Bundle Public Trust Board Meeting - Velindre University NHS Trust 29 July 2021

1.0.0 10:00 - STANDARD BUSINESS

Led by Prof Donna Mead (Chair)

1.1.0 APOLOGIES

Led by Prof Donna Mead (Chair)

Received from:
1. Mr Carl James, Director of Strategic Transformation, Planning & Digital
2\. Mrs Cath O'Brien\, Interim Chief Operating Officer

1.2.0 IN ATTENDANCE

Led by Prof Donna Mead (Chair)

** Mr Stuart Morris, Chief Digital Officer (representing Mr Carl James)*
** Ms Lisa Miller, Head of Operational Services & Delivery, Velindre Cancer Centre (representing Mr Paul Wilkins/Mrs Cath O'Brien)*
** Mr Peter Richardson, Head of Quality Assurance, Welsh Blood Service (representing Mr Alan Prosser/Mrs Cath O'Brien)*
** Ceri Harris, Diversity & Equality Manager for Agenda Item 7.5)*
** Katrina Febry, Audit Lead Performance, Audit Wales*
** Mr Stephen Allen, Chief Officer, Cardiff*
** Brenda Chamberlain, Cardiff CHC*
** David Cogan, Patient Liaison Representative*

1.3.0 DECLARATIONS OF INTEREST

Led by Prof Donna Mead (Chair)

2.0.0 CONSENT ITEMS

Led by Prof Donna Mead (Chair)

2.1.0 FOR APPROVAL

2.1.1 Minutes from the Public Trust Board meeting held on the 8th June 2021

Led by Prof. Donna Mead (Chair)

2.1.1 Public Minutes & Governance Note combined June 2021.pdf

2.1.2 Chair's Urgent Actions Report

Led by Prof. Donna Mead (Chair)

2.1.2 Chairs Urgent Action Report.docx

2.1.3 Commitment of Expenditure Exceeding Chief Executive's Limit

2.1.3. Commitment of Expenditure Cover Paper.docx

2.1.3 Appendix 1 - Commitment of Expenditure Over Chief Exec Limit.docx

2.1.3 Appendix 2 - Commitment of Expenditure Over Chief Executive Limit.docx

2.1.3 Appendix 3 - Commitment of Expenditure Over Chief Exec Limit.docx

2.1.3 Appendix 4 - Commitment of Expenditure Over Chief Exec Limit.pdf

2.1.3 Appendix 5 Primary BGA Commitment of Expenditure Over CE limit (002).pdf

2.1.3 Appendix 6 Secondary - BGA Commitment of Expenditure over CE limit.pdf

2.1.3 Appendix 7 - Commitment of Expenditure over Chief Exec Limit.pdf

2.1.3 Appendix 8 - Commitment of Expenditure over Chief Exec Limit.pdf

2.1.4 Policies for Approval Report

To be led by Mrs Lauren Fear, Director of Corporate Governance

2.1.4 Approved Policies Update - July 2021.docx

2.1.4.a VUNHST HANDLING CONCERNS POLICY 03.6.21 AE V2.docx

2.1.5 Support for the All Wales Positron Emission Tomography Programme (PET) Programme Business Case

To be led by Mr Mark Osland, Executive Director of Finance

2.1.5 All Wales PET Cover Report.docx

2.1.5a PBC for All Wales PET_FINAL.PDF

2.1.5b PET Business Case Appendicies.pdf

2.1.6 Revisions to Velindre University NHS Trust Model Standing Orders and Standing Financial Instructions

To be led by Mrs Lauren Fear, Director of Corporate Governance/Chief of Staff

2.1.6 Trust Board Revised Model Standing Orders and Standing Financial Instructions Cover Paper.docx

2.1.6 Appendix A - Model Standing Orders inc Reservation and Scheme of Delegation Amendments .pdf

2.1.6 Appendix B - Model SFIs - Table of Amendments.pdf

2.1.6 Appendix C - GC02 v37 SOs Excluding Schedules May 2021.doc

2.1.6 Appendic D - GC02b v37 SOs Schedule 2 Key Docs_SFIs_ May 2021.docx

2.1.6 Appendix E - GC02c v37 SOs Schedule 3 May 2021.docx

2.1.6 Appendix F - GC02d v37 SO Schedule 4 May 2021.docx

2.2.0 FOR NOTING

2.2.1 WHSSC Joint Committee Briefings

Led by Lauren Fear, Director of Corporate Governance and Chief of Staff

The Welsh Health Specialised Services Committee held its latest public meeting on 13 July 2021. This briefing sets out the key areas of consideration and aims to ensure everyone is kept up to date with what is happening in Welsh Health Specialised Services.

2.2.1 2021.07.13 JC Briefing v1.0.pdf

2.2.2 Infected Blood Inquiry

To be led by Mrs Cath O'Brien, Interim Chief of Staff

8.2 Infected Blood Inquiry.docx

3.0.0 10:10 - MATTERS ARISING

3.1.1 10:15 - Action Log

Led by Prof Donna Mead (Chair)

3.1.1. Public Action Log for 29_07_21.docx

4.0.0 PRESENTATIONS

Nil Items

5.0.0 KEY REPORTS

5.1.0 10:25 - Chairs Update

Led by Prof Donna Mead (Chair)

5.1.0 Chair Update Report July 2021-LF-final.docx

5.2.0 10:35 - CEO Update

Led by Mr Steve Ham, Chief Executive

5.2.0 CEO Update Report July 2021 -LF -vfinal.docx

6.0.0 QUALITY, SAFETY & PERFORMANCE

6.1.0 10:45 - Quality Safety & Performance Committee Highlight Report

Led by Mrs Janet Pickles, Independent Member and Chair of the Quality Safety & Performance Committee

6.1 Public QSP Committee Highlight Report 15th July 2021.docx

6.2.0 10:55 - Remuneration Committee Highlight Report

Led by Prof Donna Mead (Chair)

6.2 Rem Comm Highlight Report - 21.07.2021.docx

6.3.0 11:00 - Local Partnership Forum Highlight Report

Led by Ms Sarah Morley, Executive Director of Organisational Development & Workforce

6.3. LPF Committee Highlight Report - 02.06.2021.docx

6.4.0 11:05 - BREAK

6.5.0 11:15 - Delivering Excellence Performance Report Period May 2021

Led By:

Ms Lisa Miller, Head of Operational Services & Delivery, Velindre Cancer Centre (representing Mr Paul Wilkins/Mrs Cath O'Brien)
Mr Peter Richardson, Head of Quality Assurance, Welsh Blood Service (representing Mr Alan Prosser/Mrs Cath O'Brien)

6.5 PMF Cover Paper July.docx

6.5a App 1 VCC Performance Report.docx

6.5b App 2 Flow Chart Triage of sick patients OPD.docx

6.5c App 2 OPD Triage.docx

6.5d App 3 WBS May 2021 PMF Report.pdf

6.5e App 4 Dashboard for SMT VCC May 2021.pdf

6.5f App 4 Dashboard for SMT WBS May 2021.pdf

6.5g Trust-wide WOD Performance Report - May 2021.pdf

6.6.0 11:35 - Financial Report Period 31 May 2021 (M2)

Led by Mr Mark Osland, Executive Director of Finance

6.6 Month 2 Finance Report Cover Paper.docx

6.6a M2 VELINDRE NHS TRUST FINANCIAL POSITION TO MAY 2021.docx

6.7.0 11:45 - VUNHST Risk Register

Led by Mrs Lauren Fear, Director of Corporate Governance

6.7 Risk Register.docx

7.0.0 STRATEGIC DEVELOPMENT

7.1.0 12:00 - Strategic Development Committee Highlight Report

To be led by Mr Stephen Harries, Independent Member and Chair of the Strategic Development Committee

7.1 Strategic Development Committee Highlight Report - June.docx

7.2.0 12:10 - Transforming Cancer Services Programme Scrutiny Sub-Committee Highlight Report

To be led by Mr Stephen Harries, Independent Member and Chair of the TCS Programme Scrutiny Sub-Committee

7.2 Public_TCS Programme Scrutiny Committee Highlight Report July 2021.docx

7.3.0 12:25 - Transforming Cancer Services Communication & Engagement Update

To be led by Mrs Lauren Fear, Director of Corporate Governance

7.3 Comms & Engagment Report.docx

7.4.0 12:40 - LUNCH

7.5.0 13:10 - Equality, Diversity & Inclusion Ambassadors

To be led by Ms Sarah Morley, Executive Director of Organisational Development and Workforce

7.5 Equality, Diversity & Inclusion Ambassadors Cover Report.docx

7.6.0 13:25 - Equality Ambassadors Showcase: Race

To be led by Ms Sarah Morley, Executive Director of Organisational Development & Workforce and Dr Jacinta Abraham, Executive Medial Director

7.6 Race Presentation for Board - 29 July 2021.pptx

8.0.0 INTEGRATED GOVERNANCE

8.1.0 13:40 - Audit Committee Highlight Reports

To be led by Mr Martin Veale, Independent Member and Chair of the Audit Committee

8.1 Audit Committee Highlight Report 8 June 2021.docx

8.1a Audit Committee Highlight Report - part a - 08.07.2021.docx

9.0.0 13:55 - ANY OTHER BUSINESS

Prior Approval By the Chairman Required

10.0.0 14:00 - DATE AND TIME OF THE NEXT MEETING

30th September 2021 at 10 am - 2.30 pm

11.0.0 CLOSE

The Board is asked to adopt the following resolution:

That representatives of the press and other members of the public be excluded from the remainder of this meeting having regard to the confidential nature of the business to be transacted, publicity on which would be prejudicial to the public interest in accordance with Section 1(2) Public Bodies (Admission to Meetings) Act 1960 (c.67).

MINUTES PUBLIC TRUST BOARD MEETING – PART A

VELINDRE UNIVERSITY NHS TRUST HQ/LIVE STREAMED
8 JUNE 2021 @ 10.30 AM

PRESENT	
Professor Donna Mead OBE	Chair (Chair)
Mr Stephen Harries	Interim Vice Chair
Mr Martin Veale	Independent Member
Mrs Hilary Jones	Independent Member
Mr Gareth Jones	In Independent Member
Mrs Janet Pickles	Independent Member
Mr Steve Ham	Chief Executive
Mrs Nicola Williams	Executive Director of Nursing, AHPs & Health Scientists
Mr Mark Osland	Executive Director of Finance
Ms Sarah Morley	Executive Director of Organisational Development & Workforce
ATTENDEES:	
Mrs Lauren Fear	Director of Corporate Governance
Ms Cath O'Brien MBE	Interim Chief Operating Officer
Mr Carl James	Director of Strategic Transformation, Planning & Digital
Ms Emma Stephens	Head of Corporate Governance
Mrs Catherine Currier	Secretariat

1.0.0	**STANDARD BUSINESS** Prof. Donna Mead opened the meeting and advised that this meeting of the Public Trust Board had been scheduled later than normal to allow an Extraordinary Audit Committee to take place to receive the Trust's Annual Report and Accounts. It was noted that due to the process of finalising the final Accounts, these reports had been issued at the end of last week. As the Public Trust Board would be receiving the Accounts in detail, the standard monthly Financial Report had been included on the Consent Agenda. It was highlighted that the Trust Board was taking the opportunity of today's meeting to support 'Wear Red for Velindre/Wales' event. It was noted a photograph would be taken during today's Public Trust Board meeting for inclusion in the 'Wear Red for Velindre/Wales' publicity literature.	

	Prof. Donna Mead explained the process for the Trust Board members to ask questions or approve reports. For the benefit of the Public Trust Boards' regular attendees, an alternative way of giving them access to the papers had been established and Prof. Donna Mead thanked the Corporate Governance team for facilitating this process.	
1.1.0	**APOLOGIES** Apologies were received from: • Mr David Cogan, Patient Liaison Group • Katrina Febry, Audit Wales • Stephen Allen, Cardiff Community Health Council • Dr. Jacinta Abraham, Executive Medical Director • Professor Donald Fraser, Independent Member The Chair notified the Board that Mr Stephen Harris, Vice Chair and Independent Member was experiencing some technical difficulties and would be joining the meeting shortly.	
1.2.0	**IN ATTENDANCE** Led by Prof. Donna Mead (Chair) 1. Barbara Burbidge, Patient Liaison Representative (representing Mr David Cogan) 2. Mr Steve Wyndham, Audit Wales 3. Clare James, Audit Wales 4. Mr James Quance, Head of Internal Audit 5. Mr Andrew Butler, NHS Wales Shared Services Partnership (NWSSP) 6. Mrs Non Gwilym, Assistant Director Communications & Engagement	
1.3.0	**DECLARATIONS OF INTEREST** There were no declarations of interest made.	
2.0.0	**CONSENT ITEMS**	
2.1.0	**FOR APPROVAL**	
2.1.1	**Minutes from the Public Trust Board meeting held on the 25th March 2021** The Trust Board **CONFIRMED** the Minutes of the meeting were an accurate and true reflection.	

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2.1.2	**Chair's Urgent Actions Report** The Trust Board **CONSIDERED** and **ENDORSED** the Chair's urgent action taken between 1st April 2021 to 25th May 2021.	
2.1.3	**Commitment of Expenditure Exceeding Chief Executive's Limit** The Trust Board **AUTHORISED** the Chief Executive to **APPROVE** the award of contracts summarised within the paper and supporting appendix and **AUTHORISED** the Chief Executive to **APPROVE** requisitions for expenditure under the named agreement.	
2.1.4	**Policies for Approval Report** The Trust Board **NOTED** the approval of the All Wales Respect and Resolution Policy that has been approved since the last report in March 2021. The policies will be published on the Trust Intranet site and circulated to the policy distribution list.	**CC**
2.1.5	**Documents 'Sealed' Report** The Trust Board **APPROVED** the contents of the Trust Board Seal Register.	
2.1.6	**NWSSP - Proposed Amendments to Financial Delegation** The Trust Board: • **APPROVED** a further extension to the financial scheme of delegation in respect of COVID 19 related contracts allowing the Chair and Managing Director of NWSSP to continue to approve contracts up to £5m, until 30 September 2021. • **APPROVED** the proposed changes to the Scheme of Delegation for the Existing Liability Scheme. • **APPROVED** the increase in the ESR Recharge limit to £1m.	
2.2.0	**FOR NOTING**	
2.2.1	**Memorandum of Understanding for Partnership Board with Cardiff & Vale UHB** The Trust Board **NOTED** the Memorandum of Understanding to support the Cardiff and Vale University Health Board.	

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2.2.2	**Welsh Health Specialist Services Committee Meeting - May 2021** The Trust Board **NOTED** the Briefing from the Welsh Health Specialist Services Committee Meeting held on 11th May 2021.	
2.2.3	**Quality & Safety Governance Arrangements for NWSSP Committee** The Trust Board **APPROVED** the proposed additional role of the Committee in relation to the assurance of quality and safety of NWSSP business.	
2.4.0	**Financial Report Period 12** The Trust Board **NOTED** the contents of the final 2020-21 financial report.	
3.0.0	**MATTERS ARISING**	
3.1.0	**Review of Action Log** The Trust Board **APPROVED** the Action Log and updates captured in the meeting. Ms Sarah Morley highlighted that a significant amount of work has been undertaken to develop a health and wellbeing plan for the Trust. The Quality, Safety & Performance Committee will receive a presentation of the plan at its July 2021 meeting.	
	AGENDA ITEM BROUGHT FORWARD	
5.1.3	**Velindre University NHS Trust - Head of Internal Audit Opinion and Annual Report 2020/21.** *Due to the availability of Mr James Quance this agenda item was brought forward on the agenda.* Mr James Quance, Head of Internal Audit, presented the Velindre University NHS Trust - Head of Internal Audit Opinion and Annual Report for 2020/21. The report sets out the overall Opinion for the reporting period, together with the summarised results of the internal audit work performed during the year. Mr James Quance reported the overall opinion for 2020/2021 is that the Board can take **Reasonable Assurance** that arrangements to secure governance, risk management and internal control within the areas under review are suitably designed and applied effectively. This is consistent with the	

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	overall Opinion for the Trust in previous years. Mr James Quance went on to summarise the outputs of the Internal Audit programme for the year, and highlighted that in part due to the continued impact of COVID-19, the audit programme had been subject to change during the year. Mr. James Quance expressed his thanks to Trust officers for their help and support in enabling Internal Audit to complete their work programme during what has been an extraordinary year due to the impact of the pandemic. Mrs Nicola Williams also expressed her thanks to Internal Audit colleagues for being accommodating in their flexibility to afford the Trust reasonable timescales during the past year. The Trust Board **NOTED** the report.	
4.0.0	**KEY REPORTS**	
4.1.0	**Chairs Update** Prof. Donna Mead presented the Chair's Update Report and highlighted the following: • Re-establishment of the Board development programme in May inclusive of the Velindre Cancer Services show and Tell, where the Board were able to learn about some of the exciting developments underway including: - Genomics and DPD testing - HypoFractionation - Virtual Assessment Patient Pathway - Medicines@Home - Ambulatory Care Services - Siren Study In addition, the Board received a presentation on the nVCC Project Reference Design, the Advanced Therapy Programme and an update on the Transforming Access to Medicines Services (TRAMS) • The wonderful success of the Neuro Oncology Team that have been awarded joint winners of the Advancing Healthcare Award in innovation in neuro-rehabilitation for their development of the Neuro-Oncology AHP Clinic. Prof. Donna Mead extended her thanks to all at Velindre Cancer Services for their welcome during the International Nurses Day walk around and also extended her thanks to all those involved in contributing to the Chair End of Year Appraisal. The Trust Board **NOTED** the content of the update report.	

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4.2.0	**CEO Update** Mr Steve Ham presented the CEO Report and highlighted the following: • Update on the COVID-19 pandemic and that an update on the recovery plan and activity levels would be presented to the Quality, Safety & Performance Committee in July. Mr Steve Ham thanked staff for continuing to be flexible and for the commitment shown for the best part of the past 15-16 months. The Trust Board also wished to extend their thanks. • Mr Mark Osland would be retiring from the Trust at the end of September 2021. Mr Steve Ham took the opportunity of thanking Mr Mark Osland for his support over the last 6 years since joining the Trust. • Update on the diagnostic funding in Wales for an MRI rebuild. Prof. Donna Mead noted and welcomed the proposal for there to be Executive Equality Ambassadors, as we are now in a position to take this work forward, this was an indication that the Trust is moving out of the heights of the pandemic into what is hoped to be a sustained recovery. The Trust Board **NOTED** the content of the update report.	
5.0.0	**QUALITY, SAFETY & PERFORMANCE**	
5.1.0	**Annual Report and Accounts 2020/21**	
5.1.1 **5.1.1a**	**Cover Paper for Annual Report and Accounts 2020/21** Mrs Lauren Fear provided the Trust Board with an update on the purpose of the Accountability Report and the Trust Governance Statement, and outlined the following key highlights detailed within the report: • The governance framework of the organisation, including information about the impact of the COVID-19 pandemic, the Board's new committee structure, and the coverage of its work • The Board's performance, including its assessment of its own effectiveness following its annual review meeting in April, which brought together the various sources of internal and external assurance for the reporting period and concluded an overall maturity level of four i.e.	

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	Have well developed plans and processes and can demonstrate sustainable improvement throughout the organisation. • Internal Audit of the Health & Care Standards in Wales which provided Substantial Assurance. This serves to reflect and demonstrate the progress that has been made over the reporting period. Mr Martin Veale provided a brief summary of the discussions from the Extraordinary Audit Committee that had taken place prior to the Board meeting which had endorsed the report for approval by the Board subject to a very few minor amendments. Prof. Donna Mead commented that it was a very detailed and comprehensive report which reflected the considerable work undertaken during the reporting period. It was noted that the report would be made available on the Trust website following the Annual General Meeting in July. The Trust Board noted the considerable amount of work in putting the report together and thanked all involved.	
5.1.1b	**Velindre University NHS Trust Final Annual Accounts 2020/21** Mr Mark Osland introduced the full consolidated accounts of 2021 and highlighted the following: • Section 2 included the outturns for Velindre University NHS Trust and hosted organisations. • It was confirmed the final outturn for Velindre University NHS Trust core services remained as represented in the note sent on 30th April to the Trust Board, which provided draft figures. • Integrated Medium Term Plan statutory duty had been approved by the Minister. • Information on the overall payment performance, which was above target. Mr Mark Osland wished to draw the Board's attention to two specific issues, namely: (i) Firstly, the Auditor General will be issuing a qualified 'limitation of scope' opinion. This is specifically in relation to Audit Wales being unable to conduct a physical stocktake of our inventories at 31 March due to COVID-19 restrictions. Audit Wales have emphasised that this qualification is not due to any shortcomings in the Trust's systems or actions, but	

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	because of the impact of COVID-19 on one of their key audit procedures. (ii) The second issue is that the audit report will also include an 'Emphasis of Matter' issue in relation to a Ministerial Direction issued to the permanent secretary in December 2019, regarding the funding of Clinicians pension tax liabilities. The Trust currently has insufficient information to calculate and recognise an estimate of any potential costs and therefore no expenditure is recognised in the financial statements but as required, the Trust has disclosed a contingent liability in note 24 of its financial statements. The Trust Board was provided with an update on the Stocktake audit. Mr Andy Butler explained that due to the pandemic NHS Wales Shared Services Partnership had been required to distribute Personal Protective Equipment across Wales. It was noted that due to the level of stock required to be available upon Welsh Government's advice, Shared Service had stock located in 7 different locations across Wales. Unfortunately Audit Wales were unable to perform a stock review in person. However, the Service was confident robust system and controls are in place. Mr Mark Osland confirmed the Audit Wales Report emphasised the inability to perform the stock review was purely as a result of COVID-19 and a change in the key audit procedures and not due to either the Service or the Trust. Mr Martin Veale echoed Mr Mark Osland's comments on the achievement of a remarkably good set of accounts, given the restraints of working from home and the additional work in responding to the pandemic. Mr Martin Veale expressed his considerable disappointment that the Trust was facing a qualified limitation audit, through no error on the Trust's behalf and was a result of Audit Wales' Policy which had prevented them from undertaking a physical audit. It was felt the Trust was being penalised for something it had no control over. The Trust Board considered if another approach to the stock taking audit could have been considered by Audit Wales i.e. using technological advancements, however it was confirmed that this had not been explored. Prof. Donna Mead thanked Mr Mark Osland and the team for their work throughout the year and was pleased to note the Trust has once again met its statutory financial duty and noted the disappointments regarding the stock take audit. Mr Mark Osland also extended his thanks to the team and the work undertaken whilst working remotely.	

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5.1.2	**Audit Wales – Audit of Financial Statements (ISA 260) 2020/21** Mr Steve Wyndham and Claire James from Audit Wales presented the Audit Wales' Audit of the Trust's Financial Statements for 2020/21. Clare James took the Trust Board through the Audit of Financial Statements including: • Stocktake review and Audit Wales Policy for all staff to work from home, which prevented a physical audit of the stock take to be undertaken. • The impact of COVID-19 on timescale and proposed scope of audits. • Re-emphasised that the Proposed Audit Opinion stated the shortcomings were not due to the Trust, but was an impact of COVID-19 on audit's staff working arrangements. • An update on Clinicians' Pensions Tax Liabilities. Clare James highlighted the positivity of working with Trust staff during the past audit year. Mr Martin Veale re-emphasised his considerable disappointment that the Trust through no fault of its own will receive a qualified limitation audit. Mr Martin Veale acknowledged Clare James work with the Trust over the last few days and the need to be clear in the report that the qualified limitation audit was due to restriction on the auditors in attending stocktake and was not on Velindre's part. Prof. Donna Mead acknowledged the qualified limited audit could have significant consequences for the Trust going forward and consideration would need to be given on how the Trust handles and responds to the situation. The Trust Board **RECEIVED** and **NOTED** the report.	
5.1.3	**NWSSP Audit & Assurance Services – Head of Internal Audit Opinion and Annual Report 2020/21** *Please ref. to notes at section 3 above, as this agenda item was brought forward in the meeting.*	
	The Trust Board: • **NOTED** the contents of the Accountability Report and the Annual Accounts, Letter of Representation (Appendix 1), and Trust Response to Audit Wales regarding Trust Governance and Management Arrangements (Appendix 2).	

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	• **NOTED** the National Audit Office (NAO) Fact Sheet on Governance Statements (Appendix 3) which has been reviewed to ensure best practice has been taken into consideration in the development of the Governance Statement section of the Accountability Report. • **APPROVED** the Accountability Report and Annual Accounts for 2020-21. The Next Steps will be for the Annual Report and Financial Accounts for 2020-201 to be submitted to Welsh Government by 11th June 2021.	
5.2.0	**Quality Safety & Performance Committee Highlight Report** Mrs Janet Pickles presented the Quality, Safety & Performance Committee Highlight report from its meeting on the 13th May 2021. Mrs Janet Pickles highlighted that the Committee had received a patient story that had been developed in conjunction with the family of a patient of Velindre Cancer Service who has sadly passed away. The story provided an overview of the patient's background and experience of attending a Velindre clinic held at an Outreach location. As a result of the patient story the Quality, Safety & Performance Committee had requested a review of what could be learned and a report was expected at the next Quality, Safety & Performance Committee. The Committee thanked the staff, who presented the story and the family for being brave enough to work with the Trust during their bereavement. The Quality, Safety & Performance Committee received updates on: • The Medical Examiner Service and Mortality Review; • Funding and renaming of the Transforming Medicines Unit; • The landmark changes to blood donation criteria with the introduction of the Assessment Individualised Risk (FAIR) in the Welsh Blood Service in conjunction with the other UK Services. Prof. Donna Mead noted the FAIR assessment for donors was due to be introduced on World Blood Donor Day, 14th June 2021. The Trust Board welcomed this significant step forward and noted the considerable work undertaken and communication programme underway to support the introduction of these changes. Mrs Cath O'Brien confirmed there was a full package of events and public awareness planned to coincide with the change. Mrs Cath O'Brien paid	

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	testament to the work of should this be Doctor Stuart Blackmore (Consultant in Donor Medicine) and the team for their work in supporting driving this forward. The Trust Board endorsed Mrs Cath O'Brien's thanks. The Trust Board **NOTED** the contents of the report and actions being taken.	
	11.50 am - Mr Stephen Harries, Vice Chair, joined the meeting.	
5.4.0	**VUNHST Risk Register SBAR** Mrs Lauren Fear highlighted the following to the Trust Board: • A summary of the Operational Risk Management Process, which had previously been agreed by the Trust Board. • An update on how the Risk Management Process linked into the Trust's governance structure including the new Datix module for recording risk. Mr Martin Veale noted the work undertaken with external consultants to develop and improve the current processes. It was aimed to present the updated Risk Register to the Audit Committee in July 2021. Prof. Donna Mead queried whether we were confident that all staff would have been trained in the new process to meet the Audit Committee July deadline, Mrs Lauren Fear confirmed that this was the case. Mrs Lauren Fear thanked Mrs Nicola Williams's team for keeping the project on track. Mrs Nicola Williams confirmed from the Datix Team's perspective, the work was being factored in along with Once For Wales Complaints Management System (OfWCMS) module. Prof. Donna Mead echoed Mrs Lauren Fear's thanks to all involved in the project. The Trust Board: • **SUPPORTTED** the proposed next steps to ensure the new risk management process is operationalised by end July 2020; • **APPROVED** the summary of the current Trust risk profile in Appendix 1.	
5.5.0	**Remuneration Committee Highlight Report** Prof. Donna Mead presented the highlight report from the Remuneration Committee held on 29th April 2021.	

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	The Trust Board **NOTED** the contents of the report and actions being taken.	
5.6.0	**Local Partnership Forum Highlight Report** Ms Sarah Morley provided the Trust Board with an update from the Local Partnership Forum meeting held on 2nd June 2021. The forum received: • An update to the Terms of Reference and cycle of business for the Local Partnership Form; • Approved the Annual Report • Received the Respect and Resolution Policy • An update on 3rd party contracts discussion • Identified a staff side rep to sit on the Agile Test Working group • An Update on the health and wellbeing work and discussed content and next steps; • Received updates from o Welsh Blood Service, o Velindre Cancer Service o Unison General Regional representative It was confirmed a written report from the Local Partnership Meeting of 2nd June 2021 would be provided to the July Trust Board meeting. The Trust Board **NOTED** the oral update.	**SFM**
5.7.0	**Delivering Excellence Performance Report** Mrs Cath O'Brien provided the Trust Board within information on the key performance issues from the Velindre Cancer Centre and Welsh Blood Service. The following key messages were highlighted: • The Trust was still experiencing very challenging circumstances as a result of COVID and extended her thanks to staff for their continued commitment to service delivery. • The Radiotherapy target for radical and palliative therapy was close to being achieved in March at 92% against a target of 98%. This was against a backdrop of patient numbers increasing by 12% higher than the previous month. • SACT waiting times target was not met but had increased by 11 percentage points from last month to 88% so is moving in the right direction. • The Trust continues to actively recruit staff;	

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	• An update was provided on the forthcoming changes to the ways of reporting and working with new performance targets, which would be implemented from 1st April 2021. The reports for the next cycle would provide dual reporting. Mr Gareth Jones noted the cover paper stated outpatient waiting times were reported as red and included a statement that there would be some developments by end of April and requested an update. Mrs Cath O'Brien explained the Trust had brought phlebotomy back into the service and was therefore seeing an increase in the number of patients coming in. Having one phlebotomy room was proving unstainable and another area had been established in Radiology. Information and clarification was also provided on when the recording of waiting times commenced for individual patients. Prof. Donna Mead asked if the Trust was repatriating the phlebotomy service to Local Health Boards and Primary Care. Mrs Cath O'Brien confirmed the repatriation of the phlebotomy service was being progressed. It was explained that the Health Boards were taking this opportunity to improve the Service being provided and to provide more options on locations. Prof. Donna Mead urged repatriation was taken forward, as speedily as possible, as this would improve patient experience in the Outpatient Department. Mrs Cath O'Brien confirmed this was a priority. Mr Steve Ham asked for an update on the repatriation of phlebotomy patients to be a standing section in the performance report, as this was a priority for the Trust Mr Stephen Harries stated that the Trust Board had frequently raised the need to understand how many patients were impacted and how long they had been waiting. It was noted that receiving information on the longest patient waiting times would be helpful to allow the Board to understand the situation better. Mrs Cath O'Brien agreed this would be included in future Performance Reports. Prof. Donna Mead asked for information to be provided at the next Trust Board meeting on the support being provided when patients are waiting for a significant time i.e. frailty assessment, access to refreshments etc. Mrs Cath O'Brien agreed to provide this information to the July Trust Board. Prof. Donna Mead highlighted the benefit of having information included in the Performance Report information on the numbers of patents that had met the target and for those patients where targets had not been met. It was	**COB** **COB** **COB**

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	confirmed this would be included in the new performance report format. Mr Martin Veale raised a general comment on the need for the Trust to be clear on which targets are a statutory duty and those that are set by us. The Trust Board **DISCUSSED** and **REVIEWED** the contents of the performance reports.	
5.8.0	**Progress Report on Quarter 3/4 Delivery Plan** Mr Carl James and Mrs Cath O'Brien provided background to the plan and provided an update on the progress regarding the actions included in the Trust's Operational Plan for Quarters 3 and 4 of 2020/21. Mr Carl James highlighted • Any actions not achieved, formed the basis of next year's planning and were included in the 3 year IMTP. • Work was ongoing to understand the impact of not delivering actions and any associated risks. Prof. Donna Mead observed there were more requests from Welsh Government colleagues for the Trust to report on the various quarterly reports and that this has meant in practice the need to retrospectively review information to be in a position to provide such updates. Prof. Donna Mead requested whether a summary report could be provided to assist in the provision of such information. Mr Carl James was happy to assist in any review and that this would be considered going forward. The Trust Board **NOTED** the content of the report.	
5.9.0	**Nurse Staffing Act** Mrs Nicola Williams presented an update on the Nurse Staffing Act Annual Report and 3 Yearly Report and highlighted: • Previously the Trust had only needed to comply with section 25a; • From 1st April 2021, when the 1st Floor ward is classified as a Medical Ward, there would be a specific duty for the Trust to comply with under the Act. • There had been no incidents, as a result of staff levels. • The 3 year report, although under the previous ward definition was not required, had been completed. It was noted there would be a duty to provide a 3 year report under the new ward classification.	

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	• The service was participating in a 2 year National Acuity Review. Mr Gareth Jones highlighted that the embedded documents in Appendix 2 could not be opened. It was agreed the iBabs papers would be updated to include the embedded documents as separate appendices. The Trust Board: • **REVIEWED** and **APPROVED** the content of the Nurse Staffing Act (Wales) Annual Report; and • **REVIEWED** and **APPROVED** the content of the Nurse Staffing Act (Wales) 3 yearly Report.	**CC**
6.0.0	**STRATEGIC DEVELOPMENT**	
6.1.0	**Transforming Cancer Services Programme Scrutiny Sub-Committee Highlight Report** Mr Stephen Harries took the Board through the highlight report from the TCS Programme Scrutiny Sub-Committee held on 20th May 2021. It was reported that the Sub-Committee had received the following updates on: • the TCS Financial Plan and there were no particular risk associated with the plan at this particular time; • the programme Risk Register; • an internal audit review, which will be presented to Audit Committee; • the Radiotherapy Satellite Centre, public engagement work and stage 3 design sign off; • the 'Minecraft' and its usage to help communities to design assets and facilities together. This work was being undertaken with Cardiff University under Well-being of Future Generations' activity. The Trust Board **NOTED** the contents of the reports and actions being taken.	
6.2.0	**Transforming Cancer Services Communication & Engagement Update** Mrs Non Gwilym provided an update to the Board on the programme of communications and engagement undertaken since 17 May 2021: • There had been 88 Minecraft registrations and positive feedback had been received.	

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	• Work was ongoing with a social enterprise to launch a digital survey community feedback, which would feed into the updated reference design and the competitive dialogue process. The feedback would also be used to start discussion on community benefits. Prof. Donna Mead noted a point of observation on a post regarding the Grange hospital and the communities' access to land around the Grange and queried whether the Trust could learn from the Grange's experience. Mrs. Non Gwilym confirmed the project team was in contact with Aneurin Bevan University Health Board colleagues. The Trust Board **NOTED** the report.	
7.0.0	**INTEGRATED GOVERNANCE**	
7.1.0	**Audit Committee Highlight Report** Mr Martin Veale presented the Audit Committee Highlight Report from the meeting held on 22nd March 2021 and an oral update from the Audit Committee held this morning. The Audit Committee also received updates on: • The successful transition of NWIS to DHCW. The Audit Committee had provided a legacy report and it was planned for Mr Martin Veale and Mrs Janet Pickles to meet with Mr Bob Hudson to discuss the handover. • An update on the action tracker received and outstanding actions were being considered to see if still fit for purpose. • The Trust's debts, managed by the Corporate Finance Team, together with information and an action plan regarding collection of Private Patient debts by the Cancer Centre Private Patient team. The Committee have requested an updated report regarding collection of the Private Patient debts is provided at the next meeting. Mr Martin Veale provided the Trust Board with an update on discussions in the Audit Committee on funding for hosted organisations. It was agreed that Mr Mark Osland would ensure the Trust Board are kept informed of any developments relating to the Hosted Organisations funding. The Trust Board **NOTED** the contents of the report and actions being taken. It was noted the Audit Committee meeting of 8th June was an Extraordinary Committee Meeting, to receive the Annual Report and Accounts for 2020-2021. A written highlight report would be provided to the July Trust Board.	**MO**

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7.2.0	**Charitable Funds Committee Highlight Report** Prof. Donna Mead provided the Trust Board with the highlight report of the Charitable Funds Committee held on 6th May 2021. The Committee received: • A presentation from a Charity Ambassador. • An update on fundraising achievements to date and the work of the fundraising team and individual fundraisers during the last year. Mr Steve Ham provided an update on recruiting to the Charity Director vacant post and an Interim Charity Director. Mr Gareth Jones requested further information on income from sale of intellectual property that was detailed in the highlight report. Mr Mark Osland provided confirmation of the timeframe to which this income generation related and that the money was being held separately to allow it to be tracked for R&D purposes. Prof. Donna Mead confirmed the Charitable Funds Committee had agreed this was the appropriate strategy for the use of the income from intellectual property. The Trust Board **NOTED** the contents of the report and actions being taken.	
8.0.0	**ANY OTHER BUSINESS** Prior Approval By the Chairman Required Prof. Donna Mead gave the Trust Board an opportunity to raise any questions or observances from any items discussed in the meeting. No further questions or observations were made. Prof. Donna Mead thanked the Trust Board Members and external colleagues for their attendance and for wearing red in support of the 'Wear Red for Velindre/Wales' event.	
9.0.0	**DATE AND TIME OF THE NEXT MEETING** 29th July 2021 at 10 am until 12 noon.	
10.0.0	**CLOSE** The Board is asked to adopt the following resolution: That representatives of the press and other members of the public be excluded from the remainder of this meeting having regard to the confidential nature of the business to be transacted, publicity on which would be prejudicial to the public interest in accordance with Section 1(2) Public Bodies (Admission to Meetings) Act 1960 (c.67).	

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GOVERNANCE FILE NOTE

VELINDRE UNIVERSITY NHS TRUST (VUNHST)
TRUST BOARD MEETING
LIVE STREAMED
8 JUNE 2021 @ 10.30 AM

LIVE STREAM RECORDING

Zoom issued a warning on 9 June 2021 to the account admin – Head of Digtial Delivery, VUNHST – to confirm it had exceeded the storage limit in respect of video recordings associated with the VUNHST Zoom account. In response, the Head of Digital Delivery sought to undertake some general housekeeping on all recordings stored within the Trust Zoom account. In doing so, the Head of Digital Delivery deleted the recording of the June 2021 Trust Board meeting in error.

A support call was opened with Zoom, to see if they were able to recover the file from backup; however, Zoom support team confirmed this was not possible.

As a result, it has not been possible to make available the recording fo the 8 June 2021 Trust Board meeting.

SIGNED:

David Mason Hawes,
Head of Digital Delivery Dated: 30/06/2021

Stuart Morris,
Deputy Chief Digital Officer Dated: 30/06/2021

Lauren Fear,
Director of Corporate Governance
& Chief of Staff Dated: 16/08/2021

TRUST BOARD

CHAIRS URGENT ACTION MATTER REPORT

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Emma Stephens, Head of Corporate Governance
PRESENTED BY	Lauren Fear, Director of Corporate Governance and Chief of Staff
EXECUTIVE SPONSOR APPROVED	Lauren Fear, Director of Corporate Governance and Chief of Staff

REPORT PURPOSE	**CONSIDER** and **ENDORSE**

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Trust Board Members – Via Email	29/06/2021	Approved
Trust Board Members – Via Email	12/07/2021	Approved

ACRONYMS	
NWSSP	NHS Wales Shared Services Partnership

1. SITUATION/BACKGROUND

1.1 In accordance with Trust Standing Orders, there may occasionally, be circumstances where decisions, which would normally be made by the Board, need to be taken between scheduled meetings and it is not practicable to call a meeting of the Board. In these circumstances, the Chair and Chief Executive, supported by the Board Secretary, as appropriate, may deal with the matter on behalf of the Board – after first consulting with at least two other Independent Members. The Board Secretary must ensure that any such action is formally recorded, and reported to the next meeting of the Board for consideration and ratification. Where issues are included in the Schedule of 'Expected Urgent Decisions' and prior approval is sought from the Board, these issues will not be reported here.

1.2 Chair's action may not be taken where either the Chair or the Chief Executive has a personal or business interest in an urgent matter requiring decision. In this circumstance, the Vice-Chair or the Executive Director acting on behalf of the Chief Executive will take a decision on the urgent matter, as appropriate.

1.3 The Vice-Chair was invited and agreed to attend the NWSSP Financial Governance Group that has been established to oversee and scrutinise NWSSP procurement requests in response to COVID 19 PPE requirements. The Board has agreed that due to the role performed by the Vice-Chair on this group, the Vice-Chair will abstain from any approval requests sought via Chairs Urgent Action involving NWSSP procurement decisions.

1.4 This report details Chair's Urgent Action taken between the 26 May 2021 – 14 July 2021.

2. ASSESMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Option Appraisal / Analysis:

The items outlined in Appendix 1 have been dealt with by Chairs Urgent Action.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below) This action is by exception and with prior approval from the Chair. The provision to permit this urgent action is to allow for quick decisions to be made where it is not practicable to call a Board meeting and to avoid delays that could affect service delivery and quality.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS /	Yes (Include further detail below)

IMPACT	Financial impact was captured within the documentation considered by the Board.

4. RECOMMENDATION

4.1 The Board is asked to **CONSIDER** and **ENDORSE** the Chairs urgent action taken between the **26 May 2021** to the **14 July 2021** as outlined in Appendix 1.

Appendix 1

The following items were dealt with by Chairs Urgent Action:

1. Submission of VUNHST Annual Operating Plan 2021/2022 to Welsh Government

The Trust Board were sent an email on the 29 June 2021, inviting the Board to **APPROVE** submission of the updated Trust Annual Operating Plan for 2021-2022 to Welsh Government.

Due to the urgency of this matter it could not wait until the 29 July 2021 Trust Board meeting.

Recommendation Approved:

- Donna Mead, Trust Chair
- Steve Ham, Chief Executive Officer
- Martin Veale, Independent Member
- Hilary Jones, Independent Member
- Gareth Jones, Independent Member
- Sarah Morley, Executive Director

A number of clarifications were required and subsequently provided. No objections to approval were received.

2. NHS Wales Shared Services Partnership Scan for Safety Contract

The Trust Board were sent an email on the 12 July 2021, inviting the Board to **AUTHORISE** the Chief Executive to **APPROVE** the financial commitment to be awarded in the NWSSP Scan for Safety Contract and the **AUTHORISE** the Chief Executive to **APPROVE** requisitions under the named agreement where appropriate.

Due to the urgency of this matter, it could not wait until the 29 July 2021 Trust Board meeting.

Recommendation Approved:

- Mrs. Donna Mead, Chair
- Mr. Steve Ham, Chief Executive Officer
- Mr. Gareth Jones, Independent Member
- Mr. Martin Veale, Independent Member
- Mr. Mark Osland, Executive Director of Finance

A small clarification was required and subsequently provided. No objections to approval were received.

Ymddiriedolaeth GIG Prifysgol Felindre
Velindre University NHS Trust

TRUST BOARD

BOARD DECISIONS REQUIRED FOR COMMITMENT OF EXPENDITURE EXCEEDING £100K FOR THE PERIOD 29 JULY 2021 to 30 September 2021

DATE OF MEETING	29 July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable

PREPARED BY	Emma Stephens, Head of Corporate Governance
PRESENTED BY	Mark Osland, Executive Director of Finance
EXECUTIVE SPONSOR APPROVED	Mark Osland, Executive Director of Finance

REPORT PURPOSE	**APPROVAL**

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Business Planning Group Velindre Cancer Service Senior Leadership Team	June 2021	Supported
Capital Planning & Performance Group Welsh Blood Service Senior Management Team	June 2021	Supported
Executive Management Board	5 July 2021	Endorsed for Board Approval

ACRONYMS	
SFIs	Standing Financial Instructions

VCC	Velindre Cancer Centre
VUNHST	Velindre University NHS Trust
WBS	Welsh Blood Service

1. SITUATION/BACKGROUND

1.1 Velindre University NHS Trust (VUNHST) has a Scheme of Delegation, as set out in its Standing Orders, together with its Standing Financial Instructions (SFIs), which ensures that there are effective governance arrangements in place for the delegation of financial authority.

1.2 Financial limits apply to the commitment of expenditure. If expenditure is greater than an individual's financial limit, and is more than the limit delegated to the VUNHST Chief Executive, the planned expenditure will require VUNHST Board approval. For extensions of existing contracts in place, this only applies if the provision for extension was not included in the original approval granted by the Trust Board.

1.3 The decisions expected during the period **8 June 2021** to **29 July 2021** are highlighted in this report.

1.4 In line with the recent review of the process for Commitment of Expenditure over the Chief Executive's Limit, all reports are now received by the Executive Management Board to ensure Executive oversight and scrutiny, to provide the Board with supporting recommendations and additional assurance.

2. ASSESMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Please refer to **Appendices 1 – 8** for the detailed appraisals undertaken of each of the expenditure proposals that require Trust Board approval.

2.2 The table below provides a summary of the decisions sought from the Trust Board:

Appendix No.	Division	Scheme / Contract Agreement Title	Period of Contract	Total Expected Maximum Value of Contract £ (Inc. VAT)
Appendix 1	VCC	Supply of Personal Radiation Dosimetry Materials	Start: 01/01/2022 End: 01/01/2024 +1 +1 year extension options	£475,000
Appendix 2	VCC	Contract for SACT provision via 3rd Party	Start: 01/10/2021 End: 30/09/2021 2 year extension option	£7,500,000 (VAT reclaimable)

Appendix 3	VCC	MR Scanner	Start: TBC End: TBC	£1,085,669
Appendix 4	WBS	Temperature Controlled Vehicles	Start: 04/03/2022 End: 03/03/2027 No option to extend	£198,060
Appendix 5	WBS	Blood Group Analysers - Primary	Start: April 2022 End: March 2027 Option to extend for 2 x 12 months	£2,135,700
Appendix 6	WBS	Blood Group Analysers - Secondary	Start: Dec 2021 End: Dec 2026 Option to extend for 2 x 12 months	£1,481,000 (VAT reclaimable)
Appendix 7	WBS	HLA Specific Antibody Systems and Maintenance	Start: 01/08/2021 End: 31/07/2025	£1,012,740 (Lot 2 – VAT reclaimable)
Appendix 8	WBS	Euro Blood Packs 2	Start: 01/04/2018 End: 31/10/2023 Proposed extension period from: 28/02/2022 - 31/10/2023	£1,284,813.33

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
	Due authority is being sought in advance of expenditure to ensure the compliant provision of goods/services to meet operational requirements.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	No (Include further detail below)
	Undertaken on a case by case basis, as part of the procurement process.
LEGAL IMPLICATIONS / IMPACT	If applicable, as identified in each case as part of the service design/procurement process.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Further details are provided in Appendix 1 of this report.

4. RECOMMENDATION

4.1 The Board is asked to **APPROVE** the Commitment of Expenditure summarised within this paper and supporting Appendices 1 - 8.

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	SUPPLY OF PERSONAL RADIATION DOSIMETRY MATERIALS
DIVISION / HOST ORGANISATION	Velindre Cancer Centre, VUNHST
DATE PREPARED	14/06/2021
PREPARED BY	Matthew Talboys, Deputy Head of Radiation Protection Arnold Rust, Head of Radiation Protection.
SCHEME SPONSOR	Paul Wilkins, Director of VCC

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

The Radiation Protection Service operates a purchase and supply operation for personal radiation dosimetry materials, required to monitor the radiation doses of staff entering radiation controlled areas, for the whole of NHS Wales and a portfolio of private clients. The supply of personal dosimetry materials from an Approved Dosimetry Service is a key requirement under the Ionising Radiations Regulations 2017.

A procurement exercise for the supply of personal radiation dosimetry materials was initiated in September 2017 with the close of submissions of interest in December 2017. It was hoped that this process and the award of the new contract would be completed by March 2018. Due to service pressures the tendering exercise was not completed until December 2018 with the new supplier, PHE, supplying from January 2019. The initial contract was for 2 years with an option to extend for a further 2 years in +1 increments. The decision was taken due to feedback from the customer base to take up one additional year's contract with a view to retender in 2021 with a view to the successful tenderer starting supply on the 1st January 2022.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☐	Contract Renewal	☒

1.2 Period of contract including extension options:

Expected Start Date of Contract	01/01/2022

Expected End Date of Contract	2 years
Contract Extension Options **(E.g. maximum term in months)**	+1 +1 year extension options.

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☐
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☒
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☐	☒
If not, please explain the reason for this in the space provided. This expenditure is a requirement for compliance with the Ionising Radiations Regulations 2017. The dosimetry materials are procured from a third supplier and then resupplied to Velindre University NHS Trust and also a customer base primarily consisting of NHS customers.		
2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.		

Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☐
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☐
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☒

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☒	Integration	☐	Collaboration	☐	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
As this is a key compliance issue with the Ionising Radiations Regulations 2017, there is no feasible option other than procuring the dosimetry materials. Failure to do so would result in a non-compliance with the regulations and enforcement action.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
The radiation protection service has operated a purchase and resupply operation for several years. The benefit to the organization is that the radiation protection service can derive ownership of the process and an operational profit to offset the salaries of key individuals in the dosimetry process.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
Non-compliance with IRR17	No mitigations
Loss of income	No mitigations

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.			
Competition		**Single source**	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☐	Direct call off Framework	☐
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☒	All Wales contract	☐

Click here for link to Procurement Manual for additional guidance

6.2 Please outline the procurement strategy
The procurement will go to a formal tender exercise. There is likely to be a small handful of suppliers who can meet the need. The tenders will be scored based on costs and also technical specifications of the materials.

6.3 What is the approximate time line for procurement?
June 2021 to December 2021.

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Pp Paul Thomas

Signature:	
Date:	29/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** **£396k**	**Including VAT (£k)** **£475k**
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☐		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	**Year 1 (exc. VAT) £k**	**Year 2 (exc. VAT) £k**	**Year 3 (exc. VAT) £k**	**Total Future Years (exc. VAT) £k**	**Total (exc.VAT) £k**	**Total (inc. VAT) £k**
Materials	69	69	69	69	276	331
Late returns*	30	30	30	30	120	144
Overall Total	99	99	99	99	396	475

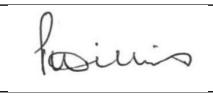
*Late returns refer to dosemeters that have been issued to the customer that have been lost or not returned. PHE currently puts a high premium on this of £32 per lost dosemeter

as they can be reused and therefore have an intrinsic value to them. This cost therefor reflects the average annual cost of lost dosemeters and we recover this cost from the customers.

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Director Name:	Paul Wilkins
Signature:	
Service Area:	VCC
Date:	01/07/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent	17th June 2021
Divisional Senior Management Team	28th June 2021
Executive Management Board	5th July 2021

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	N/A
HTW – Senior Management Team	N/A

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	CONTRACT FOR SACT PROVISION VIA THIRD PARTY (NURSING, COMPOUNDING AND FACILITES)
DIVISION / HOST ORGANISATION	Velindre Cancer Centre
DATE PREPARED	June 2021
PREPARED BY	Rhiannon Walters-Davies, Principal Pharmacist
SCHEME SPONSOR	Paul Wilkins, Director of VCC

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

Velindre University NHS Trust's (VUNHTS) existing agreement for SACT Compound, Nursing and Facility service has come to an end of 8th March 2021 but has continued on a rolling basis pending wider procurement process.

The service which began in March 2019, in collaboration with Lloyds Pharmacist Clinical Homecare (LPCH) and Tenovus Cancer Charity (TCC) provided IV SACT compounding, nursing and administration facilities for initially one day a week. The aim of the service is to provide additional capacity for the SACT service at Velindre Cancer Centre (VCC) and due to the associated financial efficiencies if this model be cost neutral to the Trust. The aim is to also continue current patient benefits of the service, including care closer to home and reduced waiting times for SACT.

Due to additional SACT demand from the Covid-19 Pandemic, a second day has been added to the existing agreement from November 2020. To respond to service delivery risks in the future, it has identified that any new contract should contain an option for the number of days per week to be flexibly varied through the life of the contract. A maximum provision of the service of up to 5 days per week has been identified. For this to be achievable, the value of the Procurement exercise will need to factor in the full 5 days service.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☐	Contract Renewal	☒

1.2 Period of contract including extension options:	
Expected Start Date of Contract	01/10/2021
Expected End Date of Contract	30/09/2024
Contract Extension Options **(E.g. maximum term in months)**	24

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☐
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☒
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☒	☐

If not, please explain the reason for this in the space provided.

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☐
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☐	Integration	☐	Collaboration	☒	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
1. *Preferred Option- Contract Renewal with multiple day options* - This will allow VCC to continue utilsing the current two day service provided with the added ability to increase the number of days in response to the capacity needs the service.

2. *Contract Renewal (with current two day service)*

- Allows VCC to continue the service two days a week but does not give the service the ability to expand within the contract if SACT demand increases or there is a decrease in capacity with VCC
- Discounted due to need to service to be flexible to demand, particularly at this point in COVID pandemic when an increase in demand is forecast

3. *Contract Expiry with no replacement*

- Loss of current capacity within SACT service leading to capacity demands and increased treatment waiting times
- Discounted as negative impact to SACT service and patient experience

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
- Increased SACT capacity to meet current demand - Reduced waiting time for SACT - Flexibility in contract to allow additional days to meet SACT demand as necessary - Additional contingency if fall in capacity at VCC - Model if cost efficient to Trust (increasing to three or more days may impact in ability to continue to be cost neutral) - Provide alternative location for day case unit which allows for treatment closer to home for patients

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	**5.2 Please state any mitigation to reduce the risk if the scheme is not approved**
- Loss of SACT capacity - Loss of relationship with current providers (LPCH and Tenovus) - Loss of contingency option	- In house capacity at VCC would need to be found, however limited scope - Early engagement and communication with providers if service to end

- Loss of care closer to home for patients - Increased waiting times	- Further scoping of SACT nursing and compounding contingency options and/or alternative locations

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.	
Competition	**Single source**
3 Quotes ☐	Single Quotation Action ☐
Formal Tender Exercise ☐	Single Tender Action ☐
Mini competition ☐	Direct call off Framework ☐
Find a Tender ☒ (replaces OJEU Public Contract regulations 2015 still apply)	All Wales contract ☐
Please click here for link to Procurement Manual for additional guidance	
6.2 Please outline the procurement strategy	
Procurement will issue a Find a Tender (previously known as OJEU) to the open market place.	
6.3 What is the approximate time line for procurement?	
5 months	

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Pp Paul Thomas
Signature:	
Date:	02/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** **7,500,000**	**Including VAT (£k)** **VAT reclaimable**
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☐		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

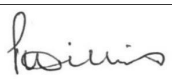
EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Service based on maximum 5 days per week requirement	£1,500,000	£1,500,000	£1,500,000	£3,000,000	£7,500,000	Vat reclaimable

(based on an estimated £300,000 for a 1 day a week service per annum)						
Overall Total					**£7,500,000**	**Vat reclaimable**

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	*N/A*

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Director Name:	Paul Wilkins
Signature:	
Service Area:	Director of Velindre Cancer Centre
Date:	01/07/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent	17th June 2021
Divisional Senior Management Team	28th June 2021
Executive Management Board	Expected 5th July 2021

Host Organisations	Date of Approval:
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	**MR UPGRADE**
DIVISION / HOST ORGANISATION	**VCC**
DATE PREPARED	**JUNE 2021**
PREPARED BY	**MIKE BOOTH, RADIOLOGY MANAGER**
SCHEME SPONSOR	**PAUL WILKINS, DIRECTOR OF VCC**

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

The scanner, as an asset, has an expiry date of 30/6/21 and a "listed" life-in-years of 7-years.

The Original Equipment Manufacturer (OEM) considers end-of-life to be 7-10 years and during this period will breakdown more frequently with each incident potentially taking longer to resolve due to difficulty sourcing parts. It is unlikely that this scanner will be able to continue up-to the anticipated opening date of the nVCC. To evidence the above statement we have had 4 further unscheduled breakdowns since the end of February causing significant loss of service provision. This level of down-time is well beyond unscheduled downtime frequency over the last 7-years.

Radiology performs daily acute and urgent referrals for both outpatients and inpatients and operate at or around 100% capacity. Any unplanned down-time is therefore a real issue for service delivery. Cancellation and then finding space for scheduled patients with most capacity already full for the next 6-8 weeks is virtually impossible.
GE are a US-based company and some parts do come from the US. Some are available within the UK, but this was not the case for this part. As scanners get older this sourcing becomes more problematic.
Between Tuesday 9th February, and Tuesday 16th February 2021, the MR scanner at VCC suffered mechanical failure and was out of action. It could not be fixed by the Original Equipment Manufacturer, GE within these times as the first planned repair failed after 2 scans, and a further replacement part had to be ordered from Chicago.

Regular, recommended service schedules and weekly QA is undertaken on all machines as advised.

As a direct result:

- 30 patients had their MR scan deferred.
- Saturday and Sunday clinics ran between 9am and 2pm on 2 consecutive weekends to catch up on deferred patients.
- 4 patients were in breach of their clinic date. The clinicians involved were informed of this.
- All patients were either rebooked or imaged within 10 days of resolution of the fault.

Impacts on Service:

- Patient pathways were interrupted, some to a greater and some to lesser degree.
- Increased overtime payment and TOIL accrued.
- Reputational damage to VCC.
- Lost clinical hours for staff rostered to work on days the scanner was out of action.

This was protracted and unscheduled down-time. There was no warning, and all the urgent referrals would require transfer for MR imaging.
To some degree radiology can support MR down-time with CT but for Spine, Head and Liver, however this is sub-optimal imaging.
There is no other compensatory imaging modality available in the Trust for MR.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☒	Contract Renewal	☐

1.2 Period of contract including extension options:	
Expected Start Date of Contract	To be confirmed with procurement
Expected End Date of Contract	To be confirmed with procurement
Contract Extension Options **(E.g. maximum term in months)**	

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☐
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☒
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☒	☐
If not, please explain the reason for this in the space provided. Original forecast dates for NVCC suggested this asset would be viable until the move. The amended date of 2025 puts the MR beyond the end-of-life and will lead to intermittent loss of service provision for a scanner that, from an image quality perspective, is redundant technology. Only after the amended date for the NVCC was released was the issue raised.		

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☐
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐

Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☒

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☒	Integration	☐	Collaboration	☐	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining

For 100% mitigation, the only solutions for failure of the MR scanner are:

MR scanner rebuild

GE have offered a re-build for around **£520k ex VAT** which leaves the magnet (no building works) and strips down and replaces the rest. Effectively, VCC would have a new scanner with full warranty and significant image-quality improvements and reduced scan-times. **The re-build is 5-7 working days, so 2 weeks maximum**. VCC will need Health Board support for acute/urgent referrals and may need to arrange some off-site transfers for those 2 weeks. We would organise additional lists in advance to manage all the patients requiring imaging for the down-time period and then only have the small number of urgent referrals to manage.

Develop a mobile MR service on-site

MR and CT mobile scanner options will cost 2.5k per day with staff and 9k per week without staff. Both options include VAT but this is recoverable for the staffed option. For a 5-day week this would give us approximate monthly costs of 50k or 36k respectively. The mobile service would only be beneficial as a contingency if based at VCC on a permanent basis. It would not be possible to operationalise this to mitigate for unplanned downtime. There would also be the requirement for an on-site pad or site with power, IT, PACS and water and a covered walkway from the building to protect In-Patients.

MR scanner replacement

A second scanner is at least **£1 million** and could be in place in **3-months** but would incur significant revenue costs for estate works due to the complexity of replacing and installing the magnet.

Buy a second scanner

A second scanner would be at least **£1 million to buy new** with significant build costs probably doubling this price. We would need to allow 6-12 months for a new build and revenue costs of radiographers and circa £100k annual servicing costs. A longer term down-time could possibly be managed by deployment of some staff to C&V to support management of the Velindre service. However, it's unlikely that any HB would be able to support scheduled referrals with all sites operating 7-day, 12-hour lists. For unplanned down-time it is unlikely that temporary contracts would be arranged or that the VCC MR radiographers could add any benefits with all scanners at VCC operating 7-day, 12 hour shifts with full staffed services.

The re-build option will make the project affordable, offers rapid turnaround-time for replacement and will provide an asset that will carry the service, up-to the new VCC, offering a significant step forward in terms of image quality and scan times.

Service provision will need to continue during the replacement with all acute referrals for MR imaging triaged to local HB's. The recommendation for scheduled referrals is to provide additional scan sessions prior to replacement to ensure all patients scanned within their "required-by" time.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
VCC will be able to deliver the MR service with a new scanner under full warranty offering potential savings against the expenditure with the first year service costs free. There will be significant image-quality improvements enabling identification of additional anatomical information while reducing overall scan times. Rapid scan-times will measurably reduce patient discomfort and increase patient throughput. Disruption to service will be minimised as the rebuild can be completed within 2 weeks, compared to 6 months for a replacement machine. The cost is also significantly lower than replacing the machine.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
If the preferred option to rebuild the scanner was not approved, the scanner at VCC would become increasingly unreliable with more frequent, and longer, periods of downtime. This would lead to disruption of the MR service and patients transferred and treated to local HB's. Prior to 2025 it is conceivable that the MR scanner would require decommissioning and, until VCC could procure a new scanner (this process can take 6 months) there would be complete loss of service provision. Health Boards do not have additional capacity for routine or acute VCC patients. This would be detrimental to patient treatment, would result in poorer outcomes for patients and reflect badly on the Velindre brand.	**Mitigating Activity** In the case of planned downtime, patients are **actively triaged and re-directed to health boards**, if necessary. The majority of planned down time takes up less than a working day. Under these circumstances, acute slots are reserved at the end of the day. Radiographers **work through protected breaks or stay late to** manage urgent referrals where capacity is loss due to breakdown. For urgent IP, Radiology does not 'reserve' acute capacity as this creates inefficiency within the system. Mobile MR scanners may be sourced but will cost 30-50k per week with a requirement for a level surface, IT, power, running water and access to acutely unwell in-Patients. For acute/urgent referrals, **CT is considered as a diagnostic option** or transfer to HB for imaging if CT is not appropriate. For unplanned downtime, options for managing deferrals are using **bank staff, locum or TOIL** at weekends or evenings, all of which attract a cost in terms of workforce and operational services. Use of the **private sector**. This has been considered (Rutherford, Spire, St Josephs', Nuffield) and can be practical for planned downtime when 'batch' prices reduce the cost. However, these providers cannot support acute patients, may not be geographically an option for some patients and cannot guarantee availability for urgent scans. As such, whilst we could use the private sector as an exception,

	this has offers no certainty for a mitigation activity.

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.			
Competition		**Single source**	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☐	Direct call off Framework	☒
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☐	All Wales contract	☐
Click here for link to Procurement Manual for additional guidance			
6.2 Please outline the procurement strategy			
The rebuild/upgrade of the existing MR Scanner will need to be undertaken by the incumbent supplier. This is covered by the NHS Supply Chain Category Tower Framework – Magnetic Resonance Imaging – with the option of direct call off. The procurement will be supported by NWSSP and a local project group will be constituted and supported by the VCC Programme Management Office.			
6.3 What is the approximate time line for procurement?			
Approval from the Trust Board to allow expenditure over £100,000 is expected in July 2021. After approval has been received, procurement can liaise with the framework provider by requesting an official Unique Reference Number. This will then permit dialogue between the supplier and project team to agree a date for the upgrade which allows the radiology service			

to put contingency plans in place, ensuring patients can continue to be scanned. The project requires completion within the 21/22 financial year due to the funding source.

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Samantha Pennington – Deputy Head of Capital NWSSP
Signature:	Samantha Pennington
Date:	30/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** **£984,869**	**Including VAT (£k)** **£1,085,669**
The nature of spend	**Capital – rebuild costs** ☒	**Revenue – maintenance costs** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☒ Other ☐		
If you have selected 'Other' – please provide further details below:		

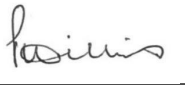
PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Rebuild cost for the scanner	£494,000	£0	£0	£0	£494,000	**£592,800**
Refurbishment costs of MR suite	£10,000	£0	£0	£0	£10,000	**£12,000**
Maintenance – 7 year contract	Warranty period	£76,230	£77,755	£326,884	£480,869	**£480,869**
Overall Total	£504,000	£76,230	£77,755	£326,884	**£984,869**	**£1,085,669**

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	The upgrade is being overseen by the MR Upgrade Project Group, chaired by the Planning and Performance Manager, with input from the radiology service, finance, estates and procurement. Meetings are held fortnightly, with project documentation submitted to the Divisional SLT meeting.

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Director Name:	Paul Wilkins
Signature:	
Service Area:	VCC
Date:	01/07/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent	17th June 2021
Divisional Senior Management Team	16th June 2021
Executive Management Board	5th July 2021

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	N/A
HTW – Senior Management Team	N/A

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	Replacement of Temperature Controlled Vehicles (TCV's) x 2
DIVISION / HOST ORGANISATION	Welsh Blood Service
DATE PREPARED	May 2021
PREPARED BY	Angela Robins, Capital Planning Manager
SCHEME SPONSOR	Jayne Davey, Interim Supply Chain Lead – Collections Services

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

The Welsh Blood Service became an All Wales Service in May 2016. To facilitate the supply of blood components and commercial products to North Wales, a Stock Holding Unit (Distribution Centre) was set up in Wrexham. The Stock Holding Unit is supplied from the manufacturing site at the Welsh Blood Service Headquarters located in Talbot Green.

The transportation of blood components and commercial products on the outward journey requires strictly validated temperature control (2 ^{0}C – 6 ^{0}C). This is required in order to ensure the temperature of the processed blood and commercial products are maintained at the appropriate temperature during transportation. Unprocessed blood units collected by the North Wales teams are returned to the Stock Holding Unit before being collected by the transport driver and returned at ambient temperature (18 ^{0}C – 22 ^{0}C) to the Welsh Blood Service Headquarters, Talbot Green.

This transportation was initially provided by the purchase of two Temperature Controlled Vehicles (TCV's) at the time of the All Wales programme.

One of the existing Temperature Controlled Vehicles (TCV's) has already been decommissioned. The remaining TCV is nearing the end of its serviceable life; this paper considers the options available to enable the continued transportation of blood components and commercial products to the Stock Holding Unit in Wrexham, North Wales.

BACKGROUND

The Welsh Blood Service obtained two Temperature Controlled Vehicles in 2016 by converting vehicles for temperature controlled storage, one of which was a 2013 plate and the second was a 2016 plate. The older of the two vehicles (2013 plate) was taken out of service in February

2019.This vehicle had a number of problems and failed validation of the refrigeration unit. To mitigate the loss of this vehicle, the Welsh Blood Service has since used two principle methods for contingency:

1. **Courier Service** – This contingency measure is expensive and has limited flexibility, but is available at short notice (a requirement of 24 hours' notice).

2. Use of **Phased Changing Materials** (PCM is a cooling unit that is packed with the blood in the transportation boxes) and boxes - the Phased Changing Materials (PCM) and box model, used for transporting products to hospitals, have been used to transport products from the Welsh Blood Service Headquarters in Talbot Green to the Stock Holding Unit in Wrexham, North Wales. Use of Phased Changing Materials (PCM) incurs additional manual handling requirements by staff within the Manufacturing & Distribution team. In addition, they take up more refrigerator space, which is required primarily for Blood Components & Commercial Products and Test Kits.

The remaining operational Temperature Controlled Vehicle (TCV) has had to operate at an increased capacity, Monday to Friday to meet service requirements and the distance/mileage currently covered. The mileage on this Temperature Controlled Vehicle is currently at 270,000 miles and will reach in excess of 310,000 by the anticipated replacement date.

There is a significant risk to resilience and business continuity in operating with a single Temperature Controlled Vehicle. The current operational Temperature Control Vehicle has had a number of issues but has had reasonable availability and has displayed a high level of reliability over the last 18 months. Whilst the refrigeration unit has not caused issues during this time, the vehicle mileage is high and the vehicle is nearing the end of its operational life, which is likely to incur additional problems, and reduced reliability.

AIMS & OBJECTIVES

The aim is to replace two Temperature Controlled Vehicles to optimise service delivery, and provide resilience and contingency arrangements.

The Main objectives are :

- Opportunity to redesign the vehicles to accommodate current and future requirements;
- Improved vehicle reliability (current operational TCV has high mileage);
- Increased service resilience;
- Opportunity to design replacement vehicles to take into account any increased space requirements due to implementation of Ambient Overnight Hold and future collection requirements;
- Reduce the packing requirement for commercial products for Hospital Services staff when current TCV is unavailable;
- Reduction in carbon emissions.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☐	Contract Renewal	☒
1.2 Period of contract including extension options:						
Expected Start Date of Contract	04/03/2022					
Expected End Date of Contract	03/03/2027					
Contract Extension Options **(E.g. maximum term in months)**	None					

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☒
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☒

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☒	☐

If not, please explain the reason for this in the space provided.

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☒
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☒
Deliver bold solutions to the environmental challenges posed by our activities.	☒
Bring communities and generations together through involvement in the planning and delivery of our services.	☒
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☒	Integration	☐	Collaboration	☒	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
OPTION 1 – Do Nothing Continue to use the current TCV, with the Phased Changing Materials (PCM) and box model used as a contingency.

This was not considered as the current vehicle mileage will continue to rise and will become too unreliable to be used on a critical delivery/collection function for the Welsh Blood Service.

OPTION 2 - **Replace Temperature Controlled Vehicles (TCVs) with modified specification** (preferred option).

Purchase 2 x Temperature Controlled Vehicles (TCV's) for the transportation of products between Welsh Blood Service Headquarters in Talbot Green and the Stock Holding Unit in Wrexham, North Wales.

The modified specification would:

- Allow for a larger ambient compartment taking into account the changes to the way non-tested donation units are returned to Talbot Green from the SHU since the implementation of Ambient Overnight Hold;
- Support any potential WBS ambition to provide apheresis services in north Wales;
- Give consideration to carbon neutral vehicle options that support WBS contribution to the Wellbeing of Future Generations (Wales) Act.

Option 3 - Utilise Phased Changing Materials (PCM) and boxes as the primary model of temperature control

Use Phased Changing Materials (PCM) and boxes in non-temperature controlled delivery vehicles for the movement of products between the Stock Holding Unit in Wrexham, North Wales and Welsh Blood Service Headquarters in Talbot Green.

The reasons for not considering are :

- A small increase in losses (commercial and blood products);
- All available refrigeration space was used to pre-condition the additional Phased Changing Materials (PCM)
- Additional pressure on staff involved in pre-conditioning, packaging and loading that is unsustainable in the long term.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
OPTION 2 **<u>Replace TCVs with modified specification</u>** Main benefits are : • Meets refrigeration temperature requirement; • Conforms to Medical Healthcare Regulatory Agency (MHRA) regulatory requirements; • Maintains quality and safety of transported blood and component products; • Efficient transportation process; • Ability to flexi interior capacity in order to accommodate varying temperature settings for ambient overnight hold; • Supports potential for plasma collection in North Wales; • Reduction/improved manual handling due to revised specification; • Reduction of possible temperature related damage to expensive commercial products due to revised loading system; • Reduced carbon emissions within Welsh Blood Service fleet. Give consideration to carbon neutral vehicle options that support Welsh Blood Service contribution to the Wellbeing of Future Generations (Wales) Act; • Improved resilience due to new vehicles; • Enhanced specification will reduce potential loss of blood and commercial products; • Improved temperature holding in event of vehicle breakdown; • Sustainable, reliable and safe option for future needs of the Welsh Blood Service; • Robust provision of service requirements with multiple contingency provision; • Allow for a larger ambient compartment taking into account the changes to the way non-tested donation units are returned to the Welsh Blood Service Headquarters in Talbot Green from the Stock Holding Unit in Wrexham, North Wales, since the implementation of Ambient Overnight Hold; • Support any potential Welsh Blood Service ambition to provide apheresis services in North Wales; • Allows contingency for vehicle break down and servicing.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
Currently the Transport & Logistics function is operating with a single Temperature Controlled Vehicle (TCV). The current vehicles mileage as of 04/06/2021 was 271,759. With regular ongoing routine usage, the vehicles mileage will continue to rise and the vehicle will become too unreliable to be used on what is a critical delivery/collection function for the organisation. Based on current usage it is anticipated that the vehicle mileage will have exceeded 310,000 by the end of the current financial year.	Blood and commercial products will need to be packaged with temperature preserving materials on a routine basis in order that delivery can be made using a non-refrigerated vehicle. This would impact Hospital Services/Issues.

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.			
Competition		**Single source**	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☒	Direct call off Framework	☐
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☐	All Wales contract	☐
Click here for link to Procurement Manual for additional guidance			
6.2 Please outline the procurement strategy			

A mini competition will be run through the Crown Commercial Services Framework agreement RM6060 for Vehicle Purchases - Lot 2: Light to medium commercial vehicles up to but not including 7.5 tonnes.
6.3 What is the approximate time line for procurement?
Estimated 2-month turnaround. This is due to the Capital end of year requirement and the lengthy lead times of the vehicle.

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Pp Paul Thomas
Signature:	
Date:	24/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** **£165,050**	**Including VAT (£k)** **£198,060**
The nature of spend	**Capital** ☒	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☐		
If you have selected 'Other' – please provide further details below: The Revenue costs incurred will be absorbed through existing budgets. There will be no request for additional revenue funding.		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Equipment Purchase	120,000				120,000	144,000
Maintenance Refrigeration	1,800	1,800	1,800	3,600	9,000	10,800
Maintenance Charges	850	250	850	8,600	10,550	12,660
Vehicle Insurance	1,200	1,200	1,200	2,400	6,000	7,200
Temperature Monitoring	200	200	200	400	1,000	1,200
Equipment – PCM's	3,700	3,700	3,700	7,400	18,500	22,200
Overall Total	127,750	7,150	7,750	22,400	165,050	198,060

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	Project managed as a procurement project using PRINCE2 and Agile methodologies.

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Sponsor Name:	Jayne Davey Alan Prosser
Signature:	
Service Area:	Welsh Blood Service Collections Services / Director WBS
Date:	23/06/2021 / 01/07/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent (CPPG)	24.06.21
Divisional Senior Management Team	24.06.21
Executive Management Board	05.07.21

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

Ymddiriedolaeth GIG
Prifysgol Felindre
Velindre University
NHS Trust

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	Procurement of Primary Blood grouping Immunohematology Analysers
DIVISION / HOST ORGANISATION	Welsh Blood Service
DATE PREPARED	22nd June 2021
PREPARED BY	Emma Cook
SCHEME SPONSOR	Tracey Rees

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

Provision of Blood and blood components

The Welsh Blood service is responsible for the collection, testing, processing and issue of blood and blood components to Hospitals throughout Wales. To facilitate this each donation undergoes rigorous testing in-line with required standards and regulations ensuring each product released is safe for transfusion.

Provision of Specialist transfusion support

The WBS is also responsible for providing specialist reference testing to support transfusion for patients with complex transfusion needs including neonatal patients, antenatal patients, and patients with specific blood borne disorders such as sickle cell and thrombocytopenia.

How testing is performed.

More than 90,000 blood samples from donors and 25,000 patient samples are tested each year.

Donations are tested, prepared, and released for patient use within 3 days of collection. Laboratories involved must release the results on day 1 post collection to allow timely labelling of products for distribution to hospitals.

In line with regulatory and standard requirements each donor and Patient sample undergoes a complex testing regimen on two suites of analysers and via a manual process;

1. Automated Primary analysers provide high-throughput testing required for all donor testing
2. Semi - Automated secondary analysers provide more specialist testing for patients and donors to increase compatibility of blood products.
3. Where tests are not available on either analyser testing is currently performed manually.

Following an extensive procurement exercise no single supplier was identified to cover both testing suites. Only one supplier has been identified as able to deliver the requirements for Primary testing. Consequently, two separate supplier contracts will be awarded. For simplicity this proposal covers Primary testing only.

The replacement of the blood group analysers will enable alignment with Welsh Government policy to establish a culture of Prudent Healthcare and align closely with Health service policy including;

- A Healthier Wales: our plan for Health and Social Care (2018)
- Wellbeing of Future Generations (Wales) Act 2015
- Welsh Government Statement of Intent for Pathology (2019)

The analyser replacement compliments the Welsh Blood Service long term vision for delivery of automated leading-edge testing services and is aligned with Velindre University NHS Trust Integrated Medium Term Plan (IMTP).

The drivers for this investment are as follows:

- The current Primary analyser asset life will expire in December 2024 and supplier is no longer supporting the current analyser past December 2022.

  To note: It has been agreed that the supplier will allow delivery of this suite of analysers in Q1 of 2022/23 To maintain business continuity and ensure uninterrupted testing of blood products the new analysers will require phased implementation and a cross over with the existing systems. The 8 month lead time allows the service sufficient time for implementation, test validation and staff training on both systems in-line with regulatory requirements

- This procurement exercise has occurred in anticipation of changes to legislation in July 2023 where all reagents will be required to be CA Marked under UK law. The full repertoire of CA marked reagents are not available for the current analyser.
- Pre-emptive replacement will allow the service to responsibly plan for changes in legislation.
- The Welsh Blood Service is responsive to the demands placed upon it. As such it recognises that updating technology and augmenting its primary testing strategy will

allow the service to respond to the growing complexity of patient and donor testing. Supporting patient care through the application

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☒	Contract Extension	☐	Contract Renewal	☐

1.2 Period of contract including extension options:	
Expected Start Date of Contract	April 2022
Expected End Date of Contract	March 2027
Contract Extension Options **(E.g. maximum term in months)**	The contract includes an option to extend for 2 x 12 months.

2. STRATEGIC FIT *(Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☒
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐

Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☒	☐
If not, please explain the reason for this in the space provided.		

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES

This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.

Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☒
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information									
Prevention	☐	Long Term	☒	Integration	☐	Collaboration	☐	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining

Following a service review a specification was put together and a formal procurement exercise was undertaken. No supplier was identified able to deliver a single solution across both primary and secondary testing. Consequently the contract for Primary and Secondary testing will be awarded to two separate suppliers. The contract will be awarded to the highest scoring supplier based on a 60/40 split (Quality/Cost).

1.1 List of Options Considered

1.1.1 Operational Options

1. Do nothing
   - Continue with existing analysers

2. Minimum action:
   - Refresh technology in 2023 once supplier withdraws support.

3. Intermediate action:
   - Refresh technology in Q1 2022/23

4. Maximum action
   - Refresh technology in Q4 2021/22

1.1.2 Financial options

To allow the service to evaluate flexible options for the testing strategy over the next 10 years. Suppliers were asked to put forward costings for both Managed Service and Capital purchase.

In both cases the provisional cost of consumables was the same the following benefits were realised for each option:

1. Managed Service
   a. Represents value for money over contract term v capital
   b. Allows for technology refresh

c. Full replacement of analysers in the event of failure.

2. Capital Purchase
   a. WBS own equipment outright until asset exhaustion.

Assessment of all options and costings were considered collectively scorings for quality and value for money conclude that the preferred option is Option 3 as a managed service.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option

Summary of benefits of the preferred option (see below for comprehensive benefits):

- Provides improved service resilience to maintain continuity in the supply chain
- Provides value for money
- Represents an appropriately planned replacement timeline allowing the service to bed-in the analysers in anticipation of changes to legislation.
- Strategically aligned to the WBS IMTP to provide a flexible service sensitive to user needs.
- Provides opportunities to utilise and develop new technologies and testing methodologies.
- Provides opportunities to expand expertise and skill sets across the service.

A full SWOT analysis was performed on the current and proposed testing strategy. Benefits of the proposal were measured against six key principles and the following benefits realised:

1. **Resilience**
   a. Adoption of a fully automated testing system across donor and patient testing will improve standardisation and quality metrics.
   b. Investment includes provision of duplicate analysers to ensure resilience and satisfy medium-throughput testing requirements (25 samples / hour).
   c. Testing throughput allows for expected 5% growth in testing as outlined in the WG SOI for Pathology.
2. **Diversity**
   a. Expansion of techniques covering both automated and manual testing (where required) for patient testing.
   b. Provision of open channels on the analysers to allow the service to adapt to changing testing requirements through development of in-house testing.

3. **Modulatory**
    a. Modular approach to testing with analysers positioned across both automated and Red Cell Immunohematology. Ensuring business continuity and a broadening of skill set and expertise across departments.
4. **Adaptability**
    a. Availability of an increased number of open testing channels and increased throughput on each analyser provides a platform for a flexible testing approach with potential to expand WBS testing repertoire in response to the needs of the service.
    b. Improved turnaround times compared to manual testing methods.
    c. Managed service allows for innovative technology refresh and adoption. Consequently enabling an agile testing strategy in response to changing user needs.
5. **Prudence**
    a. Provision of a refined automated testing strategy reducing the burden of manual testing on the service, reduction in staff time and re-prioritisation of workload to meet service needs.
    b. Managed service contract providing robust business continuity and value for money including;
        i. Total replacement of analysers in the event of critical failure
        ii. Ability to change technologies without disposal fee
        iii. All VAT recoverable including instrument and consumables VAT.
    c. Meeting quality standards: Electronic transfer of results reducing the risk of transcription errors.
6. **Embedding the service**
    a. Additional testing capacity allows departments to explore working with Health Boards and external partners in Wales to develop and improve skill sets, support healthcare initiatives and clinical trials testing.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
• Analyser asset life will expire in 2024 • Expected change in legislation in July 2023 requiring reagents to be CE marked. • Failure to deliver required testing for supply chain continuity past July 2023 • Supplier no longer supporting this analyser past 2023.	• Existing memorandum of understanding with NHSBT to cover all testing in the event of analyser failure.

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.

Competition		**Single source**	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☐	Direct call off Framework	☐
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☒	All Wales contract	☐

Click here for link to Procurement Manual for additional guidance

6.2 Please outline the procurement strategy

EU Open Procedure was carried out in accordance with Public Contract Regulations 2015. Due to the value of the contract Welsh Government approval will also need to be sought.

Award will be to single supplier under NHS Standard T&C's to include any relevant Supplementary T&C's prior agreed between both the Trust and the successful bidder.

6.3 What is the approximate time line for procurement?

ITT Issued – 1st October 2020
ITT returned – 23rd December 2020
Tender evaluation – January – June 2021
Award published to market - TBC
Contract commencement – 1st April 2022

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Pp Paul Thomas
Signature:	
Date:	25/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** 2135.7	**Including VAT (£k)** 1779.8
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☒ WHSCC		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Maintenance charges	33.6	33.6	33.6	134.4	235.2	282.2
Consumables	209.9	209.9	209.9	839.6	1469.9	1763.8
Capital leasing cost	10.6	10.6	10.6	42.4	74.3	89.1
Overall Total	254.10	254.10	254.10	1016.4	1779.8	2135.7

** As a Managed Service all costs are VAT recoverable subject to satisfying HMRC VAT relief conditions.

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	A project group has been established and the project will be managed using PRINCE2 methodologies.

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Director Name:	ALAN PROSSER
Signature:	
Service Area:	WELSH BLOOD SERVICE.
Date:	30/06/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	Date of Approval:
Business Planning Group or local equivalent	

Divisional Senior Management Team	
Executive Management Board	

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

Ymddiriedolaeth GIG
Prifysgol Felindre
Velindre University
NHS Trust

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	Procurement of fully automated Secondary blood grouping Immunohematology Analysers
DIVISION / HOST ORGANISATION	Welsh Blood Service
DATE PREPARED	22nd June 2021
PREPARED BY	Emma Cook
SCHEME SPONSOR	Tracey Rees

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

Provision of Blood and blood components

The Welsh Blood Service is responsible for the collection, testing, processing and issue of blood and blood components to hospitals throughout Wales. To facilitate this each donation undergoes rigorous testing in-line with required standards and regulations ensuring each product released is safe for transfusion.

Provision of Specialist transfusion support

The WBS is also responsible for providing specialist reference testing to support transfusion for patients with complex transfusion needs including neonatal patients, antenatal patients, and patients with specific blood borne disorders such as sickle cell and thrombocytopenia.

How testing is performed.

More than 90,000 blood samples from donors and 25,000 patient samples are tested each year.

Donations are tested, prepared, and released for patient use within 3 days of collection laboratories involved must release the results on day 1 post collection to allow timely labelling of products for distribution to hospitals.

In line with regulatory and standard requirements each donor and Patient sample undergoes a complex testing regimen on two suites of analysers and via a manual process;

1. Automated Primary analysers provide high-throughput testing required for all donor testing
2. Semi - Automated secondary analysers provide more specialist testing for patients and donors to increase compatibility of blood products.
3. Where tests are not available on either analyser testing is currently performed manually.

The replacement of the blood group analysers will enable alignment with Welsh Government policy to establish a culture of Prudent Healthcare and align closely with Health service policy including;

- A Healthier Wales: our plan for Health and Social Care (2018)
- Wellbeing of Future Generations (Wales) Act 2015
- Welsh Government Statement of Intent for Pathology (2019)

The analyser replacement compliments the Welsh Blood Service long term vision for delivery of automated leading-edge testing services and is aligned with Velindre University NHS Trust Integrated Medium Term Plan (IMTP).

The drivers for this investment are as follows:

1. The current secondary analysers are past asset life and as of December 2020 the manufacturer is no longer supporting the software for one of these analysers.
    a. Hemos haematology analyser asset expiry date: 31/03/2016
    b. Tecan haematology analyser asset expiry date 31/03/2020

2. Current suite of secondary analysers provides only a semi-automated solution. More than 14000 tests per year are performed manually by Red Cell Immunohematology department. The provision of an automated solution for testing improves standardisation, quality and reduces hands-on time for testing by specialist biomedical scientists enabling a focus on highly specialist testing.

3. The Welsh Blood Service is responsive to the demands placed upon it. As such it recognises that the change in testing strategy toward automated technologies will allow it to respond to the growing complexity of patient testing. Supporting patient care through the application of innovative testing methodologies.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☒	Contract Extension	☐	Contract Renewal	☐

1.2 Period of contract including extension options:	
Expected Start Date of Contract	December 2021
Expected End Date of Contract	December 2026
Contract Extension Options **(E.g. maximum term in months)**	The contract includes an option to extend for 2 x 12 months.

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☒
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☒	☐
If not, please explain the reason for this in the space provided.		

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☒
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☒	Integration	☐	Collaboration	☐	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
Following a service review a specification was put together and a formal procurement exercise was undertaken. No supplier was identified able to deliver a single solution across both primary and secondary testing. Consequently the contract for Primary and Secondary testing will be awarded to two separate suppliers. The contract will be awarded to the highest scoring supplier based on a 60/40 split (Quality/Cost). 1. Do nothing - Continue with existing analysers 2. Minimum action: - Direct replacement for existing services. Purchase analysers to partially cover donor and patient testing accepting the status quo for manual testing.

3. Maximum action:
   - Purchase analysers to fully automate donor and patient testing, where possible, noting that a minimal amount of specialist testing cannot be automated due to availability of technology. Two analysers will be placed in Automated Testing and a third within Red Cell Immunohematology.
   -

Assessment of all options and costings were considered collectively scorings for quality and value for money conclude that the preferred option is Option 3 as a managed service.

Summary of benefits of the preferred option (see below for comprehensive benefits):

- Provides improved service resilience to maintain continuity in the supply chain
- Provides value for money
- Strategically aligned to the WBS IMTP to provide a flexible service sensitive to user needs.
- Improved compliance with standards e.g. electronic transfer of results for blood issue.
- Reduction in risk of transcription errors from manual entry of results.
- Provides opportunities to utilise and develop new technologies and testing methodologies.
- Provides opportunities to expand expertise and skill sets across the service.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option

Summary of benefits of the preferred option (see below for comprehensive benefits):

- Provides improved service resilience to maintain continuity in the supply chain
- Provides value for money
- Strategically aligned to the WBS IMTP to provide a flexible service sensitive to user needs.
- Improved compliance with standards e.g. electronic transfer of results for blood issue.
- Reduction in risk of transcription errors from manual entry of results.
- Provides opportunities to utilise and develop new technologies and testing methodologies.
- Provides opportunities to expand expertise and skill sets across the service.

A full SWOT analysis was performed on the current and proposed testing strategy. Benefits of the proposal were measured against six key principles and the following benefits realised:

1. **Resilience**
    a. Adoption of a fully automated testing system across donor and patient testing will improve standardisation and quality metrics.
    b. Investment includes provision of duplicate analysers to ensure resilience and satisfy medium-throughput testing requirements (25 samples / hour).
    c. Testing throughput allows for expected 5% growth in testing as outlined in the WG SOI for Pathology.
2. **Diversity**
    a. Expansion of techniques covering both automated and manual testing (where required) for patient testing.
    b. Provision of open channels on the analysers to allow the service to adapt to changing testing requirements through development of in-house testing.
3. **Modulatory**
    a. Modular approach to testing with analysers positioned across both automated and Red Cell Immunohematology. Ensuring business continuity and a broadening of skill set and expertise across departments.
4. **Adaptability**
    a. Availability of an increased number of open testing channels and increased throughput on each analyser provides a platform for a flexible testing approach with potential to expand WBS testing repertoire in response to the needs of the service.
    b. Improved turnaround times compared to manual testing methods.
    c. Managed service allows for innovative technology refresh and adoption. Consequently enabling an agile testing strategy in response to changing user needs.
5. **Prudence**
    a. Provision of a refined automated testing strategy reducing the burden of manual testing on the service, reduction in staff time and re-prioritisation of workload to meet service needs.
    b. Managed service contract providing robust business continuity and value for money including;
        i. Total replacement of analysers in the event of critical failure
        ii. Ability to change technologies without disposal fee
        iii. All VAT recoverable including instrument and consumables VAT.
    c. Meeting quality standards: Electronic transfer of results reducing the risk of transcription errors.
6. **Embedding the service**
    a. Additional testing capacity allows departments to explore working with Health Boards and external partners in Wales to develop and improve skill sets, support healthcare initiatives and clinical trials testing.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
• Both analysers are past asset life • Software on one of the current analysers is no longer supported by the manufacturer • Compliance shortfall in electronic transfer of results • Extensive manual entry of results into eProgesa • Potential for system failure without adequate preventative cover from manufacturer. • Failure to deliver required testing for supply chain continuity • Failure to meet standard for electronic issuing of blood and blood components	• Existing memorandum of understanding with NHSBT to cover all testing in the event of analyser failure.

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.

Competition		Single source	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☐	Direct call off Framework	☐
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☒	All Wales contract	☐

Click here for link to Procurement Manual for additional guidance

6.2 Please outline the procurement strategy
EU Open Procedure was carried out in accordance with Public Contract Regulations 2015. Due to the value of the contract Welsh Government approval will also need to be sought. Award will be to single supplier under NHS Standard T&C's to include any relevant Supplementary T&C's prior agreed between both the Trust and the successful bidder.
6.3 What is the approximate time line for procurement?
ITT Issued – 1st October 2020 ITT returned – 23rd December 2020 Tender evaluation – January – June 2021 Award published to market - TBC Contract commencement – 1st December 2021

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Pp Paul Thomas
Signature:	
Date:	25/06/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k)** 1776.5	**Including VAT (£k)** 1480.8
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☒ WHSCC		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Maintenance charges	21	21	21	84	147	176.4
Consumables	176.4	176.4	176.4	705.6	1235.1	1481.7
Capital leasing cost	14.1	14.1	14.1	56.4	98.7	118.4
Overall Total	211.5	211.5	211.5	846	1480.8	1776.5

Note: As a managed service all costs are VAT recoverable (subject to satisfying HMRC VAT relief conditions).

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	A project group has been established and the project will be managed using PRINCE2 methodologies.

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.

Lead Director Name:	ALAN PROSSER
Signature:	
Service Area:	WELSH BLOOD SERVICE
Date:	30/06/2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent	
Divisional Senior Management Team	
Executive Management Board	

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

GIG CYMRU NHS WALES | Ymddiriedolaeth GIG Prifysgol Felindre Velindre University NHS Trust

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	HLA Specific Antibody (Detection & Definition) Systems and Maintenance of Existing HLA Systems (NHSBT/1249) Lot 1 – HLA Antibody Detection and Definition testing (Kits & Reagents) Lot 2 – Purchase of new equipment and maintenance of existing Luminex.
DIVISION / HOST ORGANISATION	Welsh Blood Service
DATE PREPARED	07/04/2021
PREPARED BY	Kim McShane
SCHEME SPONSOR	Tracey Rees

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

Background:

The Welsh Transplantation and Immunogenetics laboratory is charged with pre and post transplant monitoring for solid organ and stem cell transplant patients. As part of this role they are required to routinely test all patients on the transplant list for levels of antibodies which may cause transplant rejection. The WBS has successfully benefited from the NHSBT framework for purchase of these testing kits and maintenance since 2016.

This paper outlines the request for approval to purchase antibody screening test kits and implement a maintenance contract for test instruments via a new NHSBT framework.

Lot 1 covers antibody screening test kits for pre and post-transplant patients. Lot 2 covers the maintenance for the instrument used in the antibody testing.

NHSBT -1249

Lot 1: HLA Antibody Detection and Definition testing (Kits & Reagents)
Lot 2 – Purchase of new equipment and maintenance of existing Luminex.
This has been competitively put together and represents a value for money option for the WBS.

Testing methods are the same as previously supplied (VHBio supplier of LabScreen Luminex test kits). These represent a fully validated methodology and is the only supplier able to provide the range and sensitivity of tests required for patient testing.

Maintenance element will also be provided by the existing supplier (Immucor) as they are the original suppliers of the instrument and have previously been shown to be the most cost effective (prior to NHSBT framework 2016).

Both existing contracts have expired on the 31st March 2021.

There was a delay in obtaining the new framework documentation in order for the service to review the options available so the contracts have lapsed for a short period. This was due to issues with the NHSBT documentation not being received as they were being blocked by the NHS Email Firewall.

A work around to this was put in place and the documents have now been received and reviewed.

No orders have needed to be placed for consumables as the service have sufficient stock to cover provision until the end of August 2021.

In order to ensure business continuity an order was placed and approved on 10/03/2021 for the total Maintenance element of this contract covering the 4-year term.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☐	Contract Renewal	☒

1.2 Period of contract including extension options:	
Expected Start Date of Contract	01/08/2021
Expected End Date of Contract	31/07/2025
Contract Extension Options **(E.g. maximum term in months)**	N/A

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS

This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☒
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐
Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
Part of required routine testing repertoire.	☒	☐
If not, please explain the reason for this in the space provided.		

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☒
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐

Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☒	Long Term	☐	Integration	☐	Collaboration	☐	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
Do nothing: Unable to perform routine testing for transplant patients. Unable to maintain instruments for testing. Option 1: Independent procurement exercise: unable to benefit from the NHSBT Framework value for money. This option would also require a substantial amount of procurement time and resource to complete. Option 2: (Recommended) Become beneficiaries of the NHSBT 1249 framework.

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
Preferred option: Option 2 - Represents value for money for the Welsh Blood Service, benefitting from economies of scale, and secures a fixed rate for services for the next 4 years.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	**5.2 Please state any mitigation to reduce the risk if the scheme is not approved**
Unable to perform testing critical to transplantation.	Procure contract outside of NHSBT framework for supply of test kits and maintenance of test equipment.

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.

Competition		Single source	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☐	Direct call off Framework	☒
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☐	All Wales contract	☐

Please click here for link to Procurement Manual for additional guidance

6.2 Please outline the procurement strategy

The contract will be awarded as a Direct Call off from the NHSBT Framework agreement.

This option was selected as there are no other suitable providers on the framework agreement.

The Welsh Blood Service are a named beneficiary on this agreement.

The Framework agreement has been competitively tendered in line with Public Procurement Regulations and represents value for money.

The contract will be let for a four year period which is in line with the remaining asset life of the equipment.

The use of the framework also negates the resource time involved in the Trust conducting its own Procurement process, which, based on current market conditions is unlikely to achieve a more favorable commercial offer. The use of the framework offers enhanced pricing based on economies of scale.

The Trust will contract direct with the supplier based on the terms & conditions of the NHSBT Framework Agreement

6.3 What is the approximate time line for procurement?

Trust Board Approval – July 2021
Welsh Government Notification – July 2021
Contract Commencement – 1st August 2021

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	
Signature:	
Date:	

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£k) £852,740**	**Including VAT (£k) £1,012,740**
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☐		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £k	Year 2 (exc. VAT) £k	Year 3 (exc. VAT) £k	Year 4 (exc. VAT) £1k	Total Future Years (exc. VAT) £k	Total (exc.VAT) £k	Total (inc. VAT) £k
Lot 1 (Kits & Reagents)	200,000	200,000	200,000	200,000		800,000	£960,000

Lot 2 (Maintenance of Equipment)	13,185	13,185	13,185	13,185		52,740	VAT Reclaimable
Overall Total	213,185	213,185	213,185	213,185		852,740	1,012,740

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	N/A

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.

Lead Director Name:	ALAN PROSSER
Signature:	
Service Area:	WELSH BLOOD SERVICE.
Date:	03/06/2021.

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	Date of Approval:
Business Planning Group or local equivalent	
Divisional Senior Management Team	
Executive Management Board	05/07/2021

Host Organisations	Date of Approval:
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

COMMITMENT OF EXPENDITURE EXCEEDING CHIEF EXECUTIVE'S LIMIT / BUSINESS JUSTIFICATION

SCHEME TITLE	Whole Blood Collection Systems and Ancillary Processing Systems (European Blood Packs 2)
DIVISION / HOST ORGANISATION	Welsh Blood Service
DATE PREPARED	24 May 2021
PREPARED BY	Rachel Evans, Huw Lovett, Dr Tracey Rees
SCHEME SPONSOR	Dr Tracey Rees / Alan Prosser

All Divisional proposals must be consistent with the strategic and operational plans of Velindre University NHS Trust.

1. DESCRIPTION OF GOODS / SERVICES / WORKS

The current European Blood Pack 2 (EBP2) Framework Agreement for the supply of primary and ancillary blood packs was awarded in 2017 and ends on 9 June 2021. Under the terms of this Framework WBS ran a mini-competition in 2018 and placed call-off contracts with an agreed end date of 28 February 2022 as the Framework Agreement allowed call-off contracts to run beyond the Framework end date.

The original Framework Agreement due to end on 9 June 2021 has recently been extended by NHSBT it until 31 March 2023 with call-off contracts able to be awarded until October 2023.

WBS is a beneficiary of this Framework in collaboration with the other three UK blood services, the Irish Blood Transfusion Service and two beneficiaries from the Asian Pacific Network (Australia and New Zealand). This collaboration brings major benefits to scale and therefore cost.

A procurement exercise for a new Framework Agreement to replace the current EBP2 Framework agreement has commenced, with the intention of implementing by October 2023 at the latest. This has additional collaborators to the EBP2 procurement and has been named International Blood Pack 1 (IBP1)

The progress of this exercise has been impacted by the ongoing COVID-19 pandemic and uncertainty in the timelines for the enactment of EU-derived legislation requiring a major change (for safety reasons) in the plasticiser currently used in the manufacture of blood packs. This requires moving to Di (2-ethyhexyl) phthalate (DEHP) free blood packs. The so-called "sunset

date" – the absolute deadline for this is currently May 2025. No manufacturers currently have DEHP-free products ready for market therefore any move to a DEHP-free solution will require major development for the manufacturers which may include the need for clinical trials.

A procurement approach has now been agreed whereby the contract will be awarded with a mechanism to switch to DEHP-free systems during the contract length, subject to certain conditions being met.

This paper seeks approval to extend the current EBP2 contract to align with the extension to the Framework Agreement and provide sufficient time to cover the period for award of the new contract.

1.1 Nature of contract: Please indicate with a (x) in the relevant box	First time	☐	Contract Extension	☒	Contract Renewal	☐

1.2 Period of contract including extension options:	
Expected Start Date of Contract	01/04/2018
Expected End Date of Contract	31/10/2023
Contract Extension Options **(E.g. maximum term in months)**	Proposed extension period is from 28th February 2022 until 31st October 2023.

2. STRATEGIC FIT (*Host organisations are not required to complete Section 2)*

2.1 OUR STRATEGIC PILLARS This scheme should relate to at least one of the Trust's five strategic pillars. Please mark with a (x) in the box the relevant pillars for this scheme.	
Goal 1: Be recognised as a pioneer in blood and transplantations services across Europe.	☒
Goal 2: Be a recognised leader in specialist cancer services in Europe.	☐
Goal 3: Be recognised as a leader in stated priority areas of research, development and innovation.	☐

Goal 4: An established 'University' Trust which provides highly valued knowledge and learning for all.	☐
Goal 5: An exemplar of sustainability that supports global well-being and social value.	☐

2.2 INTEGRATED MEDIUM TERM PLAN		
Is this scheme included in the Trust Integrated Medium Term Plan?	**Yes**	**No**
	☐	☒
If not, please explain the reason for this in the space provided. This is business as usual and is covered from revenue expenditure		

2.3 SHAPING OUR FUTURE WELLBEING OBJECTIVES This scheme should relate to at least one of the Trust's wellbeing objectives. Please mark with a (x) in the box the relevant objectives for this scheme.	
Reduce health inequalities, make it easier to access the best possible healthcare when it is needed and help prevent ill health by collaborating with the people of Wales in novel ways.	☒
Improve the health and well-being of families across Wales by striving to care for the needs of the whole person.	☐
Create new, highly skilled jobs and attract investment by increasing our focus on research, innovation and new models of delivery.	☐
Deliver bold solutions to the environmental challenges posed by our activities.	☐
Bring communities and generations together through involvement in the planning and delivery of our services.	☐
Demonstrate respect for the diverse cultural heritage of modern Wales.	☐
Strengthen the international reputation of the Trust as a centre of excellence for teaching, research and technical innovations whilst also making a lasting contribution to global well-being.	☐

FIVE WAYS OF WORKING (SUSTAINABLE DEVELOPMENT PRINCIPLES) CONSIDERED

Please mark with a (x) in the box the relevant principles for this scheme.

Click **here** for more information

Prevention	☐	Long Term	☐	Integration	☐	Collaboration	☒	Involvement	☐

3. OPTIONS CONSIDERED

Include 'business as usual' i.e. 'do nothing'

3.1 Please state alternative options considered and reasons for declining
1. Do nothing • WBS contract will end in February 2022 and WBS will be unable to continue collection of blood and provision of components. • WBS will need to instigate its own procurement exercise for a replacement contract. 2. WBS to carry out its own procurement exercise for a replacement contract • Unlikely that this could be achieved within the remaining lifetime of the current contract. • Increased costs due to WBS being unable to take advantage of economies of scale from being part of a collaborative. 3. Extend current EP2 contract (preferred option) • Ensures continuity of supply to enable whole blood collections to continue beyond February 2022 until replacement IBP1 contract is in place. • WBS will be aligned with the other participating blood services • No increase to cost of products

4. BENEFITS (Quantifiable / Non-Quantifiable)

4.1 Outline benefits of preferred option
• WBS will be able to continue buying primary and ancillary blood packs at the current price and will continue to benefit from the collaborative purchase power of the participating blood services. • Extending the contract will provide the time needed to carry out the IBP1 procurement exercise to secure a replacement contract. This includes the potentially significant time commitment required to validate a DEHP-free solution.

5. RISKS & MITIGATION

5.1 Please state risks of not proceeding with the scheme	5.2 Please state any mitigation to reduce the risk if the scheme is not approved
WBS will be unable to continue whole blood collection after February 2022.	Import blood components under mutual aid agreement (at significant cost and reputational damage).
WBS will not have a contract in place for the supply of primary and ancillary blood packs.	Conduct an accelerated procurement exercise.
Significant increase in costs if WBS carries out a procurement exercise on its own due to weaker buying power and potential requirement for extensive validation.	None

6. PROCUREMENT ROUTE

6.1 How is the contract being procured? Please mark with a (x) as relevant.			
Competition		**Single source**	
3 Quotes	☐	Single Quotation Action	☐
Formal Tender Exercise	☐	Single Tender Action	☐
Mini competition	☒	Direct call off Framework	☐
Find a Tender (replaces OJEU Public Contract regulations 2015 still apply)	☐	All Wales contract	☐
Click here for link to Procurement Manual for additional guidance			
6.2 Please outline the procurement strategy			
The procurement route is an extension of a call off contract awarded from a mini competition on the NHSBT Framework for whole blood collection system and ancillary processing systems. The			

mini competition was run by NHSBT on behalf of all UK Blood establishments and further beneficiaries, this allows for a larger buying power and more competitive prices.
6.3 What is the approximate time line for procurement?
NHSBT published a modification notice to extend the Framework agreement on 10th May 2021 allowing the Welsh Blood Service to extend the call off contract in place until the anticipated start date (1st November 2023) of the successive agreement, International Blood Packs 1 (IBP1).

6.4 PROCUREMENT ROUTE APPROVAL

The Head of Procurement / Delegated Authority has approved the preferred procurement route	
Head of Procurement Name:	Wyn Owens (Head of Sourcing – Medical & Clinical)
Signature:	W.Owens
Date:	27/05/21

7. FINANCIAL ANALYSIS

Maximum expected whole life cost relating to the award of contract	**Excluding VAT (£) 1,070,677.78**	**Including VAT (£) 1,284,813.33**
The nature of spend	**Capital** ☐	**Revenue** ☒
How is the scheme to be funded? Please mark with a (x) as relevant. Existing budgets ☒ Additional Welsh Government funding ☐ Other ☐		
If you have selected 'Other' – please provide further details below:		

PROFILE OF EXPENDITURE

EXPENDITURE CATEGORY	Year 1 (exc. VAT) £	Year 2 (exc. VAT) £	Year 3 (exc. VAT) £	Total Future Years (exc. VAT) £	Total (exc.VAT) £	Total (inc. VAT) £
Consumables (Blood Bags)	44,465.28	533,583.33	311,256.94	0	889,305.56	1,067,166.67
Consumables (Autostop Filters/Transfer Bags)	9,068.61	108,823.33	63,480.28	0	181,372.22	217,646.67
Overall Total	53,533.89	642,406.67	374,737.22	0	1,070,677.78	1,284,813.33

8. PROJECT MANAGEMENT (if applicable)

What are the management arrangements associated with this scheme? E.g. PRINCE 2	Project managed as a procurement project using PRINCE2 and Agile methodologies.

9. DIRECTOR/SPONSOR DECLARATION OF COMPLIANCE

The Lead Director, by providing email confirmation, to seek Board approval is making a declaration that all procurement procedures, standing orders and standing financial instructions requirements have been appropriately discharged and observed and that where relevant, appropriate advice and confirmation has been obtained to that effect. Procurement Services retain this confirmation electronically in the tender file.	
Lead Director Name:	Alan Prosser
Signature:	
Service Area:	Welsh Blood Service
Date:	01 July 2021

10. APPROVALS RECEIVED

List and include date of approvals received in support of this scheme.

Divisions	**Date of Approval:**
Business Planning Group or local equivalent	Tuesday 8 June 2021
Divisional Senior Management Team	Wednesday 16 June 2021
Executive Management Board	Monday 5 July 2021

Host Organisations	**Date of Approval:**
NWSSP / NHS Wales Shared Services Partnership Committee	
HTW – Senior Management Team	

TRUST BOARD

APPROVED POLICIES UPDATE

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Catherine Currier, Business Support Officer
PRESENTED BY	Emma Stephens, Head of Corporate Governance
EXECUTIVE SPONSOR APPROVED	Lauren Fear, Director of Corporate Governance & Chief of Staff

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Quality, Safety & Performance Committee	15/07/21	APPROVED

ACRONYMS	
QSP	Quality, Safety & Performance Committee

1. SITUATION/BACKGROUND

1.1 In accordance with the "Policy for the Management of Policies, Procedures and other Written Control Documents", the Trust Board will receive all approved policy documents for information under the consent agenda.

1.2 The purpose of this report is for the Trust Board to note the policies that have been approved since the last report in June 2021.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Following approval at the relevant Committees the policies below were uploaded to the Trust Intranet and internet site and circulated via the policy distribution list for immediate implementation.

2.2 The list of Policies approved since the report received by the Trust Board are outlined below:

Policy Title	Policy Lead / Function	Approving Committee	Effective Date
Handling Concerns Policy	Quality & Safety	Quality Safety & Performance Committee	15th July 2021

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below)
	The Trust has a defined process for the management of policies and written control documents. The purpose of which is to ensure staff are aware of their responsibilities with regards to Trust policy documents and to provide a 'model' guide and consistent approach for the development, management and dissemination of the Trusts documents
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.

FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.

4. RECOMMENDATION

4.1 The Trust Board is asked to **NOTE** the policy that have been approved since the last report in March 2021.

Ref: QS 03

HANDLING CONCERNS POLICY

Executive Sponsor & Function	Executive Director of Nursing, Allied Healthcare Professionals and Health Care Scientists
Document Author:	Trust Quality & Safety Manager
Approved by:	Quality, Safety & Performance Committee
Approval Date:	15th July 2021
Date of Equality Impact Assessment:	*****
Equality Impact Assessment Outcome:	This policy has been screened for relevance to equality. No potential negative impact has been identified.
Review Date:	September 2021
Version:	2

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Executive Summary

This policy is produced for Velindre University NHS Trust (VUNHST) for the effective handling of concerns according to the requirements set out in the National Health Service (Concerns, Complaints and Redress Arrangements) (Wales) Regulations 2011 ("the Regulations").

This policy applies to all staff within VUNHST and will assist staff in interpreting the Putting Things Right Regulations and provides guidance on applying best practice at the various stages of handling and investigating a concern.

The term "concern" is used throughout the policy and should be taken to mean any complaint, claim or reported patient safety incident (about NHS treatment or services) to be handled under the arrangements.

The handling concerns policy enables a single and consistent method for grading and investigating concerns, and ensures openness and involvement of the person raising the concern. It also enables the consideration of 'Redress' when a concern notified contains an allegation that harm has or may have been caused whether they have caused harm to a patient through a breach in duty of care.

Additionally, the implementation of the Handling Concerns policy plays a significant role in improving patient and donor safety and experience, with an explicit requirement to show how services have improved as a result of concerns that have been notified and dealt with under the arrangements.
This policy will be updated as required to reflect new or changing requirements.

The latest version of the policy will always be available on the Trust intranet site at: Intranet Site - Putting Things Right (check policy link and insert)

VUNHST
Handling Concerns
Policy
Part 1
Purpose

1.1 Introduction

The Trust acknowledges that, as a provider of complex clinical and non-clinical services, there will be occasions where things will go wrong. The organisational response is to understand the reasons why this occurred and to do all it can to minimise or prevent the reoccurrence of similar occurrences in the future rather than attribute individual blame.

The National Health Service (Concerns, Complaints and Redress Arrangements) (Wales) Regulations 2011 ("the Regulations") outline the arrangements for the NHS in Wales for the way in which it deals with things that go wrong. The Regulations are commonly known as '*Putting Things Right'* and provide a framework for the raising, investigation of and learning from concerns. Concerns have been defined within the Putting Things Right Regulations as being issues identified from patient safety incidents, complaints and claims about services provided by a Responsible Body in Wales.

The Trust Handling Concern policy supports delivery of the Putting Things Right Regulations and ensures the effective management of concerns (complaints, patient safety incidents and claims).

1.2 Policy aim

The Trust is committed to always investigating and managing concerns in an open, accessible, and fair manner. The aim of this policy is to provide a single, integrated and supportive process for people to raise *concerns ensuring:*

- A common model across the Trust for dealing with concerns which is patient/donor/user focused and complies with the National Health Service (Concerns, Complaints and Redress Arrangements) (Wales) Regulations 2011
- A culture of accepting and supporting when dealing with concerns about treatment and care, with staff at all levels being encouraged to apologise for adverse outcomes and to offer explanations why they may have arisen.
- A philosophy of "investigate once, investigate well".
- Compliance with the Welsh language duties and people are not disadvantaged when raising concerns through the medium of Welsh.
- Learning from concerns drives quality improvement and reduces adverse events, and avoidable harm to patients/donors and users.
- Redress is provided in circumstances where there is a qualifying liability in tort in relation to the provisions of qualifying services. Redress may encompass apologies, explanations, action plans, remedial treatment and, if appropriate financial compensation.

The principles of 'Being Open' are at the heart of the Putting Things Right arrangements and support improvements in the management of concerns as it is widely accepted that a culture of openness, transparency and candour is associated with good quality care. The Trust Handling Concerns policy supports 'Being Open' by requiring staff to be open and honest

with patients, donors and service users when things go wrong and the individual suffers an adverse outcome which has or could result in unexpected or unintended harm that is more than minimal, and the provision of health care was or may have been a factor. The benefits of the approach adopted in this policy include:

- Learning from concerns leads to better quality and standard of care;
- Reduced incidence of similar issues arising again;
- Improved patient and donor safety;
- Better experience for people wishing to raise a concern;
- Reduced number of concerns that are escalated;
- Better focus of specialist advice;
- Potential reduction in the cost of legal fees, and
- Increased public confidence in the services provided by the Trust.

1.3 Policy scope

This policy applies to all staff, permanent and temporary, employed by or working within the Trust, including independent providers who have responsibility to report, manage and or be involved in concerns raised. The Policy covers concerns about:

- Services, care & treatment provided by the Trust;
- Services, care & treatment provided by Trust staff;
- Services, care & treatment provided by independent contractors;
- Services, care & treatment provided by the independent or voluntary sector which are funded by the Trust;
- This policy does not apply to clinical services provided privately, even when provided within Trust premises.

Disciplinary action does not form part of the organisational response to concerns except in cases where one or more of the following applies:

- There is persistent occurrence involving the same individual.
- The concern requires police investigation.
- The action causing the concern is far removed from acceptable practice i.e. gross professional misconduct.
- There is a failure to report an incident by a member of staff who was either involved or fully aware.
- There is evidence of an attempt to conceal the fact that the incident occurred or to tamper with any material evidence relating to the incident.

In the event that disciplinary action is required, this policy should be used in conjunction with the Trust Disciplinary Policy and Procedure.

1.4 Policy Framework

The Handling Concerns policy provides a governance framework for the management of concerns and redress and sets out the responsibilities and principles for the handling of the concerns. The policy should be read in conjunction with:

- National Health Service (Concerns, Complaints and Redress Arrangements) (Wales) Regulations 2011.
- Putting Things Right Guidance on Dealing with Concerns about the NHS from 1st April 2013.
- Welsh Risk Pool Standard 5 Concerns and Compensation Claims Management Standard.
- Handling concerns staff manual & procedures *(**under development**).*
- Trust Incident Reporting Procedure.
- Claims Management policy
- Trust Serious Incident Toolkit.
- Concerns intranet pages.
- Public Services Ombudsman (Wales) Act 2019

1.5 Roles and responsibilities

The Regulations specifically require every NHS organisation to have clearly defined roles and responsibilities for the handling of concerns, including those individuals responsible for the undertaking of the distinct roles and regulatory responsibilities as set out below:

Strategic oversight of the arrangements

A nominated Independent Member assumes responsibility for maintaining a strategic overview of the operation of the Trust's arrangements (under the Regulations), particularly as regards ensuring that:

- The Trust complies with these arrangements and the Independent Member supports a positive safety culture and commitment to being open;
- The Trust has arrangements in place to review the outcome of the investigation of any concern, in order to ensure that any deficiencies in actions or service provision that have been identified by the investigation, are acted upon and monitored;
- Lessons learned are identified and disseminated throughout the Trust to improve the services that it provides and to seek to reduce future risk.

In the case of the Trust, this role has been designated to the Independent Member with overall responsibility for Quality and Safety.

Chief Executive Officer

On behalf of the Board, the Trust Chief Executive Officer has overall responsibility for dealing with concerns and ensuring investigations are undertaken in an appropriate manner, within the correct timescales and lessons learned are implemented within the Trust. The Chief Executive Officer ensures that all staff are informed about and receive appropriate training in respect of the operation of this Policy.

Responsible Officer

The Executive Director of Nursing, Allied Healthcare Professionals, and Health Scientists is the Trust Responsible Officer for the handling of concerns, and is responsible for the effective day to day operation of the Trust's arrangements for dealing with concerns in an integrated manner. The Executive Director of Nursing, Allied Healthcare Professionals, and Health Scientists ensures arrangements are in place to:

- Deal with concerns in line with the Regulations and required timescales;
- Allow for the consideration of qualifying liabilities;
- Provide for incidents, complaints and claims to be dealt with under a single governance arrangement.

The responsibilities of the Responsible Officer can be delegated to another authorised person for operational purposes.

Senior Investigations Manager

The Quality & Safety Manager is the Senior Investigations Manager for the Trust. The Senior Investigations Manager is responsible and accountable for:

- Ensuring the handling and consideration of concerns in accordance with this policy;
- Performing such other functions relating to the handling and consideration of concerns as the Trust may specify;
- Ensuring co-operation with such other persons or bodies as may be necessary to facilitate the handling and consideration of concerns;
- The management and operation of the Trust Concerns Team;
- The development, integration and embedding of a comprehensive investigation and redress system for concerns;
- Escalation of matters of concerns, breach of timescales or regulatory requirements to the Responsible Officer;
- Triangulation of concerns and feedback data;
- Providing robust assurance to the Board / Board Committees on the Trust performance (qualitative and quantitative) regarding Concerns;
- Meeting national, legislative and Trust reporting requirements;
- Ensuring systems and processes are in place for the learning of lessons and the sharing of this learning across the Trust and beyond as appropriate.

The Trust Senior Investigations Manager will ensure that there is enough staff, of the required level of seniority and skills, to assist them in the carrying out of the functions and ensuring that members of staff will receive adequate training to enable them to fulfil their responsibilities as specified.

Trust Concerns Team

The Trust's Concerns Team's responsibilities is to develop systems, processes and the support infrastructure for the Trust and its staff to meet its requirements in relation to the investigation and management of concerns in accordance with the Putting Things Right Regulations. This will include:

- Developing and keeping updated all systems, processes, policies, procedures and training & education programmes;
- Overseeing, monitoring and quality checking the management of concerns, incidents & claims including compliance with national & legislative timescales;
- Ensuring accumulative and robust trend and theme analysis;
- Developing robust mechanisms for monitoring actions and evidencing of learning and dissemination of learning;
- Reporting formal concerns outcomes, outputs and exceptions to relevant divisional & Trust meetings and board level committees, including provision of robust triangulated quarterly and annual reports and contributing to the Trusts Annual Quality Statement;
- Responding proactively and positively to the training needs of staff identified by the service by developing/co-ordinating training and education sessions to staff on Concerns and compliments;
- Liaises with external bodies such as the Public Service Ombudsman, Coroner's Office, Shared Services – Legal and Risk, Police, Community Health Council and any other agencies as appropriate and relevant.
- Advises, supports and updates complainants, their families or advocates, and practitioners on individual concerns.

Service Directors & Responsible Officers within Hosted Organisations

Service Directors and Responsible Officers within hosted organisations are responsible for ensuring;

- That Concerns relating to their areas of responsibility are managed in line with Trust and national policy requirements and Putting Things Right Regulations;
- That a culture of openness is promoted and encouraged to ensure that staff report all concerns that are patient/donor safety incidents, and that concerns are robustly investigated in line with this policy and acted upon;
- Effective and practical local arrangements are in place across all services to ensure full implementation of and compliance with this policy, and that these are communicated to staff;

- That all staff receive patient safety/ concerns training and RLDatix training pertinent to their roles and responsibilities. Refresher training needs of staff will be determined at a local level and based on local training needs analysis;
- That adequate and appropriate support is made available to staff who are involved in/are the subject of a concern;
- That staff trained in patient/donor safety investigations within the service areas are released or have their duties appropriately adjusted to enable them to undertake or support investigations when required;
- That all information pertaining to individual concerns including the outcomes of all investigations are fully and accurately recorded in RLDatix, that all documents are saved against the RLDatix record, and all action plans are completed through the RLDatix system so that compliance can be easily monitored and reviewed;
- That all necessary actions are taken to prevent re-occurrence of issues arising from both individual and aggregated concerns;
- Appropriate communication and reporting of relevant information to all appropriate Groups/Committees;
- That lessons are shared across services and the Trust as relevant;
- A culture exists across services where issues are resolved as they arise and informally as far as possible – not allowing unnecessary escalation or protraction of concerns;
- Compliance against the Trust Key Performance Indicators (KPI's) for managing and responding to concerns;
- Outcomes from concerns are reported to local management groups and formally to the Trust Quality, Safety & Performance Committee via the divisional quality & safety reports.

All Staff employed by the Trust

All staff must;

- Treat persons notifying concerns with respect and courtesy;
- Address issues and concerns as they arise and escalate for assistance if unable to manage the matter;
- Attend patient or donor safety/ concerns training and RLDatix training pertinent to their roles and responsibilities;
- Ensure that patient and donor safety incidents that they are aware of are reported, no matter how minor they might appear. This ensures that the Trust can take all appropriate actions under this policy including learning from such events and improving services for the future;
- Ensure they report patient or donor safety incidents brought to their attention by patients, donors and other persons;
- All staff should ensure they are aware of how to access copies of the Trust's arrangements for handling Concerns, in all the formats, to enable them to satisfy any reasonable request made of them for this information;
- Be open, honest, and transparent at all times; and

- Adhere to this Policy and supporting procedures.

Quality, Safety & Performance Committee

The Quality, Safety & Performance Committee;

- Considers Putting Things Right Policies for approval by the Quality, Safety & Performance Committee and approves all relevant Standing Operating Procedures;
- Oversee compliance with the Trusts Handling Concerns Policy and affiliated policies, as necessary to ensure compliance with the Putting Things Right Regulations;
- Receives concerns performance reports at divisional and Trust level in order that key issues can be identified, and learning can be shared. A divisional quality & safety report will be provided at each meeting outlining concerns activity and performance against national and Trust concerns indicators. Quarterly and annual Trust concerns reports will be provided by the Trust concerns team;
- Scrutinises themes, trends and risks for escalation to the Velindre University NHS Trust Board.

The Quality, Safety & Performance Committee will also commission reports from the service areas and Trust concerns team to support achievement of these objectives.

Trust Putting Things Right Panel

The Trust a Putting Things Right panel to assist with the determination of breach of duty and qualifying liability. The panel is a multi-disciplinary team who receives presentations from investigators or a lead clinician relating to concerns where it is considered there has been a breach in our duty of care. The Panel's role is to:

- Determine and or validate whether a breach of duty has occurred;
- Determine whether the breach of duty described has caused harm;
- Consider the engagement of an independent clinical expert in collaboration with the person raising the concern if a decision on breach of duty cannot be reached;
- Consider the engagement of an independent clinical expert in collaboration with the person raising the concern where causation is in question or further clarity as to the degree of harm is required;
- Agree how the decision of the panel will be communicated to the person raising the concern, and by whom;
- Agree how the decision of the panel will be communicated to staff affected by the concern, and by whom; and
- Ensures there is a robust system in place for recording the decisions made.

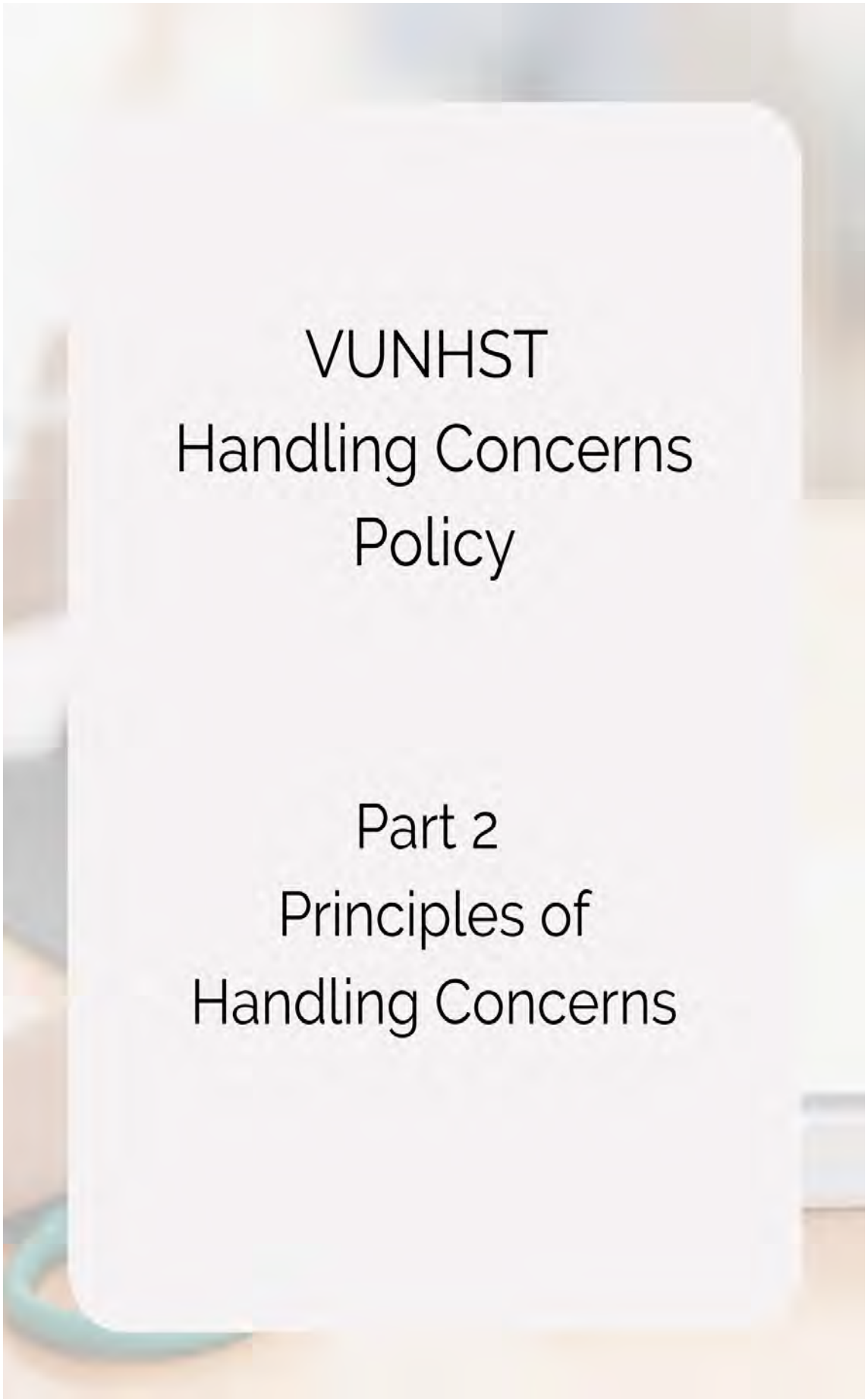
The Medical Director and Executive Director Nursing, Allied Healthcare Professionals, and Health Scientists have joint responsibilities for quality and safety and are able to provide authority to admit a breach of duty in respect of their professional accountabilities, and for considering recommendations from the Trust Putting Things Right Panel to inform decisions on admissions.

Regulatory Responsibilities *(Governance framework provided at Appendix 1)*

1.6 Definitions & terms

Concern	Patient/Donor/service user safety incident or expression of dissatisfaction (incorporates safety incidents, complaints, claims).
Complainant	A person notifying the concern.
Qualifying Liability	A liability in tort owed in respect of, or consequent upon, personal injury or loss arising out of or in connection with breach of duty of care owed to any person in connection with the diagnosis of illness, or in the care or treatment of any patient/donor/service user in consequence of any act or omission by a health care professional and which arises in connection with the provision of qualifying services.
Redress	The making of an offer of compensation in satisfaction of any right to bring civil proceedings in respect of a qualifying liability in tort; the giving of an explanation; the making of a written apology and the giving of a report on the action that has been, or will be, taken to prevent similar cases arising.
Working Day	Monday to Friday (excluding Bank Holidays).
Trust	Velindre University NHS Trust.
Adverse event/incident	An adverse incident is an event which causes or has the potential to cause unexpected or unwanted effects involving the safety of the patients, users or other persons.
Claim	Allegations of negligence and/or demand for compensation made following an untoward incident resulting in personal injury to a member of staff, a patient or a member of the public or damage to property.
Complaint	An expression of dissatisfaction, which requires a response.
Early Resolution (on the spots)	Concerns that could potentially be resolved immediately or within 2 working days through discussion, explanation or the provision of information. These generally relate to relatively easy to address issues and as such are handled outside of the Regulations.

External body / agency	An organisation that has an official advisory or regulatory role that has been mandated to regulate the corporate and professional activities of NHS bodies.
Near Miss	A near miss is a situation in which an event or omission, or a sequence of events or omissions, arising during clinical care fails to develop further, whether or not as a result of compensating action, thus preventing injury.
Never Event	“Never events” are defined as ‘serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented by healthcare providers’.
Serious Incident	An incident or accident where a patient, member of staff, or member of the public suffers serious injury, major permanent harm or unexpected death (or risk of serious injury) on either premises where health care is provided, or whilst in receipt of health care, or where the actions of health service staff are likely to cause.
Investigation	A formal approach to gathering information in a systematic and methodical way.
Root Cause Analysis	A process for identifying the basic or causal factor(s) that underlies variation in performance, including the occurrence or possible occurrence of a sentinel event.
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR), place a legal duty on employers to report incidents/accidents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Part 2
Principles of
Handling Concerns

2.1 General principles for handling concerns

The Trust's arrangements for the handling and investigation of concerns are intended to ensure:

- A single point is provided for notifying concerns as required by Putting Things Right.
- The expectation of the person notifying the concern is established and their involvement in the process secured wherever possible.
- Concerns are thoroughly investigated and responded to efficiently and openly, applying the Trust's Concerns Pledges (provided at Appendix 2).
- Potential for any safeguarding or protection issues are identified, in particular in relation to a child or a vulnerable adult.
- Persons raising concerns are treated with respect and courtesy and advised of the availability of assistance to enable them to pursue their concern and where they may obtain such assistance if it is required. Also, the name of the person who will act as the Trust contact throughout the handling of the concern.
- Consideration is given to the making of an offer of redress where the Trust's investigation into the matters raised in the concern reveals that there is a qualifying liability in tort.
- Persons who notify the Trust of concerns are advised of the outcome of the Trust's investigation and receive an appropriate response providing the appropriate consent has been received by the Trust.
- Appropriate action is taken in the light of the outcome of the investigation and there is learning and improvement.

Record keeping is fundamental to the effective handling and investigation of concerns and where records exist they must be accurate, complete, understandable and contemporaneous in accordance with professional standards and guidance. As such, Trust policies and local procedures on record keeping and management of records should be adhered to all times.

2.2 Providing information widely and in accessible ways

Concerns are received by the responsible officer at a single point of entry. The Trust advertised point of contact for concerns is.

Executive Director of Nursing, Allied Healthcare Professionals and Health Scientists
Velindre Trust Head Quarters
2 Charnwood Court
Heol Billingsley
Parc Nantgarw
Cardiff
CF15 7QZ
Telephone: 02920196133
Email: handlingconcernsvelindre@wales.nhs.uk

The Trust will ensure its concerns process is accessible and inclusive. Information will be provided widely and in accessible ways. Information will be available;

- In a variety of formats e.g. leaflets, posters, websites;
- Free of charge;
- In English and Welsh;
- In other languages as required;
- In other formats as required e.g. Braille, large print, audio, Easy Read, child-friendly, etc.

Where a person raising a concern identifies a disability or special requirements in relation to communication, every effort will be made to make reasonable adjustments to accommodate the special request/requirement. Once agreed this should be documented in Datix and shared with all staff who will communicate with the individual.

When concerns are raised, people will be provided with information in the format they need and will be offered support as appropriate. The Trust will also provide a translation service wherever needed. Where there is limited availability of interpreters or communication support assistants in a particular area, it might be the case that the interpreter may be known to the person who raised the concern. This could make discussion of confidential health matters very difficult. As such, the Trust will inform the person of the interpreter's name as soon as possible, so that any conflicts of interest can be identified and an alternative interpreter made available where possible.

Concerns relating to the Welsh Language may be about the provision of health services (for example, that a particular service has not been provided through the medium of Welsh and therefore the person's needs have not been met) or about whether the Trust has complied with the Welsh Language Standards (Welsh Language (Wales) Measure 2011). Both can be handled under the Regulations.

Where the Welsh Language is a significant part of the concern, the Trust will advise the individual raising the concern that as well as the Public Services Ombudsman for Wales, they can take their concern to the Welsh Language Commissioner if they remain unhappy. When issuing a response to an individual regarding a concern about the Welsh Language, the following text will be included:

"If you are still dissatisfied following our enquiries and response, you can refer your concern to the attention of the Welsh Language Commissioner or the Public Services Ombudsman for Wales"

Staff will be additionally sensitive to the requirements of first language Welsh speakers in the handling of their concerns and arrangements will be made to ensure that they are able to raise their concerns, discuss them with Welsh speaking members of staff and receive a response in Welsh.

2.3 Person who can raise concerns

A concern may be notified by:

- People who are receiving or have received services from the Trust;
- Any person who is affected, or likely to be affected by the action, omission decision of the Trust, in relation to the functions of the Trust;
- Independent Members of the Trust;
- Any member of staff of the Trust;
- Any person acting on behalf of any person from the above categories who has died, is a child, lacks the capacity under the Mental Capacity Act (2005) to notify the concern themselves or has requested the person to act as their representative;
- Assembly Members and Members of Parliament

2.3.1 Concerns raised on behalf of a child / young person

Where a concern is notified by a child, the Trust will provide the child with any reasonable assistance that the child requires in order to pursue the concern. Advice can be sought from the Trust Lead Nurse for Safeguarding regarding advocacy services. Alternatively, advice can be sought via https://www.meiccymru.org/about/.

In many instances, someone else (parent/carer/guardian) will raise a concern on behalf of a child / young person. This does not remove the right of the child / young person to take the concern forward themselves with support. The Trust must satisfy itself whether the child / young person wishes to raise the concern themselves, with support, or if they are happy for the person who raised the concern to represent them. If the child / young person is not willing to proceed with an investigation then a decision will need to be taken about proceeding and specialist advice sought if appropriate. Particular regard needs to be given to safeguarding issues, and it may be necessary to proceed with an investigation, even if a child appears unhappy to do so. Decisions on how best to proceed will be made by the lead Director with advice from the Trust lead nurse for safeguarding.

The Trust is under no obligation to provide a response to the person who raised the concern in the first instance.

2.3.2 Concerns raised by prisoners

Prisoners have access to the same quality and range of healthcare services as the general public receives from the NHS in Wales. Where a prisoner raises a concern the Trust will handle and investigate the concern in the same way as it does for anyone else. Prisoners will also have access to the advocacy services provided by Community Health Councils, however this does not in any way affect the prisoner's right to raise a concern at any stage with the Independent Monitoring Board.

2.3.3 Concerns raised by staff

These arrangements may be used by members of staff who wish to report that something has gone wrong with care or treatment provided to a patient/donor/service user, with a view to learning lessons. This is not the same as reporting concerns about another member of staff in terms of suspected wrongdoing, criminal activity or unprofessional behaviour which still need to be dealt with via the Trust's "whistle blowing" policy.

Staff are required to report any concerns with a person's care or treatment via Datix. Where the initial investigation determines there has been harm, the Trust will:

- Notify the patient/donor/service user or his/her representative of the notified concern, and
- Involve the patient/donor/service user, or his/her representative in the investigation of the concern.

This notification and involvement will be undertaken in accordance with the Trust incident reporting and investigation procedure and under the principles of Being Open. However, where the Trust has considered that it would not be in their interest, this may be due to mental capacity or health status, then a best interest meeting will be convened, and the Trust safeguarding lead nurse will be contacted to lead the process. The Trust is required to:

- Make a written record of this decision and the reasons for it, and
- Keep the decision under review during the investigation of the concern.

2.4 Matters and concerns excluded

Not all concerns can be dealt with under the Putting things Right Regulations. Matters excluded are set out in regulation 14 of Putting Things Right and include:

- A concern notified by any member of staff relating to that person's contract of employment - these are to be managed through the Trusts workforce procedures;
- A concern that is being or has been investigated by the Public Services Ombudsman for Wales;
- A concern arising out of an alleged failure of the Trust to comply with a request for information under the Freedom of Information Act 2000 – these would be dealt with by the Information Commissioners Office;
- Disciplinary proceedings that the Trust is taking or proposing to take, arising from the investigation of a concern notified and dealt with in accordance with this Policy- these would be via the Trusts workforce procedures;
- A concern that is notified verbally and is resolved to the satisfaction of the person who notified the concern within 2 working days of the concern being notified (Early Resolution);
- A concern with the same subject matter as a concern that was previously notified verbally and was resolved to the satisfaction of the person who notified the concern

within 2 working days, unless the Trust considers that it is reasonable to re-open the concern and undertake an investigation under this policy;

- A concern previously considered under this Policy;
- A concern that is/becomes the subject matter of Civil Proceedings (legal claim). If court proceedings are issued when a concern is already under investigation in accordance with the Regulations, all further investigation of the concern must stop;
- A concern that is/becomes the subject of a concern related to an Individual Patient Funding (IPFR) Request. Reference should be made to the Welsh Health Shared Services Committee IPFR policy;
- Police criminal investigations;

Where a concern cannot be investigated under the Putting Things Right Regulations the Trust concerns team will advise the person who notified the concern, as soon as reasonably practicable, in writing, of the reason(s) for any decision that the concern is excluded from the scope of the Regulations and, thereby, this policy. However, this is not required in relation to a concern that was notified verbally and resolved to the satisfaction of the person who notified the concern within 2 working days of the concern being notified (Early Resolutions).

2.5 Time limits for the notification of a concern

The Putting Things Right Regulations require a concern to be notified:

- Within 12 months of the date on which the subject matter of the concern occurred, or
- Within 12 months of the date on which the subject matter of the concern came to the notice of the patient or service user. (Where a patient or service user has opted to have a representative act on his/her behalf, this date is the patient or service users's date of knowledge, NOT the date that the representative was informed of the concern by the patient, donor or service user).

To investigate a concern after this 12 month deadline, the Trust Executive Director Nursing, Allied Healthcare Professionals, and Health Scientists will consider whether the person raising the concern had good reason not to notify the Trust of the concern earlier and whether, given the time lapse, it is still possible to investigate the concern thoroughly and fairly.

However, a concern may not be notified 3 or more years after the date on which the subject matter occurred or after the date that the subject matter came to the notice of the patient, donor or service user. In most cases, the Trust will therefore, refuse to consider any such concern. If the Trust Executive Director Nursing, Allied Healthcare Professionals, and Health Scientists makes an exception to this, the Trust Concerns team will make it clear to the person who raised the concern that the investigation may be limited in some respects based on the information available as key staff may have left the Trust and memory in relation to the circumstances may be compromised.

A decision regarding breach of duty or qualifying liability will not be provided for these investigations. If the person who raised the concern is a child at the time of injury the three-

year period does not begin to run until the individual reaches the age of 18 years and runs out on their 21st birthday.

2.6 Withdrawal of a concern

A concern may be withdrawn at any time by the person who notified it. The withdrawal can be communicated to the Trust by written, electronic or verbal means. Where a withdrawal is communicated verbally, the Trust concerns team will write to the person to confirm the withdrawal and the Datix record will be updated.

The Trust can however, continue to investigate any concern that has been withdrawn, should it be considered reasonable and necessary to do so. The Trust Senior Investigations Manager will determine whether the concern should continue to be investigated and record the rationale for this decision.

2.7 Concerns involving other Health Bodies

Where a concern is notified and includes services provided from another Welsh health provider, the Trust will undertake a joint investigation and provide a single joined up response. There may be exceptions where this cannot be achieved, for example where the person raising the concern specifically requires separate investigations/response, however, where the Trust is notified of a concern that also involves the functions of another organisation, (whether this is known by the person notifying the concern or not), the Trust Concerns team will seek the consent of the person to contact any other relevant organisations to notify it of the concern, and to undertake a joint investigation.

Should another health body receive a concern that relates to services/work undertaken by Velindre University NHS Trust, the Trust Concerns team will liaise with the other health bodies to agree individual roles and responsibilities for the investigation of the concern.

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Part 3
Handling Concerns

3.1 Early Resolution Concerns (Informal)

Every effort should be made to engage positively with complainants and to resolve their concern through early resolution. Early Resolution is within 2 days / 48 hours. If it cannot be resolved to the satisfaction of the person raising the concern within this timescale it MUST revert to a formal concern.

What is an Early Resolution?

- Concerns that relate to operational issues that do not allege harm and can be effectively resolved by members of staff who are directly involved in the patient or service user's care, before the end of the next working day.
- Concerns arising out of a need for information and can be resolved on the spot via an explanation and an apology.
- The majority of Early Resolution concerns will be notified verbally**,** however, **c**oncerns received in writing or electronically may also be resolved as an Early Resolution where the nature of the concern is a matter easily resolved and contact has been made with the complainant to agree the concern can be resolved informally.

Managing Early Resolutions

- Early Resolutions will be managed and resolved by the most appropriate person within the service area.
- The member of staff to whom the concern has been notified will make every effort to respond to that concern there and then "on the spot".
- If unable to immediately resolve to the satisfaction of the person raising the concern, the staff member will escalate to someone more senior e.g. department manager, team leader, ward manager etc.
- Following escalation, if the concern is resolved to the satisfaction of the person raising the concern and by the end of the following working day, the concern can be closed.
- A written record of the concern will be produced and a copy of the written record will be offered to the person who notified the concern.
- The concern will be recorded as an **Early Resolution** in Datix (guidance for completing the Datix record is available on the Trust Datix intranet page).
- If the concern cannot be resolved within 2 working days / 48 hours, it will progress as a formal concern and managed under the Putting Things Right Regulations.
- The person raising the concern will be advised how the concern will be managed under Putting Things Right, provided with a Putting Things Right leaflet and offered information on advice and advocacy support.
- The concern will be reported in Datix as a formal complaint to be managed under Putting Things Right.

The person raising the concern does not need to put their concern in writing for this to occur – staff should make written notes of the concern on their behalf. Guide for managing an early resolution is provided at Appendix 3.

3.2 Putting Things Right Concerns (formal)

Where a concern cannot be resolved within 48 hours / 2 days, or where an allegation of harm exists, the concern must be managed under the Putting Things Right Regulations.

Most concerns to be managed under Putting Things Right will have been notified to the organisation in writing by the person receiving care/treatment from the service, or by someone acting on their behalf. However, concerns may also be notified verbally in cases where the person wishes to have their concern managed formally.

To assist with the interpretation and application of the Putting things Right Regulations, the Trust has identified the following stages for handling formal concerns. The stages will be covered in detail within this section of the policy, and further pathways are available for review in Appendicies 10a – 10d.

Handling Concerns	
Stage 1 **Receipt**	Recording a concern
Stage 2 **Assessment**	Initial assessment of a concern Acknowledging the concern Grading the concern Obtaining consent Joint investigations with other health bodies
Stage 3 **Investigation**	Early resolution meeting Scoping the investigation Undertaking the investigation Obtaining independent expert opinion Considering a qualifying liability
Stage 4 **Responding**	Producing the response Approval of the response
Stage 5 **Redress**	Redress arrangements
Stage 6 **Closure**	Identifying learning Local resolution meetings Re-opening concerns

	Alternative Dispute Resolution Public Services Ombudsman Wales

3.2.1 Receipt of a concern

Recording the concern

Concerns can be raised directly with the services or centrally via the Trust Concerns team. However, all concerns requiring formal management under the Putting things Right Regulation must be referred to the Trust Concerns Team to ensure an initial assessment is undertaken.

Where a concern is notified in writing to the service area, the person receiving the concern should immediately record the details in the Trust Datix system and attach a copy of the concern and any other relevant information. An automated notification will then will issued via Datix to the Trust Concerns team and the local concerns lead advising of the concern.

Where a concern was raised verbally but is to be managed formally under the Putting Things Right Regulations, the person raising the concern should be advised that the concern will be referred to the Trust Concerns team who will acknowledge the concern within **2 working days**. The details of the verbal concern should again be reported immediately into the Trust Datix system in order to notify the Trust Concerns team and local concerns lead.

3.2.2 Assessment of a concern

The Trust concerns team are responsible for undertaking the initial assessment of all concerns to be managed under the Putting Things Right Regulations.

Acknowledging the concern

Upon receipt of the concern, the Trust Concerns Team will make every effort to contact the person raising the concern (via telephone if possible) to:

- Confirm receipt of the concern;
- Provide a named contact for use throughout the handling of the concern and details of how to contact that person;
- Confirm the areas to be investigated;
- Identify any specific needs they may have which should be taken into account as the investigation proceeds;
- Advise the way in which the investigation will be handled;
- Advise how long it is likely to take and when a response can be expected;
- The availability of advocacy and support;
- What the person who raised the concern is expecting as an outcome;
- Confirms that the person understands their clinical records will be looked at as part

of the investigation;
- Discuss any outstanding issues such as consent.

Within **2 working days** of receipt of the concern, the Trust Concerns Team will also issue a formal acknowledgement (in writing or electronically for concerns received electronically) confirming the above details. Where the person raising the concern did not want to discuss their concern or telephone contact could not be made, the Trust Concerns Team will determine how the concern will be managed and then inform the person in writing of the proposed actions to manage their concern.

Verbal concerns that could not be managed as an Early Resolution will also be acknowledged in writing as above.

The process is further described in Appendix 4 and Appendix 5.

Grading the concern

All concerns requiring a response under Putting Things Right will be graded upon receipt by the Trust concerns team using the information available at that time. The All Wales Grading Framework will be used to determine the grade and the level of investigation required. This will ensure a consistent approach across the Trust and to ensure a proportionate investigations. (Further details are available in Appendix 6).

Upon grading the concern, the Trust Concerns team will also determine whether the concern should be considered as a Serious Incident and managed in accordance with the NHS Wales Serious Incident Framework

Concerns containing allegations against staff

Where concerns raised contain allegations against a staff member, the staff member should receive a copy of the correspondence at the beginning of the investigation. The Trust Concerns team will ensure a copy of the concern is provided to the line manager who will be responsible for discussing the nature of the allegations with the staff member and for identifying any support and advice arrangements during the investigation process.

Any staff member identified personally in the response letter should have an opportunity to see the draft letter before it is issued. The relevant Director will ensure the identified staff receive a copy and are able to provide feedback and comments.

Obtaining Consent

The Trust Concerns team will identify if appropriate consent is in place for the concern to be investigated.

In the majority of cases, the investigation of a concern requires access to medical records, and so the issue of consent will need to be considered. Where the patient/donor or service

user him/herself raises the concern, then in doing so, they can be deemed to have given implied consent to an investigation. This will also apply if a concern is raised by a representative who has shown proof that they are legally entitled to act for the patient/service user (e.g. the representative has a Power of Attorney).

Where a third party has raised a concern on behalf of someone else, the Trust Concerns team will contact the patient/service user or their representative to request written consent to the access to medical records and the conduct of an investigation. A copy of the Trust Concerns consent form will then be sent to the patient/service user or their representative for their approval.

Where the next of kin/personal representative raises a concern in respect of a deceased person, the Trust Concerns team should be satisfied that the person is entitled to act on behalf of the deceased.

Where someone other than the next of kin/personal representative raises a concern in respect of a deceased person, the Trust Concerns team will request written consent of the next of kin or personal representative.

Upon receipt of consent, the concern can then be managed and investigated in accordance with this policy. However, in the event that the patient/personal representative advises that they are not happy for consent to be inferred and they do not want their records to be accessed, then the Trust Concerns Team will close the matter unless the concern is of sufficient seriousness to merit an investigation without access to the medical records. The decision to continue with an investigation will be made by the Executive Director Nursing, AHP's and Clinical Scientists and the reasons for the decision will be recorded on the Datix system before proceeding with or closing the matter.

If there is any doubt as to whether the processing of sensitive personal data without the consent of the data subject is unlawful, appropriate legal advice will be sought by the Trust Concerns team.

Joint investigations with other health bodies

Most concerns will only relate to care or services provided by the Trust, however, there will be occasions where concerns also include services provided by another health body (for example, a local health board) and a joined up approach to the investigation is required with an aim of provided a single joint response.

To ensure a coordinated approach, the Trust Concerns team will act as the Trust central point of contact for the involved health bodies, and will advise the service division on the management and investigation of the concern.

If it seems clear that the concerns also involve another health body, the Trust Concerns team **within 2 working days** of first receipt will:

- Inform the person raising the concern that another Health Body is or may be involved in their concern, and
- Seek consent from the person raising the concern to contact and notify the other

Health Body that they are involved in the concern.

- Inform the other Health Body **within 2 working days** of receiving the consent, that a concern has been received;
- Agree with the other organisation/s involved with the concern which organisation will act as the lead in coordinating and investigating the concern in accordance with the Putting Things Right Regulations – this will usually be determined by the number and severity of concerns raised in relation to each organisation;
- How communication with the person who raised the concern will be managed including and how they will be kept up to date of progress;
- Arrangements for the production, approval and sending of the joint response to the concerns;
- Throughout the course of the investigation, the ongoing communication between organisations, including the sharing of information relevant to the concern (subject to consent which should be obtained at the outset);
- Appropriate representation of the organisations at any relevant meetings.

Where an agreement of the above cannot be reached within **5 working days**, the matter will be escalated to the Executive Director Nursing, AHP's and Clinical Scientists for a resolution.

3.2.3 Investigating a concern

Scoping the investigation

Following the initial assessment by the Trust Concerns team, the concern will be referred to the relevant service for investigating and managing. The service will identify a lead investigator for the concern, including where needed, a clinical lead for advising and supporting on clinical matters.

The lead investigator will scope the concern to determine the depth of and parameters of the investigation, which needs to be proportionate to the severity of the concern notified. The depth of the investigation will then vary according to the issues under consideration.

It will not be appropriate to conduct in-depth investigations for all concerns and so it is important to determine as accurately as possible from the outset what will be proportionate in the circumstances. It is also essential that the assessment of a concern is kept under review throughout its investigation in case the nature of the investigation needs to change. An investigation scoping toolkit has been developed by the Trust Concerns team and is available on the Trust Handling Concerns Resources intranet page.

The number of people participating in an investigation is dependent on the severity and complexity of the concern. For a low grade concern (grade 1 or 2) it may be sufficient for one person to undertake the investigation, whereas a higher grade concern (grades 3-5) may require a multidisciplinary team approach, supported by the Trust Concerns team. In these cases, it is likely that a comprehensive or concise Root Cause Analysis will be required.

It is important that the investigator(s) are appropriately selected according to their knowledge and experience and the nature of the concern. They should also be independent of, and played no part in the actual issue(s) under investigation.

At all points during the handling of the concern consideration should be given to any potential for safeguarding or protection issues to apply, in particular in relation to a child or a vulnerable adult. Any suspicions of abuse or neglect must be reported immediately to the Trust Lead Nurse for Safeguarding for advice on whether an investigation under the Trust Safeguarding policy is required. The Trust Lead Nurse for Safeguarding will work alongside the lead investigator to identify elements of the concern that can still be managed under Putting Things Right and where relevant, areas to form part of a child safeguarding/adult protection investigation.

Where there is any uncertainty as to whether a Putting Things Right investigation should be commenced/continue, the Trust Concerns team will seek legal advice from Legal & Risk Services.

Early resolution meeting

On occasions, a meeting alone may be sufficient to resolve a concern. If there is to be a meeting with the person raising the concern at this stage, the person will be advised what to expect from the meeting, asked how the matter can be resolved for them, and be encouraged to bring a relative or friend, or an advocate to any meetings.

The relevant service division will then make the necessary arrangements for the meeting to take place, and will be responsible for communicating directly with all attendees.

If the meeting is successful and the actions to resolve the concern are agreed by all parties the concern can be considered as resolved and no further investigation may be required. The meeting must be followed-up by a full written response based on the discussions and include confirmation that the concern is now resolved. If any follow-up actions were agreed then the person who raised the concern must be told when they can expect to receive information about the outcome of these actions.

In most cases, a meeting will serve the purpose of establishing some basic information and agreeing a way forward. The concern will then progress to the next stage for investigation.

Undertaking the investigation

Concerns will be investigated by people who have completed the relevant training, are competent, objective, have recognised authority and are credible and respected.

A concern which is raised by a patient/donor or their representative may already have been raised by staff as an incident and an investigation may already be underway. In this situation, the investigation into the incident should continue to ensure that action is taken to reduce the risk of recurrence and improve patient safety, and a plan will be agreed with the concern lead investigator how the incident investigation will feed into the overall investigation.

To support the timely undertaking of an investigation, the Trust Concerns team has developed a number of investigation pathways which advise what action should be taken at each stage of the investigation, and the timescales for undertaking each stage. Copies of the investigation pathways are provided at Appendix 4 and 5.

Obtaining independent clinical or other advice

There may be occasions when the Investigator considers it is necessary to secure an independent opinion on a matter relating to a concern, with a view to resolving it. This may include:

- obtaining a second opinion to aid a patient's/donor or service user understanding of their care;
- where differences in clinical opinions are provided to the investigator;
- Where there is an absence of national or local clinical guidance.
- In instances when an allegation of harm has been made by the patient/service user, and where the Trust is unable to come to a determination itself as to
- Advice is required in relation to issues relating to breach of duty, causation, condition and prognosis and/or quantum to establish whether there is a qualifying liability in respect of which an offer of Redress should be made.

All requests for an independent expert report will be made via the Trust Claims Manager who will seek advice from Legal & Risk Services. A database has been set up by Legal & Risk Services containing the names and details of potential independent expert advisers who may be commissioned by NHS organisations in Wales to provide advice in the circumstances set out above. The database contains experts from across the health professions, disciplines and specialities/sub-specialties.

Considering a qualifying liability

When undertaking an investigation under the Putting Things Regulations, the Trust is required to consider whether a qualifying liability in tort exists. To ensure a multi-disciplinary approach to the identification of a qualifying liability, the Trust has set up a Putting Things Right panel who review investigation findings and make recommendations as to whether a breach of duty occurred, and whether that breach caused or materially contributed to harm suffered by the patient, donor or service user. The Panel is managed by the Trust Concerns team who also maintain records of all cases and decisions made by the panel.

Through the course of the investigation, if a suspected breach of duty is identified which could have led to harm being suffered, the case will be escalated to the Trust Concerns team for referral to the Putting Things Right panel. The Trust Concerns team will liaise with the lead investigator to prepare the case and to agree who will present the findings.

The findings from the panel will then determine the nature of the response to be issued under the Putting Things Right Regulations.

3.2.4 Response

A written response will be required for all concerns managed under the Putting Things Right Regulations. The Trust should make every effort to provide a full and comprehensive response within 30 working days of first receipt of a concern from the person or their representative. In the event this is not possible the person raising the concern must be informed of the reason for delay and an extension will be agreed by the Executive Director Nursing, AHP's and Health Scientists. The response must then be sent as soon as possible and **NO LATER THAN 6 MONTHS** from the date the concern was received.

Under the Putting Things Right Regulations there are a number of responses that may be provided:

- A final response under Regulation 24 will be issued if it is determined that there is no qualifying liability in tort to which the Redress arrangements could apply.
- If the Trust is of the opinion that there is or there may be a qualifying liability in tort worth less than £25,000 an interim response in accordance with Regulation 26 will be issued.

Regulation 24 response

All concerns responses must be comprehensive and address all of the concerns raised (Appendix 7). Trust responses issued in line with Regulation 24 must include the following:

- Summarises the nature and substance of the matter or matters raised in the concern;
- Describes the investigation;
- Contains copies of any expert opinions that the person investigating the concern has received during the investigation;
- Contains an offer to provide in request a copy of any relevant medical records, where this is appropriate;
- Contains an apology, where this is appropriate;
- Identifies what action will be taken in light of the outcome of the investigation;
- Contains details of the complainant's right to notify the concern to the Public Services Ombudsman for Wales and for complaints relating to the Welsh Language, the right to notify the Welsh Language Commissioner;
- Offers the complainant the opportunity to discuss the contents of the response.

Where a concern that alleges harm has or may have been caused, an explanation of the reasons why there is no qualifying liability should be provided. In the case where the financial threshold for Redress would be exceeded, the response should advise that a qualifying liability could not be considered.

Where there may be difficulties in understanding the response, the Trust will make every effort to provide the appropriate support. Where necessary, people raising concerns should be given the opportunity to receive their response in an appropriately accessible format, e.g. Braille, large print, electronically or on audio cassette.

Regulation 26 response

Where an investigation identifies a qualifying liability may exist, which, would attract financial compensation of £25,000 or less, an interim report under Regulation 26 needs to be issued within 30 working days of first receipt of a concern from the person or their representative. The interim report will include:

- A summary of the nature and substance of the issues contained in the concern;
- A description of the investigation undertaken so far;
- A description of why in the opinion of the Trust there is or may be a qualifying liability;
- A copy of any relevant medical records;
- An explanation of how to access legal advice without charge;
- An explanation of advocacy and support services which may be of assistance;
- An explanation of the process for considering liability and Redress;
- Confirmation that the full investigation report will be made available to the person seeking Redress;
- An offer of an opportunity to discuss the contents of the interim report with appropriate staff;

The interim response will be produced by the Trust Claims Manager with support from the lead investigator, and will be approved and signed by the Executive Director Nursing, AHP's and Clinical Scientists subject to the approval process listed below.

Approval of a concerns response

The relevant service director (or designated deputy) will approve and sign all responses for concerns graded level 1 and 2.

The Trust Executive Director Nursing, AHP's and Health Scientists (or designated deputy) will approve and sign all responses for concerns graded level 3 – 5 and responses produced under Regulation 26. Prior to referral to the Executive Director Nursing, AHP's and Health Scientists, the response must first be checked for clinical accuracy by an appropriate clinical lead, and approved by the relevant Service Director. The draft response should also be

shared with any staff named in the draft response or involved in investigation.

Following approval by the divisional director, the draft response letter and a copy of the original concern will be forwarded to the Trust Concerns Team for quality assurance (quality assurance checklist provided at Appendix 8), and for referral to the Executive Director Nursing, AHP's and Health Scientists for final approval.

3.2.5 Redress

If the Trust considers that a qualifying liability exists it should consider an offer of Redress. Redress comprises:

- The making of an offer of compensation in satisfaction of any right to bring civil proceedings in respect of a qualifying liability.
- The giving of an explanation.
- The making of a written apology, and
- The giving of a report on the action which has been, or will be, taken to prevent similar cases arising.

All Redress cases are managed by the Trust Claims Manager and the Trust redress arrangements are provided in detail within the Trust Claims policy. The following section provides an overview of the Trust Redress arrangements and should be read in conjunction with the Trust Claims policy.

The Trust is only able to consider Redress if there is a proven qualifying liability in tort and cannot be offered where there is no qualifying liability in tort. Nor can it be offered if the concern is or has been subject to civil proceedings (i.e. where court proceedings have been issued).

If the person or their representative raising the concern wishes to pursue their claim through the courts and has issued civil proceedings, any consideration of Redress under these Regulations will cease and the person will be informed by the Trust Claims Manager.

Additionally, the Redress arrangements should not be engaged where it is considered at the investigation stage that the amount of financial compensation that would be awarded would exceed the limit currently set at £25,000. In circumstances where it is admitted that there may be a qualifying liability and it subsequently transpires that financial compensation in respect of any qualifying liability will exceed £25,000, the Trust Claims Manager will write to the patient or the patient's representative indicating that it will not make an offer of redress under the regulations.

Where a financial offer of Redress is made, that they only have 9 months to consider the offer. After that time, the Redress arrangements will no longer apply.

Where the Redress arrangements are engaged, legal advice **without charge** to the person who notified the concern will be available, should the person or his representative want it, in relation to:

- the joint instruction of clinical experts including clarification of issues arising from their reports;
- any offer of Redress made
- any refusal to make an offer; or
- any settlement agreement that is proposed.

Legal advice may only be sought from a recognised firm of solicitors with known expertise in clinical negligence and who are accredited by the Law Society or from the Action against Medical Accidents Clinical Negligence Panel. The Trust Claims Manager will share with the person who raised the concern details of accredited firms. The cost of such legal and clinical advice will be funded by the Trust and not the person who raised the concern.

Redress Investigation

In order to determine whether an offer of Redress can be made under the Regulations, it is necessary to undertake a certain amount of additional investigation, which may include the need to address the following matters:

- *Whether there is a qualifying liability*
- *An up to date assessment of condition and prognosis*
- *Compensation Recovery Certificate (CRC)*
- *Quantification of any financial loss*

Should the patient accept the offer of free legal advice, all the evidence referred to above should be provided with the report. The Trust will can contact Legal & Risk Services for advice to ensure they have covered all matters at this stage.

There may be a number of issues on which expert advice may be required, including those relating to causation, condition and prognosis and/or quantum to establish whether there is a qualifying liability in respect of which an offer of Redress should be made. Under the Redress arrangements, any expert required to provide advice should be instructed **jointly** by the person raising the concern and the Trust.

If the person has accepted the offer of free legal advice then their legal adviser should also be allowed input to the instruction of the expert(s).

Communicating the decision

The Trust will communicate its decision to either offer Redress in the form of financial compensation, treatment or combination of both or, if no liability could be established as a result of investigations carried out in accordance with Part 6 of the Regulations, not to make an offer.

The offer of Redress or decision not to make an offer must be communicated to the person raising the concern, or their representative, within 12 months of the first receipt of the concern.

In exceptional circumstances, if the Trust is unable to make a decision within the 12-month

period then the reason for delay and an expected date for the decision will be explained in writing to the person who notified the concern.

If an offer of Redress is made this offer will be by way of a formal agreement. By accepting the offer of Redress the person or their representative must sign a waiver to any right to take the same concern, for which they have accepted Redress, to court.

Redress – Investigation Report

Where a person is seeking Redress, the findings of the investigation must be recorded in an investigation report. The investigation report, will be provided to the person who raised the concern and is seeking Redress within 12 months of first receipt of the concern. In practice the communication of the decision and investigation report will be issued at the same time.

The investigation report will contain:

- copies of any independent expert advice used to determine whether or not there is a liability;
- a statement by the Trust confirming whether or not there is a liability; and
- the rationale for their decision.

It is not necessary for the Trust body to provide a copy of the investigation report:

- before an offer of Redress is made;
- before a decision not to make an offer of Redress is communicated;
- if the investigation of Redress is terminated for any reason; or if the report contains information which is likely to cause the person or other applicant for Redress significant harm or distress.

Where an investigation report cannot be provided within the set 12 month timescale, then the person raising the concern must be informed of the reason for the delay and given an expected date for response

3.2.5 Closure of a concern

Learning

The final investigation response should include the learning identified from the investigation and the specific actions that will be taken to take forward the learning. The concern will only be closed when learning has been considered and a plan has been agreed to address any recommendations. The service divisions will be responsible for ensuring learning is identified and arrangements are in place to deliver and monitor the implementation of action plans.

Reopening concerns

Following issue of the final response, further correspondence may be received when the person raising the concern does not feel that all the issues in the original concern have been addressed. Every effort will be made to address these further issues satisfactory at a local level including, where appropriate, the setting up of a meeting between the person raising the concern and relevant staff, where this has not yet happened. Notes should be taken at meetings and these will be shared with the person raising the concern.

Further letters received from the person raising the concern and dissatisfaction with their final response will be acknowledged within 2 days. If the complainant identifies new issues for investigation, this will be managed as a new concern but will be linked in Datix to the original concern.

In the event that a complainant remains dissatisfied and there are no new issues to investigate then the concern will not be reopened, and he/she will be advised to refer to the Public Services Ombudsman of Wales. Contact details of this must be provided in the acknowledgement or response letter to the person raising the concern.

Local Resolution meeting

All final concern responses provide the person raising the concern with an opportunity to meet to discuss the findings. This can be particularly helpful to discuss any outstanding concerns or to explain areas of the response that may be easier to explain by the professions involved in providing the care.

Where an individual agrees to attend a local resolution meeting the arrangements will be made by the appropriate service division in collaboration with the Trust Concerns team and the individual who raised the concern. The service division will identify the attendees for the meeting and their role within the meeting. The division will also contact the patient or their representative to establish the areas for discussion and to agree the structure for the meeting.

A note taker will also be present to capture a record of the discussion and a copy of the notes will be shared with the patient or their representative for agreeing. The approved notes will then form part of the concerns record and will be attached to the Datix record.

Alternative Dispute Resolution

Some concerns may be resolved by using alternative dispute resolution (ADR), such as mediation, facilitation or conciliation. This approach is often useful when the person who raised the concern is upset or there is unease between the Trust and the person raising the concern. Trust Executive Director Nursing, Allied Healthcare Professionals, and Clinical Scientists will confirm whether alternative dispute resolution should be considered in cases where:

- Staff or practitioners are having difficulty in dealing with the concern,
- When the person who raised the concern feels anxious that the approach of the concerns team/lead person is not impartial,
- When there are misunderstandings with relatives, during the treatment of a patient.

Options for providing Alternative Dispute Resolution will be considered on a case-by-case basis and in partnership with the complainant.

Public Services Ombudsman for Wales

Should a person raising a concern be dissatisfied with the response they are able to contact the Public Service Ombudsman for Wales who will review the matter on their behalf. The Ombudsman can accept complaints through his website, by e-mail, in writing, or over the phone.

The Ombudsman's contact details are:

Phone: 0300 790 0203
Email: ask@ombudsman.wales
Website: www.ombudsman.wales
Address: Public Services Ombudsman for Wales, 1 Ffordd yr Hen Gae, Pencoed, CF35 5LJ.

Any approach to the Ombudsman should be done so promptly as the Ombudsman is only able to consider complaints made to him within one year of the matters complained about (or within one year of when the person raising the concern became aware). All concerns response letters advise of the need to inform the Ombudsman within twelve weeks of receiving a response.

The Ombudsman will determine on a case-by-case basis whether to consider a complaint. However, he will not generally consider a complaint in relation to matters which happened more than a year ago, unless the complaint to the Trust was made within a year and the complaint is referred to the Ombudsman within twelve weeks of this response.

3.3 Supporting Staff in raising concerns

Being the subject of a concern or even reporting a concern as a member of staff can be very stressful. In terms of being the subject of a concern, when an issue is raised, whether by a patient or through a report from a member of staff, the Putting Things Right – Guidance on dealing with concerns should be shared with the staff member involved wherever appropriate. This should be done supportively and staff may want to have a member of their professional association or Trade Union representative present in any meetings.

Consideration should also be given under the HR policies as to whether a staff member may need more proactive support such as counselling.

In terms of staff who report concerns, consideration should also be given as to whether they may require specific support. For any member of staff involved in a concern, their line manager should be involved in any decisions that are taken. Staff may need to prepare reports or evidence during the investigation of the concern and assistance may be required from their local concerns team in completing these tasks. Above all, it is important that staff are kept informed about the progress of the investigation of any concern that they raised or which directly involved them, and the final outcome.

3.4 Confidentiality

Information contained within concerns falls within the definition of personal data contained within the General Data Protection Regulation (2016). The Trust also has duties under the requirements of Caldicott and the Human Rights Act 1998 in respect of the right to privacy and also the Freedom of Information Act 2000 in respect of openness.

Information on concerns should not be disclosed/copied/ shown to any external agency without the permission of the Responsible Officer or nominated deputies. All requests for access to such information should, therefore, be directed to the appropriate manager, or nominated deputy, for the service area that is the subject of the concern, in the first instance.

NHS Wales has adopted the Confidentiality: Code of Practice for Health and Social Care in Wales. All staff have an obligation of confidentiality regardless of their role and are required to respect the personal data and privacy of others. Staff must not access information about any individuals who they are not providing care, treatment or administration services to in a professional capacity. Rights to access information are provided for staff to undertake their professional role and are for work related purposes only.

Further information where required can be found via the Trust Information Governance Policy or via the Trust Information Governance Manager.

3.5 Managing media interest / media communications

The management of media interest/ in relation to incidents, either individually or generally, will be undertaken by the Trust communications department. Staff who are contacted by the media should immediately refer the matter to the Trust communication department for action.

3.6 Dealing with unreasonable demands or behaviour

All concerns should be investigated thoroughly with local resolution being the main aim. All people raising a concern should be dealt with fairly, honestly, consistently and appropriately, including those whose actions could be considered unacceptable. A small number of people can either take up a disproportionate amount of time in dealing with their concerns including complainants who;

- Persist in pursuing a concern where the Trust's procedure has been fully and properly implemented and exhausted.
- Seek to prolong contact by changing the substance of a concern or continually raise new issues and questions whilst the concern is being addressed.
- Are unwilling to accept documented evidence of treatment given as being factual e.g. drug records, medical records, nursing notes.
- Deny receipt of adequate response despite evidence of correspondence specifically answering their questions.
- Do not accept that facts can sometimes be difficult to verify when a long period of time has elapsed. Focus on a trivial matter to an extent which is out of proportion to its significance and continue to focus on this point. (It is recognised that determining what a 'trivial' matter is can be subjective and careful judgement must be used in applying this criterion).
- Have, in the course of addressing a registered concern, had an excessive number of contacts with concerns staff and make unreasonable demands on them.
- In contravention of the Data Protection Act, are known to have recorded face to face meetings and/or telephone conversations without the prior knowledge and consent of the other parties involved.

As a last resort and only after all reasonable measures have been taken to try to resolve concerns following the Trust's concerns procedure, concerns meeting the above criteria will be deemed habitual and/or vexatious. Provided that any legitimate cause for concern has been appropriately investigated and dealt with, and there is documentary evidence of the person's habitual or vexatious behaviour, the Trust Senior Investigation Manager has the authority to stand down the investigation process.

Once a person has been determined as habitual or vexatious, this status may be withdrawn at a later date if, for example, they subsequently demonstrate a more reasonable approach or if they submit a further separate concern for which normal Putting Things Right procedures would be appropriate.

Staff should be advised to contact their manager or a member of the Trust concerns team where they believe a person's behaviour is unacceptably challenging. Any such case should be discussed between the Investigation Lead and the Trust Senior Investigation Manager with reference to the Trust's Violence and Aggression to Staff Policy. Support and advice should be readily available for staff when a complainant's actions go beyond acceptable limits. A minimum of 2 staff should be present when interviewing complainants who may be aggressive or abusive, to ensure safety and security, and to ensure that evidence is properly recorded. Staff should not be expected to tolerate rude, aggressive and threatening behaviour over the telephone and they should inform the complainant that if their unacceptable behaviour continues they will terminate the phone call. (For further details, please refer to Appendix 9)

Where an investigation is still on-going the Chief Executive should write to the person raising the concern setting parameters for a code of behaviour and the lines of communication. Where the investigation is complete, a letter will be sent from the Chief Executive to inform them that correspondence is at an end.

VUNHST
Handling Concerns
Policy
Part 4
Training

4.1 Training

Staff at all levels within the Trust will receive appropriate training to enable them to comply with the Handling Concern policy. The level of training required by individual staff will be arranged according to their specific roles and responsibilities.

Training will be identified via;

- Trust and local training needs analysis (TNA) - a concerns TNA will be maintained by the Trust concern team, and the level of training required for each staff member will be determined by each service division/hosted organisation;
- Trust wide and service level training strategies – Concerns training will be included in organisational training strategies, including Trust induction and mandatory and statutory training programmes;
- Workforce development processes e.g. via the Performance Annual Development Review (PADR) - the Trust will ensure it has sufficient numbers of staff with the skills suitable to both conduct and oversee robust and appropriate investigations as well as to be able to consider issues such as liability and settlement of claims in appropriate cases where the Redress arrangements are engaged.

4.2 Types of Training

Examples of the training provided by the Trust includes:

- ***Induction*** - The Trust will provide concerns awareness training for all staff as part of its corporate induction and will ensure that appropriate training is provided to all staff, tailored to the requirements of the post and the needs of the organisation.

- ***Investigation Training*** – Thorough investigation processes are key to the effective management of concerns. Investigation training will include a range of the following areas:

    - Identifying key issues for investigation;
    - Undertaking timelines;
    - Investigation techniques – including Root Cause Analysis (RCA), Human Factors, 5 Why's;
    - Identification of contributory, causal and mitigation factors;
    - Writing effective letters and responses.

- ***Putting Things Right*** – *S*taff with responsibilities for handling concerns will be supported to attend development programmes in relation to the application of the PTR Regulations. Specific professional groups will receive training, e.g. clinical staff, as part of their Continued Professional Development (CPD).

- ***RLDatix Training*** – The RLDatix system is used across the Trust to report and manage concerns. Training is available for all modules within the RLDatix system including:

- How to report a concerns (complaints & incidents);
- Managing concerns;
- Extracting information/reports from RLDatix;
- Developing Dashboards.

- ***Being Open and Duty of Candour*** – the importance of being open and transparent and the requirements under a Duty of Candour.

- ***Other areas of training will include:***

  - Customer care;
  - Effective communication;
  - Records management and data protection;
  - Legal training/awareness;
  - Safeguarding children and vulnerable adults;
  - Equality & Diversity;

4.3 Methods for delivery of training

The Trust concerns team and the Trust education & development department will support the delivery of concerns training across the Trust. Training will be provided using various tools including presentations, training videos, user guides, E-Learning and face-to-face training. Whilst some training will be developed and implemented in-house, other training will be sourced and facilitated via reputable external providers.

The Trust concerns team will work closely with the service areas to identify and implement concerns training.

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Handling Concerns
Policy
Part 5
Learning from
Concerns

5. Learning from Concerns

The Trust will ensure that it has arrangements in place to review the outcome of any concern that has been subject to an investigation under the Regulations, in order to ensure that any deficiencies in its actions or its provision of services, identified during the investigation, are:

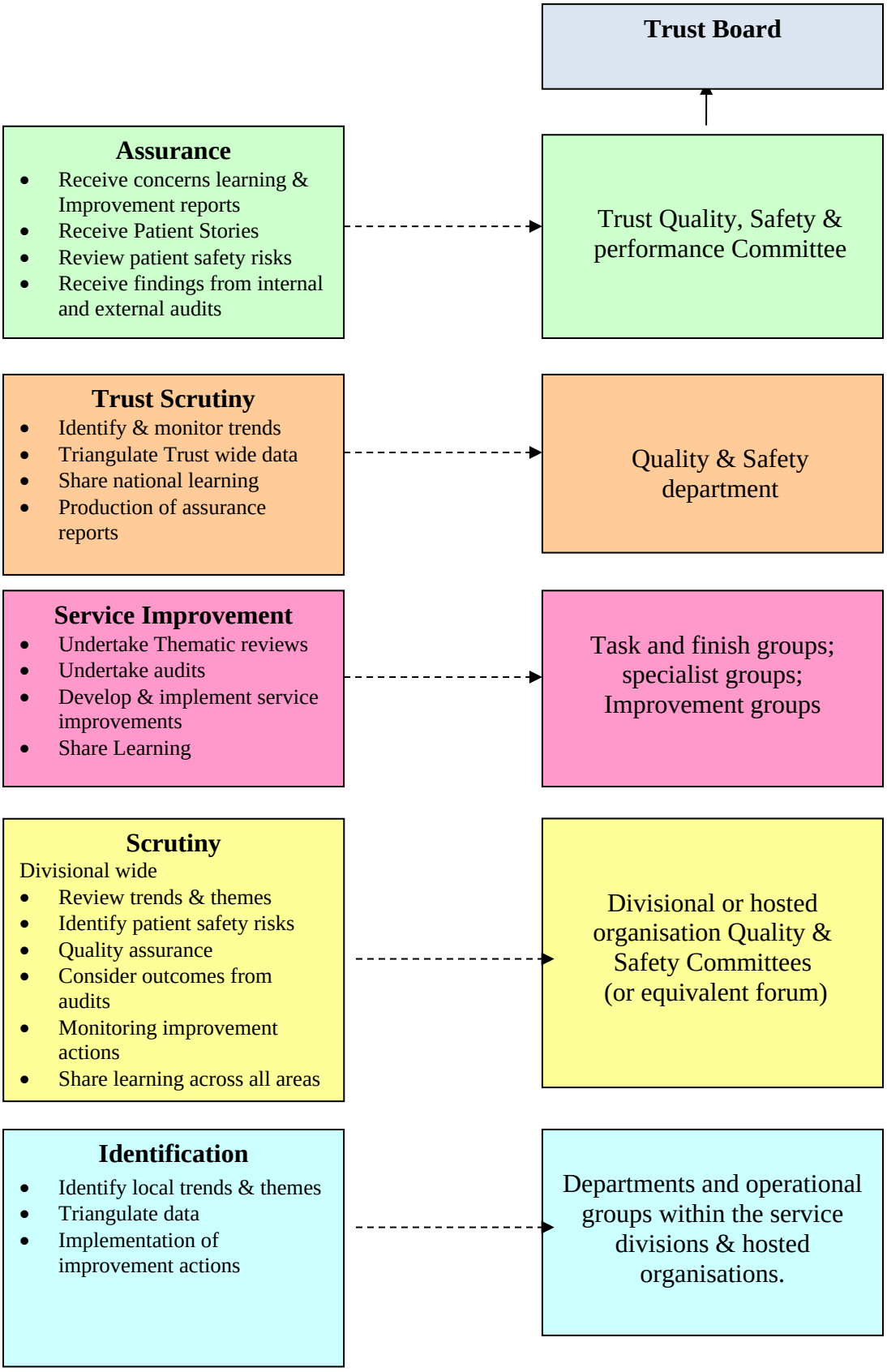
- Recognised, acknowledged, owned and acted upon,
- Where improvements are identified, an improvement plan will be developed using the template action plan in Datix; and
- Reviewed and reported regularly within the service areas and to the Trust Quality, Safety & Performance Committee, to ensure improvements are established minimizing the risk of reoccurrence.

Learning lessons throughout the Trust and taking action to ensure any necessary improvements are made is critical to avoid a reoccurrence. The Trust has a number of mechanisms for sharing learning from patient experience and concerns, eg. Alerts, newsletters, intranet, training, meetings using the multi-disciplinary team forums within the service areas for shared learning and improvement.

The service areas are responsible for having robust learning processes in place and for monitoring the implementation of learning. Learning is reported to the Trist Quality, Safety & Performance Committee via the divisional quality & safety reports and via the Trust quarterly concerns reports.

For concerns where significant learning has been identified the Trust has adopted the completion of a 7 step learning brief which is shared at the Trust Quality, Safety & Performance Committee (Appendix 12)

CONCERNS LEARNING GOVERNANCE FRAMEWORK



VUNHST
Handling Concerns
Policy
Part 6
Monitoring
Arrangements

6.1 Monitoring

All concerns are monitored to ensure the concern has been adequately investigated, remedial actions put in place and lessons have been learned. The Trust Quality, Safety & Performance Committee provides assurance to the Board in relation to the Trust's arrangements for learning from concerns, and that the Trust has robust processes to drive continuous improvement in the quality of services and care. A set of Concern Key Performance Indicators have been approved by the Trust Executive Management Board which are used as the basis for quarterly reporting to the Trust Quality, Safety & Performance Committee. (For further details, please refer to Appendix 11)

For the purposes of monitoring the operation of the arrangements for dealing with concerns Velindre must maintain a record of the following matters:

- Each concern notified to it
- The outcome of each concern
- The time period taken to investigate the concern
- The reasons where any investigation exceeded the 30 day time period
- This record will be reported to the Quality, Safety & Performance Committee on a quarterly basis.

6.2 Annual report

An annual report will be produced using the template provided in the Putting Things Right guidance, to include:

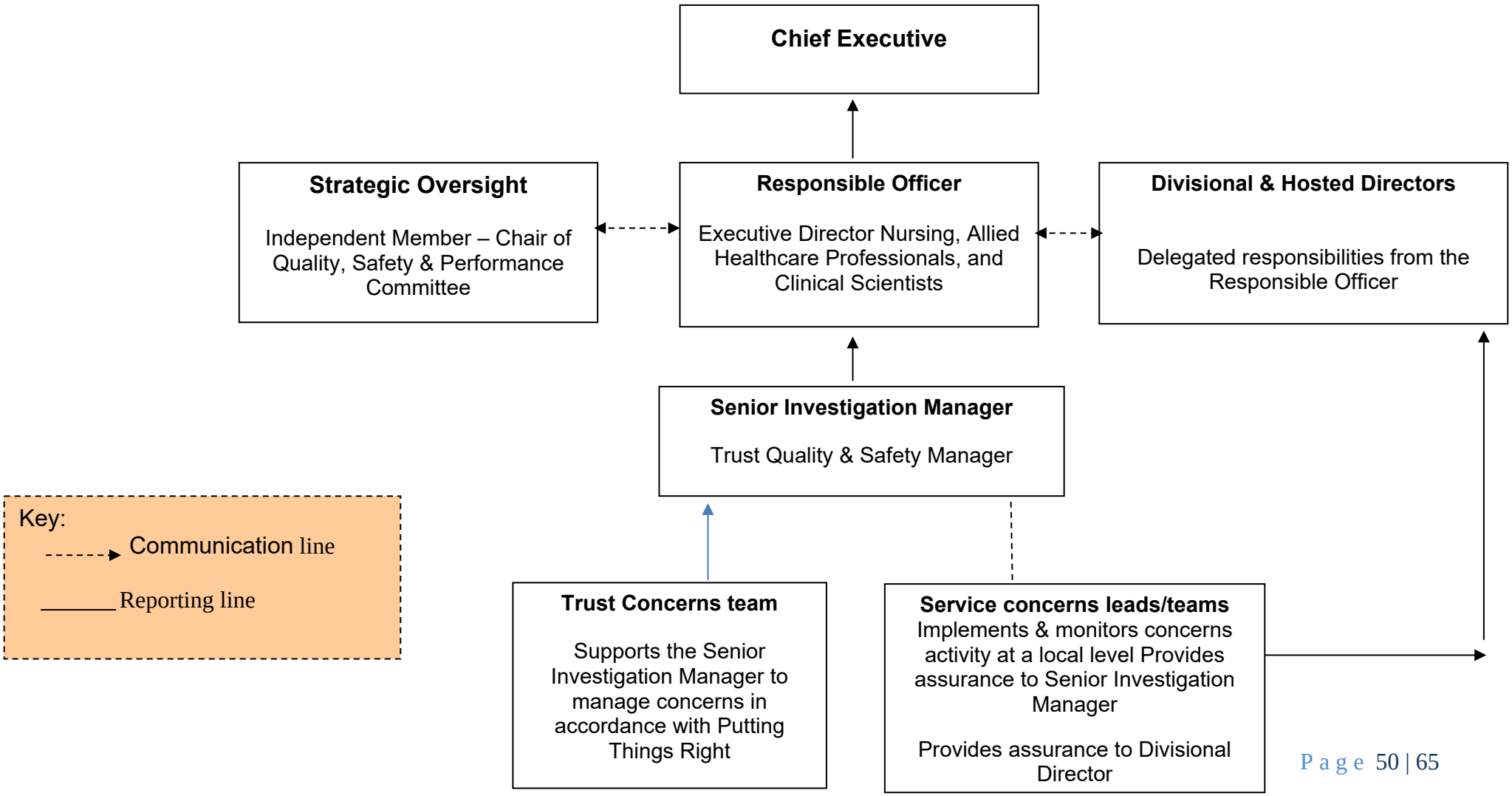
- An overview of arrangements in place for dealing with Concerns
    - Any planned developments
    - Reference to working with other responsible bodies
    - Effectiveness of the arrangements, and how this has impacted on patients/service user and staff
    - An indication of services used, for example expert advice, legal advice, alternative dispute resolution, advocacy services.
- Concerns Statistics
- Themes, trends, and key issues
- Lessons learnt
- Conclusion and priorities for improvement

The report will be placed on the Trust's internet site, and published as part of the organisation's Annual Quality Statement.

VUNHST
Handling Concerns
Policy
Appendices

Appendix 1 - Assurance Framework

Velindre UNHS Trust Handling Concerns – Assurance Framework



Appendix 2 - Trust Concerns Pledge

GIG CYMRU NHS WALES
Ymddiriedolaeth GIG Prifysgol Felindre Velindre University NHS Trust

Valuing Concerns - Our Pledge

Concerns will be valued.

- We will ensure information on raising a concern is widely accessible.
- We will provide support to raise concerns, taking account of individual requirements.
- We will listen to your concerns and review our services to Put Things Right.

Concerns will be dealt with quickly and efficiently.

- We will acknowledge concerns within 2 working days.
- We will aim to resolve concerns at source, or by the end of the next working day.
- Where a concern cannot be resolved at source, we will aim to provide a full response within 30 working days.

Investigations will be proportionate and robust.

- We will assess all concerns and determine the level of investigation required.
- We will undertake robust investigations by trained staff with the required skills and knowledge.
- We will be open and transparent throughout the investigation of the concern.

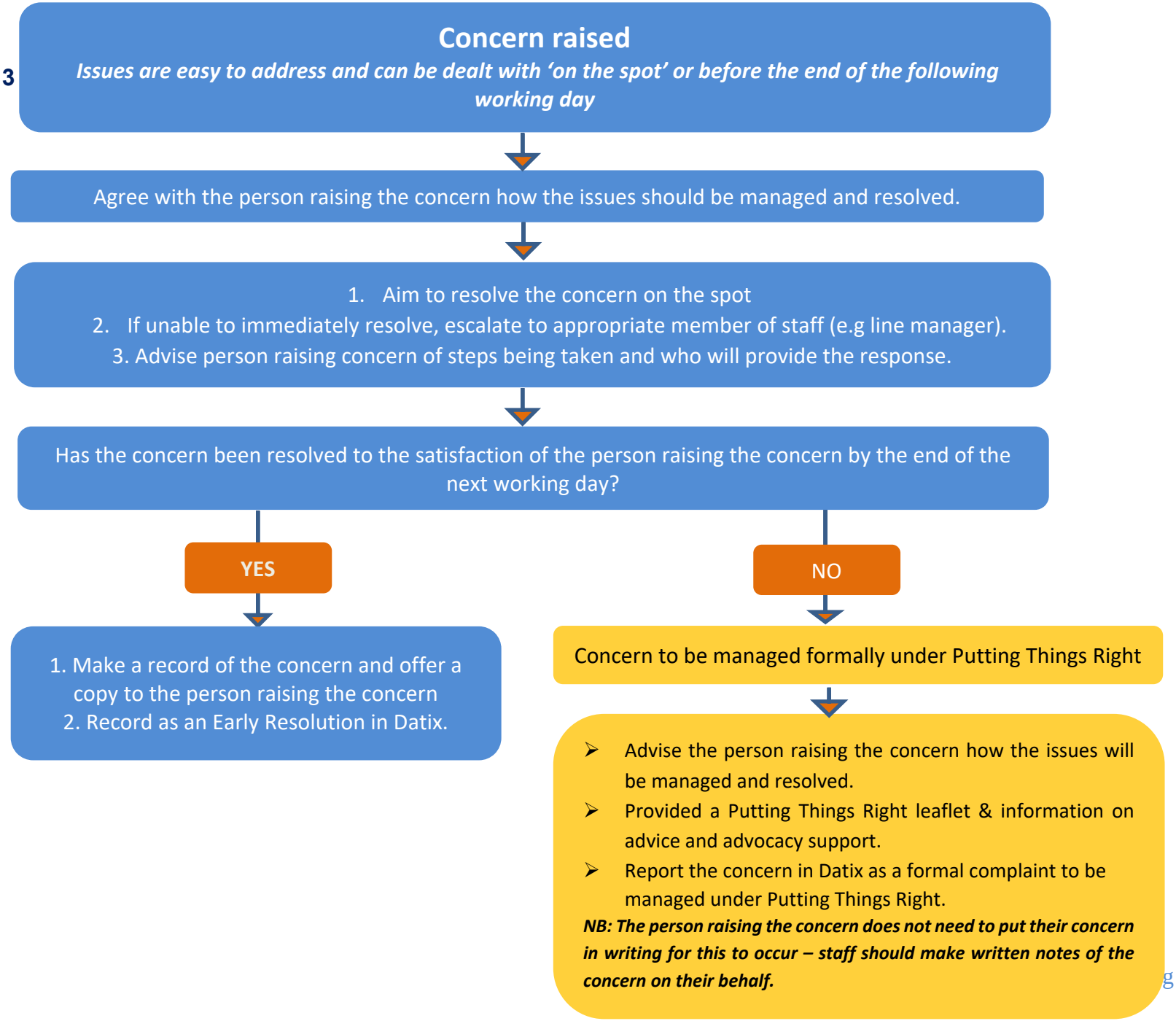
Responses will be easy to read and will address all of the issues.

- We will provide an apology where appropriate.
- We will consider forms of Redress where we have not met our highest standards of care.
- We will advise you of next steps, offer a meeting with key staff and provide details of the Public Services Ombudsman Wales

Learning will be identified to improve our services.

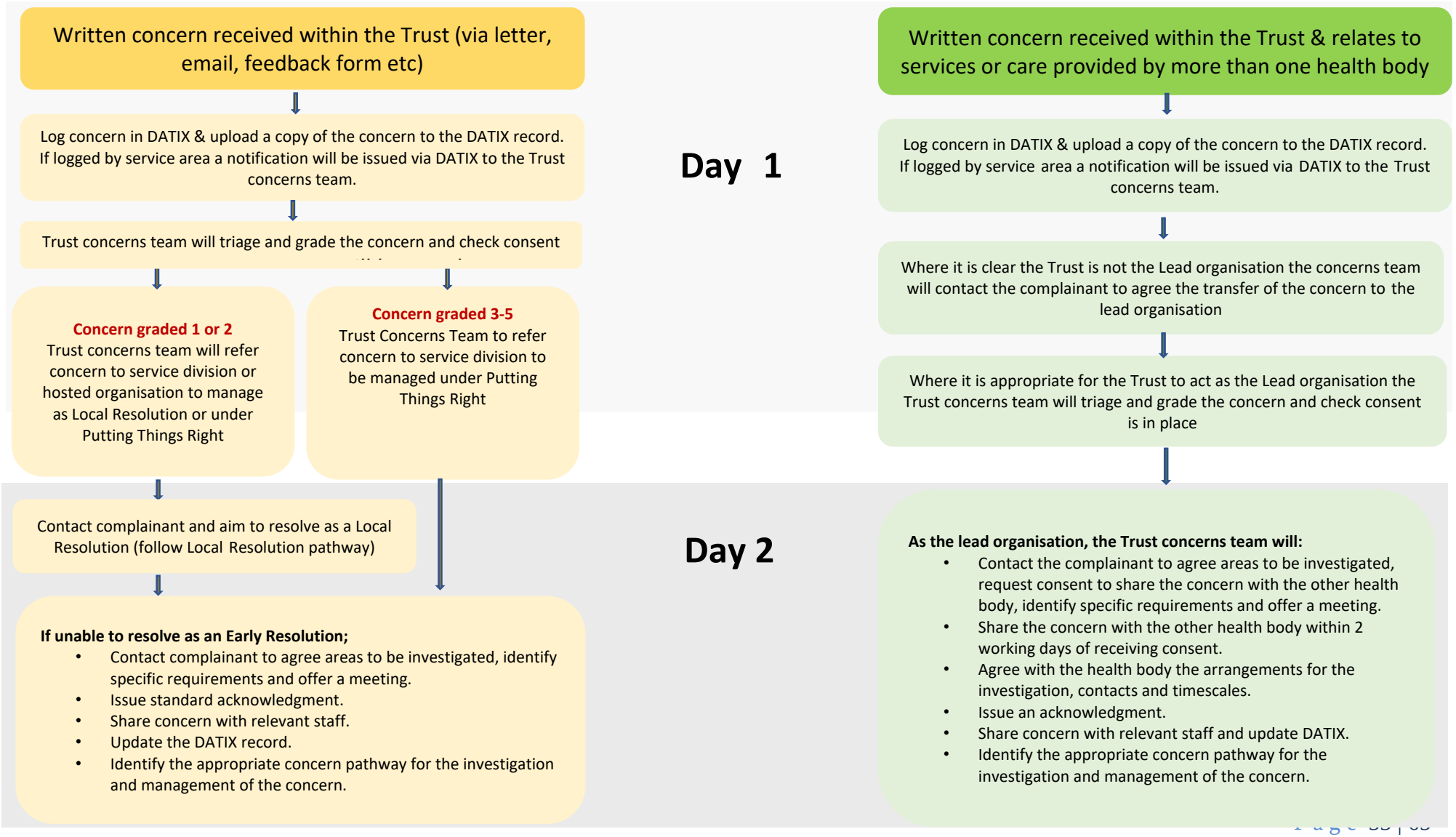
- We will identify and implement learning from concerns raised with us.
- We will let our patients and donors know how their experience has changed the way we deliver services.

Appendix 3


Concern raised
Issues are easy to address and can be dealt with 'on the spot' or before the end of the following working day
Agree with the person raising the concern how the issues should be managed and resolved.
1. Aim to resolve the concern on the spot
2. If unable to immediately resolve, escalate to appropriate member of staff (e.g line manager).
3. Advise person raising concern of steps being taken and who will provide the response.
Has the concern been resolved to the satisfaction of the person raising the concern by the end of the next working day?
YES
NO
1. Make a record of the concern and offer a copy to the person raising the concern
2. Record as an Early Resolution in Datix.
Concern to be managed formally under Putting Things Right
Advise the person raising the concern how the issues will be managed and resolved.
Provided a Putting Things Right leaflet & information on advice and advocacy support.
Report the concern in Datix as a formal complaint to be managed under Putting Things Right.
NB: The person raising the concern does not need to put their concern in writing for this to occur – staff should make written notes of the concern on their behalf.

Appendix 4

Appendix 5 - receipt of written or electronic concerns



Appendix 6

All Wales Concerns Grading Framework

Grade	level of harm	Examples of concerns	Redress Potential
1	**No harm** Impact Prevented – any patient safety incident that had the potential to cause harm but was prevented, resulting in no harm to people receiving NHS funded care **OR** Impact not prevented – any patient safety incident that ran to completion but no harm occurred to people receiving NHS-funded care.	Concerns which normally involve issues that can be easily / speedily addressed, with no harm having arisen. For example: • outpatient appointment delayed, but no consequences in terms of health • difficulty in car parking • Concerns which have impacted on a positive patient experience	Highly unlikely
2	**Low harm** Any patient safety incident that required extra observation or minor treatment and caused minimal harm, to one or more persons receiving NHS-funded care.	• Concerns regarding care and treatment which span a number of different aspects/specialities • Increase in length of stay by 1 - 3 days • Patient fall - requiring treatment • Requiring time off work - 3 days • Concern involves a single failure to meet internal standards but with minor implications for patient safety • Return for minor treatment, e.g. local anaesthetic	Unlikely
3	**Moderate harm** Any patient safety incident that resulted in a moderate increase in treatment and which caused significant but not permanent harm,	• Clinical / process issues that have resulted in avoidable, semi permanent injury or impairment of health or damage that require intervention; • Additional interventions required or treatment / appointments needed to be cancelled;	Possible in some cases

	to one or more persons receiving NHS-funded care.	• Readmission or return to surgery, e.g. general anaesthetic; • Necessity for transfer to another centre for treatment / care • Increase in length of stay by 4 -15 days • RIDDOR Reportable Incident • Requiring time off work 4 -14 days • Concerns that outline more than one failure to meet internal standards • Moderate patient safety implications • Concerns that involve more than one organisation	
4	**Severe harm** Any patient safety incident that appears to have resulted in permanent harm to one or more persons receiving NHS-funded care.	• Clinical process issues that have resulted in avoidable; semi-permanent harm or impairment of health or damage leading to incapacity or disability; • Additional interventions required or treatment needed to be cancelled; • Unexpected readmission or unplanned return to surgery; • Increase in length of stay by >15 days • Necessity for transfer to another centre for treatment / care • Requiring time off work >14 days • A concern, outlining non compliance with national standards with significant risk to patient safety • RIDDOR Reportable Incident	Likely in many cases
5	**Death** Any patient safety incident that appears to have resulted in permanent harm to one or more persons receiving NHS-funded care, orAny patient safety incident that directly resulted in the death (or severe harm) of one or more persons receiving NHS-funded care.	• Concern leading to unexpected death, multiple harm or irreversible health effects • Concern outlining gross failure to meet national standards • Normally clinical/process issues that have resulted in avoidable, irrevocable injury or impairment of health, having a lifelong adverse effect on lifestyle, quality of life, physical and/or mental well-being. • Clinical or process issues that have resulted in avoidable loss of life • RIDDOR Reportable Incident	Very Likely

Appendix 7 - Guidance for preparing a response

The response

- Thank the person for their feedback regardless of its content.
- Provide condolences where appropriate.
- Summarise the nature and substance of the matter or matters raised in the concern.
- Describe the investigation undertaken by the Trust; specifically providing details under each aspect of the Regulatory requirements.
- Refer to copies of any expert opinions that the investigator(s) received during the investigation.
- Offer a copy of any relevant medical records.

Provide apology

- Provide a heartfelt apology which is meaningful for the circumnstances.
- provide an offer to discuss the content of the response.
- Identify what action, if any, the Trust will take in light of the outcome of the investigation.

Content

- Provide a response to each issue
- Be specific and factul.
- Advise what went wrong, why it went wrong and what action will be taken to prevent it occurring in the future.
- Where the Concern includes an allegation that harm has or may have been caused, but the Trust is of the view that there is no qualifying liability, the Trust must detail the reasons for this view in the response.

Signposting

- Signpost other relevant services and explain their purpose.
- Provide contact details, opening times, and a named person for signposted services.
- Offer support from the Trust e.g via clinical nurse specialist etc
- Contain details of the right to notify the concern to the Public Services Ombudsman for Wales with the relevant paragraph indicating 12 week timescale for contacting Ombudsman.
- Include Community Health Council Advocacy support details.

Sign-off

- The final response must be signed off by the Director for the area.
- Where clinical information is included ot muct be approved by the appropriate clinical lead. e.g Clinical Direcotr or SST lead
- Offer the person the opportunity to discuss the contents of the response further;
- Where the investigation determines that a qualifying liability does or may exist then the redress requirements must be included.
- Final check- Would you be satisfied receiving this response?

Appendix 8 - Quality Assurance for Concerns Responses

Quality Assurance Questions	Yes/No
Has a thorough and robust investigation, answering each of the key questions agrees at the outset, been undertaken? Are there any gaps or inconsistencies which need to be addressed?	Yes/No
Has the investigation been initiated in a timely way? When did it happen, when did the organization find out about it, when did the investigation start? Have there been any delays?	Yes/No
Are there any questions which the reader will have which have not been answered in the report?	Yes/No
Did the patient/family ask for any questions to be included in the investigation and have these been answered?	Yes/No
Has there been appropriate constructive challenge to the investigation from independent individuals with sufficient expertise of the issues being analysed?	Yes/No
Is there a clear consistent flow of information, from the timeline and care / service delivery problems, analysis of contributory factors through to lessons being learned, recommendations and actions?	Yes/No
Will the information in the report make sense to someone who doesn't work in healthcare? For example, clinical jargon has been removed or explained.	Yes/No
Is the language used appropriately sensitive to the patient and / or their family be reading the report?	Yes/No
Are the conclusions reached justified by the information and analysis in the report?	Yes/No
Does the root cause identify the early, underlying cause(s) of the incident?	Yes/No
Will the actions in the action plan reduce the risk of the incident recurring in the same set of circumstances?	Yes/No
Are the actions in the action plan SMART?	Yes/No
Are there actions in the plan to monitor that the learning has been embedded in the organization?	Yes/No
Are the action timescales appropriate and realistic?	Yes/No
Has the action plan been recently updated so the current status of actions is clear?	Yes/No
Are the appropriate plans to share the learning across the organization?	Yes/No
Is the report appropriately formatted and spell checked, reflective of the work that has gone into the investigation and the importance of the investigation to the organization?	Yes/No
Is the report consistent with others from the organisation?	Yes/No
Has learning from the previous investigations been incorporated or is there evidence that previous learning has not been embedded?	Yes/No
Will the output of this investigation make a difference to patient safety or patient experience?	Yes/No

Appendix 9 – Dealing with unreasonable demands

Dealing with People who make unreasonable demands relating to concerns

People raising concerns have the right to be heard, understood and respected. However, there may be times when the distress of a situation leads to the person raising a concern to act out of character and become determined, forceful, and angry, and make unreasonable demands of staff or (rarely) use threatening behaviour and even resort to violence.

People who are unhappy about the outcome of the investigation of their concern, despite being advised about other avenues available to them, may also show aggression towards staff or continue to persistently pursue their concerns by phoning, writing or in person. The following steps may be considered and further information is available in the Putting Things Right Guidance- Appendix L

Action Required
Notify and seek support from the Concerns Team

The Concerns Team will -

Put an arrangement in place whereby calls can only be received at set times on set days and one member of staff will be allocated as a contact point for written or verbal communication.

Restrict contact to written correspondence only.

Advise to only make appointments to meet with the complainant if there is no other way of communicating with them. Also advise to never meet them alone and always in working hours within a NHS facility where other staff are available for support. If there are threats or use of physical violence the incident should be reported to the police.

At each stage, it should be made clear to the person what actions are being taken and why, and outlined in a letter to the complainant from the concerns team.

Where previous concerns have been addressed, the complaints file should be closed and if new issues arise it should be explained that this will be managed as a new complaint. Any new correspondence will be acknowledged and the PTR Regulations followed in the usual manner.

Reporting Violent or Aggressive Behaviour Incidents where violence and/or aggression occur must be reported and recorded via local reporting mechanisms.

Appendix 10a - Local Resolution Concern Pathway

Local Resolution – Concern Pathway

Day 0

Managing the Concern

- Concern may be relating to a single issue and resulted in inconvenience or a poor experience but not harm.
- Listen to the concerns raised, **Say Sorry** and acknowledge what has happened. Consider if any immediate make safe action is required.
- Stay calm, polite, use the person's name, make eye contact and speak calmly. Remember the person may be prompted by distress, bereavement, anxiety and frustration
- Establish the nature of the concerns and what the complainant would like as a resolution.
- Involve appropriate staff to help resolve the concerns.
- Report the concern into Datix as soon as you are able to.

Day 0

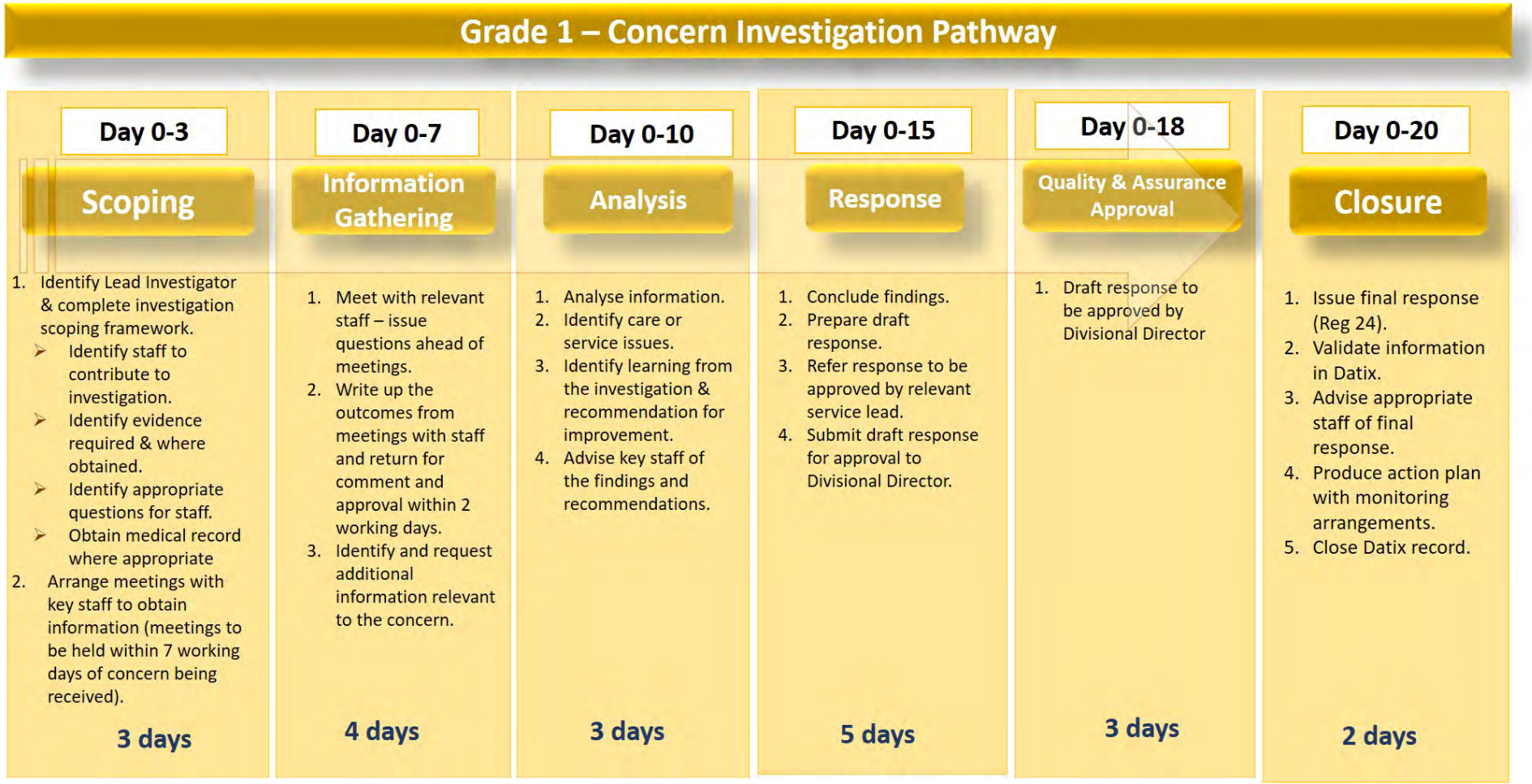
Day 0-2

Fully Resolve

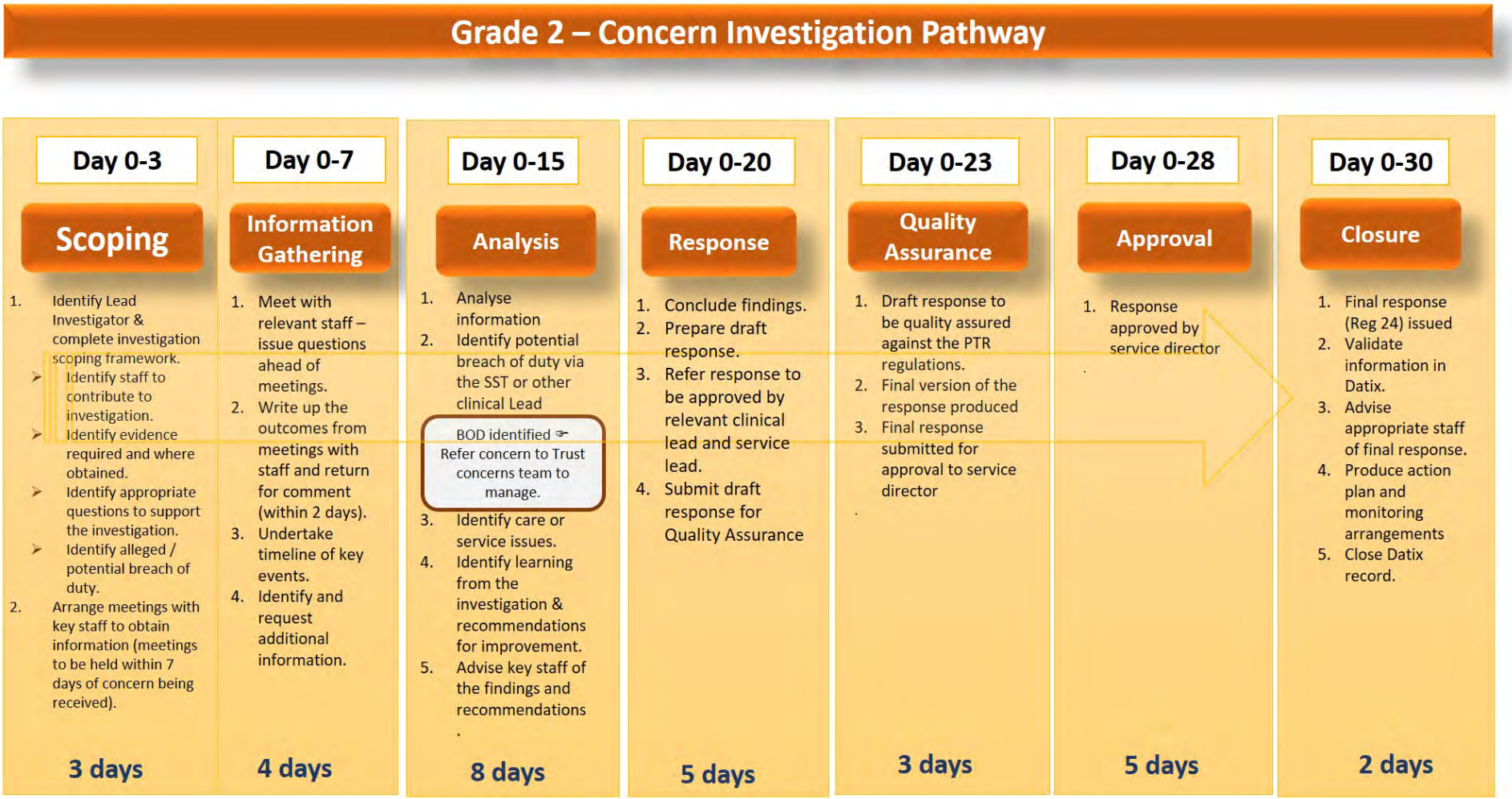
- If the concern cannot be resolved immediately, ensure the complainant is kept up to date of progress.
- Maintain a record of the investigation undertaken in Datix
- Ensure the concern has been resolved by the end of the next working day to the satisfaction of the complainant.
- provide a response to the complainant (if requested) or update the Datix record with actions taken.
- If unable to resolve by the end of the next working day the concern must be managed under Putting Things Right.

By end of the next working day

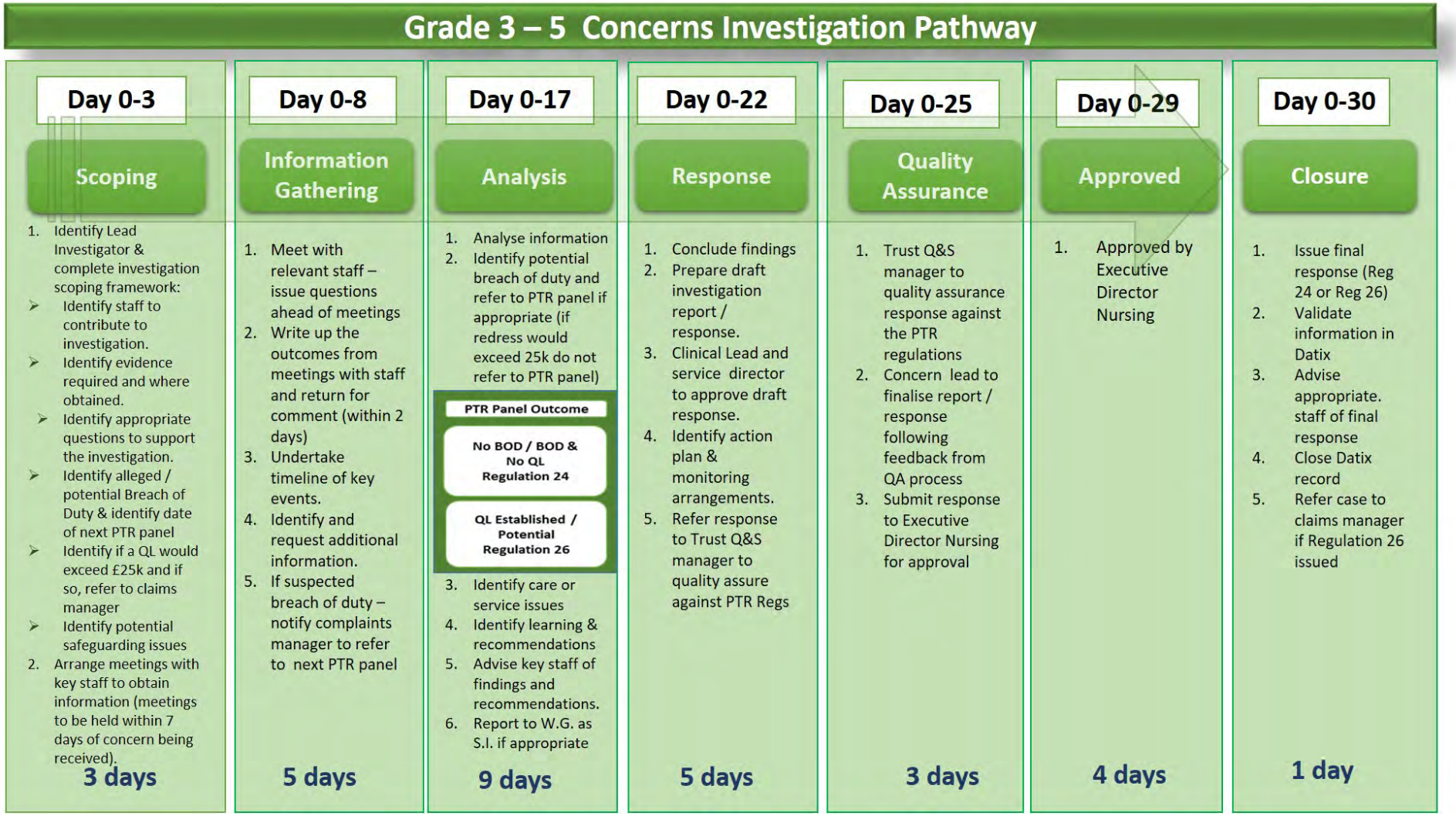
Appendix 10b – Grade 1 Concern Investigation Pathway



Appendix 10b – Grade 2 Concern Investigation Pathway



Appendix 10b – Grade 3-5 Concern Investigation Pathway



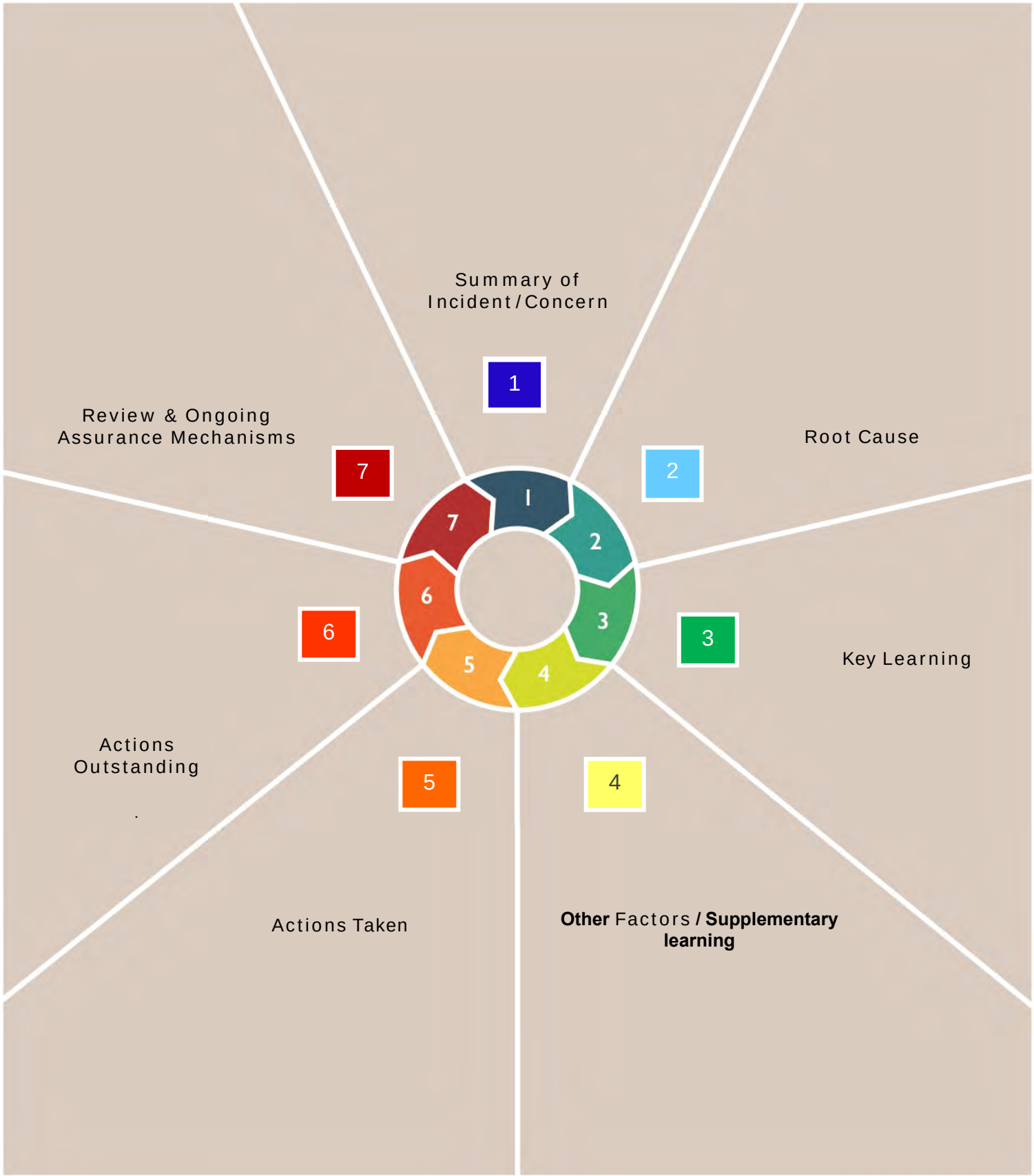
Appendix 11 - Concerns Pledges and KPIs

Pledge	Standard	Criteria	KPI	Assessed
Concerns will be valued	Raising a concern will be easy and information will be widely accessible	All concerns will be recorded and monitored	100%	Quarterly
		The method for notifying the concern will be recorded to ensure concerns can be raised via different routes.	100%	Quarterly
	Put the complainant at the centre of the process and provide support for individual requirements	Concerns raised in Welsh will be recorded and managed within the Welsh Language	100%	Quarterly
		Contact will be made with each person raising a concern to identify any support requirements and offer advocacy support	100%	Quarterly
	Listen to concerns and treat everyone with dignity and respect	Concerns themes and trends will be recorded and monitored	100%	Quarterly
		Reduction in the same themes reported from the previous year where learning was identified	20% reduction	Quarterly
Concerns will be dealt with quickly and efficiently	Acknowledge all concerns within 2 working days	All concerns will receive an acknowledgement (verbal or written) within 2 working days	100%	Quarterly
	Aim to resolve concerns at source, or by the end of the next working day	Percentage of all concerns received that are dealt with as an Early Resolution (ER)	65%	Quarterly
		Percentage of level 1 concerns received which were resolved as an Early Resolution (ER)	80%	Quarterly
	Responses required under PTR will be provided within the legislative timescales	Percentage of all concerns managed under PTR responded to within 30 working days	85%	Quarterly
		Percentage of concerns managed under PTR responded to within 6 months	100%	Quarterly
Investigations will be proportionate and robust	Concerns will be assessed to determine the level of investigation required	All concerns will be graded at the start and the end of the investigation	100%	Quarterly
		The percentage of closed concerns graded < level 3 following investigation	90%	Quarterly
	Undertake robust investigations by trained staff	Achieve a low percentage of re-opened concerns against those closed in the corresponding period	<10%	Quarterly
		An annual reduction in the number of cases investigated by Public Service Ombudsman Wales (PSOW)	20% reduction	Annual
		Compliance with the timescales for the PSOW request for information (20 working days)	100%	Quarterly
		Number of cases upheld by PSOW	0	Annually
		Concerns training programme in place	N/A	Quarterly

Pledge	Standard	Criteria	KPI	Assessed
	Being open and transparent throughout the investigation	For all PTR cases, an update on the investigation progress will be provided at day 15 and at intervals agreed with the	100%	Quarterly
Responses will be easy to read and address all the issues	Provide an apology where required and confirm what has been done to Put Things Right	Identify for all concerns whether the concerns were upheld, partially upheld or not upheld	100%	Quarterly
		Identify and report key issues from concerns that have been upheld or partially upheld	N/A	Quarterly
	Redress will be considered where appropriate	Number of cases being managed under Redress where a QL has been identified	<5% of concerns	Quarterly
		Percentage of cases where an offer of Redress has been accepted	100%	Annually
		Number of complaints resolved under PTR Regulation 24 that have subsequently been received as a claim	<5%	Annually
	Offer concerns meetings and details of the PSOW	Number of local meetings held	N/A	Quarterly
Learning will be implemented to improve	Identify and implement learning from concerns raised	Implement recommendations from investigations in accordance with agreed action plans	100%	Quarterly
		Identify link between learning from concerns and local audit plans	N/A	Quarterly
	Updating patients and donors as to how learning has improved services	Produce concerns performance reports and websites to be updated to include learning from concerns	N/A	Quarterly

Appendix 12 – 7 Step Learning Brief

7 Step Learning Brie



TRUST BOARD

Support for the All Wales Positron Emission Tomography (PET) Programme Business Case.

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Mark Osland, Executive Director of Finance
PRESENTED BY	Mark Osland, Executive Director of Finance
EXECUTIVE SPONSOR APPROVED	Mark Osland, Executive Director of Finance & Informatics

REPORT PURPOSE	FOR APPROVAL

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Chief Executive Group	18/05/2021	ENDORSED FOR APPROVAL

ACRONYMS	
PET	Positron Emission Tomogrophy
PETIC	Positron Emission Tomogrophy Imaging Centre

AWPET	All Wales PET Advisory Group
WSAC	Welsh Scientific Advisory Committee
NISPB	National Imaging Strategic Programme Board

1. SITUATION/BACKGROUND

PET-CT has become a central diagnostic tool in the management of cancer, and increasingly in many non-cancer conditions and as such demand for this scanning service is rapidly increasing. However in Wales scanning activity is low compared to the rest of the UK, Europe and other countries.

Shortly after the Welsh Government published the Imaging Statement of Intent (March 2018), the All Wales PET Advisory Group (AWPET) and the Welsh Scientific Advisory Committee (WSAC) produced a report "Positron Emission Tomography (PET) in Wales – Overview and Strategic Recommendations" (November 2018). One of its five key recommendations was that WHSSC should be commissioned to produce a Programme Business Case for PET-CT capacity in Wales that considers increased demand projections, estates, staffing requirements and research.

In March 2019, the Director General, Health and Social Service/NHS Wales Chief Executive, endorsed the 2018 AWPET/WSAC report recommendations and outlined the expectations for NHS Wales to collaborate on their implementation. As there was recognition that additional capital investment would be required to develop the service, the Director General requested that WHSSC develop the PBC, with support from the National Imaging Strategic Programme Board (NISPB), to guide the development of future PET service provision for the whole of Wales.

WHSSC has led the All Wales PET Programme development and produced a Programme Business Case (PBC) which justifies the rationale to invest in the All Wales PET service.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

Without investment, the PET service in Wales would likely be served by increasing expensive external providers, using mobile scanners, and the Welsh NHS would miss

the opportunity to build a future-proofed network of centers of excellence. Continuing to meet growing demand by relying on external providers is likely to cost an additional £25.6 million p.a. revenue by 2031/32. This approach would not only prove expensive but would deliver no improvements to the existing service structure.

Consequently the resulting PBC assesses future Welsh PET scanning demand needs and focuses on the surrounding infrastructure of PET scanning delivered by the NHS. As such, it provides a ten-year strategic view of service delivery, in addition to describing the business change and technical aspects of implementation.

Following a robust assessment of options, the PBC identifies the preferred way forward which involves investing in four fixed PET-CT scanners which will reduce the cost pressure by £6.8 million p.a. by providing sufficient capacity for NHS Wales and PETIC to meet demand. WHSSC therefore is seeking capital funding of £24.881 million from Welsh Government over five years to invest in equipment and building works required to deliver the preferred way forward. The revenue costs required to fund the increase in PET scanning capacity in the future, set out in the business case, will be funded by the commissioning health boards through the usual Integrated Commissioning Plan process.

At their meeting on the 18 May 2021 the Chief Executive Group of the NHS Wales Health Collaborative confirmed their support for the All Wales PET PBC and the Chief Executives agreed to a request for letters of support from each of their organisations to accompany submission of the PBC to Welsh Government.

The attached short document at Appendix 1 has been drafted by WHSSC as a standard briefing paper for each NHS organisation to use during their own internal governance routes, whilst seeking formal approval to issue a letter of support for the PBC.

IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below)
	There is strong evidence that PET scanning facilities enhance the quality and effectiveness of diagnosis.
RELATED HEALTHCARE STANDARD	Effective Care
	If more than one Healthcare Standard applies please list below:

EQUALITY IMPACT ASSESSMENT COMPLETED	Yes
	Equality Impact assessments will be undertaken during the submission of the individual business cases for each site
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	All resource requirements to be fully met by Welsh Government and the Health Boards

3. RECOMMENDATIONS

3.1 The Board are asked to **APPROVE** the issuing of a letter of support from Velindre to accompany the PBC submission to, Welsh Government.

Ymddiriedolaeth GIG
Prifysgol Felindre
Velindre University
NHS Trust

Appendix 1

Pwyllgor Gwasanaethau Iechyd
Arbenigol Cymru (PGIAC)
Welsh Health Specialised
Services Committee (WHSSC)

Cover paper for Health Board and Velindre NHS Trust Colleagues on the All Wales Positron Emission Tomography Programme

May 2021

Situation:

On review of the full business case, the Chief Executive Group (CEG) of the NHS Wales Health Collaborative confirmed their support for the All Wales Positron Emission Tomography (PET) Programme Business Case (PBC) on 18 May 2021. At the meeting, the Chief Executives agreed to a request for letters of support from their organisations (being the seven health boards and Velindre NHS Trust) to accompany submission of the PBC to Welsh Government (WG).

The Capital, Estates and Facilities team at WG indicated that they were willing to accept the PBC immediately following this endorsement by CEG. As such, the PBC has been submitted.

Background:

The mandate for this Programme was issued by Andrew Goodall in March 2019, following publication of key strategic reports on both PET and the wider imaging provision in Wales. WHSSC host the Programme Board for this strategic Programme and have used HM Treasury Green Book methodology and extensive engagement to develop the All Wales PET PBC.

The preferred way forward for the programme seeks to have four Projects that will, over the course of five years, update the existing fixed facility at Cardiff, replace

mobile scanners with fixed scanners at the Swansea and North Wales sites and at a fourth location (to be defined).

The PBC is primarily a capital funding request business case (£24.881 million) and has focused on the supporting infrastructure for PET-CT service delivery over the next ten years, thus ensuring deliverability and sustainability is at the heart of the overall strategic approach.

Assessment:

There has been wide engagement on the Programme and there is representation from each Health Board and Velindre NHS Trust on the PET Programme Board, in addition to regular updates at the NIPSB. There will be no fundamental change to any referral pathways and the revenue costs required to fund the increase in PET scanning capacity in the future, set out in the business case, will be funded by the commissioning health boards through the usual Integrated Commissioning Plan process.

Recommendation:

We kindly request that Boards issue a letter of support to accompany the PBC submission to WG, addressed to Sian Lewis (Programme SRO). We understand from discussions at the CEG meeting (18 May) that some Health Boards may be able to expedite this. To facilitate the process, we ask that a letter of support is issued as soon as possible, but no later than the week following your July Board meeting.

Programme Business Case
for an All Wales Positron Emission Tomography (PET) Service

May 2021

GIG CYMRU NHS WALES

Pwyllgor Gwasanaethau Iechyd Arbenigol Cymru (PGIAC)

Welsh Health Specialised Services Committee (WHSSC)

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The Commercial Case
The Financial Case
The Management Case

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1.3 Strategic Context
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Document control

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V0.1	08.05.2021	Collated version of PBC generated	Archus

Glossary of Abbreviations and Acronyms

ABUHB	Aneurin Bevan University Health Board
AML	Alliance Medical
ARSAC	Administration of Radioactive Substances Advisory Committee
AWPET	All Wales PET Advisory Group
BCUHB	Betsi Cadwaladr University Health Board
CRB	Cash Releasing Benefit
CSFs	Critical Success Factors
CT	Computerised Tomography
CUBRIC	Cardiff University Brain Research Imaging Centre
CTMUHB	Cwm Taf Morgannwg University Health Board
CVUHB	Cardiff and Vale University Health Board
DHCW	Digital Health and Care Wales
EA	Environment Agency
EPSRC	Engineering and Physical Sciences Research Council
FBC	Full Business Case
HDUHB	Hywel Dda University Health Board
GDNF	Glial cell-derived neurotrophic factor
GIRFT	Getting It Right First Time
GMP	Good Manufacturing Practices
HCA	Health Care Assistant
HEIW	Health Education and Improvement in Wales
IMP	Investigational Medicinal Product
IPEM	Institute of Physics and Engineering in Medicine
LSHW	Life Sciences Hub Wales
MA	Marketing Authorisation
MDT	Multi-Disciplinary Team
MHRA	Medicines and Healthcare Products Regulatory Agency
MPE	Medical Physics Expert
MRC	Medical Research Council
MRI	Magnetic Resonance Imaging
NCRI	National Cancer Research Institute
NIAW	National Imaging Academy Wales
NIPSB	National Imaging Strategic Programme Board
NRW	National Resources Wales
OBC	Outline Business Case
ONS	Office for National Statistics

PACS	Picture Archive System
PBC	Programme Business Case
PET	Positron Emission Tomography
PET-CT	Positron Emission Tomography combined with Computerised Tomography
PETIC	Positron Emission Tomography Imaging Centre
PTHB	Powys Teaching Health Board
QA	Quality Assurance
RCR	Royal College of Radiologists
RCP	Royal College of Physicians
RD&I	Research, Development and Innovation
RIS	Radiology Information System
RISPP	Radiology Information System Procurement Programme
RPA	Radiation Protection Adviser
RWA	Radioactive Waste Adviser
SLA	Service Level Agreement
SOC	Strategic Outline Case
SBUHB	Swansea Bay University Health Board
SPB	Strategic Programme Board
SPECT	Single-Photon Emission Computerised Tomography
SRO	Senior Responsible Officer
SWOT	Strengths Weaknesses Opportunities Threats
UHB	University Health Board
VUT	Velindre University NHS Trust
WSAC	Welsh Scientific Advisory Committee
WHSSC	Welsh Health Specialised Services Committee
WTE	Whole Time Equivalent
18F-DOPA	Fluoro-3,4-dihydroxyphenylalnine - radiopharmaceutical
18F-FDG	Fluorodeoxyglucose – radiopharmaceutical
18PSMA	Prostate-specific membrane antigen – radiopharmaceutical

Executive Summary

Introduction

PET-CT has become a central diagnostic tool in the management of cancer, and increasingly in many non-cancer conditions. Its role and the evidence base continue to evolve. Although it is a relatively expensive investigation, when used appropriately, PET-CT can significantly improve clinical decision making, particularly with respect to the appropriate use of complex and expensive specialist treatments.

This is supported by an increasing body of high-quality evidence outlining the contribution of PET to improved patient outcomes. There are many studies that demonstrate the role PET-CT has in accurately determining the staging of certain cancers and subsequent treatment plans, which enables reduction of inappropriate patient management and allows for best prognosis and patient care.

Demand for PET-CT is growing with England realising an approximate 18% rise in demand per annum. However, in Wales, scanning activity levels are low compared with the rest of the UK. It is estimated that in 2020 Wales was performing approximately 33% of the PET scans per head of population compared to England. In addition, NHS Wales has a list of funded indications for PET-CT which is limited compared to England and Scotland. The picture becomes bleaker when comparing performance with the rest of Europe and beyond.

Continuing to meet growing demand by relying on external providers is likely to cost an additional £25.6 million p.a. revenue by 2031/32. This approach would not only prove expensive but would deliver no improvements to the existing service structure. Indeed, without investment, the PET service in Wales would likely be served by expensive external providers, using mobile scanners, and the Welsh NHS would miss the opportunity to build a future-proofed network of centres of excellence.

Shortly after the Welsh Government published the Imaging Statement of Intent (March 2018), the All Wales PET Advisory Group (AWPET) and the Welsh Scientific Advisory Committee (WSAC) produced a report “Positron Emission Tomography (PET) in Wales – Overview and Strategic Recommendations” (November 2018). One of its five key recommendations was that WHSSC should be commissioned to produce a Programme Business Case for PET-CT capacity in Wales that considers increased demand projections, estates, staffing requirements and research.

These reports clearly demonstrates that much like other imaging modalities in Wales, there is an obvious and clear need to address the multifactorial issues facing the PET service including staffing, equipment age, facilities and research, development and innovation (RD&I).

In March 2019, the Director General, Health and Social Service/NHS Wales Chief Executive, Welsh Government endorsed the 2018 AWPET/WSAC report recommendations and outlined the expectations for NHS Wales to collaborate on their implementation. As there was recognition that additional capital investment would be required to develop the service, the Director General requested that WHSSC develop the PBC, with support from the National Imaging Strategic Programme Board (NIPSB), to guide the development of future service provision for the whole of Wales.

WHSSC has led the All Wales PET Programme development and produced this Programme Business Case (PBC) which justifies the rationale to invest in the All Wales PET service.

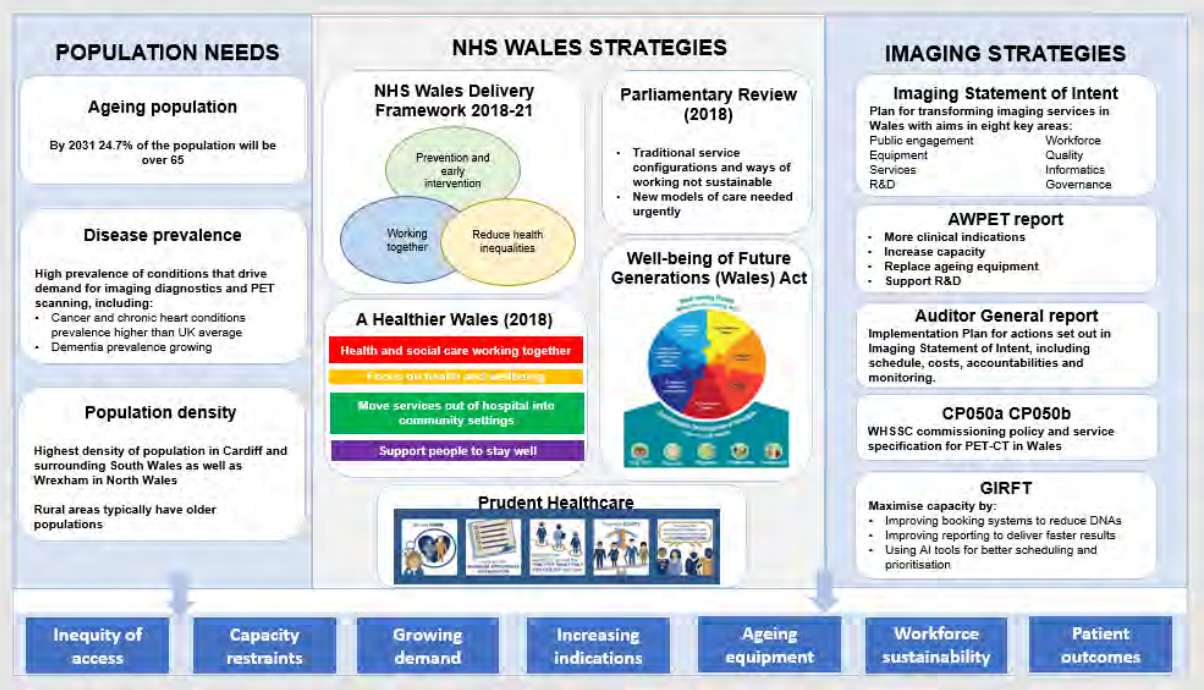
The resulting PBC assesses future Welsh PET scanning demand needs and focuses on the surrounding infrastructure of PET scanning delivery. As such, it provides a ten-year strategic view of service delivery, in addition to describing the business change and technical aspects of implementation.

Following a robust assessment of options, the PBC identifies the preferred way forward which involves investing in four fixed PET-CT scanners which will reduce the cost pressure by £6.8 million p.a. by providing sufficient capacity for NHS Wales and PETIC to meet demand. WHSSC therefore seeks capital funding of £24.881 million from Welsh Government over five years to invest in equipment and building works required to deliver the preferred way forward.

The Strategic Case

The Strategic Context

There are multiple strategic drivers for this Programme of work, which have been summarised in the figure below.



The Case for Change

The programme has run workshops and set up specific task and finish groups with subject matter experts to fully understand business requirements from clinical and operational perspectives. These have allowed the Programme to identify its core Spending Objectives and has defined programme implementation plans.

Spending Objectives

The Programme identified five spending objectives which articulate what the programme is seeking to achieve.

- **SO1** - To improve the quality of PET service provision for Welsh patients by delivering better patient outcomes.
- **SO2** - To ensure a sufficient workforce to deliver a high-quality service.
- **SO3** - To improve delivery of the All Wales PET Service by efficient use of PET-CT scanners, facilities, processes and infrastructure.
- **SO4** - To ensure that the future All Wales PET service provides a cost-effective service for patients and NHS Wales.
- **SO5** - To widen the scope of the All Wales PET service, to meet recognised international best practice.

Current Service provision

WHSSC commission and approve funding of PET scans for the population of Wales in line with the criteria presented in commissioning policy CP50a and service specification CP50b (which covers requirements for both fixed site and mobile scanners). WHSSC is committed to regularly reviewing and updating all of its clinical commissioning policies based upon the best available evidence of both clinical and cost effectiveness.

NHS Wales currently has three providers delivering PET-CT services:

- A fixed site at the University Hospital of Wales in Cardiff (the Wales Research and Diagnostic Positron Emission Tomography Imaging Centre; PETIC).
- A mobile service at Wrexham Maelor Hospital (2 days per week).
- A mobile service at Singleton Hospital, Swansea (2 days per week).

Patients are referred for a range of PET-CT scans by members of the relevant multi-disciplinary team (MDT).

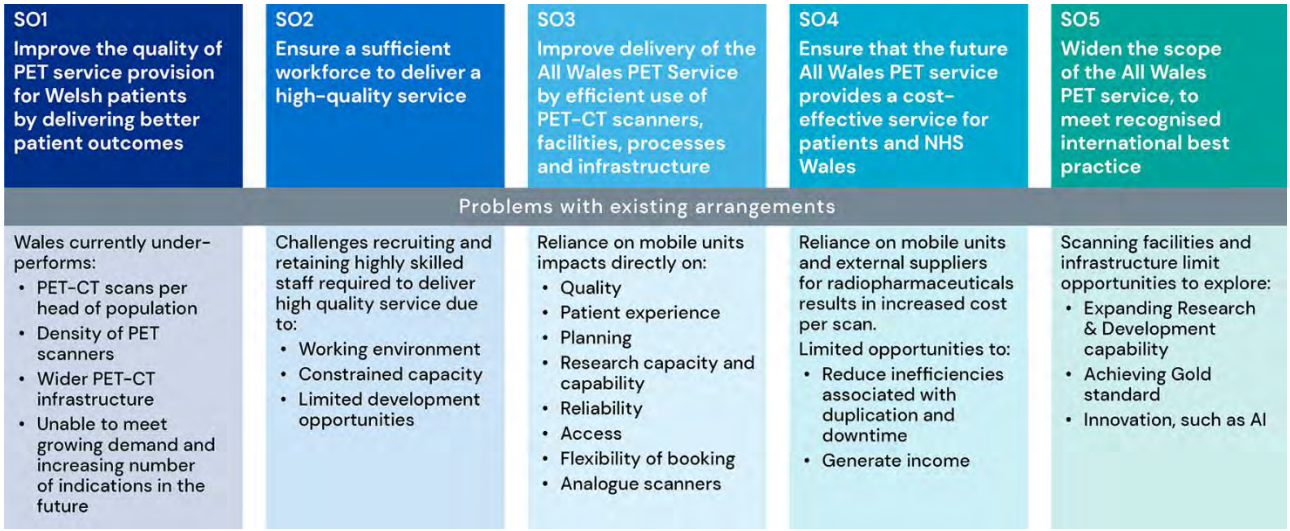
Business Needs

Continuing with existing arrangements is not feasible because there are some significant business needs which will result in deterioration of the service, growing costs and impact on clinical outcomes and patient experience. Specifically, these include:

- There is a growing and aging population, thus the demand for PET-CT is increasing substantially in countries across the world. Critically, in his 2020 report ‘Diagnostics: Recovery and Renewal’, Professor Sir Mike Richards indicated that between 2014/15 and 2018/19 demand for PET-CT in England increased by 18.7% per annum in England. He recommended that scanning equipment should, as a minimum, be expanded in line with current growth rates and that all imaging equipment older than 10 years be replaced.
- However in Wales, scanning activity levels are low compared with the rest of the UK. It is estimated that Wales is currently performing approximately 33% of the PET scans per head of population compared to England (2020). In addition, NHS Wales has a list of commissioned indications for PET-CT which is limited compared to England and Scotland. Furthermore, Wales has just 0.6 scanners per million population versus ~1.0 scanners per million population in other devolved nations. The picture becomes bleaker when comparing performance and infrastructure with the rest of Europe and beyond.
- Several other significant considerations for this programme are:

- there are patient experience and quality issues associated with mobile scanners that are currently used in South West and North Wales,
- the analogue fixed scanner at PETIC is older than its useful life, causing a significant service delivery risk,
- there are critical workforce issues facing the wider imaging and nuclear medicine professions, with staffing levels low and many core personnel being close to retirement,
- there are issues facing the assurance of radiopharmaceutical supply across Wales, with some but not all radiopharmaceuticals being produced at PETIC in Cardiff and the production facility requiring investment to update equipment, and
- there is a clear need for equitable patient access to research, development and innovation activity in Wales.

The spending objectives are therefore not achievable under current arrangements. Problems with the existing arrangements are described in relation to each of the spending objectives in the figure below.



Addressing the business needs and delivery of the spending objectives will deliver a range of benefits including:

- Improved quality and reduction in patient harm
- Workforce resilience
- Improved efficiency and economy
- Improved access reducing patient travel time
- Cost effective service supported by income generation
- Provide capacity that meets population needs in line with international best practice
- Increased opportunities for Research and Development
- Increased opportunities for innovation

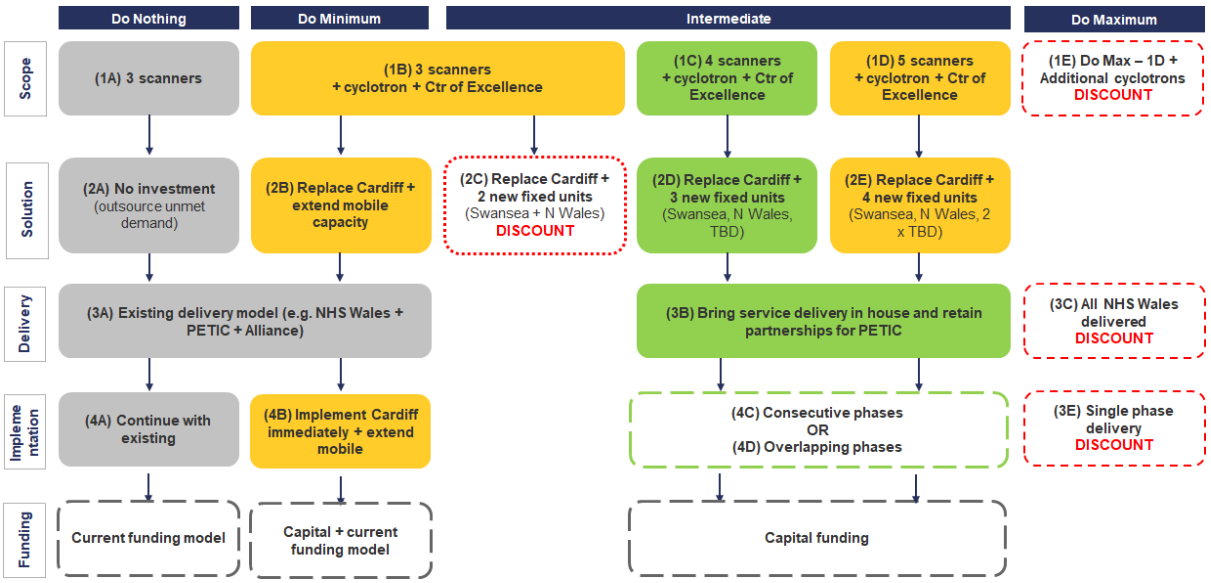
The PBC has a detailed benefits log as part of its appendices.

The Economic Case

In accordance with HM Treasury's Green Book 2020 (A Guide to Investment Appraisal in the Public Sector) and Better Business Case guidance, a wide range of options have been considered that could deliver the agreed spending objectives for the following five categories of choice:

- Scope (service and geographical coverage)
- Solution (including services and required infrastructure)
- Service delivery (who will deliver the required services)
- Timing and phasing of delivery
- Funding of the investment

Stakeholders identified a long list of options for each of these categories and assessed them in relation to how well each meets the agreed spending objectives and critical success factors. An overview of the long list is shown in the diagram below.



The results of this were aggregated into a shortlist of options as shown in the table below.

Options	Option 1 Business as Usual	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Scope	**3 Scanners (Core scope)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales	**3 Scanners (Core + Desirable scope)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff • Centres of Excellence facilities (with new scanners)	**4 scanners (+Desirable)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff • Centres of Excellence facilities • 1 additional PET-CT or PET-MR scanner (aligned to clinical model/demand)	**5 scanners (+Optional)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff Centres of Excellence facilities • 2 additional PET-CT or PET-MR scanner (aligned to clinical model/demand)
Solution	**No investment (Outsource unmet demand to mobile scanners)**	**Replace Cardiff equipment + extend mobile capacity in Swansea and North Wales**	**Replace Cardiff equipment + 3 new fixed units (Swansea, North Wales, 1 location to be determined)**	**Replace Cardiff equipment + 4 new fixed units (Swansea, North Wales, 2 locations to be determined)**
Delivery	**Existing delivery model** (e.g. NHS Wales + PETIC + Alliance)	**Existing delivery model** (e.g. NHS Wales + PETIC + Alliance)	**Bring service delivery in house and retain partnerships for PETIC**	**Bring service delivery in house and retain partnerships for PETIC**
Implementation	**Continue with existing arrangements**	**Deliver Cardiff replacement + extend mobile provision**	**Phased approach** • Cardiff 2021/22 • North Wales 2023/24 • Swansea 2023/24 • 4th scanner 2025/26	**Phased approach** • Cardiff 2021/22 • North Wales 2023/24 • Swansea 2023/24 • 4th scanner 2025/26 • 5th scanner 2028/29
Funding	**Current funding model**	**Capital and revenue**	**Capital funding**	**Capital funding**

The following shortlist was therefore carried forward to the economic appraisal to evaluate the costs, benefits and risks in order to identify the option that is most likely to offer best public value for money:

- Option 1 – Business as Usual: Do nothing.
- Option 2 – Do Minimum: Retain 1 fixed scanner and extend capacity of 2 mobile scanners.
- Option 3 – Preferred Way Forward: Provide 4 fixed scanners (10-year programme).
- Option 4 – More Ambitious: Provide 5 fixed scanners (10-year programme).

At Project business case stage, the development of detailed designs which will determine patient flows and resource requirements will allow costs, benefits and risks to be estimated with a greater degree of certainty. For the purposes of the PBC, indicative capital costs have been estimated by Specialist Estates Services and indicative revenue costs, benefits and risks have been estimated based on high-level assumptions which are outlined in detail in the Economic Case.

Based on these assumptions, the Comprehensive Investment Appraisal (CIA) model has been prepared to estimate the Net Present Social Value (NPSV) and Benefit Cost Ratio (BCR) for each option. An overview of the results is presented in the table below.

	Option 1 **Business as Usual (BAU)**	**Option 2** **Do Minimum**	**Option 3** **Preferred Way Forward**	**Option 4** **More Ambitious**
Description	Do nothing	Retain 1 fixed and extend capacity of 2 mobile scanners	Provide 4 fixed scanners (10-year programme)	Provide 5 fixed scanners (10-year programme)
Incremental NPSV	-	£4.4m	£54.0m	£68.3m
Benefit Cost Ratio	-	0.00	2.30	2.38
Average cost per scan (10 year period)	£935	£898	£729	£708
Sensitivity and risks	Consistently ranks as worst value for money even with significant changes in assumptions	Consistently ranks as second worst value for money even with significant changes in assumptions	Ranks as best value for money if demand growth is lower than 17.5% year on year	If demand growth is lower than predicted 5th scanner will be significantly underutilised

The analysis concluded that although Option 4, which involves a programme to provide five fixed scanners within the next 10 years, results in the highest NPSV and Benefit Cost Ratio, this is relatively sensitive to changes in the demand growth assumptions. Option 3, which involves a programme to provide four fixed scanners within the next 10 years, delivers the second highest NPSV and Benefit Cost Ratio, while providing greater flexibility to review requirements as more evidence emerges about demand growth in the future.

It is therefore recommended that Option 3 is carried forward as the preferred way forward for delivering the programme and the potential need for a fifth scanner assessed at a later date.

The Commercial Case

The Programme will look to acquire four fixed, digital (Artificial Intelligence enabled) PET-CT scanners and install these key items of equipment at four locations across Wales. This procurement includes ancillary equipment, radiotherapy adaptations, in addition to an ion source and hot cell replacement for the cyclotron at the Cardiff site.

In line with clinical demand and workforce availability, the implementation of the Programme will need to be carried out in a phased manner. Dependent upon the timings of the phases and or the available funds, it may be possible to aggregate NHS Wales' purchasing requirements so as to generate additional value.

There are multiple procurement routes that can be followed, however all of the major items of equipment are available on a compliant pre-approved framework. NHS Wales has direct access to this framework and at the time of writing it is thought that Cardiff University can, through its own procurement department, access this same agreement.

Given the scale and impact on current Welsh NHS services that the All Wales PET Programme will deliver, it is imperative to ensure appropriate governance is in place for procurement. As such we propose that a multidisciplinary team will make up membership of a Procurement Workstream that will support the Programme.

The Procurement Workstream will be made up of specialist colleagues from both NWSSP-SES and NWSSP-PS, in addition to local procurement and estates and facilities teams to ensure that expertise and information is shared effectively and efficiently.

The Financial Case

Delivery of the preferred way forward, which involves implementing a programme that will deliver four fixed digital scanners in Wales requires capital investment of £24.881m for which funding is sought from Welsh Government.

As well as delivering a wide range of non-financial benefits in relation to service improvements and patient experience and outcomes, this will enable three of the scanners to reduce the average cost per scan to £572, compared with an average cost from external providers of £935. This will result in an overall average cost per scan for all four scanners over a 10-year period to £729.

Indicative modelling suggests that revenue costs could increase by £25.6m per annum by 2030/31 based on predicted demand growth. This investment will contribute to mitigating the ongoing cost pressure associated with growing demand including:

- Reduction in average cost per scan resulting in £6.6m annual financial benefit by 2030/31.
- Opportunities to deliver system-wide financial benefits due to increased PET-CT scanning reducing the need for high-cost late stage interventions. There is insufficient detail available on specific demand by patient pathway to calculate this at this stage.
- Opportunities for income generation from RD&I activities which, based on 7% of predicted demand, is estimated at around £3.3m by 2030/31.

Revenue funding for PET scanning is currently provided via WHSSC on a price-per-scan basis, with existing service providers charging WHSSC an agreed price for each scan carried out. WHSSC has

included projected growth in PET scanning demand within the WHSSC ICP plan. It is expected that each local organisation that will host a PET-CT scanner will make clear how they, as service providers commissioned by WHSSC, will incorporate the additional revenue implications i.e. staff and running costs, into the price-per-scan that they charge WHSSC.

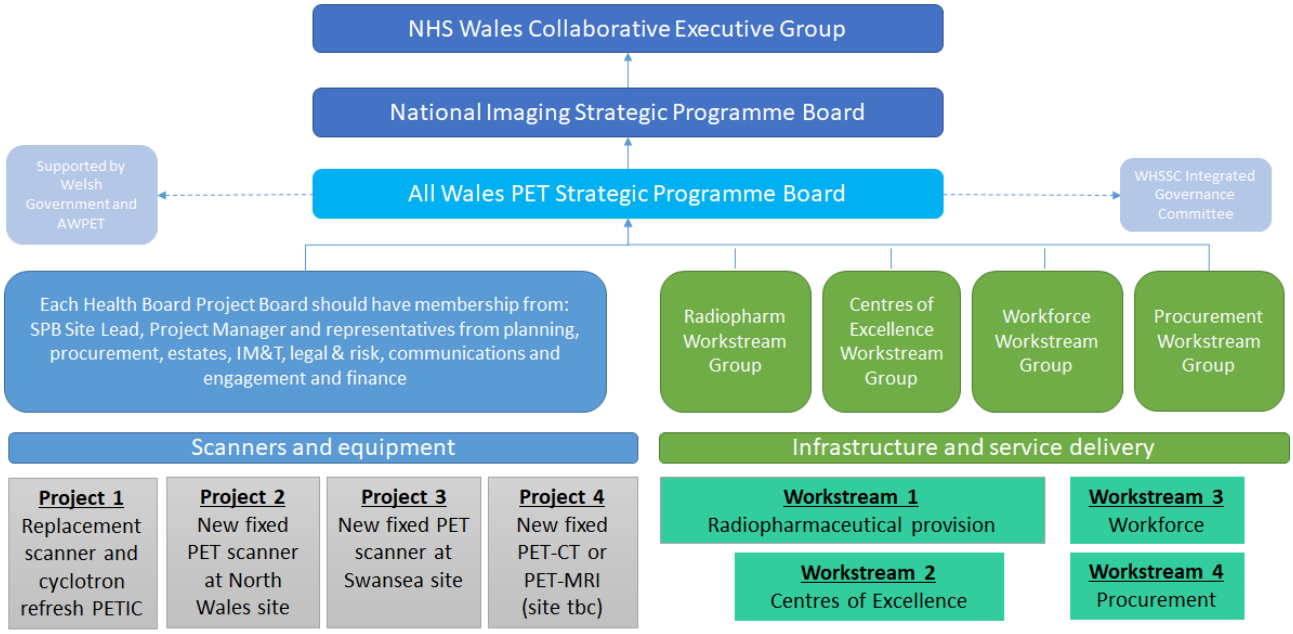
The Management Case

Programme structure

The All Wales PET Programme is a strategic Programme that is hosted by WHSSC and sits within the "Strategic Resource Planning" category of the National Imaging Programme Strategic Board (NIPSB). The NIPSB is hosted and supported by the NHS Wales Collaborative and the NHS Wales Collaborative Executive Group (CEG).

The All Wales PET Strategic Programme Board (SPB) is the formal decision making forum for the programme, and is chaired by the NHS Senior Responsible Officer (SRO), the Managing Director of WHSSC, Dr Sian Lewis.

The Programme structure as set out below ensures clear accountability and also deploys mechanisms to facilitate decision making, escalation, communication and alignment.



The scope of this Programme is limited to procurement of the following list of equipment:

- Four digital PET-CT Scanners (Artificial Intelligence enabled; one scanner at each site);
- Ancillary equipment and phantoms (robotic radiotracer dispenser);
- Radiotherapy adaptions (laser bridge, flat table top).

The equipment is to be located at Cardiff (replacement scanner), Swansea (new scanner) and North Wales (new scanner). The fourth scanner (new) placed at a location to be defined at a later date will be based upon clinical demand and population density. Associated build works for the PET site

facilities are also within scope. Furthermore, refresh of equipment connected with the cyclotron at Cardiff is within scope of this Programme, thus requiring procurement of:

- Ion source replacement within the cyclotron
- Hot cell replacement and associated GMP build.

Supporting infrastructure to PET has been identified as an essential consideration to the success of the PET Programme delivery, including workforce and research and development. As such, these elements have been considered as within scope and are addressed in the Programme structure, with a series of sub projects for implementation works and supporting workstreams.

Programme Plan

Programme implementation will be phased so that sufficient time is given to scrutinise supporting business cases for Projects. This will ensure supporting infrastructure requirements are solved at appropriate timings, in order to optimise delivery and ultimately PET service provision.

Business Case (BC)	Proposed date of Welsh Gov. BC approval	Proposed "go live" date	
Tranche 1			
Project 1			
BJC	July 2021	PET Scanner	March 2022
		Ion Source replacement	March 2022
		Hot Cell replacement	March 2023
Tranche 2			
Project 2			
SOC1	July 2021	January 2024	
OBC/FBC	March 2022		
Project 3			
OBC2	November 2021	November 2023	
FBC2	July 2022		
Tranche 3			
Project 4			
Appraisal Process	April 2023	June 2026	
OBC3	January 2024		
FBC3	December 2024		
Tranche 4			
		January 2027	

Further to endorsement of the PBC, the programme will expand to provide the capacity to procure, prepare and implement the programme solution. At the time of writing, the NHS Wales Collaborative

fund a programme manager that is hosted by WHSSC on a fixed-term basis. This role forms the core of the All Wales PET Programme Management arrangements and is funded until March 2022.

The anticipated annual staffing cost of the Programme Implementation is £115k and will consist of a national programme manager and administrator, providing a total cost of £575k over the five year total implementation and evaluation period. Local organisations that will host a PET-CT scanner will need to source a project manager from within their existing resource for the duration of local implementation and these arrangements should be outlined in subsequent project business cases.

External Programme Review and Assurance

This Programme has clearly defined internal governance arrangements and will be subject to the OGC Gateway™ Review processes. The Programme will also be subject to audit by the NWSSP (Audit and Assurance Services).

Benefits realisation

A detailed Benefits Register is included in the Appendices, alongside detailed Benefits Maps in in the full Management Case. On endorsement of this PBC, the baselining of these benefits will begin in advance of implementation of scanners.

Risk Management

The All Wales PET Programme will utilise its governance structure and arrangements to ensure the effective management of risk. The governance structures allow for risks to be escalated from Project boards and Workstream groups, through to the Strategic Programme Board and/or the Health Board/Trust, as appropriate.

Post Programme Evaluation

The All Wales PET Programme is committed to ensuring that a thorough Post-Programme Evaluation (PPE) is undertaken after the Programme has concluded, to ensure that positive lessons can be learnt. This is noted in tranche 4 of the Programme Plan.

The All Wales PET Programme is also committed to ensuring that lessons are learned at all key stages during implementation, so these can be fed into the wider Programme.

As such, there will be two Evaluation sessions held after each Tranche:

- **Lessons learned and post tranche review** – to be held two to three months post tranche completion.
- **Evaluation of benefits, outcomes & spending objectives** – to be held six to twelve months post tranche completion.

1 Strategic Case

1.1 Introduction

1.1.1 Purpose

The purpose of the Programme Business Case (PBC) is to set out the case for an All Wales Positron Emission Tomography (PET) Programme with sufficient capacity to meet the projected increased demand for PET scanning over the next ten years. It considers the requirements in terms of infrastructure, workforce, and research, development and innovation (RD&I).

This introductory section of the PBC provides an overview of:

- The context of the proposed investment.
- The governance arrangements for the programme.
- The structure and the content of the PBC.

1.1.2 Context of proposed investment

A PET-CT scan is where Positron Emission Tomography is combined with Computerised Tomography (CT) to produce a highly detailed image. This combination is the most commonly used approach in PET scanning and as such, scanning may be referred to as either PET or PET-CT throughout this document.

PET-CT scanning services in Wales are commissioned by the Welsh Health Specialised Services Committee (WHSCC) [1, 2]. NHS Wales currently has three providers delivering PET-CT services, and the respective University Health Board (UHB) where these are located are responsible for managing the service:

- A fixed site at the University Hospital of Wales in Cardiff (the Wales Research and Diagnostic Positron Emission Tomography Imaging Centre; PETIC) (Cardiff and Vale UHB).
- A mobile service at Wrexham Maelor Hospital (2 days per week) (Betsi Cadwaladr UHB)
- A mobile service at Singleton Hospital, Swansea (2 days per week) (Swansea Bay UHB).

PET-CT has become a central diagnostic tool in the management of cancer, and increasingly in many non-cancer conditions. Its role and the evidence base continue to evolve. Although it is a relatively expensive investigation, when used appropriately PET-CT can significantly improve clinical decision making, particularly with respect to the appropriate use of complex and expensive specialist treatments.

There is an increasing body of high-quality evidence to demonstrate the contribution of PET to improved patient outcomes. There are many studies that have demonstrated the role PET-CT has in accurately determining the staging of certain cancers and subsequent treatment plans, which enables reduction of inappropriate patient management and allows for best prognosis and patient care [3, 4, 5].

Demand for PET-CT is growing, however in Wales, scanning activity levels are lower compared with the rest of the UK. It is estimated that in 2019 Wales was performing approximately 33% of the PET scans per head of population compared to England. In addition, NHS Wales has a list of funded

indications for PET-CT which is limited compared to England and Scotland. The picture becomes bleaker when comparing performance with the rest of Europe and beyond.

In November 2018, the All Wales PET Advisory Group (AWPET) and the Welsh Scientific Advisory Committee (WSAC) produced a report "Positron Emission Tomography (PET) in Wales – Overview and Strategic Recommendations" [6].

A detailed summary of this report is available in section 2.11. One of its five key recommendations was that WHSSC should be commissioned to produce a PBC for PET-CT capacity in Wales that considers increased demand projections, estates, staffing requirements and research.

In March 2019, the Director General, Health and Social Service/NHS Wales Chief Executive, Welsh Government endorsed the report recommendations and outlined the expectations for NHS Wales to collaborate on their implementation. As there was recognition that additional capital investment would be required to develop the service, the Director General requested that WHSSC develop the PBC, with support from the National Imaging Strategic Programme Board (NIPSB), to guide the development of future service provision for the whole of Wales.

This document sets out the PBC which:

- Explores the case for change in terms of the gap between existing arrangements and future business needs.
- Describes the appraisal undertaken to identify a preferred option for the future service model that will address this gap and deliver optimum public value for money.
- Assesses alternative procurement routes available to deliver the preferred way forward.
- Determines the overall capital and revenue requirements and assesses affordability.
- Sets out the programme management arrangements to deliver the preferred way forward.

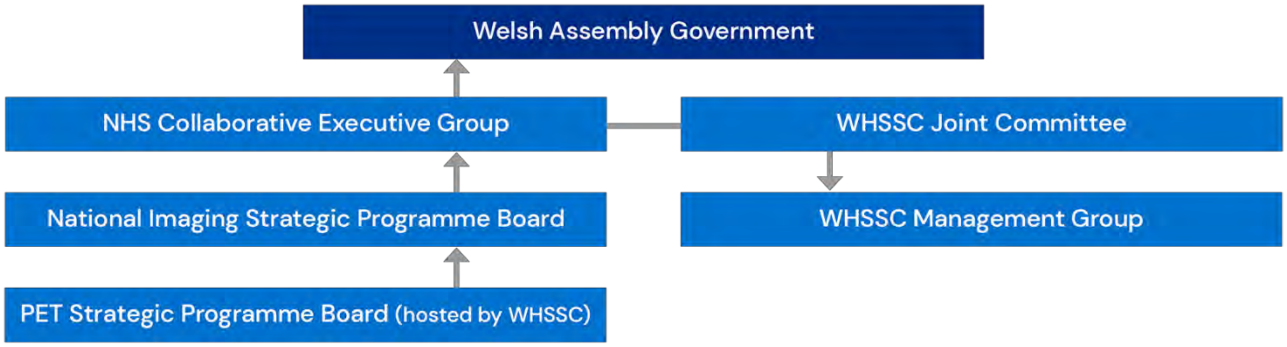
1.1.3 Programme governance

The PET Strategic Programme Board (SPB) was established to develop and implement the recommendations from the AWPET report (see section 1.3.8).

The Senior Responsible Officer (SRO) of the Programme Board is Dr Sian Lewis, Managing Director, WHSSC and Deputy SRO is Dr Andrew Champion, Assistant Director, Evidence Evaluation and Effectiveness, WHSSC.

The SPB is accountable to the National Imaging Strategic Programme Board (Figure 1).

Figure 1: Programme governance structure



1.1.4 Structure and content of the PBC

This PBC follows the Five Case Model in line with HM Treasury Green Book and Welsh Government best practice guidance as set out in 'Better Business Cases: Guide to Developing the Programme Business Case'[1]. The structure of the PBC is outlined in the table below.

Table 1: Structure of the Programme Business Case

Case	Section		Purpose
Strategic Case	1.1	Introduction	Sets out the background and programme governance.
	1.2	PET Scanning Context	Provides context for the proposals by describing what PET is, the steps involved in a PET-CT scan, an overview of the production of radiopharmaceuticals and specialist workforce.
	1.3	Strategic Context	Provides an overview of current services and explains how the programme is strategically placed to contribute to the delivery of organisational goals.
	1.4	Case for Change	Establishes the case for change by outlining the spending objectives, existing arrangements and business needs.
	1.5	Potential Scope	Identifies the potential scope of the programme in terms of the operational capabilities and service changes required to satisfy the identified business needs.
	1.6	Benefits and Risks	Identifies the benefits, risks, constraints and dependencies for the project.
Economic Case	2.1	Options Identification	Explores the preferred way forward by agreeing critical success factors (CSFs), determining the long list of options, and undertaking a SWOT analysis to identify a shortlist of options.
	2.2	Economic Appraisal	Appraises the economic costs, benefits and risks for the shortlisted options. Identifies the preferred way forward by reviewing the outputs of the economic appraisal, as well as consideration for the benefits and risks of each of the three shortlisted options to determine which option offers the best value for money
Commercial Case	3	Procurement Arrangements	Outlines the procurement strategy and the contractual arrangements for development of the deal that is required to deliver the preferred solution for the programme.
Financial Case	4	Financial Appraisal	Sets out the forecast financial implications of the preferred way forward.
Management Case	5	Management Arrangements	Sets out the arrangements put in place to manage the programme to successful delivery.

[1] https://gov.wales/better-business-cases-investment-decision-making-framework

1.2 PET scanning Context

1.2.1 Introduction

This section of the PBC provides context to the All Wales PET Programme by providing an overview of PET including:

- A description of PET.
- The steps involved in PET-CT scans.
- The production of radiopharmaceuticals.
- Specialist workforce for PET scanning.

1.2.2 What is PET?

Positron emission tomography (PET) is a scanning technique that produces detailed 3-dimensional (3D) images of the inside of the body. The images can clearly show the part of the body being investigated, including any abnormal areas, and can highlight how well certain functions of the body are working.

A PET-CT scan is most commonly used where PET is combined with Computerised Tomography (CT) to produce an even more detailed image. The main clinical benefit of using PET-CT scanning lies in its ability to link changes in metabolic activity (PET), with anatomical imaging (CT), allowing for more accurate identification of the location, size and shape of tumours through identifying abnormal cellular activity. PET can also be used alongside Magnetic Resonance Imaging (MRI).

PET-CT scans are particularly helpful for investigating cases of cancer, for example to determine how far the cancer has spread and how well it is responding to treatment. As PET is a functional technique, it can detect tumours and metastatic spread of cancer much earlier than other anatomical imaging techniques such as CT or MRI. Indeed, PET is more sensitive than either CT or MRI in the detection of cancer and results in more accurate staging and typically changes patient management in 30-40% of patients that are scanned.

The breadth of application of PET-CT scanning is expanding and it is increasingly being used to help plan operations, such as a coronary artery bypass graft or brain surgery for epilepsy. Some specific scanning can assist in the diagnosis of conditions such as dementia, Alzheimer's or Parkinson's disease.

PET scanners work by detecting the radiation given off by a substance that has been injected into the body as it is metabolised in different parts of the body. This substance is called a radiopharmaceutical. Radiopharmaceuticals consist of two components: a radionuclide and a biological molecule or "carrier". The radionuclide is chosen on the basis of the radioactive decay characteristics.

Positron emitting radionuclides decay via emission of positrons (particles with the mass of electrons but with a positive charge). Positrons interact with surrounding electrons in the body. This electron and positron interaction causes the annihilation of both particles, releasing energy in the form of two 511keV gamma photons which travel in opposite directions. The resulting gamma rays are detected by a ring of detectors - the PET camera - that surround a patient during a scan. The ring of detectors feeds into computer software that creates a 3D image of the radiopharmaceutical presence in the body.

The carrier molecule, for example glucose, is chosen to match a particular function within the body. Therefore, altering the carrier molecule means that clinicians are able to target specific organs, tissues or cells within the human body. In most PET scans a radiopharmaceutical called

fluorodeoxyglucose (18F-FDG) is used. The 18F is the radionuclide and the DG (deoxyglucose) is the carrier.

The deoxyglucose is metabolised by the human body in a similar manner to glucose. Tumours often demonstrate increased metabolism and as a result will show up as areas of increased 18F-FDG uptake on the PET scan.

By analysing the areas where the radiopharmaceutical is metabolised, it is possible to visualise how well certain body functions are working and identify any abnormalities. For example, a concentration of 18F-FDG in the body's tissues can help identify cancerous cells because cancer cells use glucose at a much faster rate than normal cells.

1.2.3 Steps involved in a PET-CT scan

Before the scan, the radiopharmaceutical is injected into a vein in the patient's arm or hand. The patient needs to wait quietly and keep warm for about an hour to give the radiopharmaceutical time to be absorbed by the cells in the body, a process known as 'uptake'. It is important to relax while waiting because moving and speaking can affect how and where in the body the radiopharmaceutical is absorbed.

Figure 2: a PET-CT scanner

During the scan, the patient lies on a flatbed that is moved into the centre of the scanner.

The duration of a scan depends on which part of the body is requested for imaging, and which radiopharmaceutical is being used.

On average and in general, scans typically take between 30 minutes for an 18F-FDG scan and 45 minutes for an 18F-PSMA scan.

Following the scan, a patient is asked to make use of a "hot toilet" where any radioactive material that may be present in the patient's body, may be safely expelled and managed.

For more details on the steps involved, please see Appendix 1: Service Operating Model.

1.2.4 Production and management of radiopharmaceuticals

Approximately 95% of PET-CT scans are currently performed using a radiopharmaceutical called fluorodeoxyglucose or 18F-FDG. Many other radionuclides are under development and are likely to see widespread use, both in the clinic and for research, within the next five years.

The decay of a radioactive substance is termed "half-life" and this refers to when the unstable radioactive nuclei has decayed. Typical half-life is a matter of hours, some are within minutes, and such preparations therefore have very short "shelf-lives". 18F has a two-hour half-life and, as a result, radiopharmaceuticals labelled with 18F require manufacture and use on the same day. Furthermore, the shelf-life of a radiopharmaceutical is dependent on the radiochemical stability and impurities

within the preparation. For example, 18F based preparations such as 18F-FDG and 18F-PSMA are normally intended to be used within 10 hours of preparation.

As a result of this short half-life, radiopharmaceuticals must be produced immediately prior to use in patients. This is a significant factor for consideration when planning the location of a PET scanner as it needs to be easily accessible for delivery of the radioactive material, to ensure that a sufficient dosage arrives in time for a patient's scan.

Radionuclides for PET radiopharmaceuticals are produced in cyclotrons. A cyclotron is a particle accelerator, an electrically powered machine which accelerates charged particles in a spiral path and produces a beam of charged particles. These particles are then processed in a clean room and combined with a pharmaceutical molecule to produce a radiopharmaceutical for use in patients.

The proximity of the PET-CT scanner to the cyclotron has a bearing on 'recovery' plans should the cyclotron or scanner fail at a given session. If a scanner is located near to a cyclotron, the more feasible it is for a rapid second delivery of radiopharmaceutical should the first batch be wasted due to scanner delays or faults or should the cyclotron fail to manufacture a first batch of suitable quality.

The production of radiopharmaceuticals is strictly controlled. Production centres must have a licence from the Medicines and Healthcare Products Agency (MHRA) to manufacture and supply radiopharmaceuticals for PET-CT imaging for both clinical and clinical trial use. There are three types of license:

- **Marketing Authorisation (MA):** supplying the product commercially. For example, ^{18}F-FDG.
- **Investigational Medicinal Product (IMP):** supplying the product to sites carrying out a research trial (cannot be administered to a patient outside of a clinical trial)
- **Specials License[2]:** this is where a production centre can manufacture to a specification, satisfy itself of the quality and supply other sites where a marketing authorisation is not in place. For example, ^{68}Ga or ^{18}F-PSMA and ^{18}F-DOPA.

The handling of radioactive materials and disposal of radioactive waste is also strictly controlled and is an important consideration in the planning and design of PET-CT facilities.

The radiological installation or operator organisations that use radioactive substances will inevitably produce such waste following the administration of PET radiopharmaceuticals to patients.

The keeping and use of radioactive materials, and the accumulation and disposal of radioactive waste or activities will be detailed in site-specific permits issued by the Environment Agency (EA) (Natural Resources Wales (NRW) in Wales). Radiological risk assessments will be required as part of the permit application process. An overarching procedure for managing PET radioactive waste at a radiological installation should describe the best available techniques to minimise the impact on the public and the environment from the use and disposal of such waste.

Operators who accumulate, dispose or manage radioactive waste must appoint a suitable radiation protection expert. Radioactive Waste Advisors (RWA) are specialists in radioactive waste management and environmental radiation protection. In particular, a designated 'hot' toilet is required for PET patients and a lockable shielded safe is required to decay-store PET radioactive waste.

[2] The Medicines Act 1968 allows a GMP facility to produce and sell unlicensed radiopharmaceuticals as 'specials' if they are not licensed in the jurisdiction of the UK. If they are licensed (have a MA) they can be made for local use but cannot be sold (or given) to another institution. All 'specials' radiopharmaceuticals can furthermore be subjected to a MA which (once granted) would preclude existing facilities to manufacture the product for sale

1.2.5 Specialist workforce for PET scanning

PET-CT is a complex imaging modality (sub-speciality of nuclear medicine) that requires a specialist skill mix for a service to run. The reasons that necessitate such a specialist skill mix include the handling and administration of radioactive material, dealing with radioactive waste and operating highly technical equipment. As such, it is a tightly regulated field of work (note IR(ME)R 2017, IRR17, Environmental Permitting Regulations 2016). These regulations govern the practice of PET-CT as well as the rest of nuclear medicine. Given the level of specialisation within PET-CT, most staff members start their careers in general SPECT nuclear medicine and specialise later in PET-CT. Therefore there is transferability of skills between PET and nuclear medicine.

It is a legal requirement under IR(ME)R 2017 for employers to hold an Administration of Radioactive Substances Advisory Committee (ARSAC) licence at each medical radiological installation (hospital, etc.) where radioactive substances are to be administered to humans, and additionally for practitioners to hold individual ARSAC licences in order to justify the administration of those substances. A nuclear medicine service cannot therefore operate without these licences in place.

It is the ARSAC who provides advice to the relevant licensing authority on the issue of these licences. Practitioners who wish to apply for a licence to enable them to support a comprehensive diagnostic nuclear medicine imaging service should have satisfactorily completed the Royal College of Radiologists (RCR) Radionuclide Radiology Subspecialty Training Programme, the Royal College of Physicians (RCP) Nuclear Medicine Speciality Training Programme or demonstrate an equivalent level of training.

1.3 Strategic Context

1.3.1 Introduction

This section of the PBC outlines the strategic context for the All Wales PET Programme by providing an organisational overview and explaining how the proposals are strategically placed to support the delivery of organisational goals. It includes:

- An overview of the lead organisation and stakeholders.
- An analysis of population needs including demographic growth and disease prevalence.
- An outline of how the programme is essential to achieving the overall business strategies and aims of NHS Wales.
- A description of how the programme contributes to strategic goals within the context of the Imaging service.
- An overview of interdependencies with other relevant programmes and strategies.

1.3.2 Organisation overview

The All Wales PET Programme is led by Welsh Health Specialised Services Committee (WHSSC). WHSSC is responsible for the joint planning of Specialised and Tertiary Services on behalf of local health boards in Wales.

WHSSC Commissioning policies define the specialised services commissioned by WHSSC on behalf of the seven Welsh Health Boards and the criteria that must be met for Welsh patients to access the treatment.

WHSSC Service specifications are important in clearly defining what WHSSC expects to be in place for providers to offer evidence-based, safe and effective services and importantly, sets equitable access to services for Welsh patients.

WHSSC supports NHS Wales and the Health Boards by ensuring that there is equitable access to safe, effective, and sustainable specialist services for the people of Wales, as close to patients' homes as possible, within available resources. WHSSC has an established Prioritisation Process and Risk Management Framework to help identify the priorities for the WHSSC Integrated Commissioning Plan (ICP) [7].

WHSSC must ensure that any new investment decisions are affordable, offer value for money and are supported by convincing evidence of safety and effectiveness. To do this WHSSC runs an annual prioritisation process to determine the relative prioritisation of new interventions within specialised services. The process is facilitated by the WHSSC Clinical Impact Assessment Group (CIAG) and their recommendations (or priorities) are subsequently presented in the WHSSC ICP.

The WHSSC ICP 2020-23, which was approved by Joint Committee in February 2021, included investment in a number of new key clinical areas recommended by CIAG. This included a recommendation to support 20 new or updated PET indications across six disease areas that will account for an additional 679 scans per year across Wales.

Other stakeholders for the programme are:

- All Health Boards in NHS Wales;
- Velindre University NHS Trust;
- Cardiff University;
- PET providers in NHS England commissioned by WHSSC;
- National Imaging Strategic Programme Board (NIPSB);
- Welsh Government;
- Imaging Workforce and Education Group (IWEG);
- NHS Health Collaborative;
- Wales Cancer Network and other relevant specialist groups or organisations (e.g. Royal College of Radiologists);
- National Imaging Academy Wales (NIAW);
- Health Education and Improvement Wales (HEIW);
- Digital Health and Care Wales (DHCW; formerly the NHS Wales Information Service).

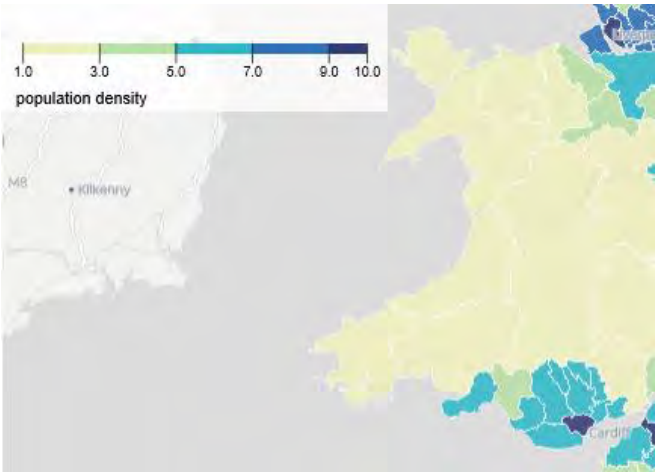
Collaboration with:

- Consultant Radiologists;
- Nuclear Medicine;
- Medical Physics;
- Cancer MDTs and non-cancer MDTs;
- Planning and Estates departments.

1.3.3 Population needs: Demographic growth

The mid-2019 population of Wales was 3,152,879 (1,554,678 males at 49.3%, and 1,598,201 females at 50.7%) (Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland, ONS, June 2020).

Figure 3: Population density



Map sourced from Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland, ONS, June 2020

Predicted population growth for Wales over the next 10 years is 0.25% p.a. ("Stats Wales: Population projections by local authority and year", 2018), which suggests that the population of Wales is likely to be 3.2 million by 2031.

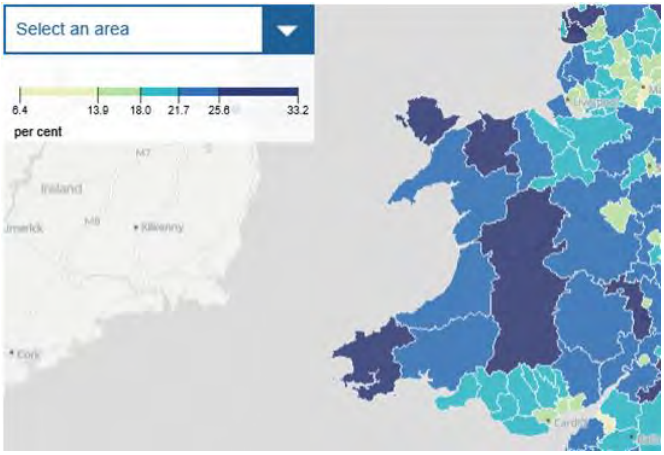
This is a modest growth and is in line with the 2018 National Population Projections by the Office of National Statistics.

The 2020 population density across Wales can be seen in Figure 3, where Cardiff and the surrounding South Wales areas have the highest density of people. The highest density of Welsh citizens in North Wales is centred on Wrexham.

The population aged 65 years and over experienced the highest level of growth of any broad age group in 2019 (ONS, Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland). There was a relatively uniform increase in the number of people aged 65 years and over in the year to mid-2019 across the constituent countries of the UK, with England

(1.7%), Scotland (1.8%), Wales (1.6%) and Northern Ireland (2.1%) all experiencing a similar proportion of growth.

Figure 4: Proportion of population 65 or older



Map sourced from Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland, ONS, June 2020

The 2019 ONS Dataset critically demonstrated how Welsh rural areas typically have older populations than cities. This is an important consideration in service provision and access to key clinical services (Figure 4).

More detail on population growth estimates can be found in Appendix 2.

1.3.4 Population needs: Disease Prevalence

Although Welsh population growth over the next 10 years will be modest, Wales is projected to realise growth in the 65+ population of around 130,000 by 2031, which is a significant demographic shift. An aging population will mean increased overall demand for health and care services (Future of an Ageing Population, Government Office for Science, 2016).

Population ageing will mean a greater prevalence of age-related conditions, such as dementia and chronic conditions affecting the heart, musculoskeletal and circulatory system. Data from Cancer Research UK correlates increased incidence of cancer with age at diagnosis (Cancer Research UK, https://www.cancerresearchuk.org/health-professional/cancer-statistics/incidence/age#heading-Zero, Accessed January 2021).

Wales has a higher prevalence of cancer and chronic heart disease than the UK average. Although dementia in Wales is at a slightly lower prevalence to the UK average, projections are for a substantial increase in the overall number of cases from 822,000 to 940,000 by 2031 in the UK, and more than 1.7 million by 2051 (Alzheimer's Society (2014) Dementia UK: Update, https://www.alzheimers.org.uk/dementiauk, Accessed January 2021). Therefore dementia rates in Wales will likely rise in line with the rest of the UK, and as a marker of an aging population of Wales.

This disproportionate demand on services will include increased requests for imaging diagnostics, which is an important consideration when looking to predict future demand for PET-CT scans. In particular, conditions such as cancer, chronic heart disease and dementia are believed to be the biggest drivers for future PET scanning.

1.3.5 NHS Wales business strategy and aims

The proposals outlined within this PBC are aligned with the national strategic context, supporting a broad range of national strategies and policies. An analysis of these is provided in the table below, showing how the programme will support their delivery.

Table 2: Programme alignment with national strategies

Strategy/Policy	Summary	How the All Wales PET Programme supports this
The NHS Wales Planning Framework 2020-23 [8]	The Framework sets high quality as a key priority which underpins all aspects of services, settings and contacts with the NHS in Wales. It states the need for health organisations to focus on the populations for which they are responsible, with an emphasis on prevention and early intervention, reducing health inequalities, timely access to care and working with wider partners to deliver the best possible services for citizens in Wales.	Patients across Wales will have equitable access to PET-CT services. There will be sufficient capacity within the service to cope with anticipated demand for PET-CT. High-quality, detailed scanning will lead to more accurate diagnosis, improved treatment planning and improved outcomes for patients.
The Parliamentary Review of Health and Social Care in Wales. Final Report. (January 2018) [9]	The Parliamentary Review set out a vision for the future, to include health and social care moving forward together and developing primary care services out of hospitals. The Review's recommendations focus on key themes around seamless care, a great place to work and maximising the benefits of technology and innovation.	Providing seamless care. Improving facilities. Providing greater opportunities in order to attract a highly skilled workforce Maximising the benefits of technology and innovation.
A Healthier Wales: Our Plan for Health and Social Care (June 2018) [10]	'A Healthier Wales' is the Welsh Government's response to the Parliamentary Review. It sets out the vision of a 'whole system approach to health and social care' which is focused on health and wellbeing, and on preventing physical and mental illness. It focuses on 'providing more joined-up services, in community settings', and shifts the emphasis from treating illness to prevention and supporting people to stay well and lead healthier lifestyles.	Addressing the recommendations set out in the Parliamentary Review as described above Focusing on improving access to services that will enable earlier interventions.
The Wellbeing of Future Generations (Wales) Act 2015 [11]	The Wellbeing of Future Generations Act is about improving the social, economic, environmental, and cultural wellbeing of Wales. It makes the public bodies listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach.	Deliver a sustainable service that focuses on Addressing health inequalities Improving outcomes for patients Attracting and developing a highly skilled workforce.

1.3.6 Imaging Service strategic aims

There are a range of strategic aims related specifically to Imaging services that are relevant to the programme including:

- Positron Emission Tomography (PET) in Wales - Overview and Strategic Recommendations, All Wales PET Advisory Group (AWPET) and the Welsh Scientific Advisory Committee (WSAC) (November 2018) [6].
- Imaging Statement of Intent, Welsh Government (March 2018) [12].
- Radiology Services in Wales, Auditor General for Wales (November 2018) [13].

- Specialised Services Commissioning Policy: CP50a Positron Emission Tomography, WHSSC and Specialised Services Service Specification: CP50b Positron Emission Tomography - Fixed and Mobile Site [1, 2].

An overview of each of these is provided in sections 1.3.7-10 below.

1.3.7 Imaging Service strategic aims: Imaging Statement of Intent

Imaging services in Wales face a number of significant challenges, for example:

- Increasing demand for non-invasive and accurate imaging modalities.
- Workforce issues related to recruitment, training, and retirement.
- The need to diagnose conditions quicker.
- New imaging techniques and technologies.

Such challenges can lead to unnecessary delays in diagnoses and treatment and there is compelling evidence of the need to transform the provision of imaging services in Wales. To respond to these challenges, it is essential that a coordinated implementation plan for imaging services in NHS Wales is developed. To prepare the ground for this, a Welsh Government-led Imaging Taskforce prepared a strategic, forward looking, Statement of Intent [12].

The table below shows how the All Wales PET Programme supports some of the Statement's key priorities.

Table 3: Programme alignment with Imaging Statement of Intent priorities

Statement of Intent Priority	How the All Wales PET Programme supports this
Workforce development	Makes the case for a well-trained and highly qualified PET-CT workforce, which is flexible and has the correct skill mix. Ensures that the PET-CT service in Wales can attract, retain and develop staff.
Equipment	Sets out the case for new, state-of-the-art equipment to replace ageing facilities, including latest generation digital PET-CT scanners to meet forecast demand for services and a new cyclotron to support the supply of radiopharmaceuticals.
Quality	Improves access to services that will enable earlier interventions and improve clinical outcomes. Provides, through new digital scanners, high quality, detailed images leading to more accurate diagnosis, improved treatment planning and improved clinical outcomes.
Services	Ensures that patients across Wales will have equitable access to PET-CT services. Increases capacity to meet the forecast growth in demand for scanning services.
Research, development and innovation	Provides modern and updated facilities that will create centres and a network of RD&I excellence for staff and will ensure that patients have equitable access to participate in clinical trials.

1.3.8 Imaging Service strategic aims: the AWPET Advisory Group 'PET in Wales' report

The AWPET report [6] provided the strategic vision for Welsh PET Services and outlined, in broad terms, a strategic plan for PET development in Wales. The table below shows how the All Wales PET Programme supports some of the report's recommendations:

Table 4: Programme alignment with AWPET report

Recommendation	How the All Wales PET Programme supports this
Indication list should be expanded based on best clinical evidence	Increases capacity to meet the forecast growth in demand for scanning services, which comes partly from a growing list of clinical indications.
Provide an outline business case (OBC) for the replacement of the end of life machine at PETIC	Sets out the case for new, state-of-the-art equipment to replace ageing facilities, including latest generation digital PET-CT scanners to meet forecast demand for services and a new cyclotron to support the supply of radiopharmaceuticals.
Produce a Programme Business Case for PET-CT capacity in Wales	This PBC forecasts capacity based on increased demand projections, and also considers the requirements for estates, staffing and research and innovation. It also ensures patients across Wales will have equitable access to PET-CT services.
Review the licensing of radiopharmaceuticals	Describes the need for an expanded supply chain for radiopharmaceuticals to support the expansion of PET-CT facilities in Wales. Sets out the case for the replacement of the cyclotron at PETIC. Provides a radiopharmaceutical enabling workstream that will fully assess requirements for the programme, including needs to contractually assure supply outside of PETIC remit, potential MA licensing of the cyclotron at PETIC, horizon scanning of the future of radiopharmaceuticals.
Establish a Welsh PET innovation strategy to support RD&I	Provides modern and updated facilities that will create centres of R&D excellence for staff and will ensure that patients have equitable access to participate in clinical trials. Provides an RD&I enabling workstream and group to lead and support implementation of the programme.

1.3.9 Imaging Service strategic aims: Radiology Services in Wales, Auditor General

Given the challenges facing imaging services in Wales, the Auditor General began a review of radiology services at all health boards in late 2016. The work examined each Health Board's arrangements to meet demand for radiology examinations and made recommendations for service improvements.

Table 5: Programme alignment with Auditor General – Key findings

Key findings	How the All Wales PET Programme supports this
Despite increasing demand, diagnostic radiology examination waiting time targets are currently largely being met, however, some patients wait a long time for their examination results.	Providing the appropriate capacity to meet growing demand for PET-CT services
Recruitment, retention and an ageing workforce are threatening the sustainability of the service and limiting Health Boards' ability to train staff	Developing a PET-CT service and development opportunities that will attract and retain highly skilled staff
Ageing and underutilised equipment are making it harder for health boards to meet demand and health boards do not have the staffing resources to extend opening hours.	Replacing ageing equipment and mobile scanners with new generation digital scanners that can meet the growing demand for PET-CT services

Key findings	How the All Wales PET Programme supports this
Wales-wide radiology IT system challenges and weaknesses in local IT infrastructures inhibit radiology services' efficiency.	Replacing ageing equipment with new generation digital scanners that are enabled for future IT developments.

1.3.10 Imaging Service strategic aims: PET commissioning policy

WHSSC commission and approve funding of PET scans for the population of Wales in line with the criteria presented in commissioning policy CP50a [1] and specification CP50b [2] (which covers requirements for both fixed site and mobile scanners). This defines the requirements and standard of care essential for delivering PET-CT for people of all ages who are resident in Wales.

WHSSC is committed to regularly reviewing and updating all of its clinical commissioning policies based upon the best available evidence of both clinical and cost effectiveness. In September 2016, WHSCC established the multidisciplinary All Wales PET Advisory Group (AWPET). This Group is tasked to review the evidence base for PET-CT and advise WHSSC on the introduction of new indications (including non-oncological indications), ensuring that all decisions are made following a systematic review of the available evidence.

The All Wales PET Programme aligns directly with the objectives of the commissioning policy by seeking to deliver a sustainable high-quality PET service for the people of Wales, ensuring there is equitable access to PET-CT and improving outcomes for those accessing PET-CT services.

1.3.11 Interdependencies and other relevant programmes and strategies

In developing the proposals within this PBC, a number of other relevant programmes and strategies were considered. These are summarised in the table below.

Table 6: Other relevant strategies and considerations

Strategy Summary	How the All Wales PET Programme supports this
Diagnostics: Recovery and Renewal – Report of the Independent Review of Diagnostic Services for NHS England, Professor Sir Mike Richards (December 2020) [14]	
Demand for PET-CT scanning in England grew by 18.7% per annum between 2014/15 and 2018/19. Major expansion and reform of diagnostic services is needed over the next five years to facilitate recovery from the COVID19 pandemic and to meet rising demand for all diagnostic services. The review recommends: • scanning equipment should, as a minimum, be expanded in line with growth rates prior to the pandemic and all imaging equipment older than 10 years should be replaced; • a major expansion in the workforce with an additional 2000 radiologists and 4000 radiographers [in England]; • improving connectivity and digitisation to deliver seamless care across traditional boundaries and facilitate remote reporting.	Increases capacity to meet the forecast growth in demand for scanning services. Sets out the case for new, state-of-the-art equipment to replace ageing facilities, including latest generation digital PET-CT scanners and a new cyclotron to support the supply of radiopharmaceuticals Ensures that the PET-CT service in Wales can attract, retain and develop staff.

Strategy Summary	How the All Wales PET Programme supports this
The Single Cancer Pathway, Next Steps To Achieve Earlier Diagnosis In Wales, Cross Party Group on Cancer (November 2020) [15]	
Inquiry into cancer waiting times in Wales to consider how the new Single Cancer Pathway was being implemented during its first year, as well as develop recommendations to identify next steps for cancer diagnosis in Wales. The report made a series of recommendations including: • developing a comprehensive cancer strategy to support the Cancer Delivery Plan; • re-starting reporting against the Single Cancer Pathway, which was paused during the Covid-19 pandemic; • increasing the amount of diagnostic equipment to ensure adequate capacity to manage rising demand for diagnostic services.	Increases capacity to meet the forecast growth in demand for scanning services. Sets out the case for new, state-of-the-art equipment to replace ageing facilities, including latest generation digital PET-CT scanners to meet forecast demand for services and a new cyclotron to support the supply of radiopharmaceuticals
Rapid Diagnostic Centres [16]	
Following a study tour to Denmark to investigate their initiatives to improve cancer diagnosis, Wales is now testing the Danish model by piloting access to rapid diagnostic centres. The centres take referrals for patients who present to primary care with serious but non-specific symptoms, where the GP suspects this could be due to cancer and needs further investigation.	The Programme will engage with this initiative.
Radiology Informatics System Procurement Programme (RISPP) [17]	
The Radiology Informatics System Procurement (RISP) Programme is supporting the modernisation of imaging services across Wales. From 2020 to 2024 the Programme aims to procure an innovative system that will provide a seamless end-to-end electronic solution, from receipt of a referral to the delivery of a radiology report. This will include: • a Picture Archive System (PACS) - storing all diagnostic imaging files; • a Radiology Information System (RIS) - allowing users to track patient records	Will be considered in developing the Programme and in implementation. The All Wales PET Programme will engage with the RISPP where appropriate and required.
The National Imaging Academy Wales (NIAW)	
Established in 2018, the Academy is Wales' flagship purpose-designed, state-of-the-art facility which will meet the increasing need to train radiologists and imaging professionals across the UK.	The Programme supports the aims of the National Imaging Academy by creating centres of excellence to attract and retain highly trained and qualified staff.
Heart Conditions Delivery Plan 2017, Welsh Government [18]	
Plan to both minimise the incidence of preventable heart disease and ensure patients have timely access to high quality pathways of care, irrespective of where they live. Diagnostic tests should be provided as early (within 8 weeks) and as locally as possible. Health Boards should ensure that diagnostic procedures, technologies, treatment and techniques are in line with the latest evidence.	Range of clinical indications may be in scope of PET scanning. Will be considered when developing the Programme.

Strategy Summary	How the All Wales PET Programme supports this
Dementia Delivery Plan 2018-2022, Welsh Government [19]	
Currently only around 53% of individuals in Wales with dementia have a diagnosis. The plan therefore sets targets for health boards to increase diagnosis rates by at least 3% a year.	Range of clinical indications may be in scope of PET scanning. Will be considered when developing the Programme further.
Neurological Conditions Delivery Plan 2017, Welsh Government [20]	
There are around 100,000 people with a neurological condition in Wales. All GPs should have direct access to a range of diagnostic tests and procedures where a neurological condition is suspected. Health Boards should ensure research findings result in service change to improve clinical practice and patient outcomes so patients get quicker access to innovative new diagnostic tools, treatments and medical technologies.	Range of clinical indications may be in scope of PET scanning. Will be considered when developing the Programme further.
Getting it Right First Time Programme National Speciality Report, Radiology (2020) [21]	
The GIRFT report examines ways of meeting the ever-increasing demand on radiology units in England at the same time as shaping a better service for those who use it.	Provides examples of the ways in which existing capacity can be maximised and services expanded. Suggests patient-centred measures that are of interest to the All Wales PET Programme.

1.3.12 Relevant regional issues

There are a number of initiatives taking place across the Welsh Health Boards and other organisations that will have an impact on the Programme.

Betsi Cadwaladr UHB

Initiatives to be considered by the programme:

- The restructure of nuclear medicine in north Wales.
- The Nuclear Medicine service in north Wales, which includes gamma cameras and the mobile PET service, is being consolidated. Currently the service is provided utilising three gamma cameras - one on each of the three main acute hospital sites - and one mobile PET-CT, which is located in Wrexham for two days a week. A Strategic Outline Case (SOC) was submitted to Welsh Government in October 2020 and identifies a series of issues with the Nuclear Medicine service configuration which make it unsustainable in the short and long term, in particular:
  - difficulties in staffing three separate services;
  - obsolete equipment;
  - falling demand for the gamma camera service; and
  - increasing demand for PET-CT.
- The SOC notes that there is an opportunity to improve the quality of the service, make it more resilient and reduce revenue costs.
- The preferred way forward identified in the SOC is to consolidate services in a single Centre of Excellence for Nuclear Medicine at one of the three acute sites across North Wales. The Centre would consist of two gamma cameras and one permanent fixed PET-CT scanner, and would be housed by a combination of new building and refurbishment work. The gamma camera and PET-

CT service would be run by the same radiographers and administrative staff. The programme is currently out to public consultation and the outcome of this is a clear interdependency to delivering this All Wales PET Programme.

Velindre NHS Trust

Initiatives to be considered by the programme:

- Re-provision of the Velindre Cancer Centre on a new site in Cardiff may affect the patient flow to PETIC and may offer opportunities to the All Wales Programme.

Swansea Bay UHB

Initiatives to be considered by the programme:

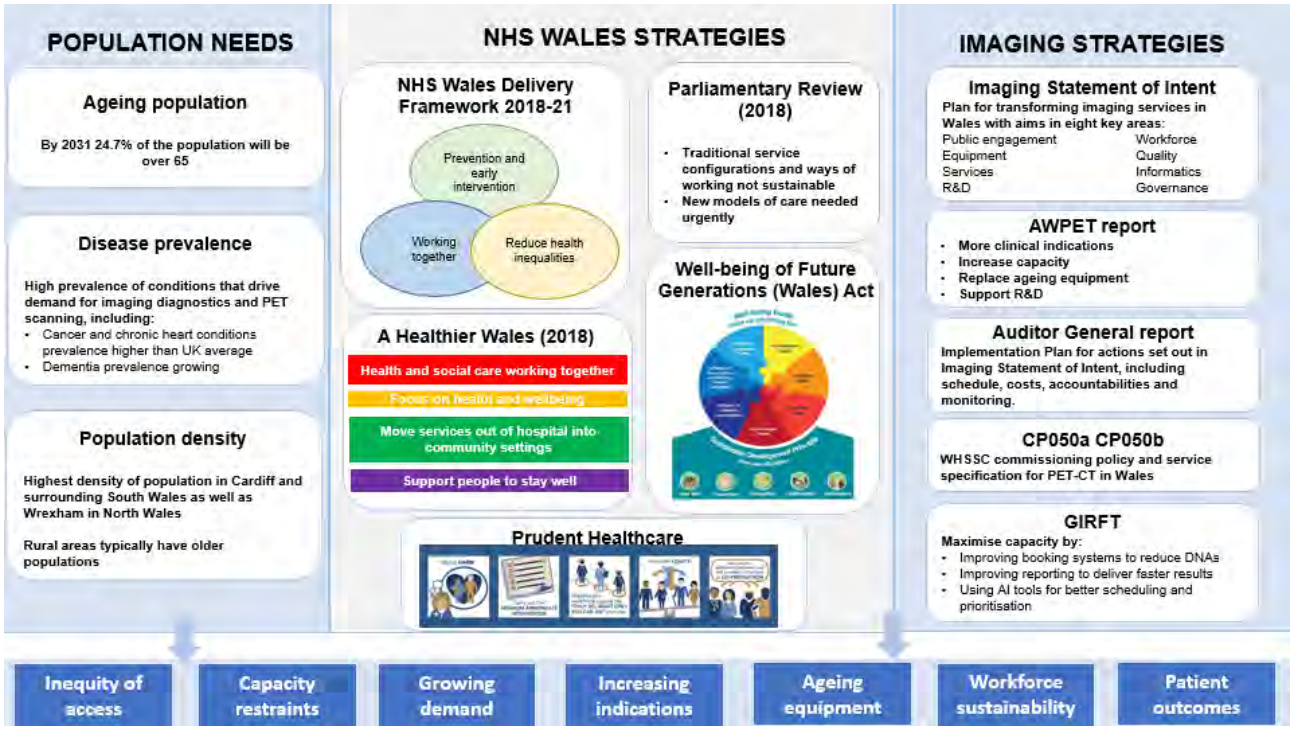
- Currently has an active project that is putting in place two new SPECT cameras and associated facilities.

1.3.13 Summary

The All Wales PET Programme seeks to address population needs while aligning with the strategic direction of Wales and addressing specific strategic issues within the Imaging service. Other relevant strategies and interdependencies with related programmes have been considered in developing these proposals.

An overview of the overall strategic context is provided in the illustration below (Figure 5).

Figure 5: Strategic context



1.4 The Case for Change

1.4.1 Introduction

This section of the PBC establishes the case for change that is driving the All Wales PET Programme, providing a clear understanding of:

- The spending objectives (what the programme is seeking to achieve).
- Existing arrangements (what is currently happening).
- Business needs (what is required to close the gap between existing arrangements and where the service needs to be in the future).

1.4.2 Spending objectives

Spending objectives describe what the programme is seeking to achieve and provides a basis for post-programme evaluation.

The spending objectives were partly informed through early engagement with service providers. A clinical questionnaire was sent to healthcare professionals at all PET providers in Wales and asked the following questions:

- In general terms, what are we not doing now that we should? This could include additional clinical indications for a PET scan, more research, further investment in infrastructure, education and training etc.
- What would you perceive to be the main clinical areas where the demand for PET scans (new indications) will change over the next 5 years, for example cardiology, dementia etc. and to what extent?
- What are the likely technical developments in the pipeline we need to be aware of and factor into future PET imaging services? This maybe to do with advances in technology (more efficient machines, all body PET, more sensitive/specific isotopes etc.)
- Considering the existing PET service across Wales, Is there anything we should not be doing/stop doing?

The questionnaire was sent to 23 clinicians, 12 of whom responded (six Medical Physicists, six PET Consultant Radiologists). The responses were also used to inform the clinical demand model. A summary of the responses is included in Appendix 3.

The final spending objectives were discussed as part of a workshop and subsequently approved by the PET Strategic Programme Board in February 2021 and these are outlined below.

- **SO1** - To improve the quality of PET service provision for Welsh patients by delivering better patient outcomes.
- **SO2** - To ensure a sufficient workforce to deliver a high-quality service.
- **SO3** - To improve delivery of the All Wales PET Service by efficient use of PET-CT scanners, facilities, processes and infrastructure.
- **SO4** - To ensure that the future All Wales PET service provides a cost-effective service for patients and NHS Wales.
- **SO5** - To widen the scope of the All Wales PET service, to meet recognised international best practice.

1.4.3 Existing arrangements

There are currently three PET-CT service providers in Wales, each with an analogue scanner:

- A full-time fixed site and cyclotron in Cardiff at the Wales Research and Diagnostic Positron Emission Tomography Imaging Centre (PETIC). This is a Cardiff University owned PET-CT scanner, which is situated at University Hospital Wales Cardiff site.
- A mobile service at Wrexham Maelor Hospital (2 days per week), provided by Alliance Medical.
- A mobile service at Singleton Hospital in Swansea (2 days per week), provided by Alliance Medical.

Referral routes

Patients are referred for a range of PET-CT scans by consultants or other members of the multi-disciplinary team (MDT).

Figure 6: PET services catchment areas, Wales

Patients in South East Wales (excluding Swansea Bay, Hywel Dda and West Bridgend) and parts of Mid Wales are referred to the Wales Research and Diagnostic PET Imaging Centre (PETIC) Cardiff. Patients in South West Wales, and parts of Mid Wales are referred to the mobile PET-CT service at Singleton Hospital, Swansea.

Patients in North Wales and parts of Mid Wales are referred to Nuclear Medicine, Wrexham Maelor Hospital, Wrexham. The patient flow for mid Wales generally follows the pattern for cancer referral to the north and south Wales specialist centres. Patients from mid Wales who would otherwise be referred to the Royal Shrewsbury Hospital for specialist treatment are referred to north Wales for PET scans.

Clinical indications

PET-CT scans are offered in line with the WHSSC Commissioning policy [1]. When treatments are not routinely available, patients who might get particular benefit can still access the treatment through a process called Individual Patient Funding Requests (IPFR).

Funding requests are considered by the all Wales IPFR Panel. The purpose of the Panel is to act as a Sub Committee of WHSSC and hold delegated Joint Committee authority to consider and make decisions on requests to fund NHS healthcare for patients who fall outside the range of services and treatments that a Health Board has agreed to routinely provide.

Each year the AWPET Advisory Group review evidence and advise WHSSC on new clinical indications that may be commissioned for PET scans. When considering requests for new indications, the AWPET Advisory Group will also review the list of recent IPFR applications and assess any trends in requests when advising WHSSC.

Activity levels

For Wales overall, under the current commissioning policy, 3,865 scans were completed in 2020-21, which equates to approximately 1,246 scans per million population. There was a significant drop in PET referrals during the period March-June 2020, related to the first wave of the COVID-19 pandemic, but this activity had returned to 'normal' levels by the end of 2020.

The table below shows current activity levels for each of the three individual PET-CT centres. Please note that Swansea PET scanning went "live" in July 2020, so the table includes just nine months of activity for 2020-2021. The annual equivalent would be 1,061 scans.

Table 7: Current and forecast activity levels

Year	PETIC, Cardiff (South East)		Wrexham (North Wales) 2 days per week		Swansea (South West) 2 days per week		Total no. PET scan
	NHS Scans	Growth	NHS Scans	Growth	NHS Scans	Growth	
2010-11	675	n/a					675
2011-12	1,285	90%					1,285
2012-13	1,417	10%					1,417
2013-14	1,619	14%					1,619
2014-15	1,920	19%					1,920
2015-16	2,119	10%	794	N/A			2,913
2016-17	2,263	7%	784	-1%			3,047
2017-18	2,318	2%	763	-3%			3,081
2018-19	2,667	15%	771	1%			3,438
2019-20	2,939	10%	819	6%			3,758
2020-21	2206	N/A*	891	9%	768#	N/A	3,865

*The figures for this table have been submitted to WHSSC by the service providers at each site. South East Wales are provided by Prof Chris Marshall, for South West Wales by Professor Neil Hartman, and for North Wales from Dr Mark Elias. *Fall in activity due to Covid-19 and provision of new capacity at Swansea from July 2020. #Scanner at Swansea was opened in July 2020.*

Commissioning beyond Wales

A very small number of patients from South Wales currently travel to London centres for Gallium DOTA-PET imaging (approximately 50 per year). Some patients from North Wales have PET scans in English centres but this number is low.

Supply of radiopharmaceuticals

All three Welsh sites offer 18F-FDG and 18F-PSMA PET scans. However, as PETIC benefits from an onsite cyclotron, it is able to offer a wider range of scans to patients.

The cyclotron at PETIC Cardiff is producing 18F-FDG, 18F-PSMA, 18F-Fallypride, 18F-DOPA and 18F-FMZ. PETIC is supplying 18F-FDG, 18F-PSMA, 18F-Fallypride, 18F-DOPA and 18F sodium fluoride to external providers and industry.

Under the Specials Licence, PETIC is supplying 18F-PSMA to Swansea, Bath, Poole, Plymouth and Bristol and 18F-DOPA to Manchester and London.

Under licensing rules, as PETIC does not hold Marketing Authorisation for 18F-FDG, it is currently unable to sell this product commercially to other sites within Wales. Instead, PETIC has a contract with Alliance Medical meaning PETIC can only supply other sites when/if Alliance Medical is unable to meet demand. Under the Specials License, PETIC is able to provide other UK sites products such as 18F-PSMA, 18F-DOPA and 18F-Fallypride.

Summary of current PET-CT facilities in Wales

The table below (Table 8) summarises PET-CT infrastructure, staffing and radiopharmaceutical position across each site.

Table 8: PET-CT centres summary

	PETIC	Wrexham	Swansea
Population served	1,661,810	711,946	777,008
Date site was established	2010	2015	July 2020
PET sessions per week (a session is considered to be half a day of scanning)	Nine - Two extended days (Tues and Wed), half day Fri	Four to five	Four
Cyclotron present (Y/N)	Y	N	N
Fixed or mobile	Fixed	Mobile (Alliance)	Mobile (Alliance)
Research activity undertaken at site (Y/N)	Y	Y (limited)	Y (limited)
Staffing	Onsite Clinical Radiologists from C&V, in addition to hub and spoke model for radiologists from Aneurin Bevan, Velindre and Cwm Taf (in discussion). Radiographers from C&V, Medical Physics staff from Cardiff University, radiopharmaceutical production staff from Cardiff University	Alliance staffing – comes with mobile scanner Local BCUHB team (Nuclear Medicine Dept.) undertake booking PET appointments and liaising with referrers, patients and Alliance Medical. Justification of the medical Exposures, reporting of the images and requisition of the PET Tracer from Cyclotron	Alliance staffing – comes with mobile scanner Swansea Bay UHB provides its own booking staff, clinical scientists, RPA, reporting, waste management, financial management.
Scan types offered / radiopharmaceuticals used	18F-FDG, 18F-PSMA, 18F-DOPA, 18F-Fallypride, 18F-FMZ	18F-FDG, 18F-PSMA	18F-FDG, 18F-PSMA
Sources of radioisotopes	Manufacture own 18F-FDG and 18F-PSMA External supply of 18F-FDG and 18F-PSMA as back up and cover for 4 service weeks per annum. Only site in UK manufacturing 18F-DOPA supporting specialised paediatric insulinoma clinical services in Manchester and London. Only site in UK manufacturing 18F-Fallypride and 18F-FMZ currently for research only. 18F-Fallypride also supplied for research purposes to London. Not possible to supply 18F-FMZ at moment but developing new production method in conjunction with commercial partner. Manufactures and supply 18F-sodium fluoride to a number of research institutions.	18F-FDG supplied by Alliance Medical as part of package with scanning 18F-PSMA sourced from PETNET and delivered from Nottingham	18F-FDG sourced from Alliance Medical and delivered from Guilford, London 18F-PSMA sourced from Alliance Medical, however manufactured and delivered by PETIC

	PETIC	Wrexham	Swansea
Referral pathways	WHSSC CVUHB ABUHB Mid and South Powys Mid and East CTMUHB Epilepsy service commissioned by C&V epilepsy service Epilepsy service commissioned by Bristol epilepsy service Paediatric Cancer for SW England commissioned by NHS England	WHSSC BCUHB & North Powys The following external referrers who see BCUHB / North Powys Patients on behalf of Welsh NHS: North Powys Shropshire (RJAH / SaTH NHS Trust) Countess of Chester Hospital Liverpool Heart & Lung Hospital Clatterbridge Cancer Centre	WHSSC Hywel Dda Swansea Bay West CTUHB
Site issues / strategic considerations	Several significant items of equipment are 11 years old and in need of replacement. Business Justification Case is in preparation.	Consolidation of Nuclear Medicine is underway across North Wales. SOC has been submitted to WG and is out to public consultation. One site is proposed to include Nuclear Medicine (SPECT-CT) and PET-CT and no site selection at time of writing this PBC.	

Information Technology

The existing arrangements in relation to the processing of referrals are as follows:

- Referrals are currently made using paper forms that are printed out and sent to the relevant PET site using email or fax.
- Administrators or “booking clerks” at each site need to manually update local data systems to make and track appointments and order materials for scanning, including radiopharmaceuticals. Booking clerks liaise with referrers directly via email or phone to clarify referral needs, where forms are not completed fully.
- In addition, the gatekeeping for referrals carried out by consultant radiologists is done manually and “off line”.
- Where relevant, administrators spend time retrieving previous scans from other sources to best inform clinical decision making.
- Post scan, a radiographer then sends scan data to the PACS system for the clinical radiologist to subsequently report on the PACS system.
- A frequent operational issue is the failure of data transfer from the mobile scanning units via a data cable to PACS for reporting which results in having to manually import studies from DVD which is slow and delays reporting.

Facilities

The fixed scanner and cyclotron at the PETIC site are now beyond their recommended useful age and urgently require replacing. Replacement parts for the PETIC scanner are no longer manufactured hence the site is currently functioning “at risk”.

The sites at Wrexham and Swansea make use of mobile scanners which also have significant limitations and issues (see Table 15: Mobile vs fixed scanners).

Workforce

The imaging workforce is in a critical situation across the UK. There is an increasing clinical demand across all imaging modalities, and capacity issues are exacerbated by difficulties in recruiting consultant radiologists[3], radiographers[4], radio pharmacists and other nuclear medicine staff - the level of difficulty varies according to geographical location [12, 13]. Clinical imaging remains a popular specialty for medical trainees but training capacity does not match current workforce deficits.

According to the Clinical radiology Wales workforce summary published by the Royal College of Radiologists (RCR; 2019) [22], "there are still not enough consultant radiologists to deliver safe and effective care", with this report further noting regional variation in staffing across Wales and shortages in clinical radiology specialists being areas of concern.

Wales has 7.8 consultant clinical radiologists per 100,000 population [22], compared to a European average of 12.8. Wales has the oldest demographic of consultant radiologists in the United Kingdom; based on a retirement age of 62 years, 26% are anticipated to retire by 2020 [12]. The number of ARSAC practitioners is reducing with retirement.

Indeed the situation facing the imaging workforce has been further highlighted in the recent RCR Clinical Radiology UK Workforce Census 2020 report (2021) [23]. This report clearly outlines how the demand for diagnostics is increasing faster than the demand for NHS services as a whole, how waiting times have lengthened due to the pandemic with 58% of Clinical Directors reporting insufficient Clinical Radiology consultants. Specifically, this report notes that how £8.1 million was spent by NHS Wales on outsourcing reporting (of all imaging modalities) to the independent sector and ad-hoc locums.

Critically, the RCR 2020 census [23] notes that over the past five years there has been an 11% decline in ARSAC license holders, with many professionals approaching retirement age or have retired and returned. Many service providers are soon to be reliant on contractual agreements with other trusts or health boards and the report highlights that "health boards must ensure succession plans are in place for ARSAC license holders".

The situation for radiographers and clinical scientists is no better. According to a 2019 workforce survey carried out by the Institute of Physics and Engineering in Medicine (IPEM), 33% of UK centres stated their current staffing provision was sufficient. 57% of UK centres felt their staffing provision was not sufficient. The IPEM report noted "the precarious nature of staffing this specialism, with most services stretched to capacity, and concerns were expressed of potential increase in demand or area of coverage". The report also highlighted the concerns expressed over future workforce supply, and the just-about-managing description of the workforce is not future-proof, and while safe, does not have sufficient capacity to research, develop, and implement new technologies.

As a result of the Imaging Statement of Intent the National Imaging Academy Wales (NIAW) was established in 2018 to "develop a sustainable and flexible imaging workforce to deliver a modern, responsive diagnostic imaging service for Wales". In addition, Health Education and Improvement Wales (HEIW) were tasked with facilitating the development of an integrated workforce training strategy for radiologists, radiographers, sonographers, advanced practitioners, assistant practitioners and other imaging healthcare professionals in Wales, including Medical Physics.

3 Also refers to Consultant Nuclear Medicine Physician throughout this document

4 Also refers to Nuclear Medicine Technologists throughout this document

Further information on the training routes for all professions included in PET scanning can be found in Appendix 7.

The three current PET sites in Wales are set up differently, so there is some variance in how staffing is currently structured.

PETIC makes use of a pool of 15 radiographers/nuclear medicine technologists in CVUHB, currently deemed competent and entitled to perform PET scans. These are typically cross trained from the nuclear medicine pool. Having a large pool of staff competent to scan in Cardiff provides some resilience with regard to service expansion.

A similar model is employed for administrative staff. There is currently a pool of three booking clerks who can book PET-CT scans at PETIC, again providing resilience. In addition, PETIC has several consultant radiologists, one clinical scientist and a business manager. As the site at PETIC consists of a cyclotron, there are multiple technical posts associated with radiopharmaceutical production. In addition, several research posts are at this site.

The appointment of researchers also provides an additional route for clinical scientist accreditation. Students who obtain a PhD in a suitable subject can obtain state registration as clinical scientists through the equivalence route (https://www.ahcs.ac.uk/equivalence/). In addition, researchers may also obtain practical skills in radiochemistry which can translate into technical posts supporting the production of radiopharmaceuticals in Wales, another area with significant staffing issues. The active PhD programme in PETIC offers another pool of staff that may be utilised to meet the increasing demands of the clinical service.

For the mobile scanning sites in South West and North Wales, Alliance Medical (AML) provide the mobile scanner and three scanning operators per scanner (two to three imaging technologists/radiographers, and one healthcare assistant) and the RPA (radiation protection advisor). The local “host hospital” then provides the booking staff, waste management, governance, management of the PET-CT service, consultant radiologist reporting of scans and finance business partner for the fiscal aspects. The Swansea site has a clinical scientist for dosimetry, however Wrexham does not. Dosimetry is part of the Medical Physics Expert (MPE) role, which is contractually provided by Alliance Medical in North Wales. Additionally, the RPA role is externally contracted by AML and the RPA is rarely on site, but available by phone to the mobile van staff.

Swansea has just written and agreed an SLA with Alliance Medical to allow existing local nuclear medicine staff (technologists/radiographers and clinical scientists) to gain experience/shadowing on the mobile PET scanner, with a view to ensure that staff are partially trained and developed for future needs, and to ensure a degree of resilience when an AML staff member is absent (sickness, etc.). Wrexham has a clause within the contract with AML to facilitate training of BCUHB staff when required.

Currently BCUHB (North Wales) has a Strategic Outline Case which is going through a consultation stage with the aim of consolidating Nuclear Medicine and converting the existing mobile PET-CT service to a fixed scanner, based at the consolidated site. It is expected that the workforce model will have staff working in both conventional gamma camera and PET-CT, and supplementary training will be required.

For further detail on existing arrangements for the PET workforce, please see Appendix 7.

1.4.4 Business needs

There are a number of challenges within existing arrangements that mean over the long term it will prove increasingly difficult to deliver a sustainable high-quality PET service for the people of Wales that ensures equitable access to PET-CT and improves outcomes.

The main challenges include:

- Insufficient capacity to improve the quality of provision and deliver better patient outcomes since:
- The service underperforms in relation to UK and international best practice in terms of number of funded indications, number of scanners and supporting infrastructure.
- Demand is growing and the list of indications is expanding.
- Challenges in training, recruiting and retaining the highly skilled workforce required to deliver a high-quality sustainable service.
- Limited ability to improve delivery by efficient use of scanners, facilities, processes infrastructure, due to the use of ageing analogue scanners and reliance on mobile units and outsourcing arrangements.
- Reliance on external suppliers which limits opportunities to reduce costs and improve efficiencies and deliver a service for patients and NHS Wales that offers best value for money.
- Current facilities and the reliance on mobile units which limit the ability to broaden RD&I opportunities.

These business needs are explored in greater detail in relation to each of the five spending objectives below.

1.4.5 SO1: To improve the quality of PET service provision for Welsh patients by delivering better patient outcomes

When compared to the devolved UK nations, Europe and the developed world, Wales significantly underperforms in terms of PET-CT scans per head of population, density of PET scanners and the wider PET-CT infrastructure.

Although the situation has improved in the last three years, with an expansion of funded indications [1] and the opening of a second WHSSC-commissioned mobile PET unit for two days per week in Swansea in the summer of 2020, there is still significant progress to be made.

Patient View on accessing a PET scan at Swansea

> “Before the scan the patient said *‘I don’t want to drive to Cardiff’* and his daughter said *‘getting elderly patients to Cardiff is unsafe and unacceptable in these times’*.”

The table below provides a comparison of Wales to the number of scans carried out in England, per million of population. It is clear that Wales is currently carrying out significantly lower numbers (approximately 33%) of PET scans per head of population compared to England, despite having a higher prevalence of cancer and other chronic diseases (see Section 1.3.3 and 1.3.4, and Table 9). There are various reasons for this difference, including:

- fewer commissioned indications in Wales compared to England;
- lack of geographic access to PET-CT for North Wales and South;
- historic under-referral; and

- tighter gatekeeping in Wales compared to England.

Table 9: Number of PET-CT scans per million population

Country	2015/16	2016/17	2017/18	2018/19	2019-20
England	1,849	2,100	2,600	3,150	3,533
Wales	922	975	985	1,100	1,192

Welsh actual number of scans sourced from WHSSC. England number of scans sourced from Diagnostic Imaging Dataset Annual Statistical Release 2019/20 *Number of scans divided by population numbers from ONS.

In the Royal College of Radiologists (RCR) 2005 strategy document "PET-CT in the UK: a strategy for development and introduction of a leading-edge technology within routine clinical practice" [24] the working party recommended initially, one PET-CT per 1.5 million population is planned to reflect the current role in cancer management.

Progress has been made in other devolved nations since 2005, and according the NCRI and local intelligence, there are now 1.05 PET scanners per million population in England (Table 10).

Table 10: Comparison of number of scanners within the UK

Country	Fixed PET CT	Mobile PET CT	PET MR	Scanners per million
England	37	20	1	1.05
NI	2	0	0	1.05
Scotland	6*	0	1	1.27
Wales	**1**	**0.8**	**0**	**0.60**

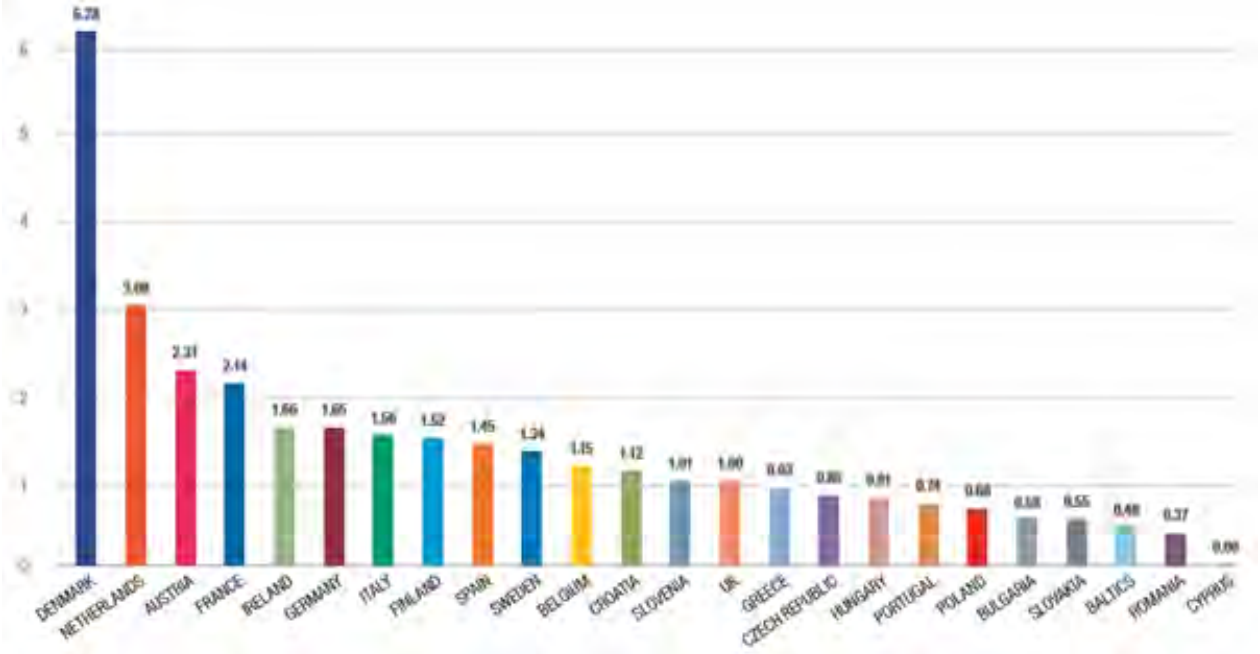
Data sources from: http://www.ncri-pet.org.uk/pet_scanning_and_cyclotron_facilities.php and informal communication between Clinical Programme Board Chairs and Regional Chairs for Scotland, Northern Ireland and England. *5 NHS PET-CT. 1 research PET CT

In the rest of the UK, PET-CT has moved out of specialist commissioning and tertiary centres to become a routine part of the equipment available in nuclear medicine departments of teaching hospitals and large District General Hospitals.

It is clear from Table 10 that the number of scanners per head of population in Wales is significantly lower than the rest of the UK. The picture becomes worse when comparing the number of scanners in Wales to the rest of Europe and beyond.

The 2016 edition of the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry report on "Medical Imaging Equipment Age Profile and Density" [25] shows the UK position to be a density of 1 PET-CT scanner per million. Welsh provision is 0.60 scanners per million population, which is comparable to Bulgaria and Poland (Figure 7).

Figure 7: Density of PET-CT scanners in the EU (scanners per million population)



According to “Healthcare resource statistics - technical resources and medical technology” (Eurostat, 2020) [26], there has been “a notable increase in the number of positron emission tomography (PET) scanner units” across Europe, with France increasing its number of PET-CT scanners from 9 in 1998 to 156 in 2018. According to this publication, the number of PET-CT scanners ranged from 0.0 per 100,000 population in countries such as Liechtenstein, Romania and Serbia, to 0.8 per 100,000 population in Denmark (Figure 8).

A more recent publication explored PET-CT services across 21 jurisdictions in seven countries (Australia, Denmark, Canada, Ireland, New Zealand, Norway and the UK). It assessed service provision to better understand the impact any variation may have upon cancer services. The authors found that the number of PET-CT scanners per 100,000 population in Wales was the lowest (0.04 per 100,000 in 2017 with 1.2 scanners) (Lynch et al., 2020) [27]. Following the introduction of a mobile scanner in Swansea in 2020, the figure has risen to 1.4 scanners equating to 0.047 scanners per 100,000 population, which would still see Wales at the lowest ranking in this comparison (

Figure 9).

Lynch et al., (2020) noted that the growth in PET-CT in Denmark is likely to be reflective of changes brought about by the 2007 National Danish Invitation to Tender for Delivery of Cancer Scanners, as well as the introduction of national integrated pathways for cancer care [28]. Lynch et al., (2020) went on to highlight that recent ICBP research demonstrated improvements in cancer survival in Denmark, for example from 27.5% 1-year lung cancer survival (1995-1999) to 46.2% (2010–2014) [29].

This will have been influenced by a multitude of factors, one of which may well be the increase in capacity of PET-CT services based on more accurate cancer staging and treatment planning [27, 30].

Figure 8: Availability of imaging equipment – PET scanners 2013 and 2018 (per 100,000 inhabitants)

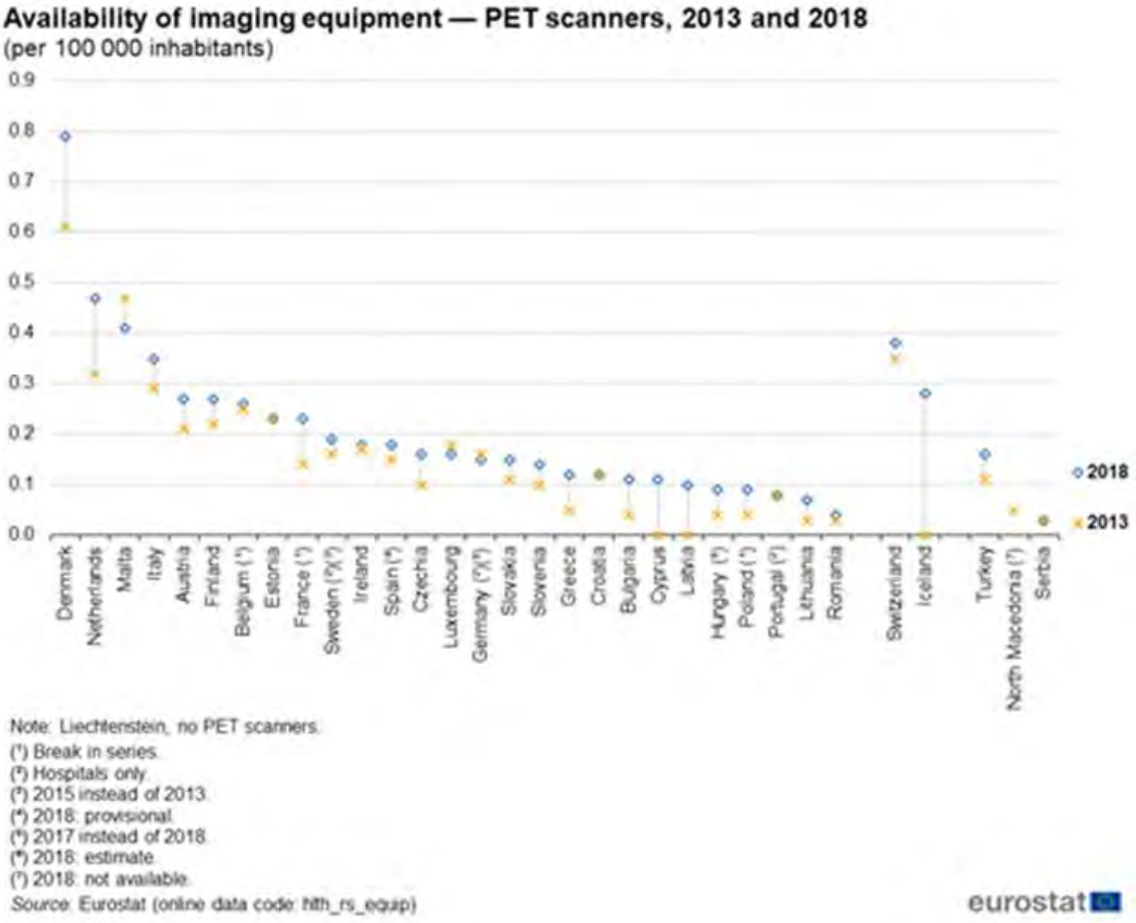
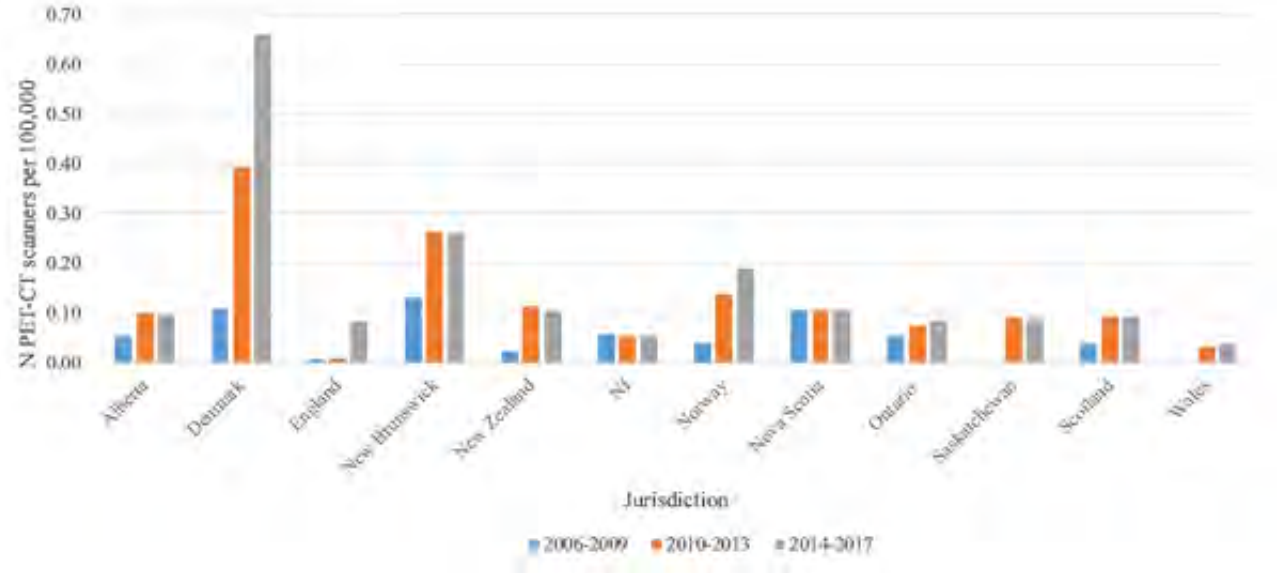


Figure 9: Comparative analysis



A comparative analysis: international variation in PET-CT service provision in oncology—an International Cancer Benchmarking Partnership study https://academic.oup.com/intqhc/advance-article/doi/10.1093/intqhc/mzaa166/6030987

Provide capacity to meet growing demand

As well as addressing the business need for provision of scanning capacity to meet the growing clinical demand for PET scans, there is also a need to increase and secure capacity of the wider infrastructure.

Expanded list of clinical indications

The number of clinical indications commissioned in Wales has historically lagged behind other devolved UK nations and comparable international healthcare systems. However, this discrepancy is improving and more indications have been funded and commissioned by WHSSC every year since 2016 (Table 11). Please see Appendix 5 and 6 for a full description.

Whilst the number of commissioned indications in Wales is increasing, greater progress still needs be made.

It appears that tighter 'gatekeeping' or reviewing of referrals in Wales compared with England may be an additional factor. The necessary widening scope of commissioned indications will undoubtedly add to the scanning capacity issues that face PET provision across Wales.

Table 11: Comparison of UK PET commissioning indications

		England	Wales (2016)	Wales (2018)	Wales (2020)	Wales (2021)
FDG Oncology	Brain	Covered	None	None	None	None
	Head and Neck	Covered	Some	Most	Covered	Covered
	Thyroid	Covered	None	Covered	Covered	Covered
	Lung	Covered	Some	Covered	Covered	Covered
	Pleura	Covered	Some	Some	Some	Some
	Thymus	Covered	None	None	None	None
	Oesophagogastric	Covered	Most	Most	Covered	Covered
	GIST	Covered	None	None	None	Covered
	Breast	Covered	None	Covered	Covered	Covered
	HPB	Covered	None	None	Some	Most
	Colorectal	Covered	Most	Most	Most	Most**
	Urology	Covered	None	None	Some	Most
	Gynaecology	Covered	Some	Most	Covered	Covered
	Testicular	Covered	None	None	None	None
	Anal and penile	Covered	Some	Some	Some	Some
	Lymphoma	Covered	Most	Most	Most	Most **
	Myeloma	Covered	Some	Most	Most	Most
	Skin	Covered	None	None	None	None
	Musculoskeletal	Covered	None	Most	Most	Most
	Paraneoplastic	Covered	Some	Some	Some	Most
	Carcinoma unknown primary	Covered	Some	Some	Some	Some
	Neuroendocrine	Covered	None	Covered	Covered	Covered
	Rare childhood	Covered	None	None	Most	Most
	Pre SABR	Not specifically covered	None	None	Covered	Covered
	Neurology	Covered	Some	Some	Some	Most

		England	Wales (2016)	Wales (2018)	Wales (2020)	Wales (2021)
Non oncology FDG	Cardiology	Covered	Some	Some	Some	Some
	Vasculitis	Covered	None	None	Covered	Covered
	Sarcoid	Covered	None	None	Most	Most
	Infection	Covered	None	None	Covered	Covered
	PUO	Covered	None	None	Covered	Covered
Non FDG	Methionine/ FET	Covered	None	None	Some	Some
	Ammonia	Covered	None	None	None	Nome
	Choline/ PSMA	Covered	None	Some	Most	Covered
	11 C Acetate	Covered	None	None	None	None
	Ga 68 DOTA	Covered	Most	Most	Covered	Covered
	F-DOPA	Covered	None	None	None	None
	18 F Fluoride	Covered	None	None	None	None
	Amyloid	None	None	None	None	None

Table 12 summarises the new indications that AWPET has recommended for inclusion within the revised WHSSC commissioning policy from May 2021. These indications have been selected based on careful assessment of the evidence base. Behind each overarching indication, specific criteria have been agreed to define the clinical circumstances in which patients should be referred (Appendix 5). Table 12 also shows the estimated annual volumes of referral for each indication (all Wales).

Table 12: New indications for PET-CT 2021: Estimated volume per annum (All Wales)

Indication	Volume
Colorectal cancer	40
Cholangiocarcinoma	24
Dementia	250
Gastrointestinal stromal tumours (GIST)	45
Lymphoma	40
Prostate cancer	280
TOTAL	**679**

Patient views on accessing a PET scan for the diagnosis of Alzheimer's

> My wife had her PET Scan at the beginning of September last year. Her memory problems had been ongoing for sometime and the doctor had suspected the onset of Alzheimer's Disease.
>
> The PET Scan results gave a definite diagnosis of Alzheimer's which was a relief, in a strange way, to know what we were dealing with. Reading the Scan report and seeing which areas of her brain showed reduced activity, has been a great help to me in understanding her memory loss and other symptoms.
>
> Following the diagnosis the doctors have been able to persuade my wife to start on medication which has already had a positive effect. Her mood has improved and she is less anxious and agitated.
>
> All in all, the PET Scan has been of real benefit to us and I am so grateful that the doctors were able to refer my wife for it. I hope many more people will be able to gain from this amazing technology.

> My husband had been having problems with his memory for some time before the scan but no diagnosis was given. He had a course of CAT therapy as they thought his problems might have been due to anxiety. During this time my husband became increasingly anxious.
>
> I was sure there was something else wrong with him, so when the diagnosis of Alzheimer's was given, it was a relief to me, even though I understood the terrible implications that were carried with the diagnosis. It enabled me to prepare for the future and to be more understanding of my husband's problems.
>
> I would strongly recommend the PET scan as it brought clarity to a situation which until then had been quite unclear and very disturbing.

Future projections for scanning demand in Wales

The NHS England report "Diagnostic Imaging Dataset Annual Statistical Release 2019/20" shows PET-CT scanning in England increasing year-on-year with a large proportional increase in 2019/20 (12.6%). The dataset also shows that PET-CT scanning is dominated by the 60-74 year old age group, accounting for 45% of total activity.

Critically, in his December 2020 report 'Diagnostics: Recovery and Renewal' [14], Professor Sir Mike Richards indicated that between 2014/15 and 2018/19 demand for PET-CT in England increased by 18.7% per annum. He recommended that scanning equipment should, as a minimum, be expanded in line with current growth rates and that all imaging equipment older than 10 years be replaced.

This is an exceptional consideration when estimating growth demand for PET-CT for Wales as scanner numbers, scans per population and commissioned indications are currently markedly below other UK devolved nations and Europe. In addition, Wales faces an increasing proportion of older people in the population and an associated increase in disease prevalence by 2031.

Essentially, Welsh PET-CT scanning provision first needs to "catch up" with developed world country comparators, then look to align with the estimated growth demand.

Developing the Welsh PET-CT demand model

The demand model has been developed by the Clinical Programme Board based on:

- The population growth estimates included in section 1.3.4.
- An expanded list of commissioned clinical indications in line with comparator countries;
- Feedback from the clinical questionnaire (see section 1.4.1 and Appendix 3).

Table 13 demonstrates the various aspects of growth and scenarios that were considered by the PET Programme Clinical Board.

A full range of modelled scenarios can be found in Appendix 4 and a full narrative in Appendix 6.

The Clinical Board presented all model scenarios to the Strategic Programme Board in August 2020. In consideration of the need for international benchmarking or "levelling-up", alongside the predicted expansion of commissioned clinical indications and the potential for additional modalities of use, a 20% activity growth model per annum for the next ten years was proposed as an appropriate figure that would fully account for the inputs noted above. This figure of 20% was agreed and confirmed by all members of the Strategic Programme Board as the most likely real-time demands, based on figures from the Richards report and anecdotal growth in England to date.

As well as cancer diagnostics, the demand model is inclusive of the expert consideration for the probable widening scope of indications such as dementia and scanning for modalities such as radiotherapy planning and generic cardiology. It also includes the additional scans that are estimated to result from the widened commissioning policy that will be in place from May 2021 (679 additional scans).

The Strategic Programme Board also considered the role and function of RD&I in their review of the activity growth in the clinical demand model. Advice from expert membership is that a PET scanning facility could dedicate no more than 10% of its annual scanning capacity to RD&I. Indeed, in the recent quarterly report from PETIC, it stated that 7% scans were associated with RD&I. As a result, RD&I scanning activity is included in all projected activity data and as part of the annual 20% estimates for growth.

Table 13: Summary of likely clinical demand for PET scans across Wales based on 20% underlying growth

Year	South East Wales	South West Wales	North Wales	Projected All Wales
2021	2629	1434	1144	5207
2022	3155	1721	1373	6249
2023	3786	2065	1647	7498
2024	4543	2478	1976	8998
2025	5452	2974	2372	10789
2026	6542	3569	2846	12957
2027	7851	4282	3415	15548
2028	9421	5139	4098	18658
2029	11305	6167	4918	22390
2030	13566	7400	5902	26868
2031	16279	8880	7082	32241

Modern digital PET-CT machines are capable of performing up to 5,500 times scans per annum. Assuming that a scanner is functional 50 weeks of the year (allowing two weeks for maintenance etc.) then a total of 5,288 scans per annum can be achieved.

The current analogue scanners that are in place within Wales (mobile and fixed at PETIC site) are capable of 2,884 scans per annum, when active for ten sessions per week (50 weeks per year, with

3,000 maximum annual capability). Based on a 20% growth model, it is possible to identify the years in which demand for PET scanning can no longer be met by existing service models and facilities. See Section 5.

The above information will assist in timing the installation of any approved PET-CT scanner and the associated building of any supporting facilities. However, the run-up time for writing and seeking approval of an OBC and FBC for each site should be factored into planning, in addition to ensuring sufficient workforce is present to run the facilities (see section 5). Indeed, in line with the Richards Report (2020), "expansion of the imaging workforce (combined with improvements in productivity will be vital in meeting the increasing demand, but very challenging. Actions will be needed on multiple fronts and by several organisations". In Wales this will include NHS Wales Improvement, HEIW, NIAW, DHCW and higher education institutions and professional bodies.

Radiopharmaceutical supply

It is clear from the clinical demand model that the projected increase in scanning activity will lead to a significant increase in demand for radiopharmaceuticals over the coming years. This step change in demand needs to be carefully considered to ensure this essential resource is available and does not prove to be a limiting factor to roll-out.

The possibility of the cyclotron facility at PETIC obtaining an MA license should be considered, as there is merit in having an assured, Welsh resource for radiopharmaceutical supply.

Furthermore, the contractual arrangements with Alliance Medical should be further considered to mitigate against the fact that Swansea needs to purchase supply from Alliance Medical, despite a local Welsh-funded cyclotron manufacturing radiopharmaceuticals in close proximity to the Swansea site.

- The demand needs to be met in the most cost effective, rational and secure manner.
- Safeguarding provision and prices through long-term contracts with suppliers may be needed for sites where on-site production cannot be secured.
- Securing partnerships and political agreement in provision from within and from outside of Wales is needed.
- Critically, horizon scanning of new isotopes, pending MA for those currently considered under Specials license and identifying new ways of using existing isotopes should become part of an annual consideration for commissioners and clinicians.
- An All Wales Strategy for Research and Development should be developed so that all sites in Wales can be considered for research activity (in partnership with one another, and further afield) in a way that ensures radiopharmaceutical supply does not hinder patient access to clinical trials.

Information Technology

There is a clear and urgent need to update the way in which referrals, appointments and reporting is managed through the PET service.

Improve clinical outcomes

The superiority of PET-CT scanning in diagnosing and staging particular cancerous lesions, evaluating metastatic spread, optimising and evaluating treatment, and assessing prognosis has been well documented. 18F-FDG PET can upstage patients with cancer and can result in patients avoiding unnecessary surgical intervention. It can also downstage a cancer diagnosis and facilitate

a patient accessing more appropriate treatment. PET-CT is also being used in the diagnosis and treatment planning of an increasing range of other diseases.

However, the under referral of patients in Wales to PET-CT services means that these benefits are not being realised, and clinical outcomes are not as good as they could be.

Clinical outcomes could be further improved by the introduction of new generation digital scanners and new radioisotopes, both of which will increase diagnostic accuracy. Extending the range of clinical indications for PET-CT will also ensure patients receive the most clinically effective interventions.

1.4.6 SO2: To ensure a sufficient workforce to deliver a high-quality service

As noted in Section 1.4.3 (page 40), the imaging workforce is in a critical situation across the UK. There is increasing clinical demand across all imaging modalities, and capacity issues are exacerbated by difficulties in recruiting consultant radiologists, radiographers and sonographers. Clinical imaging remains a popular specialty for medical trainees but training capacity does not match workforce deficits. There is a clear and substantial need to attract, train and develop appropriate staff to the All Wales PET service to ensure deliverability.

PET-CT is not a stand-alone provision, and radiology services will typically not have staff solely dedicated to PET. Instead, staff typically work across several imaging modalities. This is certainly beneficial for skill mix and resilience in a workforce. However, this needs to be considered when planning workforce for future PET-CT services as the needs have to be fed in to wider radiology service on site.

The location of a PET-CT scanner is critical when considering the use of radiopharmaceuticals. A PET-CT scanner would ideally be co-located close to other nuclear medicine services and the specialist medical physics workforce.

The various reviews and reports on this topic suggest a variety of approaches that could facilitate skill-mixing and future-proofing of the PET-CT workforce. One possibility is for radiographers/technologists/physicists to train and become adept at reporting, thus facilitating/reducing consultant radiologist reporting tasks.

Indeed, clinical reporting (interpretation), by non-medical professionals, is established practice in conventional nuclear medicine imaging and other imaging modalities. It is likely that radiographers, clinical scientists and nuclear medicine technologists (with the necessary training/qualification in clinical reporting) can facilitate some limited PET-CT reporting capacity in future, by supplementing the role of the radiologist/nuclear medicine physician, by freeing up medical time for PET-CT reporting. This would be limited to reporting on site only under the guidance of the PET (IR(ME)R) practitioner in possession of an ARSAC licence. Therefore there is a potential route to building some additional resilience within a site team, which will undoubtedly be an interesting prospect for non-medical staff wishing to expand their skill-set.

There is potential for Artificial Intelligence to play a role and assist in many areas that could facilitate more efficient working practices (see Appendix 8). Some of this is being considered and is in scope of the RISP Programme.

The IT infrastructure supporting imaging in Wales requires further development and there is a programme now addressing these issues: the Radiology Informatics System Procurement (RISP)

Programme. It is anticipated (and considered necessary) for these developments to enable the reporting of PET-CT remote from the PET-CT sites. This would facilitate a potential shift toward a "hub and spoke" service model of reporting radiologists in Wales, where perhaps a consultant radiologist based in Hywel Dda could tele-report on scans carried out at Swansea without leaving their office. This must not be to the detriment of adequate on-site support. It is noted that ARSAC does not encourage remote practitioners, so a practitioner would still be expected to regularly attend the PET centre for which they provide primary support. However, this could be an attractive prospect for consultant radiologists looking to live and work in more rural areas of Wales, and still access the interesting field of PET-CT. This is in line with the 2019 RCR [22] recommendation to provide "innovative delivery models" and is dependent on the RISP Programme.

There is a potential risk to the surrounding radiology workforce in that new PET-CT sites could attract vital staff away from other sites. However, the added benefit of retaining and attracting high quality specialists may outweigh the potential risk. This would need to be considered in regional and local plans.

The PET-CT Workforce Board have made a set of recommendations regarding the ideal staffing state for a PET-CT scanning service and have listed their professional roles and WTE, see Table 14. Descriptions of each role and responsibilities are contained in Appendix 7.

As workforce provision is a clear constraint to implementation of this Programme, it is essential that the All Wales PET Programme works closely with existing training and education organisations, Health Boards and other groups to ensure that workforce needs are appropriately considered and planned for in the near and distant future. The PET Programme Workforce Board may be best placed to adjust into an advisory role/group in the future, to maintain expertise and momentum and continue to share and learn from one another.

A fixed, state of the art PET scanning site that has an active RD&I presence is likely to prove an attractive place to work, making it easier to recruit and retain staff from all professional groups and imaging modalities outside of PET.

Table 14: Professional roles required to run a PET-CT scanning service (based on a single scanner)

Role	Band	WTE (up to 6 patients per session)	WTE (7-12 patients per session)	Scalability with increased demand
Booking clerk / Administrator / Reception staff	3 or 4	1.5	2.5	In consideration of the patient interaction involved in this role, an increased throughput of patients will result in a need for additional staff members.
Radiographer / Technologist	6-8a	3.0	4.0	Increase in patient throughput is thought to be sufficiently covered by one additional post.
HCA/Clinical Support Staff	4	1.0	2.0	TBC
Clinical Scientist (physics) / Medical Physics Expert	8a-8c	2.0 (includes RWA & RPA roles)	(2.5 for >12 patients)	The scalability for this post is not linear, but there is a small increment per patient which will need to considered, alongside increased patient throughput.
Finance Business Partner	6-8a	0.2	0.2	Post is not felt to be scalable to patient numbers.

Role	Band	WTE (up to 6 patients per session)	WTE (7-12 patients per session)	Scalability with increased demand
Consultant Radiologist	Consultant pay scale	1.5	3.0	RCR literature denotes consultant radiologist reporting a range from 3.75 - 7.5 reports per session. Agreement from this group is that 5 reports is reasonable.*
PET-CT Manager	8a-8c	0.4	(0.8 for >12 patients)	There will be increased demand for management and HR support to the increased staffing numbers when PET sessions have 7-12+ patients.

** Comments from consultant radiologist workforce are: 1) a full time consultant will typically be at work 42 weeks of the year, to allow for necessary leave. 2) A full time consultant works 10 sessions on a 7:3 split in line with the National Consultant Contract in Wales. 3) An average of 5 PET-CTs would be reported per DCC session. A Royal College of Radiologists document of 2012 discussing clinical radiology workload and a Royal College of Physicians document of 2013 detailing the duties, responsibilities and practice of physicians both suggest 1-2 per hour i.e. 3.75 to 7.5 per session. 4) Studies won't routinely be double read or reported. 5) A full-time consultant would not devote all of their time to PET-CT duties, but most likely 2 to 4 sessions per week. The clinical lead(s) for a service may well provide more than 4 sessions. 6) If there are sufficient consultants to meet the reporting needs of the service then there are sufficient to meet the non-reporting duties. 7) MDT meeting commitments are to be funded separately.*

For future consideration: non-certificated support staff to supplement the radiographer/technologist role (1 WTE).

1.4.7 SO3: To improve delivery of the All Wales PET Service by efficient use of PET-CT scanners, facilities, processes and infrastructure

To achieve this spending objective there is a need to provide modern, up to date and high quality PET-CT scanners and supporting facilities in order to improve processes and infrastructure.

Replace analogue scanners with digital PET-CT scanners

Scanning technology has advanced significantly over the last 10 years which has led to markedly improved scan image quality, shortening of scan time and lower radiation doses. Although digital scanners are significantly more expensive, they offer the following additional benefits:

- significant gain in sensitivity;
- improved resolution;
- significantly reduced radiation dose or significantly reduce scan time: in practice, a combination of both; and
- faster scans – increasing patient throughput.

All three scanning sites in Wales currently have analogue scanners.

The analogue scanner at PETIC is now 11 years old and is beyond the end of its recommended life. In order to maintain access to a scanner for the population of South East Wales and provide service continuity, the scanner will need to be replaced. A business case to progress this is in preparation.

Replace inadequate mobile facilities with fixed ones

The two mobile centres provide access to North and South West Wales respectively and population modelling shows an ongoing need for geographical access to patients in these areas. In the short

term, this could be continued on the mobile fleet but there are significant issues associated with mobile scanners, as described in Table 15 below.

When considering the number of scans that can be carried out by a digital scanner, their use will permit the service reaching full capacity requirements. Reaching this capacity will also require additional investment in the physical infrastructure to account for additional patient numbers. For instance, a digital scanner will scan between 7 and 12 patients in one session, compared to 6 in a typical analogue session. Therefore provision is required for more uptake rooms and more automation in dispensing to obtain greater yield per vial, for example the Tracis system. The same is true for workforce capacity (see Section 1.4.6).

Patient experience at a mobile PET scanner

> In autumn 2019, I had a PET scan, prior to my lung operation to make sure all areas affected by that particular cancer were visible. While I was delighted to be able to have such an expensive and useful procedure, it had its pros and cons.
>
> The actual procedure was painless, but I had no idea until I got the paper work that the radio isotope is so unstable. It only has a life of a few hours and sometimes a batch fails in the laboratory. The nearest labs to Wrexham are in Keele and Preston. Several batches are made each day and rushed to the places with the PET scanners. I find the theory fascinating, but the practicalities aren't so much fun.
>
> My appointment was in the morning at the mobile unit at Wrexham Maelor Hospital. Although I live in Wrexham, I arrived in plenty of time (i.e. very early) to avoid taxi problems at school times. Unfortunately, this meant I missed the phone call, saying that that morning's batch had failed.
>
> The nurse suggested that I went home and waited for a call in the afternoon to let me know if the next batch had been successful. I never met the other patient, who had travelled 3 hours to get to their appointment. There was no point in either of us saying we would come back another day because exactly the same thing could happen multiple times.
>
> I went home with my book and bag of warm clothes for the cold of the scanning lorry. I was hungry as I'd been fasting from the night before, but at least I could snuggle up on my sofa in my own misery. I wondered how the other poor patient was doing somewhere in the bowels of the hospital.
>
> I was fortunate, a phone call came to say that the isotope was on its way and when to come in to the hospital. I was torn between disappointment that I couldn't eat and delight that I wouldn't have to repeat the experience another day.
>
> It was damp and dusk when I went up the mesh stairs into the lorry. I was led into a large bright heated cupboard, mainly filled with a recliner chair and blankets. My warm clothes were redundant. I found a way to squeeze the bag beside my legs. I'm not small and I wondered how people larger than I am manage in the space.
>
> I was given the isotope and had to stay still for a certain length of time for it to work. I was very warm and comfortable in the recliner chair. I think I snoozed a bit to allay the gnawing hunger.
>
> To be honest, I can't remember much about the scan itself. I think it was well past five by the time I was being scanned. It wasn't uncomfortable. My main memory is of eating after an 18 hour fast!

> You're asked to stay warm but you could get rather cold on your way to the scanner.
>
> I really needed to go to the toilet after my scan so I had to be rushed to the toilet which was some distance away... having a toilet nearby would be better.
>
> There is space restriction on board the van. I use a wheelchair so had to use the lift to gain access to the van.

Patient view of a fixed PET scanner and updated facilities in North Wales

> “Discussions around a static PET scan in North Wales have suggested that people coming a distance could have their appointments in the afternoon, so they can be contacted if the appointment is cancelled.
>
> I don’t drive. If I had to travel from Bangor or the Lleyn to Wrexham or vice versa, for instance, I would probably have started my journey before I could be contacted. At least, if I had made a wasted journey, it would be nice to be greeted with a comfortable seat and a bite to eat before my return journey.
>
> Cafés aren’t always open when one wants them. Similarly, mobile phone reception can be bad on some journeys. Someone with a long road trip might well miss the call cancelling their appointment.
>
> I don’t want to denigrate Wrexham Maelor Hospital at all. It’s accessible, a huge bonus in this age of building hospitals at the back of beyond and it has been absolutely brilliant for me. It’s just that I can see so much more potential for a modern, static PET scan facility in North Wales.”

Table 15: Mobile vs fixed scanners

Issue	Mobile scanner	Fixed scanner
Quality	Manufacturers will not guarantee CT and PET alignment to <2.5mm on a mobile (i.e., that the couch movement is guaranteed linear throughout travel), as fundamentally these complex machines are not designed to be bounced around. Radiotherapy requires alignment of 0.2mm.	Fixed site scanner can be maintained, therefore offers fundamentally higher quality for all scans.
Patient experience	Cold, restricted space. Cannot accommodate patients on trolleys. A patient (possibly inpatient) would have to go outside to reach the mobile unit.	All facilities are co-located with the PET scanner, which means the patient does not need to leave the building until the scan is completed.
Maintenance considerations	Mobile units are serviced 3 monthly +/- when they break. This is often outside the control of the service provider.	A fixed site with pro-active medical physics will monitor and fine-tune performance frequently, continually maintaining the rigorous demands required for optimised clinical and research scans.
Future needs	Radiotherapy planning cannot be done on a mobile unit, nor can respiratory and cardiac gating. Diagnostic CT, with iv contrast, requires multiple phases. The staff are not trained or permitted by the mobile provider. This prevents ‘one-stop shops’ whereby patients can attend a hospital a single time for all required PET-CT, CT +/- radiotherapy planning, all fully integrated rather than multiple visits with associated time delays.	Fixed site scanner can be maintained to a standard to provide radiotherapy planning scans. Potential creation of a “one-stop shop” is possible with a fixed scanner.
Research	Very limited on mobile units due to quality assurance (QA) issues.	Accreditation for research is more easily obtained.

Issue	Mobile scanner	Fixed scanner
Uptake facility	Brown fat activation is triggered by exposure to cold temperatures. This impacts on uptake of FDG and could hinder interpretation in lymphoma and breast cancer patients, in particular. This is a significant issue in winter months.	Fixed sites generally have more uptake rooms available than mobiles, this facilitates a longer FDG uptake period, improving scan quality.
Reliability	Mobiles which are not 'static' mobiles suffer far more failures, often only discovered during warm-up when the first patients have arrived. Couch problems are a particular issue. This leads to patient delays.	
Access	Patient access is more difficult to mobile units compared to fixed sites. Space is limited for disabled patients who require a hoist. Scans on general anaesthetic patients cannot be performed on a mobile.	
Hospital/Staff Benefits	Staff radiation dose is higher on a mobile unit, where space is problematic.	Staff radiation dose is less within a static facility. A fixed unit helps with staff recruitment throughout nuclear medicine.
Booking flexibility	A mobile unit can only use contracted days with the mobile provider.	A fixed site can schedule patients over any days of the week. This not only permits more flexibility when booking patients, it allows for rebooking if there is an issue e.g., with radiopharmaceutical supply. This can also increase the range of radiopharmaceuticals that can be sourced i.e. Wrexham can only get PSMA on 3 out of 7 days. The scanner only on site for one of those days. This restricts access to that day.

Patient view of improved facilities

> "I needed a biopsy that was more easily performed in Liverpool Heart and Chest Hospital in Broad Green, than at Wrexham, simply because they have more patients with cancers in odd places than Wrexham does. It is a new hospital with new day care facilities, which they find improves patient safety and care. The new day unit at Liverpool HCH is the Holly Suite. Because I needed to fast and had to wear hospital clothes, I only saw the Atrium. It was spacious with recliner chairs. The chairs were far enough apart for privacy. Each patient had a good-sized locker. There were magazines and papers, but I'd brought my own books and music. The unisex toilets were nearby, clearly marked and large. I can't remember exactly, but I think they were all suitable for disabled people, though only one might be necessary in a more specialised unit.
>
> There was a water fountain and a light meal was provided after my procedure, before I was allowed home.
>
> There was usually someone on duty at the desk if one had queries.
>
> The only difference I would have made was to have individual earphones for the television, like they have on aeroplanes. It's a pet peeve of mine to be forced to watch and listen to TV shows that I don't like, in NHS facilities. I was fortunate, I attended on two full days, but the TV was only on for part of one of the days.
>
> A whimsical detail made a painful biopsy more cheerful. The X-ray waiting room and room with the CT scanners had, I think, a sky painted on the ceiling and natural green murals on the waiting room walls. I remember remarking on them and a staff member saying, *'Well this is a new hospital.'*
>
> I always enjoy seeing the woodland mural on the long corridor at Wrexham Maelor. I know it sounds a tiny thing and a bit daft, but it can make a difference."

1.4.8 SO4: To ensure that the future All Wales PET service provides a cost-effective service for patients and NHS Wales

As well as the service impacts outlined above, reliance on mobile scanners under existing arrangements results in increased cost per scan. As demand continues to grow this will create an ongoing and increasing cost pressure.

Similarly, reliance on external suppliers for radiopharmaceuticals results in increased and growing costs.

In addition, the existing arrangements limit opportunities for driving out inefficiencies associated with duplication and downtime. It is also not possible to take advantage of income generation opportunities which might emerge in relation to private practice, commercial research trials and supporting other nations.

1.4.9 SO5: To widen the scope of the All Wales PET service, to meet recognised international best practice

In 2018 the AWPET Advisory Group and Welsh Scientific Advisory Committee made the following recommendation in support of future PET research, development and innovation (RD&I) in Wales:

'Constitution of a Welsh PET innovation strategy to develop research, clinical, technological, and industrial collaboration within a formal framework. This will encompass horizon scanning and development of subjects such as PET in radiotherapy planning, and in novel malignant and non-malignant indications' (Recommendation 5, PET in Wales – overview and recommendations, 2018).

The aim is to enable and expand high quality RD&I using PET across Wales, whilst ensuring that every patient has the opportunity to access clinical research trials and to ultimately improve patient outcomes and clinical practice.

Internationally there is a large amount of clinical research activity involving PET currently planned or in progress. An independent literature search carried out in February 2021 by information specialists at Velindre Hospital, Cardiff on behalf of this Programme, identified a total of 812 clinical trials listed on the ClinicalTrials.gov register. Of these 352 were flagged as completed, terminated or cancelled. The vast majority of current trial activity using PET is set within oncology however there is an increasing desire to use PET in a variety of non-oncological indications.

It is clear that there is a breadth of research activity through which PET-CT scanning may be utilised:

- PET scans are being increasingly requested through oncological clinical trials as the gold-standard diagnostic tool for staging of cancer.
- PET-CT scanning is a field of research activity in its own right, with work dedicated to new radiopharmaceuticals and use of these in new clinical indications for diagnosis and even targeted treatment.
- There are studies focused on the use of PET-CT scanning in facilitation of radiotherapy planning / treatment and alternative targeted treatment of cancers.
- Currently PET-related RD&I activity is not consistently carried out across Wales, with almost all being carried out at PETIC in Cardiff. This is largely due to the differences between scanning facilities and infrastructure present at the three sites.
- Most clinical research studies involving PET-CT now require either National Cancer Research Institute (NCRI) or EANM Research GmbH (EARL) accreditation.

PETIC has a fixed scanner and a cyclotron facility. Since it was established over ten years ago, PETIC has made significant strides in the RD&I arena resulting in a dedicated research team and collaborations with high profile partners in academia and industry, such as the University of Oxford and National Physics Laboratory. PETIC has also secured funding from the Wellcome Trust, MRC, Cancer Research UK, EPSRC and Royal Society of Chemistry. Current research activity at PETIC includes:

- Six industry collaborations totalling £206,500 income per annum (2019/20);
- Providing PET-CT scans for 11 multi-centre clinical trials (2019/20);
- Running 9 Clinical Research Projects in Progress totalling income of £443,100;
- Running 12 Pre-Clinical Research Projects totalling income of £210,500;
- Running nine Chemistry and Pharmacy Research Projects totalling income of £1,136,000;
- Running six Physics Research Projects totalling income of £74,400.

There is no doubt that PETIC benefits from having a fixed scanner, on site cyclotron and ownership by an academic institution (Cardiff University). This opportunity is not apparent for Swansea and Wrexham sites, as a mobile scanner is not typically thought of as “ideal” for research PET scans, with research protocols usually highly restrictive and requiring levels of quality assurance that a mobile scanner cannot provide (See Section 1.4.7).

There is a clear link between an active research environment and attraction and retention of high quality staff. Indeed, the PETIC team recently attracted a leading UK radiologist, a radiochemist and a head of quality control as a result of the opportunities available at this site and their reputation for high quality research.

Since the Swansea PET mobile service started in August 2020 there has already some collaboration with PETIC through mentoring of PhD students and access to some clinical trials.

The AML mobile scanner at Singleton Hospital has recently achieved EARL accreditation, which is rare for a mobile scanning facility thus a significant achievement.

The Swansea site is currently open to receive patients for the SCOPE II and ADCT-402-103 studies. SCOPE II is a phase II/III trial to study radiotherapy dose escalation in patients with oesophageal cancer and the ADCT-402-103 study is an early phase trial evaluating loncastuximab tesirine and ibrutinib in patients with lymphoma.

Capacity issues of the mobile service and the specific needs of research trials means a number of studies are ineligible to open in BCUHB. This reduces BCUHB's reputation as a research organisation and denies local patients access to trial participation. This also has a negative effect on retention and recruitment of skilled staff.

There is a clear need for a pan-Wales research network, with membership spanning NHS, academia and industry to ensure that Welsh PET-CT services make the most of its population, geography and clinical expertise.

Critically, putting in place the appropriate scanners and associated facilities across Wales will not only create centres of RD&I excellence for staff retention and attraction, but ensure that patients have equitable access to participate in clinical trials. This is an important factor to consider for the needs of the service.

Over the past 10 years, PETIC has been a partner with Health Boards across Wales in 78 multi centre research studies. These studies have primarily been research into novel therapeutic agents where PET is used to monitor and assess the response of cancer and dementia patients to the novel therapeutic agent. This has also included a number of research studies in partnership with Bristol due to the fact that the private provider of PET scans in Bristol has been unwilling to support research scans.

PETIC also secured funding for a pilot study with clinicians in Aneurin Bevan UHB to investigate the use of FDG PET in the diagnosis of dementia. The result of the pilot study demonstrated that FDG PET significantly altered the differential diagnosis of dementia types and resulted in cost savings in other areas of patient management due to clearer diagnosis. Based on these data, evidence was submitted to AWPET in 2020 requesting the inclusion of new dementia indications in the WHSSC PET commissioning policy [1]. AWPET supported and recommended these new indications to WHSSC and they were subsequently approved and will be funded from June 2021. In addition, a national PET Dementia service is planned to go live in the summer of 2021.

PETIC has also led on the introduction of 18F-PSMA PET in Wales. PSMA PET is an emerging imaging modality with improved diagnostic accuracy (sensitivity and specificity) over conventional imaging for prostate cancer staging. PSMA PET identifies cancer that is often missed by current standard of care imaging techniques. Prior to 2019, PETIC offered a prostate cancer imaging service using F-Choline. Problems with the supply chain led PETIC to submit a business case to WHSSC to support an 18F PSMA scanning service. This was approved and PETIC began production of 18F

PSMA for human use in 2019. The service has proved to be hugely successful with PETIC now reliably scanning increasing numbers of prostate cancer patients in Cardiff and supplying PSMA to PET centres in Swansea, Bristol, Plymouth, Poole and Bath.

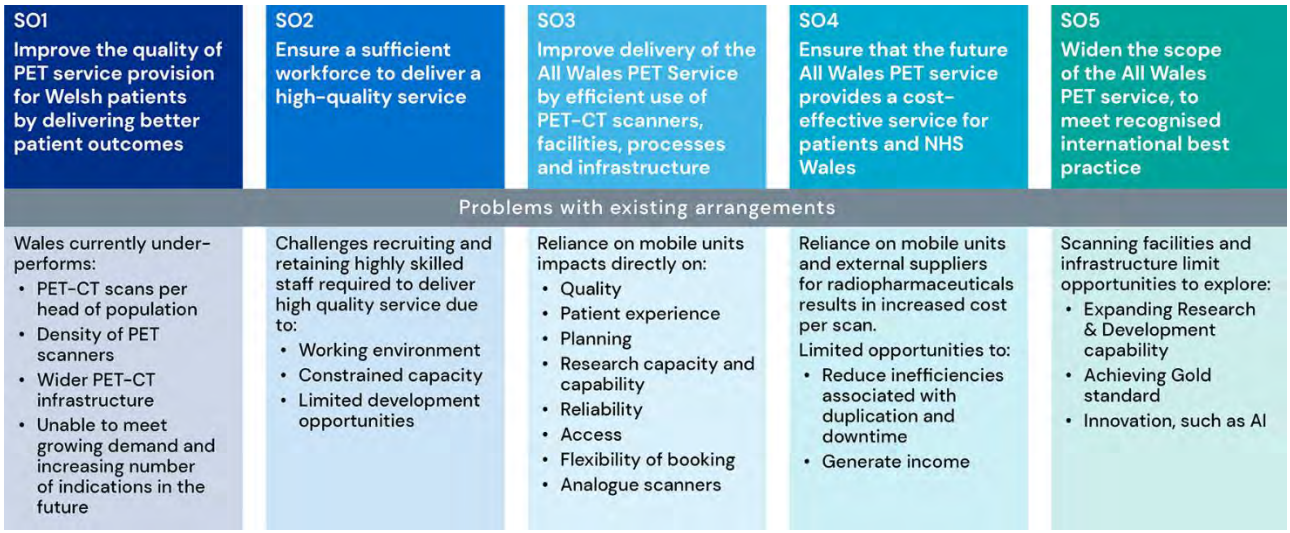
Other research interests and collaborations involving PETIC include:

- a validated method for the synthesis of 18F-DOPA in partnership with Pfizer and Bristol to investigate a potential cure for Parkinson's disease. PETIC is the only site in the UK manufacturing 18F-DOPA and is supplying specialist centres in London and Manchester who used 18F-DOPA to diagnose and treat paediatric insulinoma;
- the development and validation of Fallypride and Flumazenil radiopharmaceuticals. Fallypride is currently being used in Cardiff to assess the effectiveness of stem cell implants in Huntingdon's disease. Flumazenil is being used in partnership with CUBRIC to measure the neuroreceptor GABAA in epilepsy. In partnership with TRASIS, PETIC is planning to optimize the synthesis of Flumazenil with the aim of supplying Flumazenil across the UK;
- Artificial Intelligence (AI).

AI has been mentioned in many of the key documents referenced in the Strategic Context section of this PBC. Indeed, colleagues at the Life Sciences Hub Wales (LSHW) have used horizon scanning techniques to understand the possibilities of this advancing field of innovation, and ensure that the All-Wales PET service makes moves to the frontline of innovation (Appendix 9). There are clear and potential benefits of AI to PET-CT imaging ranging from improved image quality, reduced scan time, improved patient experience and improved efficiency, accuracy and insights. The key barriers to this innovation are the need for facilitation and collaboration. There are many suppliers with a range of technologies on offer.

The figure below summarises the case for change for this programme in relation to the five spending objectives.

Figure 10: Problems with existing arrangements



1.5 Potential Scope

1.5.1 Introduction

This section of the PBC identifies the potential scope of the All Wales PET Programme including the key service requirements that should be considered in designing the future service model and developing options.

1.5.2 Scope of programme

The overall scope of the programme is to plan, design, build and implement an All Wales PET strategy and associated business case for services up to 2031.

The aims of the Strategic Programme Board are to:

- Produce a Welsh PET services strategy that will incorporate multi-disciplinary workforce, research, clinical, technological and industry within a formal framework.
- Produce a strategic business cases for future PET-CT services in Wales.
- Establish a framework to ensure continuity of service and safe practice.
- Produce a business case for funding to replace obsolete PET-CT infrastructure.
- Consider if it is relevant to supply radiopharmaceutical tracers to other providers within NHS Wales outside of PETIC.
- Support the development of the capacity of the indication list.
- Develop a strategic business case to inform future PET service across Wales that incorporate enhancements to the indicators list, PETIC replacement scanner and radiopharmaceutical supply in line with the recommendations of the AWPET group report [6] for PET-CT in April 2019.

Areas that are excluded from this programme are:

- Ongoing maintenance of the service
- Implementing commercial products.

1.5.3 Potential scope of services

By considering the range of business functions, areas and operations to be affected and the key services required to improve organisational capability, ‘scope creep’ can be avoided during the options appraisal stage of the project.

Coverage and services are considered on the following continuum of need:

- **Core:** Essential elements that must be included in the programme to address immediate risks and ensure service continuity.
- **Desirable:** Additional elements that should be included in the programme to enhance the service and deliver greater value for money through additional benefits.
- **Optional:** Possible elements that could be included in the programme to maximise benefits providing they can be justified on a marginal low cost and affordability basis.

The Strategic Programme Board considered and agreed the potential scope of service coverage and categorised the main elements in line with this continuum of need. The results of this analysis is provided in Table 16 below.

Table 16: Potential scope - service coverage

	Core	Desirable	Optional
Number of scanners			
Provide access to 1 x PET-CT scanner to meet forecast South East Wales demand	✓		
Provide access to 1 x PET-CT scanner to meet forecast North Wales demand	✓		
Provide access to 1 x PET-CT scanner to meet forecast South West Wales demand	✓		
Provide access to 4th PET-CT or PET-MR scanner (Location and type to be determined according to future demand requirements)		✓	
Provide access to 5th PET-CT or PET-MR scanner (Location and type to be determined according to future demand requirements)			✓
Radiopharmaceutical provision			
Cyclotron co-located with SE Wales PET-CT scanner	✓		
Contract for supply of radiopharmaceuticals	✓		
Additional cyclotrons (Number and location to be determined according to future demand requirements)			✓
Additional service provision			
Centres of Excellence*		✓	

***** Centres of Excellence refer to RD&I activity and state of the art facilities. Having Centres of Excellence will result in reputational gain and the ability to attract and retain highly skilled workforce in addition to RD&I income.

1.5.4 Key service requirements

The key requirements associated with this potential scope were also considered and agreed by the Strategic Programme Board (Table 17). These will provide the basis for developing design specifications at project stage.

Table 17: Potential scope – key service requirements

	Core	Desirable	Optional
Scanner specification (where new scanners are acquired as part of the solution)			
Digital scanners	✓		
Inclusion of existing technologies - Robotic radiopharmaceutical dispenser	✓		
Inclusion of existing technologies – Radiotherapy Treatment planning	✓		
AI-enabled machines	✓		
Facilities requirements (where new scanners are acquired as part of the solution)			
Uptake rooms (Increase rooms at Cardiff and create rooms at new facilities such as Swansea and North Wales)	✓		
Dependencies (where new scanners are acquired as part of the solution)			
Integrated IT to ensure quick turnaround and clear coding	✓		
Electronic requesting	✓		

	Core	Desirable	Optional
Centres of Excellence			
Flat bed and lasers included in scanner specification	✓		
Active R&D with clear pathways available at all sites		✓	
Access to novel radiopharmaceuticals		✓	
Workforce requirements			
Hub and spoke model	✓		
Skilled workforce (Ensure expansion of workforce to deliver capacity – see section 5.5)	✓		
Training and development	✓		

1.5.5 Demand requirements

Capacity requirements, in terms of the number of PET-CT scanners required and the timescales for acquiring them, have been estimated based on the need to meet predicted demand of 20% growth per annum described in section 1.4.5 and the supporting Figure 13.

Modern digital PET-CT scanners are capable of scanning up to 5,500 times per annum. Assuming that a scanner is functional 50 weeks of the year (allowing two weeks for maintenance, breakdowns etc.), a total of 5,288 scans per annum can be provided.

The current analogue scanners that are in place within Wales (mobile and fixed at PETIC site) are capable of 2,884 scans per annum, when active for ten sessions per week (50 weeks per year, with 3,000 maximum capability).

Based on these assumptions, it is possible to identify the years in which demand for PET scanning can no longer be met by existing service models and facilities and this is shown in the table below.

Table 18: Summary of likely clinical demand for PET scans across Wales based on 20% underlying annual growth in activity

Year	South East Wales	South West Wales	North Wales	Projected All Wales
2021	**2629**	**1434**	**1144**	5207
2022	3155	1721	1373	6249
2023	3786	2065	1647	7498
2024	4543	2478	1976	8998
2025	5452	2974	2372	10789
2026	6542	3569	2846	12957
2027	7851	4282	3415	15548
2028	9421	**5139**	4098	18658
2029	**11305**	6167	4918	22390
2030	13566	7400	**5902**	26868
2031	16279	8880	7082	32241

Red cells highlight where clinical demand outstrips current service provision. **Amber** cells denote where clinical demand may outstrip mobile provision at SW and N Wales and digital scanning provision at PETIC. **Purple** cells denote where clinical demand may outstrip digital scanner provision at all three sites.

Based on this analysis, it is clear that significant capacity shortfalls will emerge as follows:

- **South East Wales:** Forecast demand will begin to exceed capacity of the existing analogue scanner in Cardiff by the end of 2021. Replacing it with a digital scanner would provide sufficient capacity to meet forecast demand until at least 2025. Introducing an additional scanner at that point would provide sufficient capacity until 2029.
- **South West Wales:** Forecast demand has already exceeded capacity of the existing mobile scanner which currently operates just two days each week. Expanding capacity to the equivalent of five days per week for a mobile analogue scanner would only create sufficient capacity to meet forecast demand until 2024. And expanding capacity to the equivalent of five days per for a digital scanner could only create sufficient capacity to meet forecast demand until 2028. Introducing an additional scanner in 2028 could provide sufficient capacity well beyond 2031.
- **North Wales:** Forecast demand has already exceeded the capacity of the existing mobile scanner which currently operates just two days each week. Expanding capacity now to the equivalent of five days per week for the analogue mobile scanner would only create sufficient capacity to meet forecast demand until 2025. And expanding capacity now to the equivalent of five days per week for a digital scanner would only create sufficient capacity to meet forecast demand until 2030.

It should be noted that this analysis is concerned with the scale of capacity requirements only and does not consider the implications of how this capacity may be provided (i.e. using a mobile or fixed scanner). These implications are considered within the options framework in the Economic Case.

It should also be noted that this analysis is inclusive of RD&I activity. It would be realistic to assume a lead time of two to three years before a new fixed digital PET scanning facility will be demonstrating RD&I activity of 10% of total annual scanning capacity.

1.5.6 Workforce requirements

The requirements for staffing should be considered carefully when planning the Programme, and concurrently with the clinical demand for PET scans. The information presented in the table below will need to be considered as a constraint in the phasing of the Programme plan.

If the All Wales PET Programme Business Case were to be endorsed, then the regional Project leads would be expected to work with local operational colleagues to ensure that more complex workforce planning is undertaken, so that future PET-CT scanners can be “manned” with a resilient workforce. Collaboration between IWEG, HEIW, NIAW and the Healthcare Scientist Board on this matter is essential.

Looking at the analysis of professional posts (Appendix 8), the indicative numbers of WTE posts needed on an All Wales basis to staff three analogue scanners is 28.8 WTEs, and three digital scanners is 45.0 WTEs.

As mentioned in Section 1.4.6, workforce will be a significant constraint to the successful implementation of this Programme. However, the gap analysis (Table 19) alongside the projected demand model (Table 18), provide sufficient data to form judgement and permit appropriate planning so that scanners can be installed at the right time to meet both clinical demand and workforce needs.

If fixed digital scanners were to be put at all three existing PET provider sites, Swansea would need to expand its workforce to that indicative of an analogue scanner by 2024-25 and North Wales by 2025-26. This should give sufficient time, if this PBC were to be endorsed by WG in 2021, to carry out detailed local workforce planning, train existing staff and advertise and attract staff needed for the new facility in advance. Conversely, PETIC would need to carry out local workforce planning to ensure the deliverability of the service as the demand gradually increases year-on-year.

Table 19: Professional posts gap analysis

	All Wales Current staffing (WTE)	All Wales Analogue Scanner requirements (WTE)	All Wales Analogue scanner gap (WTE)	All Wales Digital Scanner requirements (WTE)	All Wales Digital scanner gap (WTE)
Booking clerk/ Administrator/ Reception staff	4.4	4.5	0.1	7.5	3.1
Radiographer/ Technologist	6.2	9.0	2.8	12.0	5.8
HCA/Clinical Support Staff	0.0	3.0	3.0	6.0	6.0
Clinical Scientist (physics)/ Medical Physics Expert	2.1	6.0	3.9	7.5	5.4
Finance Business Partner	1.3	0.6	-0.7*	0.6	-0.7
Consultant Radiologist	3.9	4.5	0.6*	9.0	5.1
PET-CT Manager	1.6	1.2	-0.4*	2.4	0.8
TOTAL WTE	**19.5**	**28.8**	**9.4**	**45.0**	**25.6**

**The current consultant radiologist, finance business partner and PET-CT manager staffing level at PETIC is 2.1WTE, 1.0WTE and 1.0WTE, respectively - which is above the proposal for an analogue scanner. PLEASE NOTE THAT LOCAL/REGIONAL CONSIDERATIONS WILL BE REQUIRED AT OUTLINE AND FULL BUSINESS CASE SUBMISSION.*

It is clear from Table 19 that there will be a need for a fourth PET scanner in the South East region of Wales in 2026. This should be considered as part of the Options Appraisal and should be carefully and effectively planned. The programme should be phased in such a way that there is sufficient oversight from the SPB to review real-time scanning demand and provision for "stop/go" end of tranche reviews.

Should annual demand growth exceed 20% per annum, and this may be the case dependent on the rate of introduction of new services/indications, these timelines can be revised to an earlier date. Conversely, if the rate of growth in the next few years is not realised, the dates would be expected to be pushed back.

1.5.7 Radiopharmaceutical requirements

Radiopharmaceutical provision is an additional infrastructure factor for the All Wales PET Programme and this has been addressed in the Potential scope - service coverage (Table 5-1). However, during in-depth discussions at the SPB in development of the Programme, it became

evident that requirements for radiopharmaceutical provision for Wales may stretch beyond the scope of the All Wales PET Programme.

Therefore, it is possible that additional investment via a Project or Programme is identified for radiopharmaceutical provision for Wales after further horizon scanning and scope work. The Programme arrangement should allow space and structure for this work to be done and ensure that the radiopharmaceutical provision is future-proofed.

1.6 Benefits and Risks

1.6.1 Introduction

This section of the PBC identifies the benefits, risks, constraints and dependencies that should be considered in the All Wales PET Programme when developing and assessing the options for the optimal solution.

1.6.2 Benefits

The Preferred Way Forward should address all the business needs and achieve each spending objective identified as part of the review in order to deliver a range of benefits including:

- **Cash releasing benefits (CRB):** those that can be monetised and include improved economy (i.e. reduction in costs);
- **Non-cash releasing benefits (non CRB):** those that can be monetised and include improved efficiency (i.e. staff time released to focus on more value added tasks);
- **Quantifiable benefits (QB):** those that can be measured but not monetised (i.e. patient experience); and
- **Qualitative benefits (Qual):** those that cannot be measured or monetised.

The table below provides an overview of the main outcomes and benefits arising from achieving the spending objectives.

Table 20: Main benefits

Benefit	Description	Beneficiary	Type of benefit
Avoid high-cost late-stage interventions	Avoid surgical intervention	NHS Wales Patient	Financial
Reduction in harm	i. Increase the number of correct operations in those for whom it offers a potential cure and reduce the number of missed operations within this group. ii. Avoid the resource cost of futile operations in patients for whom it does not offer a potential cure. iii. Avoid the mortality and morbidity associated with futile operations. iv. Reduce the number of “open and close” operations for which the futility of the operation is realised during operation. v. Allow improved placement of radiation fields for curative treatment.	Patient Workforce NHS Wales	Quantitative (Unmonetised)
Reduced waiting times	Time to referral to time of scan	Patient	Quantitative (Unmonetised)
Increased certainty of treatment and planning	Increased certainty of treatment and planning through improved imaging in latest software and reduced risk of brown fat uptake in fixed units. Ensuring sufficient capacity and counter pathways.	Patient	Qualitative

Benefit	Description	Beneficiary	Type of benefit
Improved patient experience	Improved access, better facilities and greater convenience, better outcomes lead to better patient experience	Patient	Qualitative
Improved recruitment and retention	Greater ability to recruit and retain highly skilled workforce	NHS Wales Patient	Qualitative
Improved access to / uptake of training and education	Increased opportunities to provide access to training and education	Workforce	Quantitative (Unmonetised)
Improved staff satisfaction	Improved working environment, reduced stress and greater opportunities for development contribute to greater staff wellbeing	Workforce	Qualitative
Increased job opportunities contributing to Welsh economy	Ability to attract highly skilled workforce to Wales to deliver service model	Economy	Societal (monetised)
Increased capacity resulting in ability to meet demand	Ability to meet future demand - reducing cost per unit	NHS Wales	Cash releasing
Reduced downtime	Greater control of lists resulting in reduced cancellations and delays and better utilisation allowing greater throughput	NHS Wales	Non-cash releasing
Reduced reliance on mobile scanners	Reduced cost per scan due to establishing in house scanning facilities	NHS Wales	Cash releasing / cost avoidance
Reduced patient travel time - value to patients	Value to patient of reduced travel time for scans	Patient	Societal (monetised)
Reduced patient travel time - reduced greenhouse gases	Reduction in greenhouse gases as a result of reduced patient mileage	Environment	Societal (monetised)
Reduced road travel of mobile units	Reduction in greenhouse gases as a result of reduced mobile unit mileage	Environment	Societal (monetised)
Income generation opportunities	Increased opportunities to protect existing and generate additional income in relation to private practice, commercial trials, NHS England	NHS Wales	Cash releasing
Better equity of access	Increasing access in line with international best practice in terms of scanning capacity in relation to population needs ensures better equity of access which will result in improved patient outcomes	Patients	Quantitative (Unmonetised)
Increased proportion of staff research active	Centre of Excellence provides increased opportunities for staff to be involved in research and clinical trials ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)

Benefit	Description	Beneficiary	Type of benefit
Increased proportion of patients on clinical trials	Centre of Excellence provides increased opportunities for patients to participate in clinical trials ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)
Greater number of trials led by and participated in by PET site	Centre of Excellence provides increased opportunities for PET sites to be involved in a greater range of research ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)
Improved access to a greater range of diagnostics to support greater range of therapeutics	Providing increased number of dedicated fixed PET-CT facilities provides opportunities to offer an increased range of diagnostics that will support more therapeutics that would not be possible using mobile units, such as - Radiotherapy planning - Cardiology - GA	NHS Wales Workforce Patients	Qualitative

1.6.3 Risks

Risk is the possibility of a negative event occurring that adversely impacts on the success of the future service model.

Identifying, mitigating and managing risk is crucial to successful programme delivery. The key risks are likely to be those that mean the programme will not deliver its intended outcomes and benefits within the anticipated timescales and spend.

The main risks identified are listed below.

Table 21: Main risks

Risk category	Risk
Resilience	Risk of insufficient scanning capacity to meet demand resulting in increased waiting times and impacting on patient outcomes
	Risk of cancellations and downtime of service
Demand	Risk that demand and capacity requirements have been under or over-stated
Workforce	Risk of insufficient workforce available to provide high quality service
	Risk of challenges recruiting workforce
Implementation	Risk of programme delays resulting in insufficient capacity during transition period
	Risk of programme delays resulting in increased programme costs
Funding and finance	Risk of insufficient capital funding available to deliver programme
	Risk of increasing revenue costs
	Risk that programme costs have been understated

1.6.4 Constraints

Constraints relate to the parameters that the programme is working within and any restrictions or factors that might impact on the delivery of the programme. These typically include limits on resources and compliance.

The main constraints that should be considered in developing a solution for future delivery of the All Wales PET Programme include the following parameters:

- Timescales for completion of the work.
- Availability of key human resource to deliver the programme of work due to existing work commitments.
- Availability of the highly skilled workforce to safely and effectively run a PET service at each site.
- Undefined financial models.

1.6.5 Dependencies

Dependencies include items that must be in place to enable the project or project phases to run successfully. Typically these include links to other projects and funding requirements that are likely to be managed elsewhere.

The success of the future service model relies on the following main dependencies:

- The strategic direction for PET services outlined in the Imaging Statement of Intent for NHS Wales.
- 'Buy in' from all Health Boards and stakeholders.
- Availability of capital funding.

1.6.6 Conclusion

Stakeholders have identified the benefits, risks, constraints and dependencies in relation to the agreed scope of the All Wales PET Programme. These together with the key spending objectives are used to develop and assess a shortlist of options. This option development process is covered in the Economic Case.

2 Economic Case

2.1 Options Framework

2.1.1 Introduction

The purpose of the Economic Case is to identify and appraise the options for the delivery of project and to recommend the option that is most likely to offer best value for money.

The first stage of this explores the preferred way forward by undertaking the following actions:

- Agree critical success factors (CSFs).
- Identify and evaluate the long list of options.
- Recommend the preferred way forward in the form of a shortlist of options.

2.1.2 Critical Success Factors

Critical success factors (CSFs) are the essential attributes for successfully delivering the project and are used along with spending objectives to evaluate the options. The CSFs for the project are crucial, not merely desirable, and not set at a level that could exclude important options at an early stage of identification an appraisal.

Table 22: Critical success factors

Critical Success Factor		How well the option
CSF1	Strategic fit and business needs	Meets the agreed spending objectives, related business needs and service requirements, and Provides holistic fit and synergy with other strategies, programmes and projects.
CSF2	Potential value for money	Optimises public value (social, economic and environmental), in terms of the potential costs, benefits and risks.
CSF3	Supplier capacity and capability	Matches the ability of potential suppliers to deliver the required services, and Is likely to be attractive to the supply side.
CSF4	Potential affordability	Can be funded from available sources of finance, and Aligns with sourcing constraints.
CSF5	Potential achievability	Is likely to be delivered given the organisation's ability to respond to the changes required, and Matches the level of available skills required for successful delivery.

2.1.3 Key elements of the options framework

The options framework, outlined in the Welsh Government Better Business Cases guidance, provides a systematic approach to identifying and filtering a broad range of options.

An overview of the key dimensions within the options framework is provided in Table 23 below.

Table 23: Key elements of the Options framework

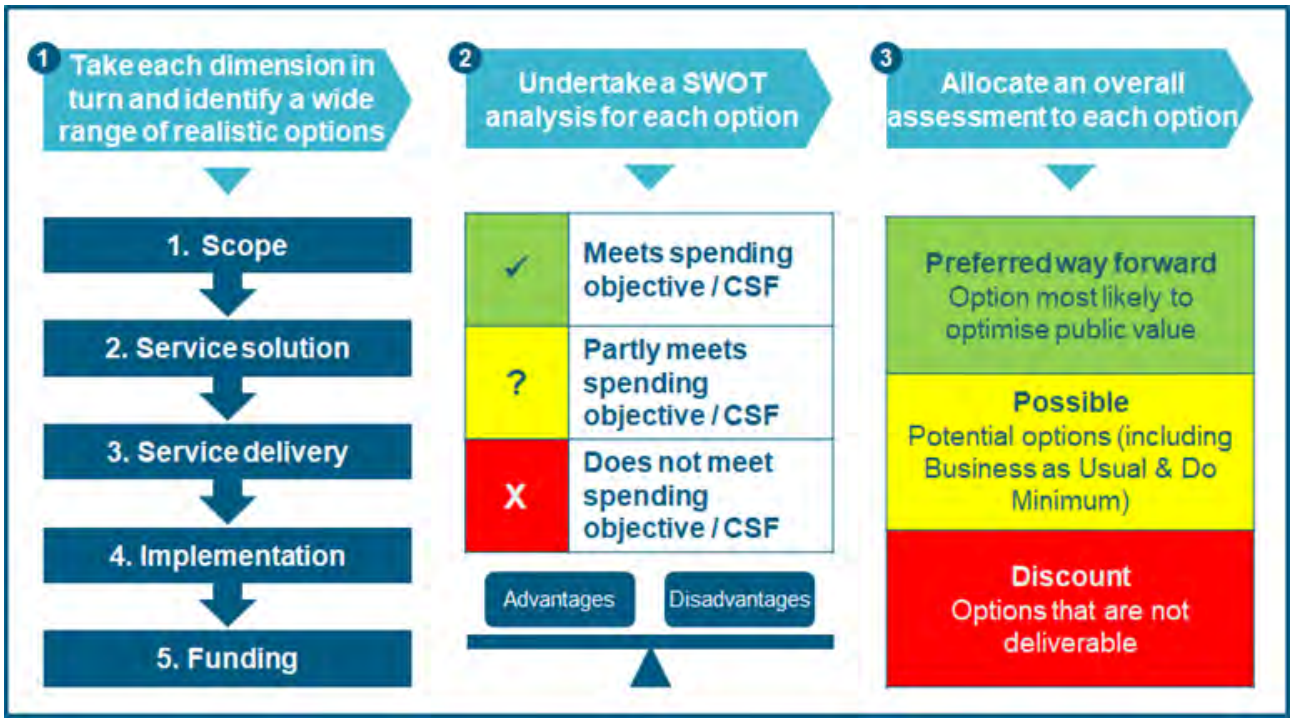
Dimension	Description
Scope	What to include in the future service model
Service solution	How to deliver the future service model
Service delivery	Who will deliver the future service model
Implementation	Timescales and phasing for delivering the future service model
Funding	Financing the future service model

The process for identifying and assessing options takes each of the key dimensions in turn and undertakes the following steps:

- Identify a wide range of realistic potential options within that dimension
- Undertake an analysis for each option to:
  - Assess how well the option meets the project's spending objectives and critical success factors; and
  - Identify the option's main strengths, weaknesses, opportunities and threats.
- Use the outputs of the analysis to determine whether the option will be carried forward as the preferred way forward, carried forward as a possible solution, or discounted at this stage.

A diagram illustrating this process is shown in Figure 11 below.

Figure 11: Process to identify and assess the long list of options



2.1.4 Identifying and assessing the long list

A long list of options for each of the five dimensions was developed by the Programme Board and evaluated to determine how well each meets the spending objectives and critical success factors at a series of workshops. The detailed analysis is provided in Appendix 1 and an overview in the sections below.

2.1.5 Scope

The options related to the project 'scope' are concerned with establishing the service coverage and key service requirements to be included within the programme over a ten-year period. The potential scope analysis outlined in section 5 provided a basis for developing these options. The evaluation results are provided in the table below.

Table 24: Long list - Scope

Dimension	Option		Description	Conclusion
Do nothing	1A	3 scanners	3 x PET-CT scanners located in Cardiff, North Wales and Swansea	**Carry forward (Baseline)**
Intermediate options	1B	3 scanners + 1 cyclotron + Centres of Excellence	3 x PET-CT scanners located in Cardiff, North Wales and Swansea 1 x Cyclotron co-located with Cardiff PET-CT Centres of Excellence facilities	**Carry forward (Do minimum)**
	1C	4 scanners + 1 cyclotron + Centres of Excellence	3 x PET-CT scanners located in Cardiff, North Wales and Swansea 1 x Cyclotron co-located with Cardiff PET-CT Centres of Excellence facilities 1 x additional scanner (PET-CT or PET-MR) in location to meet population needs	**Carry forward (Preferred way forward)**
	1D	5 scanners + 1 cyclotron + Centres of Excellence	3 x PET-CT scanners located in Cardiff, North Wales and Swansea 1 x Cyclotron co-located with Cardiff PET-CT Centres of Excellence facilities 2 x additional scanners (PET-CT or PET-MR) in location to meet population needs	**Carry forward (More Ambitious)**
Do maximum	1E	5 scanners + 1 cyclotron + Centres of Excellence + additional cyclotron	3 x PET-CT scanners located in Cardiff, North Wales and Swansea 1 x Cyclotron co-located with Cardiff PET-CT Centres of Excellence facilities 2 x additional scanners (PET-CT or PET-MR) in location to meet population needs Additional cyclotrons	**Discount**

2.1.6 Solution

The options related to 'solution' are concerned with establishing how the preferred scope for the programme can best be delivered. A range of options has been considered and the results of the evaluation of these options are provided in the table below.

Table 25: Long list - Solution

Dimension	Option		Description	Conclusion
Do nothing	2A	Do nothing	Outsource unmet demand	**Carry forward (Baseline)**
Intermediate options	2B	Replace Cardiff + extend mobile capacity	Replace PET-CT scanner and cyclotron in Cardiff Extend operating hours of Swansea and North Wales mobile sites	**Carry forward (Do minimum)**
	2C	Replace Cardiff + 2 new fixed units (Swansea, N Wales)	Replace PET-CT scanner and cyclotron in Cardiff Create 2 x facilities for fixed PET-CT scanners (Swansea and North Wales)	**Discount**
	2D	Replace Cardiff + 3 new fixed units (Swansea, N Wales, TBD)	Replace PET-CT scanner and cyclotron in Cardiff Create 2 x facilities for fixed PET-CT scanners (Swansea and North Wales) 1 x additional scanner (location, type and timescales to be determined based on demand)	**Carry forward (Preferred way forward)**
Do maximum	2E	Replace Cardiff + 4 new fixed units (Swansea, N Wales, 2 x TBD)	Replace PET-CT scanner and cyclotron in Cardiff Create 2 x facilities for fixed PET-CT facilities (Swansea and North Wales) 2 x additional scanners (location, type and timescales to be determined based on demand)	**Carry forward (More ambitious)**

2.1.7 Delivery

The options related to the programme 'delivery' are concerned with establishing the ways in which the preferred scope and solution can be delivered, specifically around who will deliver services in the future. The results of the evaluation of these options are provided in the table below.

Table 26: Long list - Delivery

Dimension	Option		Description	Conclusion
Do nothing	3A	Continue with existing arrangements	PETIC operates Cardiff facility External provider operates mobile facilities External radiopharmaceuticals contracts	Carry forward (Baseline / Do Minimum)
Intermediate options	3B	Bring service delivery in house for new facilities and retain PETIC partnership in Cardiff	PETIC operates Cardiff facility NHS Wales operates new fixed facilities External radiopharmaceuticals contracts	Carry forward (Preferred Way Forward)

Dimension	Option		Description	Conclusion
Do maximum	3C	Entire service delivered by NHS Wales	NHS Wales operates all facilities and radiopharmaceutical production	Discount

2.1.8 Implementation

The options related to the programme 'implementation' are concerned with establishing the phasing for delivering the preferred scope, solution, and delivery options.

This analysis in section 5 of the Strategic Case provides a clear indication at the tipping points at which capacity will be exceeded. Indicative assumptions can therefore be made about timescales for delivering the potential scope and these are outlined in the table below.

It would be prudent to put in place the PET scanners and associated facilities ahead of reaching the tipping points at each site, so as to avoid risks associated with potential service failure and avoid reaching a critical state in scanning provision. In addition, given the additional benefits to patient experience, realisation of wider Programme benefits, and in line with the strong case for change made within this Strategic Case, there is a strong argument to bring forward implementation to before the projected tipping points.

Table 27: Timescales for delivering the potential scope

Scanner requirements	Capacity exceeded	Timescale
Provide access to 1 x PET-CT scanner to meet forecast South East Wales demand	2021	2021
Provide access to 1 x PET-CT scanner to meet forecast North Wales demand	2025-2026	2023-2024
Provide access to 1 x PET-CT scanner to meet forecast South West Wales demand	2024-2025	2023-2024
Provide access to 4th PET-CT or PET-MR scanner (Location and type to be determined according to future demand requirements)	2026	2026
Provide access to 5th PET-CT or PET-MR scanner (Location and type to be determined according to future demand requirements)	2029	2028

The results of the evaluation of these options are provided in the table below.

Table 28: Long list - Implementation

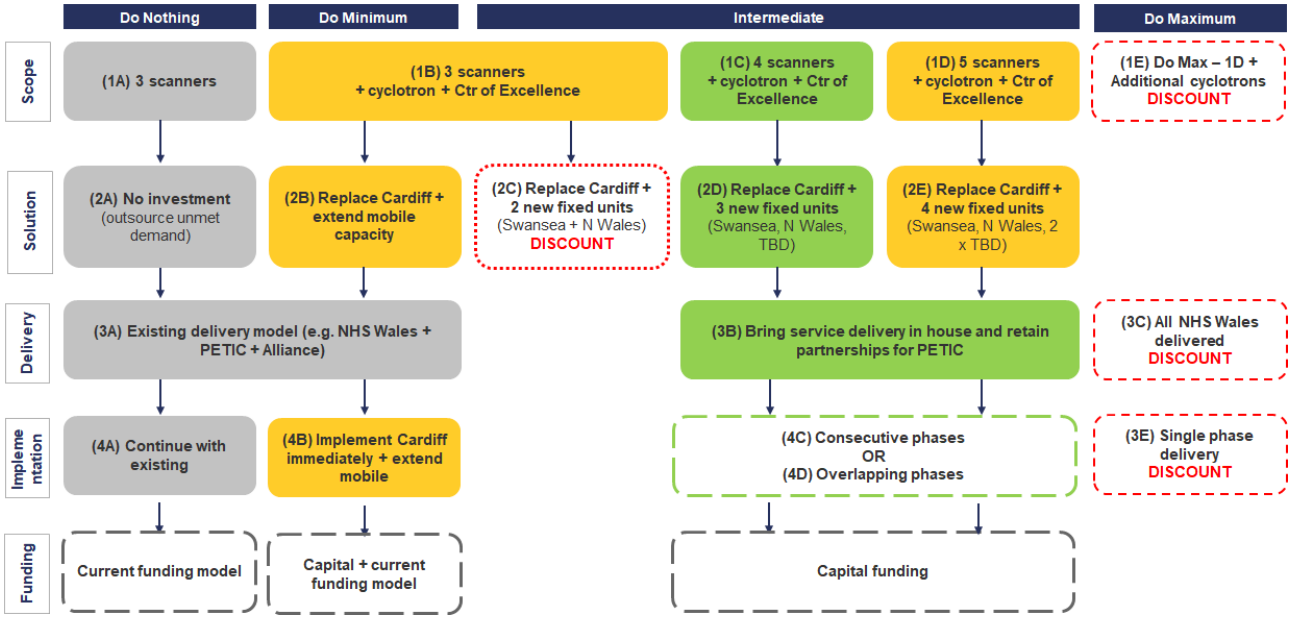
Dimension	Option		Description	Conclusion
Do nothing	1A	Continue with current arrangements	Ongoing asset replacement programme	Carry forward (Baseline)
Intermediate options	1B	Deliver Cardiff capital solution in tandem with extending mobile scanning capacity	Aligned to Do Minimum option	Carry forward (Do minimum)
	1C	Phased approach	Cardiff 2021/22 North Wales 2023/24 Swansea 2023/24 4th scanner 2026/27	Preferred way forward

Dimension	Option		Description	Conclusion
Do maximum	1D	Single phase approach	Full programme delivered simultaneously	Discount

2.1.9 Options Framework Summary

The figure below demonstrates a summary of the longlist using the options framework.

Figure 12: Options framework



2.1.10 Short Listed Options

The options framework can be used to filter the options considered at the long-list stage to generate the potential short-list for the project, as illustrated below.

Table 29: Shortlist of options

Options	Option 1 Business as Usual	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Scope	**3 Scanners (Core scope)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales	**3 Scanners (Core + Desirable scope)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff • Centres of Excellence facilities (with new scanners)	**4 scanners (+Desirable)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff • Centres of Excellence facilities • 1 additional PET-CT or PET-MR scanner (aligned to clinical model/demand)	**5 scanners (+Optional)** • Access to 3 PET-CT scanners in Cardiff, Swansea, North Wales • Cyclotron co-located Cardiff • Centres of Excellence facilities • 2 additional PET-CT or PET-MR scanner (aligned to clinical model/demand)
Solution	**No investment (Outsource unmet demand to mobile scanners)**	**Replace Cardiff equipment + extend mobile capacity in Swansea and North Wales**	**Replace Cardiff equipment + 3 new fixed units (Swansea, North Wales, 1 location to be determined)**	**Replace Cardiff equipment + 4 new fixed units (Swansea, North Wales, 2 locations to be determined)**
Delivery	**Existing delivery model** (e.g. NHS Wales + PETIC + Alliance)	**Existing delivery model** (e.g. NHS Wales + PETIC + Alliance)	**Bring service delivery in house and retain partnerships for PETIC**	**Bring service delivery in house and retain partnerships for PETIC**
Implementation	**Continue with existing arrangements**	**Deliver Cardiff replacement + extend mobile provision**	**Phased approach** • Cardiff 2021/22 • North Wales 2023/24 • Swansea 2023/24 • 4th scanner 2025/26	**Phased approach** • Cardiff 2021/22 • North Wales 2023/24 • Swansea 2023/24 • 4th scanner 2025/26 • 5th scanner 2028/29
Funding	**Current funding model**	**Capital and revenue**	**Capital funding**	**Capital funding**

As a result of this the following shortlist of options is carried forward to explore in greater detail within the economic appraisal:

- Option 1 – Business as Usual: Do nothing.
- Option 2 – Do Minimum: Retain 1 fixed and extend capacity of 2 mobile scanners.
- Option 3 – Preferred Way Forward: Provide 4 fixed scanners (10-year programme).
- Option 4 – More Ambitious: Provide 5 fixed scanners (10-year programme).

2.2 Economic Appraisal

2.2.1 Introduction

The purpose of the economic appraisal is to evaluate the costs, benefits and risks of the shortlisted options in order to identify the option that is most likely to offer best public value for money. In line with current HM Treasury Green Book and Welsh Better Business Case programme business case guidance, this involves:

- Estimating indicative whole life capital and revenue costs for each option.
- Undertaking an assessment of benefits and risks for each option, outlining how these will be quantified in monetary-equivalent values at OBC stage.
- Using DHSC's Comprehensive Investment Appraisal (CIA) Model to prepare discounted cash flows and estimate the Net Present Social Value (NPSV) and Benefit Cost Ratio (BCR) for each option.
- Presenting the results, including sensitivity analysis, to determine the preferred way forward for the overall programme.

2.2.2 The Short List of Options

As outlined in the previous section, a short list of options has been identified. A comparison of the key features of each of the shortlisted options is provided in the table below.

Table 30: Comparison of shortlisted options

	Option 1 **Business as Usual (BAU)**	**Option 2** **Do Minimum**	**Option 3** **Preferred Way Forward**	**Option 4** **More Ambitious**
Description	Do nothing	Retain 1 fixed and extend capacity of 2 mobile scanners	Provide 4 fixed scanners (10-year programme)	Provide 5 fixed scanners (10-year programme)
Project 1 **Cardiff** **2021/22**		Replace PET-CT Upgrade of cyclotron	Replace PET-CT Upgrade of cyclotron	Replace PET-CT Upgrade of cyclotron
Project 2 **North Wales** **2023/24**		No capital investment Extend capacity of mobile unit	New PET-CT New build (260m2)	New PET-CT New build (260m2)
Project 3 **Swansea** **2023/24**		No capital investment Extend capacity of mobile unit	New PET-CT Refurbish an existing building (176m2) + new build extension (40m2)	New PET-CT Refurbish an existing building (176m2) + new build extension (40m2)
Project 4 **4th scanner** **2025/26**			New PET-CT New build (260m2)	New PET-CT New build (260m2)
Project 5 **5th scanner** **2028/29**				New PET-CT New build (260m2)

2.2.3 Estimating Initial Capital Costs

Indicative capital costs have been estimated by SES for the purposes of the PBC based on the following assumptions:

- Floor area required to create a facility to house a PET-CT including supporting areas, such as waiting areas and uptake rooms.
- Construction costs based on:
  - Refurbishment costs £2k per m2 + on costs; and
  - New build costs £4k per m2 + on costs.
- Allowance for lead lining.
- On costs at 35%.
- Fees at 16%.
- Non works as estimated.
- Equipment costs:
  - PET-CT scanner £2.9m (including ancillary equipment and Radiotherapy adaptions); and
  - Cyclotron refresh £1.75m (including ion source replacement and hot cells).
- Planning contingency 10%.
- VAT at 20% on all costs except fees.

The resulting capital costs estimates for the programme are summarised in the table below. Copies of the PBC Capital Cost Forms are provided in Appendix 2.

Table 31: Capital costs - Programme (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Construction	0	45	4,593	6,341
Fees	0	0	735	1,015
Non works	0	15	80	120
Equipment costs	0	4,673	13,553	16,513
Planning contingency	0	473	1,896	2,399
Subtotal	*0*	*5,206*	*20,857*	*26,387*
VAT	0	1,041	4,024	5,075
Total capital costs incl. VAT	**0**	**6,248**	**24,881**	**31,462**

Indicative capital costs for each of the individual projects is shown in the table below.

Table 32: Capital costs – By Project (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Project 1 - Replace Cardiff equipment	0	6,248	6,248	6,248
Project 2 - Fixed scanner North Wales	0	0	6,573	6,576
Project 3 - Fixed scanner Swansea	0	0	5,486	5,488
Project 4 - 4th fixed scanner	0	0	6,573	6,576
Project 5 - 5th fixed scanner	0	0	0	6,576
Total capital costs incl. VAT	**0**	**6,248**	**24,881**	**31,462**

Indicative cash flow profiles for each of the options are shown in the table below.

Table 33: Capital costs – By Project (£'000)

Date	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
2021/22		4,472	4,675	4,688
2022/23		1,775	2,026	2,040
2023/24		0	11,693	11,693
2024/25		0	152	152
2025/26		0	6,335	6,322
2026/27		0	0	94
2027/28		0	0	152
2028/29		0	0	6,322
Total capital costs incl. VAT	**0**	**6,248**	**24,881**	**31,462**

For completeness and ease of reference to capital cost forms, these figures are shown here including VAT and inflation adjustment. However, it should be noted that for the purposes of the economic appraisal all costs exclude VAT and are restated at base year prices in accordance with HM Treasury Green Book guidance.

More detailed design work will be required at Project Business Case stage and costs will be refined accordingly.

2.2.4 Estimating Lifecycle Capital Costs

Indicative lifecycle costs have been estimated over a 30-year appraisal period based on the following assumptions:

- Equipment replacement every 10 years.
- Building lifecycle costs based on typical average annual costs per m2 as follows:
- New build spaces at £29 per m2; and
- Refurbished spaces at £35 per m2.
- Allowances applied as follows:
- 10% management and fees; and
- 10% contingency.
- Costs applied where appropriate to option as follows:
  - Swansea 176m2 of refurbished space and 40m2 of new build space from 2023/24;
  - North Wales 260m2 of new build space from 2023/24;
  - 4th scanner 260m2 of new build space from 2025/26; and
  - 5th scanner 260m2 of new build space from 2028/29.

The resulting indicative lifecycle costs over the 30-year appraisal period are summarised in the table below. Detailed calculations are provided in the Economic and Financial Calculations in Appendix 3.

Table 34: Lifecycle during 30-year appraisal period (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Lifecycle for refurbished areas	0	0	173	173
Lifecycle for new build areas	0	0	442	624
Equipment replacement	0	14,019	31,779	37,699
Allowances	0	2,804	6,479	7,699
Total lifecycle costs (30-year period)	**0**	**16,823**	**38,873**	**46,195**
Equivalent annual cost	**0**	**543**	**1,254**	**1,490**

Lifecycle costs will be refined at Project Business Case stage based on detailed design.

2.2.5 Estimating Transitional Costs

Transitional costs will be incurred in relation to delivery of programme, including activities such as programme management and dual running costs during any disruptive works.

Indicative costs have been calculated based on the following assumptions:

- Programme team costs including:
- 1 WTE x Band 8b and 1 WTE Band 4.
- Mid-point of pay scale including on-costs.
- Incurred from 2021/22 until final project delivered (2025/26 for Option 3 and 2028/29 Option 4).
- Dual running costs:
- 3 months of dual running costs during replacement of Cardiff scanner.
- No other dual running costs required as the use of mobile scanners can continue during the construction of the new fixed scanner units.

The resulting indicative transitional costs are summarised in the table below.

Table 35: Transitional costs (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Programme team	0	0	502	804
Dual running costs	0	543	543	543
Total transitional costs	**0**	**543**	**1,045**	**1,347**

2.2.6 Estimating Recurring Revenue Costs

Baseline costs have been identified which demonstrate that it currently costs WHSSC £4.5m p.a. to deliver PET-CT services in Wales, based on 2020/21 budget. This equates to £872 per scan based on 2021 predicted demand.

An analysis of this is provided below.

Table 36: Baseline revenue costs

	Total costs	Basis
Betsi Cadwaladr University Health Board	1,105	2020/21 Budget
Swansea Bay University Health Board and PETIC (Cardiff)	2,937	2020/21 Budget
New indications Wales	500	2020/21 Budget
Total cost to WHSSC (£'000)	**4,542**	
Average number of scans	5,207	Predicted 2021 demand
Average cost per scan	**£872.29**	

Recurring revenue costs are anticipated to increase over the next 10 years in line with the demand modelling outlined in the Strategic Case section 5.5. Depending on the option, it may be possible to partly mitigate the increased costs by reducing the average cost per scan.

The current pricing model includes the following range of charges:

- The cost from PETIC is between £850 - £925 per scan.
- The mobile scanner at Wrexham costs between £806 - £896 per scan.
- The mobile scanner at Swansea costs around £950 per scan.
- The Christie tariff for 2020/21 is £846 per scan.
- The cost from external providers can increase to up to £1,500 per scan.
- PSMA scans cost between £1600 - £1825 per scan.

Initial work undertaken suggests that a fixed digital scanner operated by NHS Wales would provide opportunities to significantly reduce the cost per scan. Indicative costs have been calculated based on the following assumptions:

- Pay costs are based on the Workforce Group's agreed target staffing model. A preliminary workforce costing suggests that at mid-point of pay scale including on costs, this is likely to cost between £892k and £1,060k. For the purposes of the PBC, the maximum end of the range has been used.
- Non pay costs are based on the following assumptions:
- Equipment maintenance at 10% of capital costs.
- Radiopharmaceutical costs are based on estimated external provider prices which for the most common F-FDG scans typically range between £2580 - £3705 per day (equating to between 12-17 patient doses) plus £300 per delivery. F-PSMA radiopharmaceuticals are estimated to cost £950 per patient dose and have been applied to 6% of overall activity, in line with recent activity mix.
- Consumables and transport costs are based on the average cost per scan determined from total estimated costs outlined in the North Wales SOC revenue analysis.
- Building running costs are based on an overall average cost of £100 per m2 which includes Utilities, Soft FM and Hard FM.

Based on these assumptions it is estimated that it will cost NHS Wales £2.9m p.a. to operate each fixed digital scanner at full capacity. This is equivalent to £577 per scan, based on an average of 5,000 scans. An analysis of this is provided in the table below.

Table 37: Indicative revenue costs to operate digital scanner (£'000)

Element	Total annual costs (£'000)	Equivalent cost per scan
Workforce to operate digital scanner (7-12 patients per session)	1,060	£212.01
Pay costs	**1,060**	**£212.01**
Equipment maintenance	296	£59.20
Radiopharmaceuticals	1,308	£261.64
Consumables	47	£9.30
Delivery and transport	147	£29.45
Building running costs	26	£5.20
Non pay costs	**1,824**	**£364.80**
Total costs	**2,884**	**£576.81**

Indicative recurring revenue costs for each option in line with 10-year demand model have therefore been estimated based on the following assumptions:

- Digital scanner capacity is 5,288 scans.
- PETIC charges continue at £925 for first 2,150 scans, then £850 for 2150+ and are applied to South East Wales demand up to 5,288 scans.
- Operating costs for the new fixed scanners at North Wales and South West Wales, and the subsequent 4th and 5th scanners, where relevant to an option, are based on indicative operating costs outlined in Table 37 above and are applied as follows:
  - Variable costs (Radiopharmaceuticals, Consumables, Transport) applied based on the average cost per scan to predicted demand up to 5,288 scans.
  - Fixed costs (Equipment Maintenance, Building Running Costs) are applied in full from the year of opening.
  - Pay costs are also applied in full from the year of opening for the purposes of these calculations, although it should be noted than in reality pay costs are likely to be phased during the initial years of each scanner in line with activity. Further work will be undertaken at Project business case stage to develop detailed workforce plans and associated costs.
  - Any unmet demand assumed to be outsourced at average £935 per scan (to reflect range of fees including type and provider).

Detailed calculations are available in the PET-CT Revenue Workings in Appendix 4 and an extract provided below.

Table 38: Indicative 10-year recurring revenue costs (£'000)

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
Option 1: BAU - Outsource all activity	4,869	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	156,529
Option 2: Do Minimum	4,806	5,736	6,850	8,187	9,268	11,287	13,709	16,617	20,107	24,294	29,317	150,179
Option 3: 4 scanners	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	122,122
Option 4: 5 scanners	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,688	16,305	21,329	118,536

Average cost per scan £	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
Option 1: BAU - Outsource all activity	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
Option 2: Do Minimum	£923.05	£917.89	£913.59	£910.00	£858.32	£871.10	£881.75	£890.62	£898.02	£904.18	£909.32	£897.07
Option 3: 4 scanners	£923.05	£917.89	£913.59	£903.07	£791.46	£672.53	£723.63	£653.09	£639.88	£680.32	£722.77	£729.47
Option 4: 5 scanners	£923.05	£917.89	£913.59	£903.07	£791.46	£672.53	£723.63	£653.09	£656.03	£606.86	£661.55	£708.06

This analysis demonstrates how the average price per scan is expected to change in relation to each of the options:

- Option 1 (BAU) – Average price increases to £935 per scan as all activity is outsourced.
- Option 2 (Do Minimum) – Average price increases to £898 as only the Cardiff scanner is replaced, for which PETIC pricing is retained, and there is significant reliance on outsourcing.
- Option 3 (4 fixed scanners) – Average price reduces to £729 due to the benefits of 3 new fixed scanners although there is some reliance on outsourcing from 2029/30 based on current demand predictions.
- Option 4 (5 scanners) – Average price reduces to £708 as there is no reliance on outsourcing during the 10-year period.

These costs have been incorporated into the economic appraisal for each option for the first 10 years. Costs are assumed to remain static from Year 11 onwards. This results in recurring revenue costs over a 30-year period as outlined in the table below.

Table 39: Recurring revenue costs (£'000)

Element	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Total revenue costs (30-year appraisal period)	759,436	759,374	588,176	545,115
Equivalent annual cost	25,315	25,312	19,606	18,171

2.2.7 Benefits

The delivery of the programme will deliver a range of benefits including:

- Improved quality and reduction in patient harm.
- Workforce resilience.
- Improved efficiency and economy.
- Improved access reducing patient travel time.
- Cost effective service supported by income generation.
- Provide capacity that meets population needs in line with international best practice.
- Increased opportunities for Research and Development.
- Increased opportunities for innovation.

Work will be required at Project Business Case to explore these benefits in detail and quantify them, where possible in monetary equivalent terms. Indicative methodologies and assumptions for doing so are provided in the table below.

Table 40: High level benefits assumptions

Benefit	Benefit type	Indicative methodology / assumptions for quantifying
Improved quality and reduction in patient harm		
B01 Avoid high-cost late-stage interventions	Cash releasing benefit	As the demand modelling is refined, identify the number of patients for which improved staffing would reduce the need for high cost interventions. Allocate potential cost saving based on current evidence base. For instance the Evidence Review outlined in Specialised Services Commissioning Policy CP50a suggests PET-CT is c.£1500 cheaper than a neck dissection. As an indication, if even 10% of overall predicted demand was associated with reducing late stage cost interventions, based on an indicative £1500 per patient, this would equate to £4.8m annual financial benefit by 2031/32.
B02 Improved diagnostic accuracy	Qualitative	It is anticipated that this benefit will be difficult to measure with any degree of certainty.
B03 Reduced waiting times	Quantitative (Unmonetised)	Determine baseline referral to reporting time and identify how many scans will achieve 10 day referral to report target.
B04 Improved patient experience	Qualitative	It is anticipated that it is difficult to demonstrate a direct correlation between the investment and patient experience.
Workforce resilience		
B05 Improved recruitment and retention	Qualitative	It is anticipated that it is difficult to demonstrate a direct correlation between the investment and recruitment and retention rates.
B06 Improved access to training and education	Quantitative (Unmonetised)	Based on learning needs analysis and evaluation data, identify baseline position and agree target improvement.
B07 Improved staff satisfaction	Qualitative	It is anticipated that it is difficult to demonstrate a direct correlation between the investment and staff satisfaction.
Improved efficiency and economy		
B08 Increased capacity resulting in ability to meet demand	Cash releasing	Estimate average cost per scan based on refined costs at Project stage. Based on indicative costs outlined in section 2.6, it is anticipated that this will result in a reduction to overall average from £873 to between £708 - £729 depending on the option.
B09 Reduced downtime	Non-cash releasing	At the time of developing the PBC, there was limited data showing a significant number of cancelled sessions that were impacting on utilisation, however this is likely to be as a result of additional efforts by local service leads. This should be revisited at Project Business Case stage to determine whether number of cancellations has changed or whether any estimation can be made of time spent by local teams to manage utilisation.
B10 Reduced reliance on mobile scanners	Cash releasing	Estimate average cost per scan based on refined costs at Project stage. Based on indicative costs outlined in section 2.6, it is anticipated that the average cost per scan for NHS Wales managed digital scanners will equate to £577 which is significantly below the average of £935 per scan associated with mobile scanners currently.

Benefit	Benefit type	Indicative methodology / assumptions for quantifying
Improved access reducing patient travel		
B11 Reduced patient travel time – value to patients	Societal (monetised)	Patient travel time analysis to be undertaken at Project business case stage. DfT TAG values of time can be used to estimate the economic value of any reduction in travel time.
B12 Reduced patient travel time – value to patients	Societal (monetised)	Converting the travel time analysis into mileage will enable a calculation to made using the HMT Green Book toolkit to estimate reduction in CO2e and corresponding economic value.
Cost effective service supported by income generation		
B13 Income generation opportunities	Cash releasing	Work should be undertaken at Project business case stage to estimate the value of additional income from RD&I activity. It is estimated that up to 10% of a scanner's capacity could be used for this purpose and the demand modelling includes an estimate of around 7%. As an indication, if 7% of activity generated income of £1500 per scan, that would result in a financial benefit of £3.3m by 2031/32.
Provide capacity that meets population needs in line with best practice		
B14 Better equity of access	Quantitative (Unmonetised)	At Project business case stage, determine the range of indications available at each centre and associated waiting times.
Increase opportunities for Research and Development		
B15 Increased proportion of staff research active	Quantitative (Unmonetised)	At Project business case stage, determine number of research posts at each site and potential impact in terms of publications, etc.
B16 Increased proportion of patients on clinical trails	Quantitative (Unmonetised)	At Project business case stage, determine number of patients able to participate at each site.
B17 Greater number of trails led by and participated in by PET site	Quantitative (Unmonetised)	At Project business case stage, determine number of potential trials at each site.
Increased opportunities for innovation		
B18 Improved access to a greater range of diagnostics to support greater range of therapeutics	Qualitative	It is anticipated that it is difficult to measure as dependent on a number of factors.

2.2.8 Risks

For the purposes of preparing an indicative cost benefit analysis for the PBC, a planning contingency of 10% has been incorporated into the capital costs.

At Project business case stage more detailed risk analysis will be undertaken and, where possible, risks will be quantified in monetary-equivalent values. This will include an analysis of:

- Optimism bias.
- Expected risk value.

2.2.9 Economic Appraisal Results

DHSC's Comprehensive Investment Appraisal (CIA) model has been populated with these indicative assumptions to support the appraisal of overall value for money and cost-benefit analysis of the shortlisted options.

The assumptions above have been incorporated into a discounted cash flow for each of the options. In line with HMT Green Book requirements:

- Costs, benefits and risks are calculated over a 31-year appraisal period including Year 0 (baseline year) + 30 years estimated useful life.
- Year 0 is 2021/22.
- Costs and benefits use real base year prices – all costs are expressed at 2020/21 prices in line with the baseline costs.
- The following costs are excluded from the economic appraisal:
- Exchequer 'transfer' payments, such as VAT.
- General inflation.
- Sunk costs.
- Non-cash items such as depreciation and impairments.
- A discount rate of 3.5%is applied.

A summary of the economic appraisal is shown in the table below.

Table 41: Economic appraisal overview (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Undiscounted inputs				
Initial capital costs	0	5,206	20,857	26,387
Lifecycle capital costs	0	16,823	38,873	46,195
Total capital costs	**0**	**22,029**	**59,729**	**72,583**
Transitional revenue costs	0	543	1,045	1,347
Recurring revenue costs	759,436	759,374	588,176	545,115
Total revenue costs	**759,436**	**759,917**	**589,221**	**546,462**
Undiscounted Net Present Cost	**759,436**	**781,946**	**648,950**	**619,045**
Discounted outputs				
Initial capital costs	0	5,156	19,453	23,813
Lifecycle capital costs	0	8,791	21,005	24,506
Total capital costs	**0**	**13,948**	**40,458**	**48,319**
Transitional revenue costs	0	543	1,012	1,258
Recurring revenue costs	428,611	428,548	333,182	310,723
Total revenue costs	**428,611**	**429,091**	**334,194**	**311,981**
Discounted Net Present Cost	**428,611**	**443,039**	**374,653**	**360,300**
Ranking	**3**	**4**	**2**	**1**

This analysis demonstrates that Option 4 (More Ambitious) results in the lowest Net Present Cost (NPC), closely followed by Option 3 (Preferred Way Forward).

The economic summary in the CIA model calculates the incremental costs and benefits (which in this case refers to reduction in revenue costs) in relation to the baseline option, Option 1 (BAU).

Table 42: Economic appraisal results (£'000)

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Incremental costs - total	0	(14,491)	(41,471)	(49,577)
Incremental benefits - total	0	62	95,429	117,888
Incremental Net Present Social Value	**0**	**(14,428)**	**53,958**	**68,311**
Benefit-cost ratio	**0.00**	**0.00**	**2.30**	**2.38**
Rank	**4**	**3**	**2**	**1**

This analysis suggests that, on the face of it, Option 4 (More Ambitious) provides the best value for money since it results in the following:

- Lowest Net Present Cost (£360.3m over 30 years).
- Lowest incremental Net Present Social Value (i.e. Net Present Cost is £68.3m lower than the baseline option).
- Highest Benefit Cost Ratio of 2.38.

However, this is closely followed by Option 3 (Preferred Way Forward) with the following results:

- Second lowest Net Present Cost (£374.7m over 30 years).
- Second lowest incremental Net Present Social Value (i.e. Net Present Cost is £54.0m lower than the baseline option).
- Second highest Benefit Cost Ratio of 2.30.

In addition to offering the second best value for money this option also provides greater flexibility since the need for the 5th scanner can be reviewed at a later date, reducing capital investment requirements and minimising risk. The impact of this is explored in the section on sensitivity analysis below.

2.2.10 Sensitivity Analysis

The ranking of the economic appraisal is highly dependent on the financial benefits associated resulting from the revenue costs. These have been calculated based on the current demand modelling which assumes 20% year on year demand growth.

The analysis below demonstrates that if actual demand growth is less than 17.5% year on year, Option 3 (Preferred Way Forward) consistently results in the highest Benefit Cost Ratio (BCR).

Table 43: Summary of Sensitivity analysis

	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
BCR - Results of economic appraisal	0.0	0.0	2.3	2.4
BCR - Scenario 1: Growth at 17.5%	0.0	0.0	2.3	2.3
BCR - Scenario 2: Growth at 15%	0.0	0.0	2.1	1.5
BCR - Scenario 3: Growth at 12.5%	0.0	0.0	1.4	0.9
BCR - Scenario 4: Growth at 10.0%	0.0	0.0	0.8	0.4

This demonstrates that the ranking of options is heavily dependent on demand modelling assumptions and, on this basis, Option 3 (Preferred Way Forward) results in best value for money given the additional flexibility.

2.2.11 Conclusion

A summary of the overall options appraisal results is provided in the table below.

Table 44: Options overview

Element	Option 1 Business as Usual (BAU)	Option 2 Do Minimum	Option 3 Preferred Way Forward	Option 4 More Ambitious
Description	Do nothing	Retain 1 fixed and extend capacity of 2 mobile scanners	Provide 4 fixed scanners (10-year programme)	Provide 5 fixed scanners (10-year programme)
Incremental NPSV	-	£(4.4)m	£54.0m	£68.3m
Benefit Cost Ratio	-	0.00	2.30	2.38
Average cost per scan (10 year period)	£935	£898	£729	£708
Sensitivity and risks	Consistently ranks as worst value for money even with significant changes in assumptions	Consistently ranks as second worst value for money even with significant changes in assumptions	Ranks as best value for money if demand growth is lower than 17.5% year on year	If demand growth is lower than predicted 5th scanner will be significantly underutilised

Based on the overall results, it is recommended that Option 3 (Preferred Way Forward) is carried forward as the preferred way forward for delivering the programme and the potential need for a 5th scanner assessed at a later date.

2.2.12 Preferred way forward

The preferred way forward is to implement a programme which will deliver 4 fixed digital scanners in NHS Wales. This will require capital investment of £24.9m to deliver the following projects:

Table 45: Preferred way forward programme

Project	Implementation	Investment requirements
Project 1 - Cardiff	2021/22	• Replace PET-CT • Upgrade of cyclotron

Project	Implementation	Investment requirements
Project 2 - North Wales	2023/24	• New PET-CT • New build (260m2)
Project 3 - Swansea	2023/24	• New PET-CT • Refurbish an existing building (176m2) + new build extension (40m2)
Project 4 - 4th scanner	2025/26	• New PET-CT • New build (260m2)

As a result of this investment the preferred way forward is expected to deliver the following:

- Capacity to meet predicted demand to 2028/29.
- Opportunities to reduce the cost per scan to an average of £729 per scan in the first 10 years, based on indicative operating costs of NHS Wales fixed digital scanners estimated at £577 per scan and continuing with current PETIC charging arrangements.
- Opportunities to reduce overall system costs due to avoiding late stage interventions. This could be significant since the evidence base suggests for certain diseases and patient pathways, such as the treatment of neck cancers, PET-CT scans are potentially £1,500 more cost effective. Further work will be required at Project business case stage to determine more accurate activity levels in relation to patient pathways. As an indication, if this sort of benefit was applied to 10% of activity, this would equate to a financial benefit of around £4.8m by 2031/32.
- Opportunities to generate income from RD&I activity. It is estimated that 7% of predicted demand relates to RD&I activity. Again, further work will be required at Project business case stage to identify accurate numbers but, as an indication, if research scans were charged at £1500, this would equate to an annual financial benefit of around £3.3m by 2031/32.
- Delivery of non-financial benefits including:
- Improved quality and reduction in patient harm including reduced waiting times, better diagnostic accuracy and improved patient outcomes and experience.
- Workforce resilience including improved recruitment and retention, greater access to training and education, and improved staff satisfaction.
- Improved access reducing patient travel time which benefits patient and reduces greenhouse gases.
- Provide capacity that meets population needs in line with international best practice.
- Increased opportunities for Research and Development.
- Increased opportunities for innovation.

In addition to this, there is flexibility to introduce a 5th scanner at a later date based on updated demand and capacity analysis at that time, reducing committed capital expenditure and minimising risk.

Plans to implement the preferred way forward and the commercial, financial and management implications are outlined in the subsequent chapters of this business case.

3 Commercial Case

3.1 Introduction

3.1.1 Purpose

The purpose of this section is to set out an initial high level Procurement Strategy to establish appropriate procurement and contractual arrangements in order to implement and deliver the Programme's Projects and key activities.

The Programme will look to acquire four fixed, digital (AI enabled) PET-CT (Positron Emission Tomography combined with Computerised Tomography) scanners and install these key items of equipment at four locations across Wales. This procurement includes ancillary equipment, radiotherapy adaptations, in addition to an ion source and hot cell replacement for the cyclotron at the Cardiff site.

3.1.2 Considerations

The Programme Manager has developed this commercial case with support and advice from specialist colleagues at NHS Wales Shared Services Partnership - Specialist Estates Services [NWSSP-SES] and Procurement Services [NWSSP-PS].

It should be emphasised that whilst the Programme is being hosted by WHSSC, capital funding will be given to the respective organisations, all of which have Estates & Facilities and Procurement teams that will have capability to carry out procurement activities. Dependent upon availability of a suitably experienced individual during the time period, there would be some benefit in an individual taking the procurement lead for this Programme.

Another key consideration is that the capital funding for the PETIC Cardiff site will be given to Cardiff University, and therefore this site will be subject to the University procurement processes and procedures. This will require a close working relationship with Cardiff and Vale University Health Board for effective implementation.

There are multiple procurement routes that can be followed, however all of the major items of equipment are available on a compliant preapproved framework. NHS Wales has direct access to this framework and at the time of writing it is thought that Cardiff University can, through its own procurement department, access this same agreement.

In line with clinical demand and workforce availability, the implementation of the Programme will need to be carried out in a phased manner. Dependent upon the timings of the phases and or the available funds, it may be possible to aggregate NHS Wales purchasing requirements so as to generate additional value.

Given the scale and impact on current Welsh NHS services that the All Wales PET Programme will deliver, it is imperative to ensure appropriate governance is in place for procurement. As such we propose that a multidisciplinary team will make up membership of a Procurement Workstream that will support the Programme.

3.2 Key Objectives of the Procurement

The key objectives of the procurement and its scope have been considered to ensure an optimum approach.

The key objectives are:

- a solution that delivers safe and effective clinical outcomes for patients;
- a solution that is capable of future development to meet expanding clinical needs, such as radiotherapy planning;
- a solution that is capable of answering research, development and innovation needs;
- a solution that offers value for money over its lifetime;
- a solution that is "*best in class*" (where technically, clinically and financially feasible);
- a solution that is fully interoperable across all elements;
- a solution that provides the requisite business management as well as clinical functions;
- a solution that, as far as possible, enables efficient, high quality diagnostic regimens to be introduced;
- a solution that offers full audit facilities for process development and research;
- a solution capable of meeting the needs of All Wales PET Service Clinical Model.

It is important to highlight that the objectives derive from the requirements of All Wales PET Programme.

3.3 Scope of Procurement

The Equipment/items covered under the procurement is:

- Four PET-CT Scanners (AI enabled; one scanner at each site)
- Ancillary equipment and phantoms (Robotic radiotracer dispenser)
- Radiotherapy adaptions (laser bridge, flat table top)

The Equipment must be interoperable, meet all relevant standards (as a minimum) and be demonstrably proven to operate as a complete technical and clinical solution.

The total estimated capital value of the Equipment for the Preferred Way Forward is circa £13.5 million. This will be profiled over the period of five years. This is supported by build works costs of circa £4.6 million, with fees and non-works costs circa £815,000. A quantified risk and contingency has been allocated at circa £1.9 million. Net VAT has been calculated at circa £4 million, with the total Programme cost being circa £24.9 million, inclusive of quantified risk and contingency.

Programme Management is based at the host organisation WHSSC and costs for this post are currently sourced via the NHS Wales Collaborative and have been agreed until 31st March 2022.

The revenue for staffing and maintenance/ongoing support is not included in these figures and are addresses in the Economic and Financial Cases.

Project Management support is expected to be funded by Health Boards and the Programme Management funding is to be confirmed.

The full extent of the capital and revenue costs will not be known until Full Business Cases are complete for each site. As such, implementation and roll out is not considered in any detail within this document.

The prospective timelines for the four projects within this Programme can be seen in Table 46.

Table 46: High level dates of the Projects and business cases

Business Case (BC)	Proposed date of Welsh Gov. BC approval	Proposed "go live" date	
Project 1			
BJC	July 2021	PET Scanner	March 2022
		Ion Source replacement	March 2022
		Hot Cell replacement	March 2023
Project 2			
SOC1	July 2021	January 2024	
OBC/FBC	March 2022		
Project 3			
OBC2	November 2021	November 2023	
FBC2	July 2022		
Project 4			
Appraisal Process	April 2023	June 2026	
OBC3	January 2024		
FBC3	December 2024		

3.4 Proposed Contractual Structure

The decision of supplier will sit with the procuring organisation following evaluation, which will enter into a contract with the organisation directly. However it should be noted that a collaborative approach may add additional value should this be deemed deliverable given the extended timeline of the phases.

The Procurement Workstream membership will consist of the specialists within NWSSP-SES, NWSSP-PS, organisations Procurement and Estates representatives, Programme Manager and Project Teams at relevant Health Boards, Trusts and Cardiff University.

The question as to whether the Equipment requirement should be procured as (i) single contract or (ii) a series of separate contracts, has been considered. As the procurement will utilise a compliant framework agreement to secure the requirements, then there will likely be separate contracts between suppliers and the organisation that will purchase the equipment.

It is possible that the Procurement Workstream will propose running one procurement for the NHS equipment, depending upon the timings. For instance if phasing of projects is less than two years apart, there may be option to fix the costs and place orders at the same time, deploying when needed at a future date.

It is anticipated that each organisation that subsequently hosts a digital PET scanner will enter into a contract with the supplier. This contract will be subject to the hosting organisations local governance, procurement and due diligence processes.

An initial assessment of the key risks, issues and options determined that procuring through separate contracts for the requirements would:

- be the most likely to achieve the key objectives
- allow the Programme to phase implementation, in line with clinical demand and infrastructure constraints
- allow Cardiff University to follow its procurement and contracting processes
- provide each NHS organisation with the least risk approach in terms of achieving a solution that delivers Equipment interoperability
- allow each NHS organisation to manage its procurement process more easily
- be less complex
- place risk in the most appropriate place

However, it should be noted that procuring through separate contracts may cause interoperability issues, result in a diminished value for money opportunity, a potential loss of consistency of approach across Wales and additional contract management burden. Therefore, these items will require additional consideration at the Procurement Workstream.

3.5 Evaluation

On conclusion of the procurement phase and final evaluation of the responses, the Procurement Workstream will make a recommendation based on the most economically advantageous tender(s). This recommendation will be recorded in a final evaluation report, which will set out the basis for the award decision, for the formal approval of the PET Strategic Programme Board and internal governance of the receiving organisation.

Any award will be subject to a mandatory 10-day Standstill period. Final award will also be subject to approval by the National Imaging Strategic Programme Board and Collaborative Executive Group, Full Business Case Approval and Notification being provided from the Welsh Government Cabinet Secretary for Sport, Health and Wellbeing.

Suppliers will be allowed an opportunity for a full debrief following the formal decision being ratified and approved.

The full evaluation methodology will be set out in the procurement strategy which will be developed post PBC approval and be consistent and in accordance with the requirements of the Framework Agreement being utilised.

3.6 Procurement Resources

The Procurement Workstream will consist of an experienced and suitably skilled multi-disciplinary team. They will be able to advise each PET scanning site procurement team and membership of this Workstream should include appropriate representation from each site procurement team.

Each local site procurement team could consist of the following membership:

- Organisation or Health Board responsible person
- Head of PET scanning Services (if applicable)
- PET Scanning Services Manager
- Organisation or Health Board Estates representation
- Organisation or Health Board Procurement representation
- End User Clinical lead
- Organisation or Health Board Finance lead
- NWSSP – Senior Advisor
- NWSSP – Procurement Lead
- PET site Project Manager.

A fully resourced, suitably experienced and structured Procurement Workstream and Project Team to oversee the procurement process would be a pre-requisite to achieving a successful outcome.

3.6.1 Procurement of Specialist Advisors

Each Organisation or Health Board will have in-house resources and expertise and experience in procuring this or similar equipment. Indeed, in-house legal support will be pertinent as a good reference point.

Additional support will be provided by colleagues from NWSSP-SES and PS.

3.7 Key Procurement Risks and Challenges

Set out in Table 47 below, is a non-exhaustive list of key risks and challenges which can compromise the outcome of the tender process in the absence of adequate preparation and governance arrangements

Table 47: Key Risks and Challenges

Key Risk & Challenges	Actions to Mitigate / Manage
Interfaces and requirements between the PET scanner Procurement and the Programme agreement for the scanners do not align	Sharing of key document and alignment of personnel.
Nuclear Medicine Consolidation Programme at North Wales site delayed – impact on All Wales PET Programme delivery	The Health Board would still be required to undertake appropriate procurement of equipment/solutions. Sharing of key documents between Programmes Boards.
Timeline between concluding procurement and the likely timeline for deployment into Health Boards	As above.
Issues stemming from insufficient numbers of staff and a lack of internal resources.	Each Health Board staffing and skill profile must be identified, understood, resourced and deployed effectively prior to procurement.
Adequate and appropriate engagement from senior management and operational staff	Ensure governance arrangements are in place to secure senior management and Health Boards key operational

Key Risk & Challenges	Actions to Mitigate / Manage
	staff engagement with, and commitment to, each project throughout to ensure that Programme needs are truly reflected in the final outcome.
Associated facilities are not up to service specification	Ensure breakpoints to review purchase are included in contract and ensure financial contingency is in place

3.8 Prospective Timeline

Table 48 below sets out the prospective timeline for the procurement at each site. The timescales are compliant with the relevant procurement procedures/regulations at the time of writing this Programme Business Case.

Soon after this Programme Business Case is endorsed by Welsh Government, the Procurement Workstream will hold a workshop that will include membership as noted above from Shared Services and local organisation. This will act as the catalyst to evaluating all aspects of procurement, as noted throughout this document.

Table 48: Prospective Timeline

Activity	Timeframe
Health Board approval of Outline Business Case	2 months
Welsh Government approval of Outline Business Case	2 months
Pre-tender market engagement	20 days
Time for Outline Tender returns/clarification	40 days
Time for final tender returns	25 days
Evaluate final tenders	20 days
Full Business Case drafting and submission	2 months
Welsh Government approval of Full Business Case	2 months
Contract Award	Minimum 10 days+

4 Financial Case

4.1 Financial Appraisal

4.1.1 Introduction

The purpose of the Financial Case is to consider the financial impact of the delivering preferred way forward and demonstrate affordability of the programme.

The preferred way forward identified in the Economic Case is to implement a programme that will deliver four fixed digital scanners in Wales and involves investing in the following projects:

- Project 1: To replace the PET-CT scanner and upgrade the cyclotron at the existing PETIC site in Cardiff during 2021/22.
- Project 2: To create a new fixed PET-CT scanner in North Wales by constructing a new build facility and procuring a PET-CT scanner by 2023/24.
- Project 3: To create a new fixed PET-CT scanner in South West Wales by refurbishing and extending an existing building and procuring a PET-CT scanner by 2023/24.
- Project 4: To create a fourth fixed PET-CT scanner in a location which will be determined in relation to demand needs at the time by constructing a new build facility and procuring a PET-CT scanner by 2025/26.

4.1.2 Capital Requirements

Capital funding of £24,881k is sought from Welsh Government to deliver the All Wales PET-CT programme.

This is based on indicative costs which have been estimated by SES based on the following high level assumptions:

- The floor area required to create a facility to house a PET-CT including supporting areas, such as waiting areas and uptake rooms has been calculated.
- Construction costs have been allocated to the floor areas as follows:
- Refurbishment costs £2k per m2 + on costs; and
- New build costs £4k per m2 + on costs.
- An allowance for lead lining has been included.
- On costs have been included at 35%.
- Fees have been included at 16%.
- An estimate for non-works has been estimated.
- Equipment costs are based on typical market costs:
- PET-CT scanner £2.9m (including ancillary equipment and Radiotherapy adaptions); and
- Cyclotron refresh £1.75m (including ion source replacement and hot cells).
- Planning contingency has been included at 10%.
- VAT has been applied at 20% to all costs except fees.

The PBC capital cost forms are provided in Appendix 10. The table below provides an overview of total capital costs for the delivering the overall programme.

Table 49: Capital costs - Programme

	Net Costs £'000	VAT £'000	Total Costs £'000
Construction	4,593	919	5,511
Fees	735	0	735
Non works	80	16	96
Equipment costs	13,553	2,711	16,264
Planning contingency	1,896	379	2,275
Total capital costs	**20,857**	**4,024**	**24,881**

Indicative capital costs for each of the individual projects are shown in the table below.

Table 50: Capital costs - By Project

	Net Costs £'000	VAT £'000	Total Costs £'000
Project 1 - Replace Cardiff equipment	5,206	1,041	6,248
Project 2 - Fixed scanner North Wales	5,525	1,048	6,573
Project 3 - Fixed scanner Swansea	4,600	886	5,486
Project 4 - 4th fixed scanner	5,525	1,048	6,573
Total capital costs	**20,857**	**4,024**	**24,881**

An indicative cash flow for capital costs is shown in the table below.

Table 51: Capital costs - Cash flow

	Net Costs £'000	VAT £'000	Total Costs £'000
2021/22	3,919	756	4,675
2022/23	1,719	307	2,026
2023/24	9,780	1,913	11,693
2024/25	145	7	152
2025/26	5,293	1,042	6,335
Total capital costs	**20,857**	**4,024**	**24,881**

More detailed design work will be required at Project Business Case stage and costs will be refined accordingly.

4.1.3 Transitional Costs

Non-recurring revenue costs of £1,045k are expected to be incurred in relation to delivery of the programme, including activities such as programme management and dual running costs during any disruptive works.

This has been estimated based on the following assumptions:

- Programme team costs including:
- 1 WTE x Band 8b and 1 WTE Band 4.
- Mid-point of pay scale including on-costs.
- Incurred from 2021/22 until final project delivered in 2025/26.
- Dual running costs:
- 3 months of dual running costs during replacement of Cardiff scanner.
- No other dual running costs required as the use of mobile scanners can continue during the construction of the new fixed scanner units.

The resulting indicative transitional costs are summarised in the table below.

Table 52: Transitional costs – Cash flow

	Programme team £'000	Dual running £'000	Total costs £'000
2021/22	100	545	645
2022/23	100		100
2023/24	100		100
2024/25	100		100
2025/26	100		100
Total capital costs	**500**	**545**	**1,045**

4.1.4 Estimating Recurring Revenue Costs

Baseline costs have been identified which demonstrate that it currently costs WHSSC £4.5m p.a. to deliver PET-CT services in Wales, based on 2020/21 budget. This equates to £872 per scan based on 2021 predicted demand. An analysis of this is provided below.

Table 53: Baseline revenue costs

	Total costs	Basis
Betsi Cadwaladr University Health Board	1,105	2020/21 Budget
Swansea Bay University Health Board and PETIC (Cardiff)	2,937	2020/21 Budget
New indications Wales	500	2020/21 Budget
Total cost to WHSSC (£'000)	**4,542**	
Average number of scans	5,207	Predicted 2021 demand
Average cost per scan	**£872.29**	

Demand is anticipated to increase by 20% year on year over the next 10 years as outlined in the demand modelling outlined in the Strategic Case section 5.5.

Given the existing capacity, this is likely to result in a significant cost pressure if no investment is made, particularly since the current cost model includes the following range of potential costs:

- The cost from PETIC is between £850 - £925 per scan.

- The mobile scanner at Wrexham costs between £806 - £896 per scan.
- The mobile scanner at Swansea costs around £950 per scan.
- The Christie tariff for 2020/21 is £846 per scan.
- The cost from external providers can increase to up to £1,500 per scan.
- PSMA scans cost between £1600 - £1825 per scan.

Investing in fixed digital scanners which are operated by NHS Wales provides opportunities to significantly reduce the average cost per scan and partly mitigate the cost pressure created by the growing demand.

Indicative costs for each new NHS Wales fixed scanner have been calculated based on the following assumptions:

- Pay costs are based on the Workforce Group's agreed target staffing model. A preliminary workforce costing suggests that at mid-point of pay scale including on costs, this is likely to cost between £892k and £1,060k. For the purposes of the PBC, the maximum end of the range has been used.
- Non pay costs are based on the following assumptions:
- Equipment maintenance at 10% of capital costs.
- Radiopharmaceutical costs are based on estimated external provider prices which for the most common F-FDG scans typically range between £2580 - £3705 per batch (equating to between 12-17 patient doses) plus £300 per delivery. F-PSMA radiopharmaceuticals are estimated to cost around twice as much and have been applied to 6% of overall activity, in line with recent activity mix.
- Consumables and transport costs are based on the average cost per scan determined from total estimated costs outlined in the North Wales SOC revenue analysis.
- Building running costs are based on an overall average cost of £100 per m2 which includes Utilities, Soft FM and Hard FM.

Based on these assumptions it is estimated that it will cost NHS Wales £2.9m p.a. to operate each fixed digital scanner at full capacity. This is equivalent to £577 per scan, based on an average of 5,000 scans. An analysis of this is provided in the table below.

Table 54: Indicative revenue costs to operate digital scanner (£'000)

Cost element	Total annual costs (£'000)	Equivalent cost per scan
Workforce to operate digital scanner (7-12 patients per session)	1,060	£212.01
Pay costs	**1,060**	**£212.01**
Equipment maintenance	296	£59.20
Radiopharmaceuticals	1,308	£261.64
Consumables	47	£9.30
Delivery and transport	147	£29.45
Building running costs	26	£5.20
Non pay costs	**1,824**	**£364.80**
Total costs	**2,884**	**£576.81**

Indicative recurring revenue costs for in line with the 10-year demand model have therefore been estimated based on the following assumptions:

- Digital scanner capacity is 5,288 scans.
- PETIC charges continue at £925 for first 2,150 scans, then £850 for 2150+ and are applied to South East Wales demand up to 5,288 scans.
- Operating costs for the new fixed scanners at North Wales and South West Wales, and the subsequent fourth scanners based on indicative operating costs above and are applied as follows:
- Variable costs (Radiopharmaceuticals, Consumables, Transport) applied based on the average cost per scan to predicted demand up to 5,288 scans.
- Fixed costs (Equipment Maintenance, Building Running Costs) are applied in full from the year of opening.
- Pay costs are also applied in full from the year of opening for the purposes of these calculations, although it should be noted than in reality pay costs are likely to be phased during the initial years of each scanner in line with activity. Further work will be undertaken at Project business case stage to develop detailed workforce plans and associated costs.
- Any unmet demand assumed to be outsourced at average £935 per scan (to reflect range of fees including type and provider).

Detailed calculations are available in the PET-CT Revenue Workings in Appendix 2 and an extract provided below.

Table 55: Indicative 10-year recurring revenue costs (£'000)

Business as Usual option (No investment; outsource unmet demand)

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
Total activity (Number of scans)	5,207	6,249	7,498	8,997	10,798	12,957	15,548	18,658	22,390	26,868	32,241	167,411
Total recurring revenue costs (£'000)	**4,869**	**5,843**	**7,011**	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**156,529**
Total cost per scan	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
Variance to baseline costs 2020/21	**327**	**1,301**	**2,469**	**3,870**	**5,554**	**7,573**	**9,995**	**12,903**	**16,393**	**20,580**	**25,603**	**106,567**

Preferred way forward option (Provide 4 fixed scanners)

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
South East Wales (PETIC)	2,629	3,155	3,786	4,543	5,288	5,288	5,288	5,288	5,288	5,288	5,288	51,129
South West Wales (Fixed digital scanner)	1,434	1,721	2,065	2,478	2,974	3,569	4,282	5,138	5,288	5,288	5,288	39,526
North Wales (Fixed digital scanner)	1,144	1,373	1,647	1,976	2,372	2,846	3,415	4,098	4,918	5,288	5,288	34,363
4th scanner (Fixed digital scanner)	0	0	0	0	0	1,254	2,563	4,133	5,288	5,288	5,288	23,814
Capacity shortfall - Outsourced	0	0	0	0	164	0	0	0	1,608	5,716	11,089	18,577
Total activity (Number of scans)	5,207	6,249	7,498	8,997	10,798	12,957	15,548	18,658	22,390	26,868	32,241	167,411
South East Wales (PETIC)	2,396	2,843	3,379	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	40,801
South West Wales (Fixed digital scanner)	1,341	1,609	1,931	2,126	2,275	2,454	2,668	2,926	2,971	2,971	2,971	26,243
North Wales (Fixed digital scanner)	1,070	1,284	1,540	1,976	2,095	2,237	2,408	2,613	2,859	2,971	2,971	24,022
4th scanner (Fixed digital scanner)	0	0	0	0	0	0	2,152	2,624	2,971	2,971	2,971	13,687
Capacity shortfall - Outsourced	0	0	0	0	153	0	0	0	1,503	5,344	10,368	17,369
Total recurring revenue costs (£'000)	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**	**122,122**
South East Wales (PETIC)	£911.34	£901.11	£892.59	£885.49	£760.74	£760.74	£760.74	£760.74	£760.74	£760.74	£760.74	£797.99
South West Wales (Fixed digital scanner)	£935.00	£935.00	£935.00	£858.13	£765.11	£687.64	£623.16	£569.33	£561.75	£561.75	£561.75	£663.93
North Wales (Fixed digital scanner)	£935.00	£935.00	£935.00	£999.82	£883.05	£786.01	£705.10	£637.65	£581.42	£561.75	£561.75	£699.03
4th scanner (Fixed digital scanner)						£0.00	£839.63	£634.79	£561.75	£561.75	£561.75	£574.76
Capacity shortfall - Outsourced					£935.00				£935.00	£935.00	£935.00	£935.00
Total cost per scan	£923.05	£917.89	£913.59	£903.07	£791.46	£672.53	£723.63	£653.09	£639.88	£680.32	£722.77	£729.47
Variance to baseline costs 2020/21	**264**	**1,194**	**2,308**	**3,583**	**4,004**	**4,172**	**6,709**	**7,643**	**9,785**	**13,737**	**18,761**	**72,160**
Varance to BAU option	**(62)**	**(107)**	**(161)**	**(287)**	**(1,550)**	**(3,401)**	**(3,286)**	**(5,260)**	**(6,608)**	**(6,843)**	**(6,843)**	**(34,407)**

This analysis demonstrates that over a 10-period, continuing to meet growing demand by relying on external providers is likely to cost an additional £25,603k p.a. by 2031/32 with average cost per scan increasing to £935.

Investing in the four PET-CT scanners will reduce the cost pressure by £6,843k p.a. by providing sufficient capacity for NHS Wales and PETIC to meet demand to 2028/29 which reduces the average cost per scan to £729.

In addition, this investment will deliver other benefits which will be explored at Project business case stage including:

- Opportunities to reduce overall system costs due to avoiding late stage interventions. This could be significant since the evidence base suggests for certain diseases and patient pathways, such as the treatment of neck cancers, PET-CT scans are potentially £1,500 more cost effective. Further work will be required at Project business case stage to determine more accurate activity levels in relation to patient pathways. As an indication, if this sort of benefit was applied to 10% of activity, this would equate to a financial benefit of around £4.8m by 2031/32.
- Opportunities to generate income from RD&I activity. It is estimated that 7% of predicted demand relates to RD&I activity. Again, further work will be required at Project business case stage to identify accurate numbers but, as an indication, if research scans were charged at £1500, this would equate to an annual financial benefit of around £3.3m by 2031/32.
- Delivery of non-financial benefits including:
- Improved quality and reduction in patient harm including reduced waiting times, better diagnostic accuracy and improved patient outcomes and experience.
- Workforce resilience including improved recruitment and retention, greater access to training and education, and improved staff satisfaction.
- Improved access reducing patient travel time which benefits patient and reduces greenhouse gases.
- Provide capacity that meets population needs in line with international best practice.
- Increased opportunities for Research and Development.
- Increased opportunities for innovation.

4.1.5 Balance Sheet Treatment and Impairment

The impact on organisations' individual Balance Sheets will be considered at Project business case stage.

This will include estimating non-cash funding requirements which will be sought from Welsh Government including:

- Impairment on completion of the resulting assets.
- Capital charges that represent an increase in organisations' baseline depreciation.

An overview of potential balance sheet impact and associated annual capital charges, excluding the impact of impairment, is provided in the table below, based on straight-line depreciation of 60 years for buildings and 10 years for equipment.

Table 56: Capital costs – By Project

	Balance Sheet Impact £'000	Annual depreciation £'000
Project 1 - Replace Cardiff equipment	6,248	494
Project 2 - Fixed scanner North Wales	6,573	356
Project 3 - Fixed scanner Swansea	5,486	338
Project 4 - 4th fixed scanner	6,573	356
Total capital costs	**24,881**	**1,544**

4.2 Conclusion and Overall Affordability

Delivery of the preferred way forward, which involves implementing a programme that will deliver four fixed digital scanners in Wales requires capital investment of £24.881m for which funding is sought from Welsh Government.

As well as delivering a wide range of non-financial benefits in relation to service improvements and patient experience and outcomes, this will enable three of the scanners to reduce the average cost per scan to £572, compared with an average cost from external providers of £935. This will result in an overall average cost per scan for all four scanners over a 10-year period to £729.

Indicative modelling suggests that revenue costs could increase by £25.6m by 2030/31 based on predicted demand growth. This investment will contribute to mitigating the ongoing cost pressure associated with growing demand including:

- Reduction in average cost per scan resulting in £6.6m annual financial benefit by 2030/31.
- Opportunities to deliver system-wide financial benefits due to increased PET-CT scanning reducing the need for high-cost late stage interventions. There is insufficient detail available on specific demand by patient pathway to calculate this at this stage.
- Opportunities for income generation from RD&I activities which, based on 7% of predicted demand, is estimated at around £3.3m by 2030/31.

5 Management Case

5.1 Introduction

This Management Case provides a summary of the arrangements that will be put in place to ensure the successful delivery of the All Wales PET Programme and its associated projects, and to ensure the programme realises the optimum benefits of the investment.

The case for change for the All Wales PET Programme has been clearly articulated within the Strategic Case. To achieve an effective implementation and full Benefits realisation, the Programme must manage, co-ordinate and oversee the delivery of all activities and key deliverables over the next ten years.

The All Wales PET Programme has a robust governance structure, well defined processes and has identified tranches and subprojects for the delivery of the Programme.

The All Wales PET Programme requires funding for Programme Management and Administration support in order to facilitate the oversight, governance and delivery of the programme. Projects requiring local implementation (for example at Health Board level) will need to ensure Project Management support from the respective organisation for the duration of the Project.

This PBC Management Case sets out the management arrangements that will successfully deliver the All Wales PET Programme to time, cost and quality. The Management Case outlines the following arrangements:

- Programme Scope;
- Projects within the Programme;
- Programme and Project Management Arrangements;
- External Advisors;
- Use of Special Advisors;
- Programme and Project Scrutiny and Assurance;
- Procurement and Contracts Management;
- Programme and Project Plan;
- Benefits Realisation;
- Risk Management.

5.1.1 Post Project Evaluation

This Management Case provides assurance on the capacity and capability of the management arrangements to deliver the Programme.

5.2 Programme Scope

The rationale and narrative that supports and defines the Programme scope is set out in detail within the Strategic Case (Section 5).

The purpose of the All Wales PET Programme is to plan, design, build and implement an All Wales PET strategy and associated business cases for services up to 2031.

The scope of this Programme is limited to procurement of the following list of equipment:

- Four digital PET-CT Scanners (Artificial Intelligence enabled; one scanner at each site)

- Ancillary equipment and phantoms (robotic radiotracer dispenser)
- Radiotherapy adaptions (laser bridge, flat table top)#

The equipment is to be located at Cardiff (replacement scanner), Swansea (new scanner) and North Wales (new scanner). The fourth scanner (new) placed at a location to be defined at a later date will be based upon clinical demand and population density.

Associated build works for the PET site facilities are also within scope.

Furthermore, refresh of equipment connected with the cyclotron at Cardiff is within scope of this Programme, thus requiring procurement of:

- Ion source replacement within the cyclotron
- Hot cell replacement and associated GMP build.

Programme implementation will be phased so that sufficient time is given to scrutinise supporting business cases for Projects. This will ensure supporting infrastructure requirements are solved at appropriate timings, in order to optimise delivery and ultimately PET service provision.

Supporting infrastructure has been identified as an essential consideration to the success of the PET Programme delivery, including workforce and research and development. As such, these elements have been considered as within scope and are addressed in the Programme structure.

Radiopharmaceutical provision is an additional infrastructure factor for the All Wales PET Programme and this has been addressed in the Programme structure. However, during development of the Programme, it was evident that requirements for radiopharmaceutical provision for Wales may stretch beyond the scope of the All Wales PET Programme. Therefore, it is possible that additional investment via a Project or Programme is identified for radiopharmaceutical provision, and the workstream structure of the Programme reflects this.

5.3 Projects within the programme

A Programme can be defined as a temporary and flexible organisation created to coordinate and oversee the delivery of a set of related Projects and activities in order to deliver outcomes and benefits related to Spending Objectives.

A “tranche” can be defined as a group of projects, transition activities and governance, structured around distinct step-change in capability and benefit delivery[5].

A “Project” can be defined as a temporary organisation that exists for a shorter duration, which will deliver one or more outputs in accordance with the business case. In this case, four Projects form the All Wales PET Programme.

A “workstream” is often used to describe the logical grouping of activities together to enable effective management. Workstreams concentrate dependencies and may run through a number of tranches.

[5] Sowden R et al., 2011, **Managing Successful Programmes**, 2011 Edition, Published by TSO Norwich

The All Wales PET Programme will consist of four tranches and four Projects. These are arranged to address installation of PET scanners and update a cyclotron. The output of each tranche will see a step-change in capability of the All Wales PET service (see Table 57).

Detailed information relating to the management arrangements for each of the Projects will be contained within the respective business cases. The business case plan can be noted in Table 58.

The host local organisation (Cardiff University, NHS Health Board, or NHS Trust) for Projects 1, 2, 3 and 4, will be responsible for taking forward the PET scanner installation at the relative site.

The supporting infrastructure is critical to the success of each tranche. As such, the Programme consists of four enabling workstreams which will be established to support the delivery of the programme and projects. The workstreams are thematic and manage deliverables across the programme and should ensure effective integration between the various projects (see Table 59 for a detailed breakdown of responsibilities and outputs of these workstreams).

As noted in the Strategic Case, there may be developments related to radiopharmaceutical provision in Wales that could need further investment. However, any requirement is not yet clear. Therefore, this Programme will expect the radiopharmaceutical workstream to include this aspect within its Terms of Reference and aims, with any additional Project development communicated clearly through the Programme Governance structure.

AWPET will maintain its advisory role and function, informing the SPB on potential changes to referral pathways and indications for commissioning.

WHSSC, as commissioners of the PET service in Wales and host of the PET Programme, will remain responsible for assessing the live and ongoing clinical demand for PET scans across Wales. This data is currently captured by data analysts and PET service planners at WHSSC and will be reported regularly to the SPB.

The location of the fourth scanner has not been identified at the time of writing this PBC. The clinical demand model noted in the Strategic Case (section 5.5) states that the likely population needs would benefit from the fourth scanner being positioned in south east Wales. The Programme has been designed so this can be reviewed with “live” demand and needs data at the appropriate time.

A robust appraisal process will be undertaken to identify to optimum location of the fourth scanner. Detailed plans are yet to be made; however the appraisal process will likely include two steps:

- expressions of interest to host a PET-CT scanner, and
- review of potential site(s) ability to answer population demand, have sufficient workforce, patient access, clinical alignment, estates and facilities considerations and costs.

Table 57: Structure of the All Wales PET Programme tranches, Projects and business cases

Description	Business Case	Deliverable	PET site Organisation	Accountable Officer
Tranche 1				
Project 1				
Replacement scanner at PETIC and cyclotron refresh (replacement of ion source and hot cells)	BJC (to be submitted alongside PBC May 2021)	To procure replacement digital scanner, replacement equipment associated with cyclotron and facilities on site and upgrade the cyclotron	Cardiff University responsible for business case delivery, with close engagement with C&VUHB	Chris Marshall (Project SRO)
Tranche 2				
Project 2				
New fixed PET scanner at North Wales site (part of a wider Nuclear Medicine Consolidation Programme	SOC1*, OBC / FBC combined (TBC by WG)	To deliver access and utilities to the site, build and procure a digital PET scanner and associated facilities	Site to be confirmed. Betsi Cad Health Board responsible for business case delivery	David Jones (Project SRO)
Project 3				
New fixed PET scanner at Swansea site	OBC2, FBC2	To deliver access and utilities to the site, build and procure digital scanner and associated facilities	Swansea Bay Health Board responsible for business case delivery	Neil Hartman (Project SRO)
Tranche 3				
Project 4				
New fixed PET scanner (PET-CT or PET-MR)	OBC3, FBC3	To deliver access and utilities to the site, build and procure digital scanner and associated facilities	Location is to be determined based on population needs. Host Organisation to be identified	To be confirmed during site selection
Tranche 4				
Programme Closure, PPE & Lessons Learned				Sian Lewis (Programme SRO)

** SOC was submitted to WG in October 2020*

Table 58: High level dates of the All Wales PET Programme tranches, Projects and business cases

Business Case (BC)	Proposed date of Welsh Gov. BC approval	Proposed "go live" date	
Tranche 1			
Project 1			
BJC	July 2021	PET Scanner	March 2022
		Ion Source replacement	March 2022
		Hot Cell replacement	March 2023

Business Case (BC)	Proposed date of Welsh Gov. BC approval	Proposed "go live" date
Tranche 2		
Project 2		
SOC1	July 2021	January 2024
OBC/FBC	March 2022	
Project 3		
OBC2	November 2021	November 2023
FBC2	July 2022	
Tranche 3		
Project 4		
Appraisal Process	April 2023	June 2026
OBC3	January 2024	
FBC3	December 2024	
Tranche 4		
		January 2027

Table 59: Scope of the All Wales PET Programme Enabling Workstreams

Workstream	Responsibilities	Key Outputs
Radiopharmaceutical Provision	Responsible to the SRO for leading the planning and delivery of radiopharmaceutical provision, in partnership NHS organisations and third sector partners, with a view to ensuring long-standing, cost-effective and assured supply of MA licensed radiopharmaceuticals across Wales. Responsible for informing the wider Programme on radiopharmaceutical supply under Specials or IMP licenses across Wales, for clinical use or research activity, to enable Centres of Excellence. Responsible for informing the wider Programme on horizon scanning.	Effective linkage with other key national programmes or projects. Have input into (where appropriate) developing robust and cost effective contracts with suppliers for radiopharmaceutical provision for non-PETIC sites. Carry out an in-depth horizon scanning exercise. Carry out a full assessment of needs, benefits, costs and risks associated with PETIC attaining MA license for FDG products and/or scope for an additional cyclotron in Wales. Write business case(s) for options (if appropriate).
Centres of Excellence	Responsible for developing and leading the planning and delivery of an integrated, collaborative and pan-Wales Research, Development and Innovation Group, focussed on PET scanning and radiopharmaceutical developments. This Workstream Group should have membership from all PET scanning sites, Cancer Network, Dementia Network (+others), Bangor University, LSHW, Health and Care Research Wales, and relevant academic institutions.	Build a network of key personnel and organisations both within and outside Wales. Develop a scope whereby an "all Wales research approach" is defined – ranging from basic, through to applied clinical trials. Create a virtual research hub where best practice is shared openly. Produce joint bids and advertise national capacity & capability.

Workstream	Responsibilities	Key Outputs
Workforce Provision	Responsible for advising the Programme on the strategic and operational planning and delivery of the future workforce, including ensuring that forecasted workforce gaps are accounted for in training needs. To include the management of key strategic and operational issues relating to skills-mix and commissioning of training places. This Workstream Group should have membership from HEIW, IWEG and NIAW to ensure deliverability is at the centre of all considerations. The Group should also have membership from all professional groups across the NHS.	Carry out constructive challenge for workforce planning at each site during business case planning phases. Ensure that training needs are appropriately fed into training providers, in a timely fashion. Ensure that relevant bodies are appropriately linked to facilitate Health Boards in attaining the relevant staffing levels for a PET scanning service. Link with the RISP Programme to assess how working behaviour can change for remote reporting.
Procurement	Responsible for making recommendations about providers that each organisation may use. The Procurement Workstream membership will consist of the specialists within NWSSP-SES, NWSSP-PS, PET site organisation Procurement and Estates representatives, Programme Manager and Project Teams at relevant Health Boards, Trusts and Cardiff University.	The Procurement Workstream will make a recommendation on the most economically advantageous tender. This recommendation will be recorded in a final evaluation report, which will set out the basis for the award decision, for the formal approval of the PET Strategic Programme Board.

Please note that at the time of writing this PBC, some leads for Workstreams are to be confirmed.

5.4 Programme and project Management Arrangements

5.4.1 Programme Roles and Responsibilities (The People)

The All Wales PET Programme is a strategic Programme that is hosted by WHSSC and sits within the “Strategic Resource Planning” category of the National Imaging Programme Strategic Board (NIPSB). The NIPSB is hosted and supported by the NHS Wales Collaborative and the NHS Wales Collaborative Executive Group (CEG).

At the time of writing, the NHS Wales Collaborative fund a Programme Manager that is hosted by WHSSC on a fixed-term basis. This role forms the core of the All Wales PET Programme Management arrangements and is funded until at least March 2022.

At the time of writing this document, the NHS Wales Collaborative and NIPSB are within Scope of the Rapid Review of Precision Medicine Programmes and the Consolidation of Precision Medicine Programmes Implementation Plan Phase 1, which is seeking to centralise hosting of Programmes and consolidate Programme budgets. It was agreed at a meeting of the NHS Wales Collaborative Executive Group (CEG; 16.03.2021), that the All Wales PET Programme will remain hosted by WHSSC. As such, this Management Case makes clear the governance arrangements.

The existing PET Strategic Programme Board (SPB) has the capacity and capability to facilitate the effective delivery of the Programme. Local Projects will rely on local organisational capacity and provision of project management, with facilitation from the SPB and Programme Manager.

If this Programme is endorsed by Welsh Government, the existing membership of the SPB will be expanded to include some additional roles noted in Table 60. Members of the SPB will provide

resource and specific commitment to support the Programme Lead and Programme Manager to deliver the Programme deliverables.

The key individual roles and responsibilities required to support the delivery of the All Wales PET Programme are set out in Table 60 below, and at the time of writing some of the membership is yet to be confirmed.

Table 60: All Wales PET Strategic Programme Board (SPB)

Role	Name	Responsibility
Senior Responsible Owner (SRO)	Sian Lewis (Andrew Champion Deputy)	Accountable for the success of the Programme and is responsible for enabling the organisation to exploit the new environment resulting from the Programme, meeting the new business needs and delivering new levels of performance, benefit, service delivery and value. The SRO owns the vision for the Programme and provides clear leadership and direction and secures the investment required to set up and run the Programme. The SRO is called upon at times of escalation.
Programme Lead	Andrew Champion	Responsible for providing the interface between Programme ownership and delivery, and is accountable for defining the Programme objectives and ensuring they are met within the agreed time, cost and quality constraints. Act as the link point for stakeholders at a strategic level.
Programme Manager	Sarah McAllister	Responsible for leading and managing the programme through to the delivery of new capabilities, realisation of benefits and programme closure. Responsible for providing the interface between Programme and delivery of Projects.
Clinical Lead	Martin Rolles	Responsible for providing clinical leadership to the programme, ensuring effective clinical engagement and securing clinical consensus within and outside of the organisation for the improvements identified within the programme.
PETIC site	Project SRO (Chris Marshall) and Project Manager (TBC)	Project SRO: Responsible for the development of business case(s) required to provide an effective PET scanning service at the site. Responsible for providing leadership to the delivery of Project 1. Project Manager: Responsible for managing the Project through to the delivery of outputs. Responsible for providing the Programme Board with updates on Project progress.
North Wales site	Project SRO (Adrian Hartman) and Project Director (David Fletcher)	Project SRO: Responsible for the development of business case(s) required to provide an effective PET scanning service at the site. Responsible for providing leadership to the delivery of Project 2. Project Manager: Responsible for managing the Project through to the delivery of outputs. Responsible for providing the Programme Board with updates on Project progress.
Swansea site	Project SRO (Neil Hartman) and Project Manager (TBC)	Project SRO: Responsible for the development of business case(s) required to provide an effective PET scanning service at the site. Responsible for providing leadership to the delivery of Project 3. Project Director: Responsible for managing the Project through to the delivery of outputs. Responsible for providing the Programme Board with updates on Project progress.
Fourth scanner site	Project Manager and Project SRO	Project SRO: Responsible for the development of business case(s) required to provide an effective PET scanning service at

Role	Name	Responsibility
	(TBC when site selection process is complete)	the new site. Responsible for providing leadership to the delivery of Project 4. Project Manager: Responsible for managing the Project through to the delivery of outputs. Responsible for providing the Programme Board with updates on Project progress.
Finance Lead	Mark Osland & Stuart Davies	The Finance Lead(s) is/are responsible for all financial aspects of the Programme. This includes the strategic financial planning for the Programme, financial reporting, and financial risk management.
Planning / Transformation Leads	Representation from all Health Boards and Trusts	Responsible for acting as an effective interface between the SPB and the Health Boards, ensuring that Site Leads and Health Boards are supported and informed.
Radiopharmaceutical workstream Lead	Neil Hartman	Responsible for acting as an effective interface between the SPB and the workstream, ensuring that Site Leads are supported and informed.
Centres of Excellence workstream Lead	TBC	Responsible for acting as an effective interface between the SPB and the workstream, ensuring that Site Leads are supported and informed.
Workforce workstream Lead	TBC	Responsible for acting as an effective interface between the SPB and the workstream, ensuring that Site Leads are supported and informed.
Procurement workstream Lead	TBC	Responsible for acting as an effective interface between the SPB and the workstream, ensuring that Site Leads are supported and informed.
Professional Leads	Where professional roles are not represented through existing pan-Wales membership to be sought	Professional leads that require representation: Clinical Radiologists, Clinical Oncologist, Clinical Scientists/Medical Physics Experts, and Radiographers.
PET Service Planning Manager	Luke Archard (WHSSC)	Responsible for reporting live PET scanning demand figures to the Board, assisting and advising on interim arrangements during implementation and other planning.
NHS Health Collaborative	Imaging Portfolio Lead (post being appointed)	Responsible for acting as an effective interface between the SPB and the NHS Health Collaborative.
Admin and Programme Support	TBC with funding decision	Responsible for providing high quality administrative and project management support to the Project across all phases.
Communication Lead	TBC	Responsible for providing high quality advice on Communications for the Programme.

5.4.2 Programme Management: Roles and Responsibilities

The Programme Management and Administration roles and responsibilities for the All Wales Programme are set out in Table 61 below.

The costs of the Programme Management and Programme Support have been included within the Finance Case. A Programme Manager will be responsible for the delivery of the Programme. It is

proposed that some Project Management support will be required at each PET site to manage the delivery and implementation at each site and it is expected that each Health Board/Trust/Cardiff University will make use of existing Project Management resource for implementation.

Table 61: Project Management and Administration Specific Roles and Responsibilities

Role	Responsibility
Programme Manager (based at WHSSC)	The Programme Manager will support the Programme Lead to deliver the overall Programme objectives and associated change. The role requires effective co-ordination of the Programme's Projects and management of their interdependencies including oversight and management of risks and issues that arise. The role is crucial for creating and maintaining focus, enthusiasm and momentum within the Programme and to support the workstream delivery. The Programme Manager has overall responsibility for the delivery of the Programme and all sub projects and workstreams. To ensure that they are delivered to time, cost and quality. Tasks also include day to day responsibility for the programme and subprojects and workstreams, to meet the parameters described within the programme business case. The provision of appropriate reports on status to the Programme Lead. The management of risks and issues and escalation of appropriate matters for executive direction/approval. Monitoring, co-ordinating and controlling the work of the Programme Working Groups.
Project Manager (based at local implementation site)	The Project Manager will have the overall responsibility for supporting the Project SRO with the successful initiation, planning, execution, monitoring, controlling and eventually closure of their project. They provide a structured approach to support the conveyance of the key deliverables and provide an escalation route for both Programme and work level risks.
Programme Support (based at WHSSC)	The Project Administration duties include all aspects of facilitating a programme: scheduling meeting times and locations, taking meeting minutes and capturing action points.

5.4.3 Programme and Project Management (The Methodology)

The Programme will be managed in accordance with 'Managing Successful Programmes methodologies, suitably adapted for local circumstances in order to meet the needs of this Programme. The constituent projects will be delivered utilising PRINCE2 ('PRojects IN in a Controlled Environment') methodology.

The Programme management arrangements will therefore be driven by outcomes, and Project management arrangements driven by outputs, or in PRINCE2 terminology, "Products".

This governance framework will ensure that appropriate oversight is present at all stages.

The All Wales PET Programme is predicated on the following principles:

- Decisions on the strategic direction and future needs of health care are only made after careful consideration;
- The views and interests of patients, staff and all stakeholders are fully considered;
- Appropriate behaviour with respect to the codes of corporate governance and policy are maintained;
- Guidance and good management practice is followed;
- Open and regular reporting of Projects progress and performance.

To ensure the quality of the outputs are maintained, objectives are met, and benefits are realised, the Programme Plan will be managed and undertaken on the basis of:

- Proven methodologies and standards;
- Effective monitoring procedures;
- Review and acceptance procedures;
- Effective change / issues / problem management;
- Appropriate documentation and record keeping.

In addition, the Strategic Programme Board and local PET site organisation(s) (where appropriate), will obtain specialist and professional advice as required during the life cycle of the Programme.

5.4.4 Programme Governance and Management Arrangements to deliver programme and projects

Key to the success of the Programme are the programme governance and management inputs required for the co-ordination of sub projects and their outputs. This will include reporting progress against plans, approvals and escalations of risks and issues. The governance and management processes have been designed to allow for approvals to occur at the most appropriate level.

Of particular importance is the uniting of the constituent Projects within the All Wales PET Programme and governance arrangements, in line with WHSSC Corporate Governance arrangements and that of Welsh Government's sponsorship, scrutiny and approvals process. In particular, this will allow for rapid approval and the effective escalation of risks and issues to a level where senior sponsors can intervene as necessary to support the delivery of this important project.

The Governance Arrangements are organised over five levels, namely:

- Level 1 – NHS Wales Collaborative Executive Group;
- Level 2 – National Imaging Programme Strategic Board;
- Level 2 – The All Wales PET Strategic Programme Board;
- Level 3 – Project Boards;
- Level 4 – Project Teams.

The Programme structure as set out below ensures clear accountability and also deploys mechanisms to facilitate decision making, escalation, communication and alignment.

Tranches and their projects can only commence once the SPB give approval to do so. The Programme Plan has been arranged so that end-of-tranche reviews are used as critical control points in the programme delivery cycle, where ongoing viability of the programme is evaluated and lessons learned are assessed.

Each Project will have a Project Board that will hold expert and local membership.

Workstream Groups will primarily consist of the membership from the task and finish groups that were used in the development of this Programme Business Case and will be reviewed and extended to ensure that appropriate stakeholders are included to successfully facilitate delivery.

Projects will be governed by the structures and processes that exist within the relevant PET site organisation (Cardiff University, Health Board or Trust). However, the Project Manager and Project SRO must regularly attend and update the SPB on progress for the duration of the Project.

The Programme Manager will sit on all Project Boards and Workstream groups for continuity.

All Project Business Cases will be formally signed off by the appropriate Project Board which may include the local Health Board governance structures, before being endorsed by the Strategic Programme Board (SPB). Once endorsed by the SPB, the Project Business Case(s) can be submitted to Welsh Government. This is to ensure that Project outputs are directly aligned to the Programme outcomes and benefits realisation plan.

All Projects will report to the SPB bi-monthly and issues should be escalated as appropriate.

The SPB will provide quarterly reports to the NIPSB and NHS Collaborative Executive Group, escalating issues as appropriate.

The Programme Plan includes all the management controls required to ensure the All Wales PET Programme and contracted firms meet their fiduciary obligations with respect to the development of the Business Cases, the implementation of the Programme, and the management of the Programme within a framework of acceptable risk.

Figure 13: Governance structure of the All Wales PET Programme

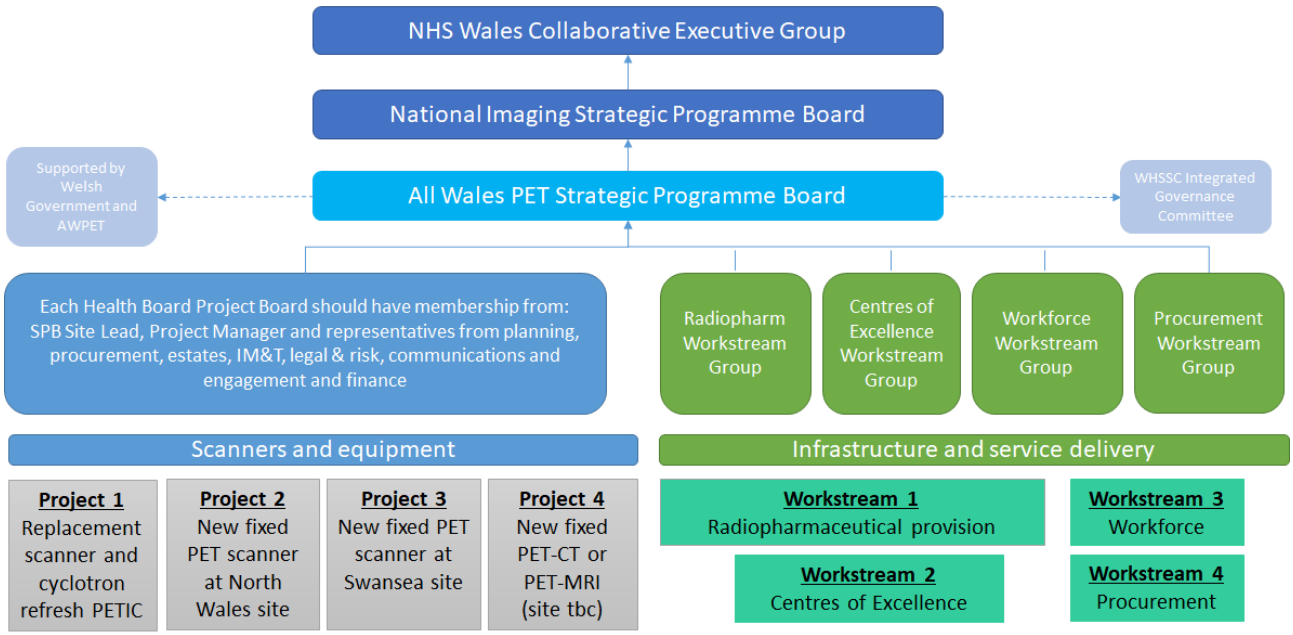


Table 62: Project Board Specific Role and Responsibilities

Project Boards		Lead
Project 1, 2, 3 and 4 Installation of new PET scanner and equipment	Responsible for leading the planning and development of the relevant business cases at the preferred site location for PET services at the relevant PET site organisation and subsequent implementation. Each Project Board should have membership from: Project SRO, Project Manager and representatives from planning, procurement, estates, IM&T, legal & risk, communications and engagement and finance.	Project SRO

5.5 Internal and External Advisors

5.5.1 Programme Roles and Responsibilities (The People)

The All Wales Programme is supported by a range of external advisors, these are listed in Table 63 below. The Programme Manager is responsible for coordinating the activity of the external advisors:

Table 63: External Advisors

Role	Name / Status	Responsibility
Head of Sourcing: Commissioning, Capital & IMT NWSSP-PS	Samantha Pennington (Deputy Head of Sourcing)	Responsible for providing professional leadership in matters relating to procurement. A pivotal role in advising on the delivery of an effective procurement process and subsequent contract development. Whilst Projects will be led by Health Boards, this role will be able to bring in resources as needed from NHS Wales Shared Services Partnership – Procurement Services (NWSSP- PS) as dictated by the needs of the Programme.
National Imaging Equipment Advisor NWSSP- SES	Andrew Ward (Senior Diagnostic Imaging Advisor)	Advisory role - supporting the SPB and Project Boards with technical, specialist equipment and Commercial advice. Responsible for advising on the delivery of optimum commercial deals and strategic partnerships with partners. Whilst Projects will be led by Health Boards, this role will be able to bring in resources as needed from NHS Wales Shared Services Partnership - Specialist Estates Team, as dictated by the needs of the Programme.
Radiation Protection	Matthew Talboys	Advisory role – supporting the SPB and Project Boards with technical and specialist advice, as required. Chair of the WSAC Medical Physics & Clinical Engineering Sub-Committee: Radiation Protection Standing Specialist Advisory Group.
External Clinical and Technical Assurance	Wai-Lup Wong (Chair of the National PET-CT Clinical Governance Board)	Responsible for providing independent and expert advice to assure the quality of project outputs and to advise on complex and challenging issues.

5.5.2 Use of Specialist Advisors (Non-NHS)

The All Wales PET Programme will utilise appropriate specialists / subject matter experts (SMEs) whom are listed in the table below and managed by the Programme Lead:

Table 64: External Advisors (non-NHS)

Company	Name / Status	Responsibility
Archus Limited	Anouska Huggins	Archus Ltd. have been appointed to support this PBC. This role includes benefits identification and quantification and economic analysis and preparation of the Financial Case.

5.6 External Programme Review and Assurance

To ensure that robust Programme Governance is achieved, clear governance arrangements are established and a range of reviews and audits will take place. These fall into the following categories:

- Internal governance arrangements;
- Gateway Reviews (Gates 0 - 5);
- Internal Audit.

5.6.1 Internal Governance Arrangements

Programme Governance arrangements are described in Section 4 of the Management Case.

As the Programme is hosted by WHSSC, it will be governed within the existing WHSSC arrangements, but with clear avenues for escalation to NIPSB which are described in Section 4 of the Management Case. For clarity, change management and risk management are further described in the following sections of the Management Case.

5.6.2 Gateway Reviews

The OGC Gateway Process examines Programmes and Projects at key decision points in their lifecycle. It looks ahead to provide assurance that they can progress successfully to the next stage. OGC Gateway Reviews deliver a 'peer review', in which independent practitioners from outside the programme/project use their experience and expertise to examine the progress and likelihood of successful delivery of the programme or project.

Programme Reviews are carried out under OGC Gateway™ Review 0: Strategic Assessment. A Programme will generally undergo three or more OGC Gateway Reviews 0: an early Review; one or more Reviews at key decision points during the course of the programme, and a final Review at the conclusion of the programme.

Project Reviews are carried out under OGC Gateway Reviews 1 - 5; typically a project will undergo all five of these Reviews during its lifecycle – three before commitment to invest, and two looking at service implementation and confirmation of the operational benefits.

It has been agreed with the Welsh Government Assurance Hub that Programme Gateway Reviews 0 will be carried out. The initial Gateway Review of the All Wales PET Programme will be a Programme Assessment Review, so that the Business Justification Case for the Cardiff site can be considered at the same time. This will take place in June 2021.

Gateway reviews relating to subordinate projects will be agreed with the Welsh Government Assurance Hub and reflected in respective business cases following endorsement of this PBC.

The likely profile of Gateway Reviews in the Programme is shown in the Table 65 below. The likely profile of Gateway Reviews for the Projects are shown in the Table 66 below.

Table 65: Programme Review Gateways

Type of Gateway (Gate)	Proposed Date
Programme Assessment Review	June 2021
Gate 0: Strategic Review	January 2023
Gate 0: Strategic Review	January 2025

Table 66: Project Review Gateways

Type of Gateway (Gate)	Proposed Dates			
	Project 1 - (Cardiff)	Project 2 - (North Wales)	Project 3 - (South West)	Project 4 - (4th scanner)
1. Business Justification				June 2022
2. Delivery Strategy				
3. Investment Decision		June 2022	June 2022	December 2024
4. Readiness for Service	April 2022			
5. Operations Review and Benefits Realisation	January 2023			April 2027

The proposed Project Review Gateways are aligned with key decision points that are applicable to each Projects individual local circumstance. For instance, there is urgency surrounding the need for update equipment at the Cardiff site which already has a fixed analogue scanner, therefore it would be appropriate to check on readiness for service here. In contrast however, the fourth scanner may benefit from more in-depth assurance as it will entail business justification based on live clinical demand data and a new site will need to be identified.

5.6.3 Internal Audit and Assurance

WHSSC is hosted by Cwm Taf Morgannwg University Health Board. There are established, existing governance processes in place at WHSSC. NWSSP (Audit and Assurance Services) carry out annual internal audits at WHSSC and internal audit reports are submitted to the Cwm Taf Morgannwg Audit Committee (Part 2) on a planned basis.

The benefit of effective internal audit is recognised within the NHS Wales Infrastructure Investment Guidance issued by Welsh Government. This expects Welsh NHS organisations to utilise internal audit to benefit from independent and objective opinions to Executives, Accounting Officers and respective Boards. This should be supplemented by regular and appropriate reporting to respective audit committees.

The team at NWSSP (Audit and Assurance Services) have reviewed implementation plans and assessed the best approach for audit of the Programme. Colleagues at Audit and Assurance Services have suggested a one-off initial audit at programme level to assess the overall risk, governance arrangements and engagement (a suggested brief can be found in Appendix 2).

At the time of writing this PBC, we are awaiting approval from the Audit Chair to add the PET Programme Audit to the 2021/22 Internal Audit Plan, following which it will be submitted to the audit committee for approval.

The NWSSP Audit and Assurance Services may progress further reviews of the programme via the internal audit plan or project audits via the respective UHB audit plans (or provisions within respective BJCs), should key issues arise and subject to risk assessment.

5.6.4 Other areas of Assurance

The need for other areas of assurance was discussed by the Strategic Programme Board in March 2021 and it was agreed that no additional assurances are required for this Programme.

5.7 Procurement and Contract Management

The All Wales PET Programme will use Capital funding via the All Wales Capital Programme.

All of the major items of equipment are available on a compliant preapproved framework. NHS Wales organisations have direct access to this framework.

The multidisciplinary team within the Procurement Workstream of this Programme will make recommendations on the most economically advantageous tender and which providers that each organisation may use. The decision of which provider will sit with the procuring organisation, and they will enter into a contract with the organisation alone.

It is possible that the Procurement Workstream will propose running one procurement for the NHS equipment, depending upon the timings. For instance, if phasing of projects is less than two years apart, there may be an option to fix the costs and place orders at the same time, deploying when needed at a future date.

Carrying out a procurement exercise at a national level will most likely make the process at local level much faster.

The Procurement Workstream membership will consist of the specialists within NWSSP-SES, NWSSP-PS, organisations Procurement and Estates representatives, Programme Manager and Project Teams at relevant Health Boards, Trusts and Cardiff University.

It is anticipated that each organisation that subsequently hosts a PET scanner will enter into a contract with the supplier. This contract will be subject to the hosting organisations local governance and review processes.

5.8 Change Control

5.8.1 Change Control and Configuration Management

The Change Control Procedure will be managed by the Programme Manager. The Change Control Procedure will comprise of:

- Change Management Document - which gives guidance of version control in regards to documents and the change control procedure;
- Change Management Log - captures all version-controlled documents/products and change requests;
- Change Form - is a formal process, which staff are required to follow to request change to a version-controlled document / products.

The Project Teams and external contractors are expected to comply fully with the Change Control Procedure.

5.8.2 Change Management Framework

This framework will underpin the change process. The framework will shape the way that the process is managed, reflecting the following change management philosophy and principals:

- Recognise the need to maximise the Benefits of the change for patients, who should be at the heart of the changes made;
- Phase the Programme implementation so that lessons learned can be appropriately ascertained and avoid risks related to a 'big bang' approach;
- Test and prove the changes through careful piloting of any aspects of the new models and processes that can be implemented before new PET scanning facilities are commissioned;
- Work in partnership with staff and other stakeholders both within and outside of the All Wales PET Programme to engage all those involved in the delivery of care in the change process;
- Work effectively with stakeholders of interdependent Programmes and Projects, to ensure that the impact of any items outside of the control of this Programme are considered in a timely fashion, and
- Focus on staff skills and development required so staff are both capable and empowered to deliver healthcare effectively and to a high-quality standard in the new facility through new models of care.

Once the PBC has been endorsed, these principles will be revisited and confirmed. The change management framework and change management principles will be communicated to all stakeholders and staff as part of the launch of the change management process.

5.8.3 The Project Change Management Approach

The Programme Manager will design a change management approach that will encompass the framework and principles outlined above.

The implementation of a change management process will progress well in advance of relevant FBC approval for implementation sub projects.

Where proposed changes to the service impact on the workforce, the NHS Wales, Organisational Change Policy will apply. This national document makes clear the onus upon the service to consult with staff affected and their individual employment rights.

5.8.4 The Change Control Plan

Once the PBC has been endorsed a Change Management Plan will be developed and three actions will occur:

- The Core Plan will be reviewed by the SPB to identify other relevant areas that need to be included;
- Detailed plans will be set up for each of the tasks in the Core Plan; and
- An overall timetable will be developed and the high-level milestones communicated as part of the launch of the Change Management Plan.

Table 67 below outlines the core plan and the main tasks identified to date.

Table 67: Core Change Management Plan

Area	Planned tasks
Planning phase	Appoint key Programme roles and Change Managers, confirming responsibilities and leadership Confirm stakeholders and interested parties both within and outside the Programme Develop core plan in more detail, identifying high level milestones for the Change Management Plan, mapped to the overall Programme Plan Confirm involvement of HR, managers and other individuals/groups in the process
Communications and stakeholder engagement	Confirm communications lead and protocols (route and timing of approval of communications) Develop communications routes, including face to face briefings bulletins, intranet pages Formulate and agree key communications messages against high level milestones Set up stakeholder map and engagement plan Launch change Programme Ongoing communications work
Training and development	Work with HEIW, NIAW and national workforce groups for each professional role Work with staff through workshops and other training to clarify the workings of the new PET scanning Service Models and how these will impact in practice Identify national training and development required to fulfil roles and competencies Link training and development into communications plan and Workforce Workstream
Piloting	Identify and confirm areas where piloting of new models and practice will be implemented Confirm schedule of pilot work, mapped against high level project and change management milestones Agree feedback arrangements from pilots and how this links into training/development, communications and overall change management plan Execute pilots, feedback and report progress
Full Implementation	Identify scheduling/phasing of full implementation Using results of piloting and training work, develop detailed implementation and transition plan, mapped to project phasing Discussion and agreement with key staff Execute implementation and transition plans

5.9 Programme Plan

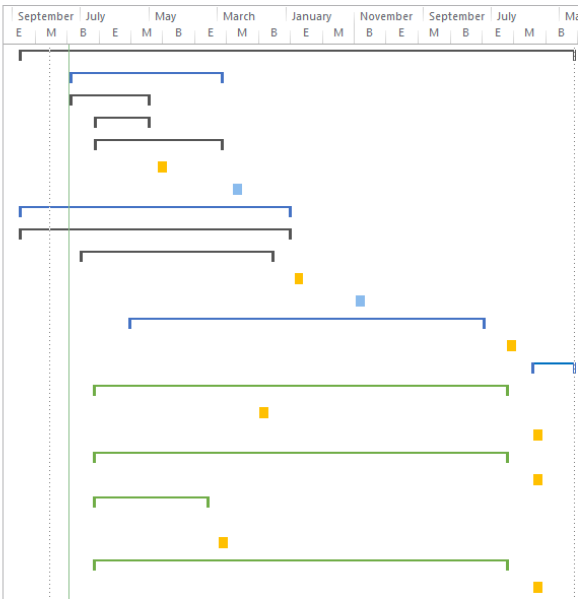
The Programme plan with details of milestones, durations of tranches and work streams is shown in Figure 14 below.

At the time of writing this Management Case many of the component Project plans are not substantially developed. This is a result of the level of infrastructure design maturity and the fact that no procurement activities have yet taken place. Please see Appendix 1 for a more detailed plan.

All programme time estimates have been based on advice from NHS Wales Shared Services Partnership and following benchmarking with other similar health schemes.

Figure 14: High level Programme Plan

Task Name	Duration	Start	Finish
All Wales PET Programme Implementation	1761 days	Mon 05/10/20	Mon 05/07/27
Tranche 1: PETIC scanner and cyclotron refresh	482 days	Thu 20/05/21	Fri 24/03/23
PET Scanner Replacement	247 days	Thu 20/05/21	Fri 29/04/22
Cyclotron refresh PETIC	170 days	Mon 06/09/21	Fri 29/04/22
Hot Cell refresh PETIC	405 days	Mon 06/09/21	Fri 24/03/23
LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 06/06/22	Fri 15/07/22
EVALUATION OF BENEFITS, OUTCOMES & SPENDING OBJECTIVES	30 days	Mon 08/05/23	Fri 16/06/23
Tranche 2: PET Scanner installation (SW and North Wales)	860 days	Mon 05/10/20	Fri 19/01/24
Project 2: North Wales	860 days	Mon 05/10/20	Fri 19/01/24
Project 3: South West	610 days	Mon 05/07/21	Fri 03/11/23
LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 05/02/24	Fri 15/03/24
EVALUATION OF BENEFITS, OUTCOMES & SPENDING OBJECTIVES	30 days	Mon 04/11/24	Fri 13/12/24
Tranche 3: Fourth Scanner (location TBD)	1125 days	Mon 07/02/22	Mon 01/06/26
LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 07/09/26	Fri 16/10/26
Tranche 4: Programme Closure and Lessons Learned	131 days	Mon 04/01/27	Mon 05/07/27
Enabling Workstream 1: Workforce	1314 days	Tue 31/08/21	Fri 11/09/26
LESSONS LEARNED AND MID PROGRESS REVIEW	30 days	Mon 04/09/23	Fri 13/10/23
LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27
Enabling Workstream 2: Centres of Excellence	1314 days	Tue 31/08/21	Fri 11/09/26
LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27
Enabling Workstream 3: Radiopharmaceutical provision for Wales	364 days	Tue 31/08/21	Fri 20/01/23
LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 06/03/23	Fri 14/04/23
Enabling Workstream 4: Procurement	1314 days	Tue 31/08/21	Fri 11/09/26
LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27



Key: Dark Blue lines denote a tranche, dark grey lines denote a Project, green lines indicate a workstream. Yellow bars denote mid-progress and end-progress evaluation, light blue bard indicates evaluation of benefits, outcomes and Spending Objectives.

5.10 Benefits Realisation

5.10.1 Benefits Realisation Strategy

The All Wales PET Programme team has worked closely with Welsh Government and other partners to ensure that management of the All Wales PET Programme benefits is robust. This work has included the identification and quantification of Programme benefits, where possible. This has allowed for the quantified benefits to influence the Economic Case where the selection of the preferred way forward was made. The quantification of benefits relating to the All Wales PET Programme reflect some wider societal benefits. These are included only where they can be directly attributable to the provisioning of the PET scanners.

The Blueprint for the Programme (Appendix 3) has been considered in developing the Benefits. Programme Benefits will be applied 100% in the PBC and then proportioned out across the subordinate business cases for Projects 1-4.

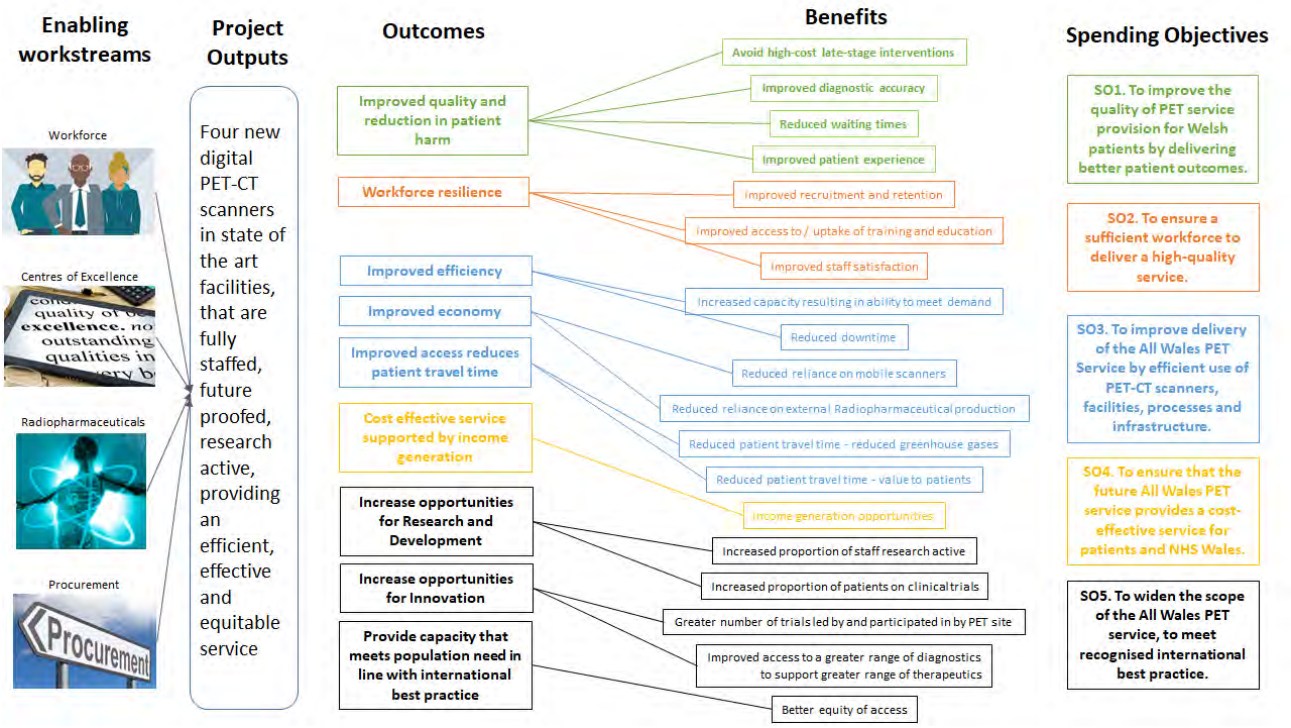
The Programme also contains non-quantifiable benefits and the Programme intends to maximise the delivery of all benefits, especially those that relate to improvement in the quality of patient outcomes.

All the Benefits identified in the Strategic Case and appraised in the Economic Case sections of the PBC are accounted for in the Benefits Register (Appendix 4). This Register notes timescales and ownership of benefits, in addition to how benefits will be measured.

5.10.2 Benefits Assurance and Mapping

One of the most important features in Benefits realisation is to ensure that the perceived benefits identified as part of the proposed investment will deliver the Spending Objectives. This can be visualised in Figure 15.

Figure 15: Benefits Map



As previously described in the Strategic Case the benefits associated with the programme have been identified and analysed, grouped by benefit criteria, and also matched to a beneficiary as illustrated in Figure 16 below.

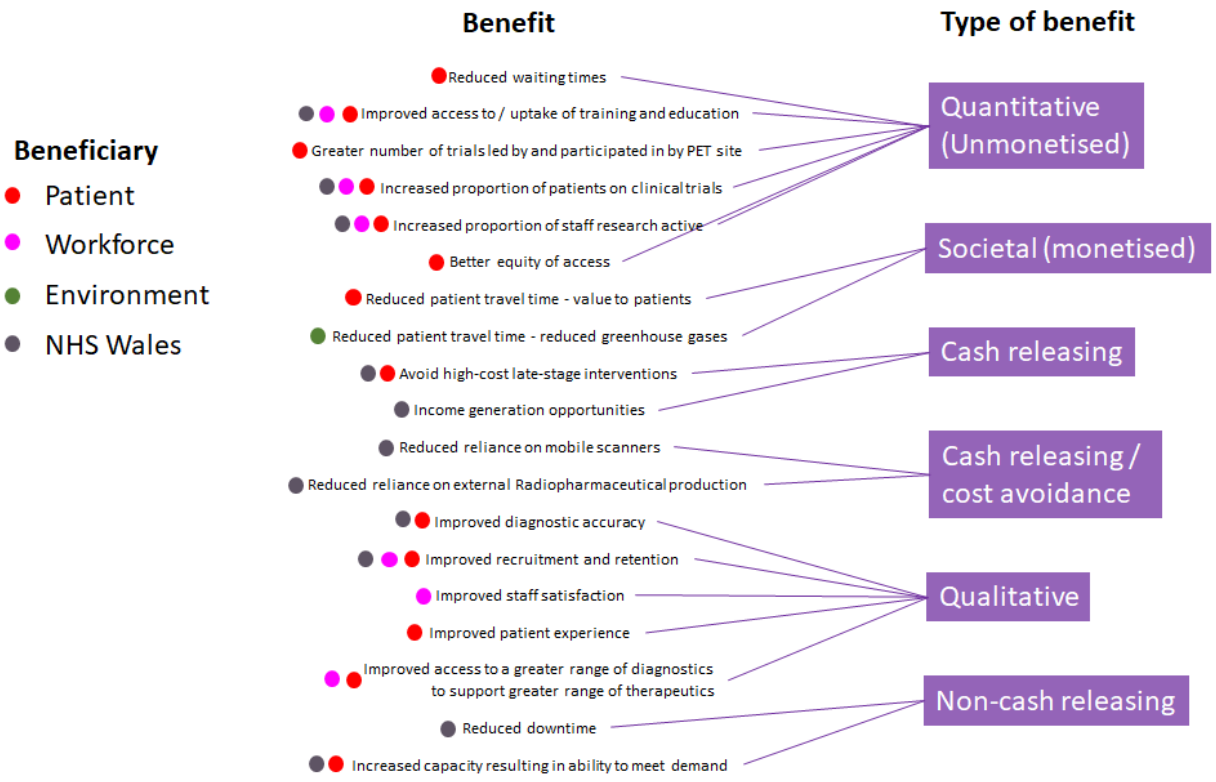
The outcome of the benefits mapping exercise demonstrated that there is a strong correlation between the five spending objectives and the benefits groups for the wider Programme. All Benefit Groups have been matched to a beneficiary, whether this be a patient, workforce, NHS Wales or the Economy.

5.10.3 Benefits Realisation Plan

Programme Benefits Realisation is intrinsically linked to Business Change delivery and as such, it requires a nationally agreed approach across all NHS Wales organisations. This must be supported by both local Project implementation teams.

A Benefits Realisation Plan will be prepared for the All Wales PET Programme. The plan will be designed to enable benefits that are expected to be derived from the Programme, to be planned for, managed, tracked and realised.

Figure 16: Benefit Criteria and Beneficiary



As part of the information required for the PBC, Benefits have been incorporated into a Benefits Realisation Register (Appendix 4) which details:

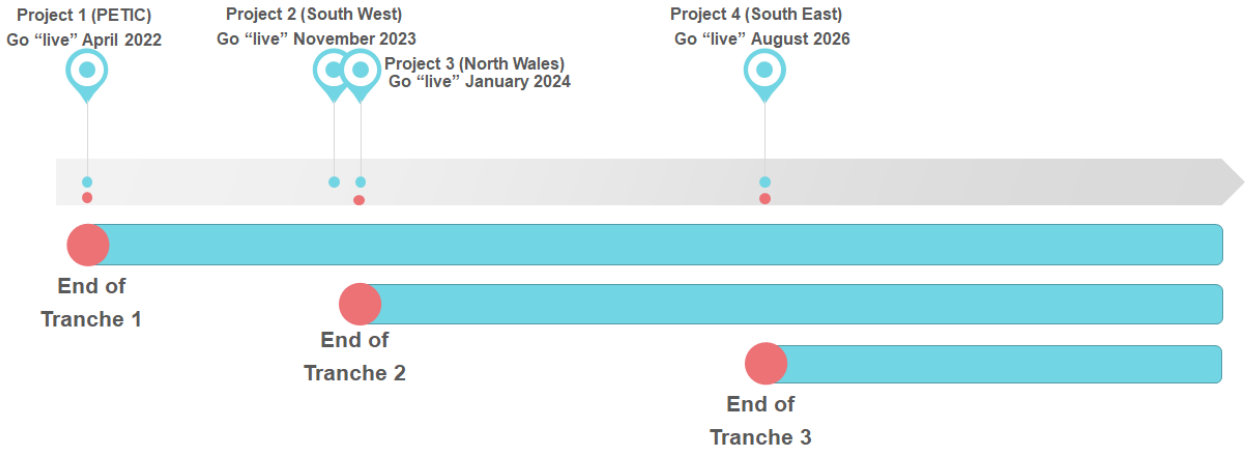
- Beneficiaries;
- Category of benefit;
- Baseline measure;
- Trajectory to target; and
- Benefit owners.

Each Project and their associated business cases will provide more detailed plans for Benefits Realisation.

Benefits will be baselined shortly after this PBC is endorsed and the Programme Manager will work with Project SROs and Project Managers to do this. As Benefits Owners, the Project SROs at each site will hold the responsibility for measuring the Benefits.

Completion of each Project will deliver a new (updated in Cardiff) PET scanning site. This will build and create core capability in each tranche, that will ultimately achieve the new operational state (or Outcome) when the scanners are “live”. Therefore, the All Wales PET Programme should begin to realise Benefits following completion of each tranche. This realisation phasing can be visualised as per Figure 17 below.

Figure 17: Benefits Realisation Timeline



5.11 Risk Management Plan

5.11.1 Risk Management Overview

The All Wales PET Programme will utilise its governance structure and arrangements to ensure the effective management of risk. The governance structures allow for risks to be escalated from Project boards and Workstream groups, through to the Strategic Programme Board and/or the Health Board/Trust, as appropriate.

Each Project will hold its own risk register and this will be updated dynamically but also formally reviewed on a monthly basis by Project Boards.

A bimonthly risk report for the Projects will be submitted by the Project SRO and Project Manager to the All Wales PET Programme SRO and local Health Board appropriate body. This risk register will highlight new risks, the movement in existing risks and issues and where appropriate, it will recommend the closure of resolved risks or issues.

A comprehensive Programme risk register and accompanying paper will be produced by the Programme Manager for all Strategic Programme Board meetings. This paper will highlight new risks across the Programme including the Projects and workstreams, the movement in existing risks and issues and recommends the closure of resolved risks or issues.

The All Wales PET Strategic Programme Board, upon receiving a Project risk register (via the Programme Manager), will consider if the mitigating actions are sufficient and if the identified risks are receiving the right level of treatment.

The Strategic Programme Board will consider the escalation of Programme Risks onto the NIPSB Risk Register, as appropriate. The remainder of this section sets out the detailed management of risks and issues.

5.11.2 Issue and Risk Management Philosophy

Managing risk is a holistic approach, seeing effective risk management as a positive way of achieving the Programme's wider aims, rather than simply a mechanistic 'tick box' exercise, to comply with guidance. The Programme regards risk as the mirror opposite of benefits. Inadequate risk management would therefore reduce the potential benefits to be gained from the Programme.

Effective Risk Management supports the achievement of wider aims, such as:

- Effective Change Management;
- Enhanced use of resources;
- Better Programme and Project Management.

The programme will utilise WHSSC's Risk Management Framework to systemically identify, actively manage and minimise the impact of risk. This is done by:

- Identifying possible risks before they materialise and putting mechanisms in place to minimise the likelihood of them materialising with adverse effects on the project;
- Putting in place robust processes to monitor risks and report on the impact of planned mitigating actions;
- Implement the right level of control to address the adverse consequences of the risks if they materialise; and
- Having strong decision-making processes supported by a clear and effective framework of risk analysis and evaluation.

Once risks are identified, the response for each risk will be one or more of the following types of action:

- **Prevention** - where countermeasures are put in place that either stop the threat or problem from occurring, or prevent it from having an impact on the business or Programme;
- **Reduction** - where the actions either reduce the likelihood of the risk developing or limit the impact on the business or Programme to acceptable levels;
- **Transfer** - where the impact of the risk is transferred to the organisation best able to manage the risk, typically a third party (e.g. via a penalty clause or insurance policy);
- **Contingency** - where actions are planned and organised to come into force as and when the risk occurs; and
- **Acceptance** - where the Programme Management Board decides to go ahead and accept the possibility that the risk might occur, believing that either the risk will not occur or the potential countermeasures are too expensive. A risk may also be accepted on the basis that the risk and any impacts are acceptable.

The All Wales PET Programme will adopt a proactive approach to the identification, assessment and management of risks throughout the whole Programme. The effective management of risk and the prevention of issues arising will support the timely delivery of the Programme, by preventing delays, avoiding costs and ensuring quality is upheld.

The management of Programme risk will be in accord with the principals of WHSSC's Risk Management Policy where the All Wales PET Programme holds a Risk Register which is regularly monitored and updated.

5.11.3 Recording and assessment of risk

The All Wales Programme has a Risk Register that is a dynamic document which will be updated with all new identified risks being assessed. All risks will have an individual identifier, an assigned owner and be scored using the standard 5 by 5 matrices to ascertain the risk rating colour.

It is worth reiterating that as set out in the Commercial Case a number of the risks associated with the procurement will be either wholly transferred or shared with the supplier.

Figure 18: Risk Scoring Matrix

Impact	Likelihood				
	1 = Rare	2 = Unlikely	3 = Possible	4 = Likely	5 = Almost certain
5 Catastrophic	5	10	15	20	25
4 Major	4	8	12	16	20
3 Moderate	3	6	9	12	15
2 Minor	2	4	6	8	10
1 Negligible	1	2	3	4	5

5.11.4 Review and Escalation of Risk

WHSSC has a simple Risk Management Framework that focuses on effective identification, reporting and management of risks. There are only three roles in the risk management process that are summarised in Table 68 below.

Table 68: Risk Management Roles

Role	Responsibility	Reporting / accountability
Risk Management Lead	Manages the process for identifying and addressing risk, maintaining the risk register on a day to day basis	SRO
Risk Management Sub Group	Brings together key risk owners to co-ordinate the identification and assessment of risks plus the management of key risks	PET Strategic Programme Board
Risk Owner	Individual or group responsible for developing and implementing risk mitigation measures for individual risks they are responsible for	As defined in the relevant Risk Register

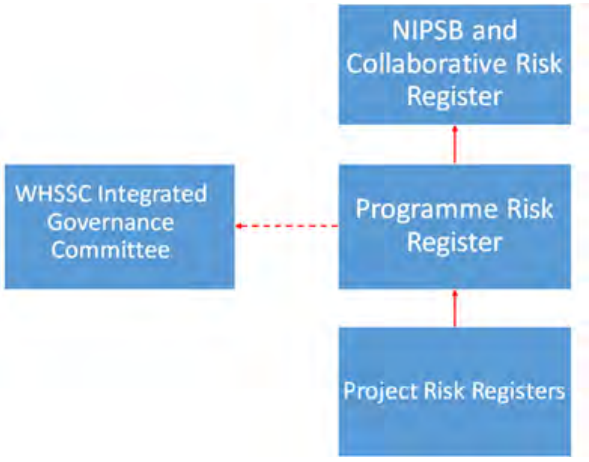
As mentioned above, Project risk registers will be reviewed monthly by the relevant organisation Project Team and by the PET Programme Board on a bi-monthly basis. Those risks that are marked as “Red” or “Amber” on a Project risk Register will be noted in the wider Programme Risk Register.

The Programme Risk Register will be reviewed once per quarter by the WHSSC Integrated Governance Committee for assurance purposes.

Programme risks noted as “Red” following countermeasure mitigation scoring will be escalated through the existing governance structure to the NIPSB at the monthly meeting.

Issues are Risks that have materialised. Similar to risk, the Strategic Programme Board will hold an Issues Register and follow the same escalation path. All issues should have an owner and an aligned action plan and will be reviewed during all Programme Project Board meetings. Issues that are outside the scope or authority of the Strategic Programme Board will be referred to the relevant Board or Group.

Figure 19: Risk Escalation Route



5.12 Arrangements for Post Programme Evaluation

The requirement to carry out a post programme evaluation is essential to determine if a Programme has (i) been successful; (ii) has it met the Spending Objectives and; (iii) realised its expected Benefits. Additionally, it ensures that lessons learned can be factored into future Projects and Programmes.

The All Wales PET Programme is committed to ensuring that a thorough Post-Programme Evaluation (PPE) is undertaken after the Programme has concluded, to ensure that positive lessons can be learnt. This is noted in tranche 4 of the Programme Plan.

The All Wales PET Programme is also committed to ensuring that lessons are learned at all key stages during implementation, so these can be fed into the wider Programme.

As such, there will be two Evaluation sessions held after each Tranche:

- **Lessons Learned and Post Tranche Review** – to be held two to three months post tranche completion.
- **Evaluation of Benefits, Outcomes and Spending Objectives** – to be held six to twelve months post tranche completion.

Immediately following implementation, all Projects will be reviewed against the usual measures for Projects: time, cost and performance, in addition to management and procurement processes. This will form the foundation of the “lessons learnt” sessions. The “lessons learnt” sessions will also provide benefits such as:

- An opportunity to improve the design, organisation, implementation and strategic management of projects and workstreams;
- An opportunity to ascertain whether the programme is running smoothly so that corrective action can be taken if necessary;
- Promote organisational learning to improve current and future performance;
- Avoid repeating costly mistakes;
- Improve decision-making and resource allocation;

- Improve accountability by demonstrating to internal and external parties that resources have been used efficiently and effectively, and
- Demonstrate acceptable outcomes and/or management action thus making it easier to obtain extra resources to develop healthcare services.

In addition to “lessons learned”, these post-tranche sessions will also provide an opportunity for the Programme to begin to assess and implement the Benefits Realisation Plan.

After a reasonable bedding-in period of six to twelve months, all Projects within a tranche will be subject to a more wide-ranging evaluation of costs and performance, as well as being reviewed against the Spending Objectives and the Benefits Realisation Plan.

It should be noted that as all Projects and Workstreams will report into the Strategic Programme Board on a bimonthly basis. In addition, the Board will remain open to comment and opportunities to determine lessons learned throughout the Programme life-cycle, and not just at the post-tranche formal reflection sessions.

The SRO will be responsible for ensuring that arrangements have all been put in place and that the requirements for PPE are fully delivered.

An Evaluation Steering Group (ESG) will be set-up and the Programme Manager will coordinate and oversee the Evaluation.

The costs of the final Post-Project Evaluation will be identified once the ESG and Evaluation Team are fully-established. These costs are therefore not currently included in the costs set out in this PBC.

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Appendices

Appendix 1 – Service Operating Model

Appendix 2 – Population Growth Projections

Appendix 3 – Collated Clinical Questionnaire narrative

Appendix 4 – PET demand forecast 10 year with variable inflation

Appendix 5 – Clinical Indication Analysis

Appendix 6 - Clinical Demand Model narrative

Appendix 7 – Workforce Board Output

Appendix 8 – Life Sciences Hub Wales – Horizon Scanning of Artificial Intelligence

Appendix 9 – Options Framework

Appendix 10 – PBC Forms

Appendix 11 – Economic and Financial Calculations

Appendix 12 – Full Programme Delivery Plan

Appendix 13 – Suggested Audit Brief from NWSSP Audit and Assurance Services

Appendix 14 – Programme Blueprint

Appendix 15 – Programme Benefits Tracker

PEOPLE

Patient

Referring Clinician

PET-CT Team

PROCESS 1 - Patient referred

PROCESS 2 - Patient scanned

PROCESS 3 - Patient results

Patient need

Clinical decision for referral to PET

Scan declined – may be referred to IPFR

Admin liaises with referring clinician on treatment times

Admin locates previous images - other sources

N

Radiologist (ARSAC) reviews referral

Y

Admin books appointment (sends letter)

Admin confirms appointment (phonecall)

Clinical scientist stores radiopharm

Admin Processes referral

Patient arrives at facility

Patient greeted by admin

Admin notifies team of arrival

HCA takes patient to changing room

HCA takes patient to uptake room and tests*

Radiographer injects patient with radiopharm

Radiographer takes patient to PET-CT Scanner

Patient leaves facility

Patient scan report viewed on PACS and discussed by referring clinician and MDT

Patient diagnosis made/treatment planned

Consultant reports PET scan on PACS system

Management Information

CP50a and CP50b IPFR Process

Management Information

Scan numbers, indications, waiting times, EXPAND

IM&T

Clinician completes paper form – printed and scans/faxes

Admin Saves info on local database

Admin locates previous images - other sources

Admin logs arrival on local system

Radiographer loads patient information

Radiographer sends scan data to PACS system

Scan reported on PACS system

Radiopharm

Admin orders radiopharm

Delivery of radiopharm

PET Isotope dispensed

Patient injected with radiopharm

Radioactive waste managed

Facilities

Radiopharm stored

Patient waits in waiting room

Patient changes into gown

Patient waits in uptake room

Radiographer scans patient

Radiographer takes patient to “hot” WC

*checks glucose/clinical info/timings/steroids/antibiotics

Welsh Population	2019	Percentage	2020	Percentage
Aneurin Bevan University Health Board	599,047	19%	600,545	19%
Betsi Cadwaladr University Health Board	693,633	22%	695,367	22%
Cardiff & Vale University Health Board	504,461	16%	505,722	16%
Cwm Taf Morgannwg University Health Board	315,288	10%	316,076	10%
Hywel Dda Health Board	378,345	12%	379,291	12%
Powys Teaching Health Board	126,115	4%	126,430	4%
Swansea Bay University Health Board	535,989	17%	537,329	17%
Welsh Population at 0.25% growth*	**3,152,879**		**3,160,761**	
ONS 2018-based principal projections			**3,164,000**	

Assumptions over 10 year period

Population of Wales - data from: ONS Report released on 24th June 2020: "Population estimates for the UK, I

*Population increase 0.25% per year based on: https://statswales.gov.wales/Catalogue/Population-and-Migr

% of population by Healthboard calculated from Sheet 2

Welsh 65+ population	2019	Percentage	2020	Percentage
Aneurin Bevan University Health Board	119,647	18	120,742	18%
Betsi Cadwaladr University Health Board	163,218	25	164,602	24%
Cardiff & Vale University Health Board	80,548	12	81,494	12%
Cwm Taf Morgannwg University Health Board	58,023	9	88,606	13%
Hywel Dda Health Board	96,018	14	97,126	14%
Powys Teaching Health Board	36,377	5	36,751	5%
Swansea Bay University Health Board	108,584	16	79,223	12%
Welsh 65+ Population at 1.6% growth*	**662,395**		**672,993**	
ONS 2018-based principal projections			**670,000**	

Assumptions over 10 year period

Population of Wales - data from: ONS Report released on 24th June 2020: "Population estimates for the UK, I

*Population increase growth at 1.6% year-on-year based on: https://www.ons.gov.uk/peoplepopulationandc

2021	Percentage	2022	Percentage	2023	Percentage	2024
602,046	19%	603,551	19%	605,060	19%	606,573
697,106	22%	698,849	22%	700,596	22%	702,347
506,986	16%	508,254	16%	509,524	16%	510,798
316,866	10%	317,658	10%	318,453	10%	319,249
380,240	12%	381,190	12%	382,143	12%	383,099
126,747	4%	127,063	4%	127,381	4%	127,700
538,673	17%	540,019	17%	541,369	17%	542,723
3,168,663		**3,176,585**		**3,184,526**		**3,192,488**
3,175,000		**3,184,000**		**3,193,000**		**3,200,000**

England and Wales, Scotland and Northern Ireland: mid-2019 - National and subnational mid-year p
ation/Population/Projections/Local-Authority/2018-based/populationprojections-by-localauthority

2021	Percentage	2022	Percentage	2023	Percentage	2024
122,083	18%	123,779	18%	125,425	18%	127,180
166,343	24%	168,159	24%	170,043	24%	172,051
82,596	12%	83,946	12%	85,221	12%	86,619
89,527	13%	90,592	13%	91,979	13%	93,172
98,399	14%	99,657	14%	101,043	14%	102,354
37,180	5%	37,620	5%	38,037	5%	38,543
79,982	12%	80,922	12%	81,967	12%	82,847
683,761		**694,701**		**705,817**		**717,110**
679,000		**689,000**		**699,000**		**710,000**

England and Wales, Scotland and Northern Ireland: mid-2019 - National and subnational mid-year p
ommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestim

Percentage	2025	Percentage	2026	Percentage	2027	Percentage
19%	608,089	19%	609,609	19%	611,133	19%
22%	704,103	22%	705,863	22%	707,628	22%
16%	512,075	16%	513,355	16%	514,639	16%
10%	320,047	10%	320,847	10%	321,649	10%
12%	384,056	12%	385,016	12%	385,979	12%
4%	128,019	4%	128,339	4%	128,660	4%
17%	544,080	17%	545,440	17%	546,803	17%
	3,200,469		**3,208,470**		**3,216,491**	
	3,206,000		**3,212,000**		**3,217,000**	

opulation estimates for the UK and its constituent countries by administrative area, age and sex".
-year

Percentage	2025	Percentage	2026	Percentage	2027	Percentage
18%	128,904	18%	130,829	18%	132,918	18%
24%	174,065	24%	176,240	24%	178,475	24%
12%	87,950	12%	89,410	12%	90,913	12%
13%	94,432	13%	95,851	13%	97,430	13%
14%	103,600	14%	104,964	14%	106,576	14%
5%	38,980	5%	39,456	5%	39,923	5%
12%	83,768	11%	84,747	11%	85,820	11%
	728,583		**740,241**		**752,085**	
	721,000		**733,000**		**746,000**	

opulation estimates for the UK and its constituent countries by administrative area, age and sex".
ates/mid2019estimates

2028	Percentage	2029	Percentage	2030	Percentage	2031
612,661	19%	614,193	19%	615,728	19%	617,268
709,397	22%	711,171	22%	712,949	22%	714,731
515,925	16%	517,215	16%	518,508	16%	519,804
322,453	10%	323,259	10%	324,068	10%	324,878
386,944	12%	387,911	12%	388,881	12%	389,853
128,981	4%	129,304	4%	129,627	4%	129,951
548,170	17%	549,541	17%	550,915	17%	552,292
3,224,532		**3,232,594**		**3,240,675**		**3,248,777**
3,223,000		**3,227,000**		**3,231,000**		**3,235,000**

2028	Percentage	2029	Percentage	2030	Percentage	2031
134,978	18%	137,101	18%	139,194	18%	139,194
180,773	24%	183,281	24%	185,631	24%	185,631
92,261	12%	93,683	12%	94,982	12%	94,982
98,740	13%	100,319	13%	101,717	13%	101,717
108,243	14%	109,798	14%	111,310	14%	111,310
40,486	5%	41,011	5%	41,537	5%	41,537
86,744	11%	87,867	11%	88,972	11%	88,972
764,118		**776,344**		**788,765**		**801,386**
759,000		**772,000**		**786,000**		**797,000**

Percentage
19%
22%
16%
10%
12%
4%
17%

Percentage
18%
24%
12%
13%
14%
5%
11%

SOURCE - ONS Dataset: Estimates of the population for the UK, England and Wales, Scotland and N

MYE5: Population estimates: Population density for local authorities in the UK, mid-2001 to mid-2019

Code	Name	Geography[1]	Area (sq km)	Estimated Population mid-2019
W92000004	WALES	Country	20,736	**3,152,879**
W06000001	Isle of Anglesey	Unitary Authority	712	70,043
W06000002	Gwynedd	Unitary Authority	2,535	124,560
W06000003	Conwy	Unitary Authority	1,126	117,203
W06000004	Denbighshire	Unitary Authority	837	95,696
W06000005	Flintshire	Unitary Authority	440	156,100
W06000006	Wrexham	Unitary Authority	504	135,957
	PERCENTAGE OF POPULATION			**22**
W06000023	Powys	Unitary Authority	5,181	132,435
	PERCENTAGE OF POPULATION			**4**
W06000008	Ceredigion	Unitary Authority	1,786	72,695
W06000009	Pembrokeshire	Unitary Authority	1,618	125,818
W06000010	Carmarthenshire	Unitary Authority	2,370	188,771
	PERCENTAGE OF POPULATION			**12**
W06000011	Swansea	Unitary Authority	378	246,993
W06000012	Neath Port Talbot	Unitary Authority	441	143,315
W06000013	Bridgend	Unitary Authority	251	147,049
	PERCENTAGE OF POPULATION			**17**
W06000014	Vale of Glamorgan	Unitary Authority	331	133,587
W06000015	Cardiff	Unitary Authority	141	366,903
	PERCENTAGE OF POPULATION			**16**
W06000016	Rhondda Cynon Taf	Unitary Authority	424	241,264
W06000024	Merthyr Tydfil	Unitary Authority	111	60,326
	PERCENTAGE OF POPULATION			**10**
W06000018	Caerphilly	Unitary Authority	277	181,075
W06000019	Blaenau Gwent	Unitary Authority	109	69,862
W06000020	Torfaen	Unitary Authority	126	93,961
W06000021	Monmouthshire	Unitary Authority	849	94,590
W06000022	Newport	Unitary Authority	190	154,676
	PERCENTAGE OF POPULATION			**19**

orthern Ireland (June 2020)

)

2019 people per sq. km	Estimated Population mid-2018	2018 people per sq. km	Estimated Population mid-2017	2017 people per sq. km	Estimated Population mid-2016	2016 people per sq. km	Estimated Population mid-2015	2015 people per sq. km	Estimated Population mid-2014
152	3,138,631	151	3,125,165	151	3,113,150	150	3,099,086	149	3,092,036
98	69,961	98	69,794	98	69,665	98	69,936	98	70,141
49	124,178	49	123,742	49	123,323	49	122,635	48	121,897
104	117,181	104	116,863	104	116,820	104	116,450	103	116,420
114	95,330	114	95,159	114	94,984	114	94,836	113	94,837
355	155,593	354	155,155	353	154,626	352	154,085	350	153,819
270	136,126	270	135,571	269	135,408	269	135,418	269	135,953
26	132,447	26	132,515	26	132,337	26	132,730	26	132,777
41	72,992	41	73,076	41	73,665	41	74,211	42	75,133
78	125,055	77	124,711	77	124,237	77	123,671	76	123,826
80	187,568	79	186,452	79	185,754	78	185,247	78	184,968
654	246,466	653	245,480	650	244,462	647	242,316	642	240,966
325	142,906	324	142,090	322	141,678	321	140,946	319	140,453
586	144,876	578	144,288	575	143,408	572	142,259	567	141,287
403	132,165	399	130,690	395	128,891	389	127,980	386	128,009
2,604	364,248	2,585	362,756	2,575	361,168	2,563	357,496	2,537	354,829
569	240,131	566	239,127	564	238,179	562	237,378	560	236,871
541	60,183	540	59,953	538	59,714	536	59,247	532	59,056
653	181,019	653	180,795	652	180,453	651	180,168	650	179,933
643	69,713	641	69,609	640	69,630	640	69,547	640	69,653
748	93,049	740	92,264	734	91,994	732	91,767	730	91,549
111	94,142	111	93,590	110	93,276	110	92,805	109	92,540
812	153,302	805	151,485	796	149,478	785	147,958	777	147,119

2014 people per sq. km	Estimated Population mid-2013	2013 people per sq. km	Estimated Population mid-2012	2012 people per sq. km	Estimated Population mid-2011	2011 people per sq. km	Estimated Population mid-2010	2010 people per sq. km
149	3,082,412	149	3,074,067	148	3,063,758	148	3,049,971	147
99	70,073	98	70,037	98	69,913	98	69,833	98
48	121,653	48	122,007	48	121,523	48	121,155	48
103	115,912	103	115,553	103	115,326	102	114,682	102
113	94,518	113	94,053	112	93,919	112	94,152	113
350	153,223	348	152,776	347	152,666	347	152,080	346
270	135,801	270	135,498	269	135,070	268	134,009	266
26	132,786	26	133,015	26	133,071	26	132,878	26
42	75,789	42	75,932	43	75,293	42	75,217	42
77	123,375	76	123,135	76	122,613	76	121,974	75
78	184,669	78	184,332	78	183,961	78	183,004	77
638	240,108	636	239,460	634	238,691	632	237,311	628
318	139,867	317	140,081	317	139,880	317	139,638	316
563	140,536	560	139,769	557	139,410	556	138,471	552
387	127,436	385	126,998	384	126,679	383	126,435	382
2,518	352,146	2,499	348,724	2,475	345,442	2,452	341,402	2,423
558	236,166	557	235,612	555	234,373	553	234,459	553
530	59,008	529	58,907	529	58,851	528	58,493	525
649	179,230	646	179,014	645	178,782	645	178,101	642
641	69,764	642	69,806	642	69,812	642	69,798	642
728	91,362	727	91,346	727	91,190	725	91,060	724
109	92,249	109	91,737	108	91,508	108	91,016	107
773	146,741	771	146,275	768	145,785	766	144,803	761

Estimated Population mid-2009	2009 people per sq. km	Estimated Population mid-2008	2008 people per sq. km	Estimated Population mid-2007	2007 people per sq. km	Estimated Population mid-2006	2006 people per sq. km	Estimated Population mid-2005
3,038,872	147	3,025,867	146	3,006,299	145	2,985,668	144	2,969,309
69,884	98	69,916	98	69,700	98	69,388	97	69,095
120,344	47	119,746	47	119,398	47	119,070	47	118,641
114,623	102	114,371	102	113,778	101	113,004	100	112,374
94,444	113	94,739	113	94,530	113	93,983	112	93,978
151,985	346	151,501	345	150,816	343	150,125	341	149,890
133,295	265	132,371	263	131,263	261	130,311	259	129,249
133,090	26	132,865	26	131,982	25	131,037	25	130,210
74,642	42	74,971	42	75,326	42	75,342	42	75,485
121,563	75	121,134	75	119,640	74	118,278	73	117,204
182,846	77	182,517	77	181,314	76	179,504	76	178,229
235,601	624	234,139	620	232,460	616	230,793	611	229,347
139,537	316	139,481	316	138,957	315	138,323	313	137,670
137,783	549	137,175	547	135,949	542	134,164	535	132,893
126,162	381	125,713	380	124,732	377	123,642	373	122,877
337,656	2,396	332,790	2,362	328,196	2,329	323,766	2,298	321,001
234,743	553	234,724	553	234,471	553	234,493	553	234,070
58,156	522	57,688	518	57,173	513	56,627	508	56,259
177,159	639	176,259	635	174,987	631	173,741	626	172,777
69,850	642	69,820	642	69,685	641	69,610	640	69,188
91,199	726	91,094	725	90,974	724	90,820	723	90,644
90,557	107	90,109	106	89,592	106	89,090	105	88,611
143,753	755	142,744	750	141,376	743	140,557	738	139,617

2005 people per sq. km	Estimated Population mid-2004	2004 people per sq. km	Estimated Population mid-2003	2003 people per sq. km	Estimated Population mid-2002	2002 people per sq. km	Estimated Population mid-2001	2001 people per sq. km
143	2,957,422	143	2,937,721	142	2,922,876	141	2,910,232	140
97	68,753	97	68,140	96	67,879	95	67,806	95
47	118,721	47	118,022	47	117,344	46	116,844	46
100	112,272	100	111,248	99	110,624	98	109,674	97
112	94,010	112	93,872	112	93,478	112	93,070	111
341	149,681	340	149,176	339	148,947	339	148,629	338
257	129,005	256	128,914	256	128,595	255	128,540	255
25	129,568	25	128,295	25	127,145	25	126,398	24
42	75,775	42	75,581	42	75,500	42	75,417	42
72	116,428	72	115,147	71	114,146	71	113,058	70
75	177,487	75	176,133	74	174,628	74	173,652	73
607	228,176	604	226,350	599	224,755	595	223,463	592
312	137,144	311	136,233	309	134,931	306	134,380	305
530	131,947	526	131,032	522	129,741	517	128,735	513
371	122,101	369	120,980	365	120,279	363	119,277	360
2,278	317,099	2,251	313,246	2,223	312,021	2,215	310,088	2,201
552	233,971	552	232,361	548	231,795	546	231,910	547
505	56,020	503	55,955	502	55,996	502	56,207	504
623	172,361	621	171,363	618	170,776	616	169,546	611
636	69,242	637	69,228	637	69,452	639	70,000	644
721	90,516	720	90,719	722	90,700	722	90,912	723
104	87,829	103	86,605	102	85,417	101	84,984	100
733	139,316	732	139,121	731	138,727	729	137,642	723

SOURCE - ONS Dataset: Estimates of the population for the UK, England and Wales, Scotland a

MYE2: Population estimates: Persons by single year of age and sex for local authorities in the U

Code	Name	Geography[1]	All ages
W92000004	WALES	Country	**3,152,879**
W06000001	Isle of Anglesey	Unitary Authority	70,043
W06000002	Gwynedd	Unitary Authority	124,560
W06000003	Conwy	Unitary Authority	117,203
W06000004	Denbighshire	Unitary Authority	95,696
W06000005	Flintshire	Unitary Authority	156,100
W06000006	Wrexham	Unitary Authority	135,957
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000023	Powys	Unitary Authority	132,435
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000008	Ceredigion	Unitary Authority	72,695
W06000009	Pembrokeshire	Unitary Authority	125,818
W06000010	Carmarthenshire	Unitary Authority	188,771
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000011	Swansea	Unitary Authority	246,993
W06000012	Neath Port Talbot	Unitary Authority	143,315
W06000013	Bridgend	Unitary Authority	147,049
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000014	Vale of Glamorgan	Unitary Authority	133,587
W06000015	Cardiff	Unitary Authority	366,903
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000016	Rhondda Cynon Taf	Unitary Authority	241,264
W06000024	Merthyr Tydfil	Unitary Authority	60,326
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		
W06000018	Caerphilly	Unitary Authority	181,075
W06000019	Blaenau Gwent	Unitary Authority	69,862
W06000020	Torfaen	Unitary Authority	93,961
W06000021	Monmouthshire	Unitary Authority	94,590
W06000022	Newport	Unitary Authority	154,676
	TOTAL NUMBER OF 65+ IN HEALTHBOARD		
	% OF THE TOTAL 65+ POPULATION		
	% OF POPULATION 65+ IN WALES		

and Northern Ireland (June 2020)

UK, mid-2019

65+	65	66	67	68	69	70
662,376	37,150	36,847	35,633	35,852	36,660	37,348
18,358	1,021	938	957	971	1,021	1,074
28,380	1,486	1,518	1,462	1,447	1,497	1,597
32,732	1,732	1,664	1,567	1,642	1,672	1,776
23,237	1,246	1,224	1,209	1,278	1,333	1,408
33,068	1,789	1,801	1,788	1,909	1,890	1,938
27,438	1,602	1,557	1,476	1,516	1,508	1,593
163,213						
24.641						
5						
36,376	2,026	2,038	1,903	1,953	2,005	2,041
132,435						
5.492						
1						
18,434	974	969	965	1,026	1,033	1,099
32,738	1,776	1,816	1,744	1,783	1,828	1,753
44,843	2,539	2,485	2,482	2,366	2,448	2,506
96,015						
14.496						
7						
48,720	2,664	2,696	2,551	2,478	2,614	2,666
29,981	1,766	1,764	1,780	1,669	1,673	1,698
29,880	1,649	1,695	1,649	1,669	1,596	1,711
108,581						
16.393						
6						
28,347	1,627	1,683	1,511	1,537	1,463	1,515
52,192	3,180	3,070	2,926	2,895	2,957	2,822
80,539						
12.160						
7						
46,628	2,561	2,628	2,559	2,542	2,708	2,723
11,386	689	639	665	683	638	695
58,014						
8.760						
6						
35,549	2,093	2,087	1,945	1,995	2,154	2,027
14,192	827	776	765	777	771	865
19,336	1,111	1,094	1,062	1,084	1,060	1,071
23,891	1,292	1,215	1,274	1,309	1,325	1,309
26,670	1,500	1,490	1,393	1,323	1,466	1,461
119,638						
18.063						
4						

71	72	73	74	75	76	77
39,168	41,091	31,145	30,534	29,891	27,803	25,095
1,096	1,152	854	900	882	801	677
1,627	1,717	1,391	1,288	1,324	1,243	1,078
1,939	1,979	1,499	1,456	1,382	1,352	1,283
1,463	1,477	1,115	1,055	1,121	1,010	846
2,069	2,242	1,569	1,556	1,566	1,389	1,245
1,622	1,745	1,320	1,275	1,221	1,178	1,063
2,089	2,187	1,718	1,655	1,769	1,579	1,347
1,094	1,082	867	877	879	752	681
1,898	2,006	1,597	1,548	1,531	1,331	1,219
2,676	2,729	2,207	2,052	2,043	1,942	1,771
2,834	3,045	2,197	2,206	2,128	2,068	1,824
1,771	1,850	1,396	1,330	1,373	1,279	1,101
1,771	1,832	1,407	1,377	1,381	1,293	1,167
1,710	1,840	1,318	1,335	1,317	1,206	1,089
2,873	3,060	2,229	2,234	2,146	1,999	1,764
2,909	2,997	2,317	2,231	2,021	1,919	1,809
674	660	504	552	529	440	421
2,197	2,203	1,721	1,693	1,581	1,449	1,422
805	914	680	671	653	639	606
1,120	1,211	862	924	821	788	724
1,348	1,470	1,146	1,125	1,090	1,019	907
1,583	1,693	1,231	1,194	1,133	1,127	1,051

78	79	80	81	82	83	84
22,394	21,602	20,742	19,518	17,891	16,566	15,052
588	600	618	562	471	440	410
902	898	886	788	795	669	650
1,118	1,052	1,048	949	897	881	807
857	761	702	707	669	569	485
1,138	1,084	1,065	986	901	753	695
935	866	817	781	706	668	582
1,204	1,200	1,142	1,070	971	915	785
559	639	515	506	489	438	456
1,127	1,056	1,007	968	819	842	788
1,496	1,451	1,384	1,265	1,248	1,069	1,037
1,638	1,614	1,571	1,476	1,318	1,304	1,212
984	970	925	873	822	733	660
1,113	986	983	905	857	716	691
936	930	921	856	749	676	594
1,637	1,641	1,628	1,607	1,450	1,396	1,227
1,649	1,491	1,431	1,381	1,210	1,130	1,032
398	374	360	351	301	313	242
1,211	1,182	1,132	1,058	890	854	780
480	488	449	392	389	374	303
668	602	599	571	503	491	446
828	797	691	675	640	601	546
928	920	868	791	796	734	624

85	86	87	88	89	90+
13,470	12,170	10,672	9,449	8,117	30,516
338	318	292	248	202	927
643	561	509	505	407	1,492
739	690	578	518	500	2,012
433	417	366	326	287	873
590	509	522	391	348	1,335
534	497	438	407	308	1,223
729	659	579	556	460	1,796
359	337	340	288	243	967
632	661	532	476	385	1,615
903	834	720	595	516	2,079
1,054	941	877	676	669	2,399
576	522	459	408	387	1,212
577	517	495	405	319	1,119
591	492	437	403	327	1,284
1,139	1,038	929	821	740	2,784
965	831	617	586	508	1,873
194	198	145	155	143	423
745	567	504	462	353	1,244
236	260	194	172	166	540
408	374	332	291	256	863
516	468	402	359	283	1,256
569	479	405	401	310	1,200

Population projections by the Office for National Statistics
Wales
PERSONS, thousands **P**

Projected populations at mid-years by age last birthday in five-year age groups

Ages	2018	2019	2020	2021	2022	2023	2024	2025	2026
0-4	169	166	163	161	159	158	158	157	157
5-9	184	184	183	181	178	175	172	169	166
10-14	177	181	185	188	190	189	189	187	185
15-19	174	172	172	174	178	183	187	191	194
20-24	205	204	203	200	195	191	187	186	188
25-29	206	208	206	203	200	199	196	194	191
30-34	188	193	196	201	205	207	207	205	201
35-39	183	185	186	186	188	191	196	199	203
40-44	169	170	173	178	181	185	187	187	188
45-49	206	199	193	183	176	171	171	175	179
50-54	222	220	217	216	213	208	201	195	185
55-59	212	217	222	224	224	224	222	219	218
60-64	190	193	197	203	208	212	217	222	224
65-69	184	182	180	180	183	185	188	193	198
70-74	175	179	182	184	176	172	170	168	169
75-79	122	127	131	136	147	154	158	160	162
80-84	88	90	91	92	94	97	101	105	109
85-89	53	54	55	56	57	58	60	61	61
90-94	23	23	23	24	24	25	26	26	27
95-99	6	6	6	6	6	6	6	7	7
00 & over	1	1	1	1	1	1	1	1	1
All ages	3,139	3,152	3,164	3,175	3,184	3,193	3,200	3,206	3,212

2018-based
rincipal projection

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
157	156	156	156	155	155	155	155	156	156
164	163	163	163	162	162	162	161	161	161
182	179	176	173	170	168	167	167	167	166
196	195	194	193	190	187	185	181	179	176
192	197	201	205	208	209	209	208	206	204
186	182	178	177	179	182	187	191	194	197
199	197	194	192	189	184	180	176	176	177
207	208	209	207	203	201	199	196	194	191
190	193	197	200	205	208	210	211	208	205
183	187	188	189	189	192	194	199	202	206
178	173	173	176	181	185	189	190	191	192
215	210	203	196	187	180	175	175	178	183
224	224	222	219	218	215	211	204	197	188
203	207	212	217	219	219	219	218	215	214
171	173	176	181	186	191	195	200	204	206
155	152	150	149	150	152	154	157	161	166
118	124	127	129	130	126	123	123	122	122
63	66	69	72	74	81	86	88	89	90
28	28	29	30	30	31	33	35	36	38
7	7	7	8	8	8	8	9	9	9
1	1	1	1	1	1	1	1	1	1
3,217	3,223	3,227	3,231	3,235	3,238	3,241	3,243	3,245	3,247

2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
156	157	157	158	159	159	159	159	159	159
161	161	161	161	161	162	162	163	163	164
166	165	165	165	164	164	164	164	165	165
174	172	172	172	171	171	171	170	170	170
201	198	195	192	189	187	186	186	185	185
198	198	197	195	193	191	188	185	182	179
181	185	189	192	195	197	196	195	194	192
186	182	178	177	179	182	187	191	194	197
202	200	198	196	193	188	183	180	179	181
210	212	213	210	207	204	202	200	198	195
194	197	201	204	209	212	214	215	213	209
187	191	192	193	194	196	199	203	206	211
181	176	176	179	184	188	192	194	194	195
211	207	200	194	185	178	173	173	177	181
207	207	206	203	202	200	196	190	184	176
170	174	179	183	185	186	186	185	183	183
124	127	130	133	137	141	145	149	153	155
87	86	86	86	86	88	90	93	96	99
42	44	45	46	46	45	45	45	46	46
9	10	11	11	12	13	14	15	15	15
1	1	1	1	1	1	2	2	2	2
3,248	3,250	3,251	3,252	3,253	3,254	3,255	3,256	3,257	3,258

2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
158	158	157	156	155	154	153	152	151	150
164	165	165	165	164	164	163	162	161	160
165	166	167	167	168	168	168	169	168	168
170	170	170	170	170	171	171	172	173	173
184	184	184	183	183	183	183	183	183	184
178	176	177	176	176	175	175	175	174	174
189	187	183	181	178	176	175	175	175	174
199	198	197	196	194	191	189	185	183	180
184	189	192	196	199	200	200	199	198	195
190	185	182	181	182	186	191	194	198	201
207	205	202	200	197	192	188	184	183	185
215	217	218	215	212	209	207	205	203	200
197	200	205	208	213	217	218	219	217	214
185	190	191	192	193	195	198	202	206	211
169	165	165	168	173	177	181	183	184	185
181	178	172	167	160	154	150	151	154	158
156	156	156	154	155	153	151	146	142	136
102	105	109	112	114	115	115	115	115	115
48	49	51	53	55	58	60	62	64	65
15	15	15	15	16	17	17	18	19	20
2	2	2	2	2	2	3	3	3	3
3,258	3,258	3,258	3,258	3,257	3,256	3,255	3,254	3,253	3,251

2057	2058	2059	2060	2061	2062	2063	2064	2065	2066
150	149	149	149	148	148	148	148	148	148
159	158	157	157	156	155	155	154	154	154
167	167	166	165	164	163	162	161	160	160
174	174	174	174	173	173	172	171	170	169
184	185	185	186	187	187	187	188	187	187
174	174	174	174	175	175	176	176	177	177
174	174	173	173	173	173	173	173	173	173
178	177	177	177	176	176	176	175	175	175
193	190	187	184	182	180	179	179	178	178
202	202	201	200	197	195	192	189	187	184
188	193	197	200	203	205	205	204	203	200
195	190	187	186	188	191	196	200	203	206
211	209	207	205	202	197	192	189	188	190
215	217	218	216	212	210	208	206	204	201
187	190	194	197	202	206	208	209	207	204
162	166	167	169	170	172	175	179	182	187
131	128	129	132	137	140	143	145	146	147
115	113	110	107	103	100	98	99	102	105
66	67	67	67	68	68	67	66	64	62
21	22	23	24	25	25	25	26	26	27
3	3	3	3	4	4	4	4	5	5
3,250	3,248	3,246	3,245	3,244	3,243	3,242	3,241	3,240	3,240

2067	2068	2069	2070	2071	2072	2073	2074	2075	2076
149	149	149	149	149	149	149	149	149	148
154	154	154	154	154	154	154	154	154	154
159	158	158	158	157	157	157	157	157	157
168	167	166	166	165	164	164	163	163	163
186	186	185	184	183	182	181	180	179	178
178	178	178	178	178	177	176	176	175	174
174	174	175	175	176	176	177	177	176	176
175	175	175	175	175	176	176	177	177	178
178	177	177	177	177	176	176	177	177	177
182	181	181	181	180	180	180	179	179	179
198	195	192	189	187	185	184	184	183	183
208	208	207	206	204	201	199	195	193	190
193	198	202	206	209	211	211	210	209	207
196	192	188	187	189	193	198	202	206	209
202	200	198	196	194	189	185	182	181	183
191	192	194	192	189	187	186	184	183	180
149	152	156	159	164	167	169	170	169	167
108	111	112	114	115	117	120	123	126	130
61	60	61	64	66	68	70	71	73	74
27	27	26	26	25	25	25	26	27	28
5	5	5	5	5	6	6	5	5	5
3,240	3,240	3,240	3,240	3,240	3,241	3,241	3,241	3,241	3,241

2077	2078	2079	2080	2081	2082	2083	2084	2085	2086
148	148	148	147	147	146	146	145	145	144
154	154	154	154	154	154	153	153	152	152
158	158	158	158	158	158	158	158	158	158
163	163	163	163	163	163	163	163	163	163
178	177	177	176	176	176	176	176	176	176
173	172	171	170	169	169	168	168	168	167
176	175	174	173	172	171	171	170	169	168
178	179	179	179	178	178	177	176	175	175
178	178	179	179	180	180	181	181	181	180
179	179	179	179	179	180	180	181	182	182
183	182	182	182	182	182	182	182	182	182
188	187	187	187	186	186	186	186	185	185
204	202	198	196	193	191	190	190	190	189
211	210	210	209	207	204	202	198	196	193
187	192	196	199	202	205	204	204	203	201
176	172	170	169	171	175	180	183	187	190
165	164	163	162	160	156	153	151	151	153
133	135	136	135	133	133	132	132	131	130
76	78	80	83	86	88	89	90	90	89
29	30	31	32	33	34	35	36	37	39
5	5	6	6	6	7	7	7	7	8
3,240	3,239	3,239	3,237	3,236	3,234	3,233	3,231	3,228	3,226

2087	2088	2089	2090	2091	2092	2093	2094	2095	2096
144	144	143	143	143	143	142	142	142	142
152	151	151	150	150	149	149	149	148	148
157	157	157	156	156	155	155	154	154	153
163	163	163	163	163	163	162	162	162	161
176	176	176	177	177	177	177	177	176	176
167	167	167	167	167	168	168	168	168	168
168	167	167	166	166	166	166	166	166	166
174	173	172	171	170	170	169	169	169	168
180	179	178	177	176	176	175	174	173	172
183	183	183	183	183	182	181	181	180	179
183	183	184	185	185	186	186	186	186	186
185	185	185	186	186	187	187	188	189	189
189	189	189	188	188	188	188	189	189	189
191	190	191	190	190	190	190	189	189	189
198	196	193	191	188	187	185	186	186	185
192	192	192	191	189	187	185	182	180	178
156	161	165	168	171	173	173	173	172	171
127	125	123	124	126	129	133	136	139	142
89	90	90	89	89	87	86	86	86	88
40	41	42	42	42	42	43	43	43	43
8	8	9	9	10	10	10	11	11	11
3,224	3,222	3,219	3,217	3,215	3,213	3,211	3,210	3,208	3,207

2097	2098	2099	2100	2101	2102	2103	2104	2105	2106
142	142	142	142	142	142	142	142	141	141
148	148	148	147	147	147	147	147	147	147
153	153	152	152	152	152	151	151	151	151
161	160	160	159	159	158	158	158	157	157
176	176	175	175	174	174	173	173	172	172
168	168	168	168	168	167	167	167	166	166
166	167	167	167	167	167	167	167	167	166
168	168	168	168	168	169	169	169	169	169
172	171	171	171	170	170	170	170	170	170
178	177	176	175	175	174	174	173	173	173
185	185	184	183	182	181	180	179	179	178
190	190	190	190	190	189	189	188	187	186
190	191	191	192	193	193	194	194	194	194
189	189	190	190	190	191	192	192	193	194
185	185	185	185	185	185	185	186	186	187
177	176	176	176	176	176	176	176	176	176
169	168	165	164	162	161	160	161	161	161
144	144	144	144	143	142	141	139	138	137
91	94	97	99	102	103	104	104	104	104
42	42	42	43	44	46	48	49	51	52
11	11	11	12	12	12	12	12	12	13
3,205	3,204	3,203	3,202	3,201	3,199	3,198	3,197	3,196	3,194

2107	2108	2109	2110
141	141	141	140
147	147	147	147
151	151	151	151
157	157	157	156
172	171	171	171
165	165	165	164
166	166	166	165
169	169	169	169
171	171	171	171
173	173	173	173
177	177	177	176
185	184	183	183
193	192	192	191
195	195	195	195
187	188	189	190
176	177	177	177
161	161	161	161
136	136	137	137
104	103	102	102
53	54	54	55
13	14	14	15
3,193	3,192	3,190	3,189

Programme Business Case
for an **All Wales Positron Emission Tomography (PET) Service**

Clinical Questionnaire to scope future Welsh PET Scanning demands

Strategic Case - Appendix 3

As part of the development of the All Wales PET strategy and associated Programme Business Case, the Clinical Group canvassed views from clinical colleagues across Wales on how the future PET services may be expanded and developed. The clinical questionnaire was sent to thirty four clinical experts to complete between June-July 2020.

Twelve of the twenty three responded, with six of the questionnaires completed by medical physics specialists and six completed by PET consultant radiologists. A number did not respond as they felt not their area. All those that participated in this exercise are highly skilled and experienced individuals, who have the knowledge and expertise to provide constructive and realistic comment. As such, we can assume that the expert views can be dealt with a level of significance. All commentary has been anonymised.

The questionnaire consisted of four questions and a box for free-text answers were provided. The four questions asked were as below:

1. In general terms, what are we not doing now that we should? This could include additional clinical indications for a PET scan, more research, further investment in infrastructure, education and training etc.
2. What would you perceive to be the main clinical areas where the demand for PET scans (new indications) will change over the next 5 years, for example cardiology, dementia etc. and to what extent?
3. What are the likely technical developments in the pipeline we need to be aware of and factor in to future PET imaging services? This maybe to do with advances in technology (more efficient machines, all body PET, more sensitive/specific isotopes etc.)
4. Considering the existing PET service across Wales, Is there anything we should not be doing/stop doing?

A detailed representation of the collated responses can be found in Appendix 1, however the key points that were consistently noted by the majority of individuals are:

1. Wales PET service provision should look to:
    a. widen the scope of commissioned clinical indications for PET scans,
    b. invest in the infrastructure,
    c. plan effectively to consider PET scanning demand and encapsulate other modalities of PET application (e.g. radiotherapy planning),
    d. carry out more research across all sites, and
    e. focus on training existing and new staff to ensure that PET services can be provided with an appropriate resilience and skill-mix.
2. The general consensus that: cancer would remain the primary clinical area for demand for PET scans for the foreseeable future. The participants did also note however that PET scanning for dementia is “a potential large growth area”, also noting potential for inflammation/infection, neurology and rheumatology to grow. There is an appetite to develop cardiac myocardial perfusion imaging in “specialist centres”.
3. Digital PET-CT scanning was unanimously viewed as a significant and necessary technical development for PET-CT in Wales. In addition to noting the development in radiopharmaceuticals, all body scanning, artificial intelligence to assist in scan interpretation.
4. There were limited answers to question four, however the items that were noted were on appropriate referrals, the effect of Covid-19 and that Wales should move away from using private contractors as it make it more difficult to develop local talent or institutions.

Question asked	Responses
1. In general terms, what are we not doing now that we should? This could include additional clinical indications for a PET scan, more research, further investment in infrastructure, education and training etc.	**Clinical Indications:** All respondents raised that there is a need to further increase funded clinical indications in Wales, moving toward an increase in accepted indications in line with NICE/RCR recommendations. There were specific comments related to clinical conditions, and for completeness these were: "areas of pressure are myeloma, biliary malignancy (not just Ca pancreas) also brain tumours", "skin (malignant melanoma): This has been subject to a treatment revolution over the last few years, with new, biologic treatments (which are very expensive) and for which FDG PET/CT provides an excellent tool for assessing disease response, so that the correct treatment can be facilitated and that futile treatments with significant side-effects can be avoided.", "gastric: FDG PET/CT improves staging of gastric carcinoma, approximately an additional 5% of patients are upstaged to metastatic, avoiding futile gastrectomy and initiating appropriate treatment at an earlier time point.", and "thymus: Rare malignant tumour but FDG PET/CT of value in characterisation and staging". **Infrastructure:** Most respondents commented on the level of PET scanning infrastructure in Wales, noting that whilst it is good that there are mobile scanners present in North and South West Wales, that these will not suffice for future demands. A few respondents noted that: "we have poor infrastructure as not to be conducive to attracting and retaining quality specialist clinicians (Radiologists / Physicians)", and "For the mobile locations – we are not able to undertake scans on patients with specific needs e.g. mobility / patient habitus / critical care". **Planning:** There was a less consensus response in this area, with a view that a more planned approach is required to predict scanning and clinical capacity. Further suggestions noted the need to consider radiotherapy planning in the future, to consider the commissioning route for PET scans to become non-specialised and that there should be some attention paid to Ga-DOTA imaging. **Quality:** One participant noted the need to optimise imaging acquisition & ensure the highest practicable diagnostic quality. **Supply Chain:** One further respondent commented that radionuclide supply is limited outside of PETIC and that this is limiting the growth of PET. **Research:** Multiple responses were received under this topic, with the opinion to "do more research" a

	must, and include sites outside of PETIC. Some specific areas of research interested were expressed: “Research into non-FDG tracers for High Grade Glioma”, “Research into FDG PET-CT for Radical CRT response assessment”, and “Research into Lung – NSCLC and SCLC, Oesophagus”. **Training:** This topic was a strong response field with two thirds of participants commenting on the need for investment in training for both clinical radiologists and clinical scientists. Multiple mentions were made to highlight investigation into non-medical reporting as a potential solution to the lack of radiologists i.e. training radiographers to report on PET scans. One respondent commented “…investment [is required] in overprovision (recruitment and training) to be ‘PET ready’ for future expansion should be made by WG”. Another specific comment was that “allowance for training [in work] is really important - support training at core/higher level for radiologists”.
2. What would you perceive to be the main clinical areas where the demand for PET scans (new indications) will change over the next 5 years, for example cardiology, dementia etc. and to what extent?	Comments were received from all participants for this question, with cancer, cardiology, dementia, inflammation/infection, neurology and rheumatology were all mentioned. **Cancer:** a near unanimous view was that demand for PET scans in cancer diagnostics would expand significantly over the coming years, with the use of PET within this clinical field as being the “mainstay” of its application in the future. In addition, to this general view, there was also some consensus on the expansion of PET use into therapeutic planning and treatment response assessments. Some specific comments were made regarding the expansion of PSMA imaging for Prostate cancer. **Dementia:** Half of all respondents noted dementia a clinical field with a potential large growth area: “dementia imaging is likely to be in greater demand as the public becomes aware of PET capability and NICE guidance”. One participant noted that “…unless that is a new ‘wonder drug' to treat Alzheimer's disease, and which necessitates a gatekeeper PET scan, that neurological indications for PET are likely to remain a very small fraction of clinical workload”. New tracer development could significantly change the scenario here. **Cardiology:** Cardiac PET was viewed as not widely utilised outside specialist centres but there is a desire to develop this in Wales, and some comments noted that this was “debatable” as a possible expansion of PET scan application. Indeed, several respondents

	noted that cardiac myocardial perfusion imaging was a potential area for growth in “specialist centres”. **Inflammation/infection:** Two respondents noted “more growth in infection and inflammation imaging”. **Neurology and rheumatology:** Two respondents noted that this is a potential area of growth.
3. What are the likely technical developments in the pipeline we need to be aware of and factor in to future PET imaging services? This maybe to do with advances in technology (more efficient machines, all body PET, more sensitive/specific isotopes etc.)	Four key items were highlighted by clinical experts. These are: **All body scanning:** Whole body and digital PET/CT scanners should be considered for investment when setting up new centres and replacing older systems. **Digital PET-CT Scanners:** Participants noted that scanning technology is currently undergoing a large leap forward, which will markedly improve quality, shorten scan time and radiation dose, but the scanners will be significantly more expensive. Consensus was that Wales should look to invest in digital PET-CT scanners for multiple reasons: • significant gain in sensitivity, • improved resolution, • significantly reduced radiation dose or significantly reduce scan time: in practice, a combination of both, and • faster PET scans – increasing patient throughput Use of digital scanners was thought to require additional investment in staff numbers and the physical infrastructure (injection/resting rooms for uptake) and more automation in dispensing to obtain greater yield per vial e.g. Tracis system. **Artificial Intelligence:** Participants noted that “artificial intelligence may well have a role to play, perhaps highlighting potential areas/regions for review by the reporter”. The CT component of a PET/CT will evolve with AI reconstruction algorithms leading to lower radiation dose and there will likely be continual incremental advances in reconstruction algorithms. **Radiopharmaceuticals:** Several experts noted that more specialist PET imaging is likely to become run of the mill in local imaging centres as time moves on – therefore provision of expanded PET tracer production and local delivery needs to be factored into future plans or strategy. PETIC is well positioned to develop or supply new tracers. However, these will mostly be of benefit in research. Other comments were:

	"The most exciting thing is new tracers, it's going to be very difficult to predict but a sudden change in practice if a new specific tracer is developed", "Development of newer F-18 radiopharmaceuticals", and "Solid state crystals (CZT, etc.) will increase throughput and enhance sensitivity/resolution". One other comment noted there may be "respiratory motion gating/correction in reconstructions" in the pipeline.
4. Considering the existing PET service across Wales, Is there anything we should not be doing/stop doing?	There were less answers provided for this question with just six respondents commenting. These are as follows: **Inappropriate referral:** Three of the six participants commented on this with two noting that there are occasions where requests for a PET scan could be inappropriate. Conversely the third person commented that "there are often marginal cases, in general MDTs are actually really sensible and only use tests including PET if they will alter management". **Private contractors:** One person commented that [Wales should stop] "subcontracting to Private Sector may make it more difficult to develop local talent or institutions". **Covid-19:** One respondent noted that "COVID-19 will reduce the amount of primary cancer work for some time, due to the increased risk of older people venturing out of their homes and into NHS facilities at all stages of the referral and assessment pathways". **Comparison with England:** One person commented "we should stop rationing indication compared with England".

Date	Year	Site	Health Board	Scan Activity
01/04/2020	2020	PETIC	Aneurin Bevan	687
01/04/2020	2020	PETIC	Betsi Cadwaladr University	0
01/04/2020	2020	PETIC	Cardiff and Vale University	515
01/04/2020	2020	PETIC	Cwm Taf	556
01/04/2020	2020	PETIC	Hywel Dda	142
01/04/2020	2020	PETIC	Powys Teaching	102
01/04/2020	2020	PETIC	Swansea Bay	148
01/04/2020	2020	SBUHB	Cwm Taf	58
01/04/2020	2020	SBUHB	Hywel Dda	466
01/04/2020	2020	SBUHB	Powys Teaching	10
01/04/2020	2020	SBUHB	Swansea Bay	504
01/04/2020	2020	BCUHB	Powys Teaching	84
01/04/2020	2020	BCUHB	Betsi Cadwaladr University	745
01/04/2021	2021	PETIC	Aneurin Bevan	813
01/04/2021	2021	PETIC	Betsi Cadwaladr University	0
01/04/2021	2021	PETIC	Cardiff and Vale University	609
01/04/2021	2021	PETIC	Cwm Taf	659
01/04/2021	2021	PETIC	Hywel Dda	0
01/04/2021	2021	PETIC	Powys Teaching	121
01/04/2021	2021	PETIC	Swansea Bay	0
01/04/2021	2021	SBUHB	Cwm Taf	68
01/04/2021	2021	SBUHB	Hywel Dda	551
01/04/2021	2021	SBUHB	Powys Teaching	11
01/04/2021	2021	SBUHB	Swansea Bay	596
01/04/2021	2021	BCUHB	Powys Teaching	99
01/04/2021	2021	BCUHB	Betsi Cadwaladr University	879
01/04/2022	2022	PETIC	Aneurin Bevan	813
01/04/2022	2022	PETIC	Betsi Cadwaladr University	0
01/04/2022	2022	PETIC	Cardiff and Vale University	609
01/04/2022	2022	PETIC	Cwm Taf	659
01/04/2022	2022	PETIC	Hywel Dda	0
01/04/2022	2022	PETIC	Powys Teaching	121
01/04/2022	2022	PETIC	Swansea Bay	0
01/04/2022	2022	SBUHB	Cwm Taf	68
01/04/2022	2022	SBUHB	Hywel Dda	551
01/04/2022	2022	SBUHB	Powys Teaching	11
01/04/2022	2022	SBUHB	Swansea Bay	596
01/04/2022	2022	BCUHB	Powys Teaching	99
01/04/2022	2022	BCUHB	Betsi Cadwaladr University	879
01/04/2023	2023	PETIC	Aneurin Bevan	813
01/04/2023	2023	PETIC	Betsi Cadwaladr University	0
02/04/2023	2023	PETIC	Cardiff and Vale University	609
03/04/2023	2023	PETIC	Cwm Taf	659
04/04/2023	2023	PETIC	Hywel Dda	0
05/04/2023	2023	PETIC	Powys Teaching	121
06/04/2023	2023	PETIC	Swansea Bay	0
07/04/2023	2023	SBUHB	Cwm Taf	68

	08/04/2023	2023	SBUHB	Hywel Dda	551
	09/04/2023	2023	SBUHB	Powys Teaching	11
	10/04/2023	2023	SBUHB	Swansea Bay	596
	11/04/2023	2023	BCUHB	Powys Teaching	99
	01/04/2023	2023	BCUHB	Betsi Cadwaladr University	879
	01/04/2024	2024	PETIC	Aneurin Bevan	813
	01/04/2024	2024	PETIC	Betsi Cadwaladr University	0
	01/04/2024	2024	PETIC	Cardiff and Vale University	609
	01/04/2024	2024	PETIC	Cwm Taf	659
	01/04/2024	2024	PETIC	Hywel Dda	0
	01/04/2024	2024	PETIC	Powys Teaching	121
	01/04/2024	2024	PETIC	Swansea Bay	0
	01/04/2024	2024	SBUHB	Cwm Taf	68
	01/04/2024	2024	SBUHB	Hywel Dda	551
	01/04/2024	2024	SBUHB	Powys Teaching	11
	01/04/2024	2024	SBUHB	Swansea Bay	596
	01/04/2024	2024	BCUHB	Powys Teaching	99
	01/04/2024	2024	BCUHB	Betsi Cadwaladr University	879
	01/04/2025	2025	PETIC	Aneurin Bevan	813
	01/04/2025	2025	PETIC	Betsi Cadwaladr University	0
	01/04/2025	2025	PETIC	Cardiff and Vale University	609
	01/04/2025	2025	PETIC	Cwm Taf	659
	01/04/2025	2025	PETIC	Hywel Dda	0
	01/04/2025	2025	PETIC	Powys Teaching	121
	01/04/2025	2025	PETIC	Swansea Bay	0
	01/04/2025	2025	SBUHB	Cwm Taf	68
	01/04/2025	2025	SBUHB	Hywel Dda	551
	01/04/2025	2025	SBUHB	Powys Teaching	11
	01/04/2025	2025	SBUHB	Swansea Bay	596
	01/04/2025	2025	BCUHB	Powys Teaching	99
	01/04/2025	2025	BCUHB	Betsi Cadwaladr University	879
	01/04/2026	2026	PETIC	Aneurin Bevan	813
	01/04/2026	2026	PETIC	Betsi Cadwaladr University	0
	01/04/2026	2026	PETIC	Cardiff and Vale University	609
	01/04/2026	2026	PETIC	Cwm Taf	659
	01/04/2026	2026	PETIC	Hywel Dda	0
	01/04/2026	2026	PETIC	Powys Teaching	121
	01/04/2026	2026	PETIC	Swansea Bay	0
	01/04/2026	2026	SBUHB	Cwm Taf	68
	01/04/2026	2026	SBUHB	Hywel Dda	551
	01/04/2026	2026	SBUHB	Powys Teaching	11
	01/04/2026	2026	SBUHB	Swansea Bay	596
	01/04/2026	2026	BCUHB	Powys Teaching	99
	01/04/2026	2026	BCUHB	Betsi Cadwaladr University	879
	01/04/2027	2027	PETIC	Aneurin Bevan	813
	01/04/2027	2027	PETIC	Betsi Cadwaladr University	0
	01/04/2027	2027	PETIC	Cardiff and Vale University	609
	01/04/2027	2027	PETIC	Cwm Taf	659
	01/04/2027	2027	PETIC	Hywel Dda	0
	01/04/2027	2027	PETIC	Powys Teaching	121

	01/04/2027	2027	PETIC	Swansea Bay	0
	01/04/2027	2027	SBUHB	Cwm Taf	68
	01/04/2027	2027	SBUHB	Hywel Dda	551
	01/04/2027	2027	SBUHB	Powys Teaching	11
	01/04/2027	2027	SBUHB	Swansea Bay	596
	01/04/2027	2027	BCUHB	Powys Teaching	99
	01/04/2027	2027	BCUHB	Betsi Cadwaladr University	879
	01/04/2028	2028	PETIC	Aneurin Bevan	813
	01/04/2028	2028	PETIC	Betsi Cadwaladr University	0
	01/04/2028	2028	PETIC	Cardiff and Vale University	609
	01/04/2028	2028	PETIC	Cwm Taf	659
	01/04/2028	2028	PETIC	Hywel Dda	0
	01/04/2028	2028	PETIC	Powys Teaching	121
	01/04/2028	2028	PETIC	Swansea Bay	0
	01/04/2028	2028	SBUHB	Cwm Taf	68
	01/04/2028	2028	SBUHB	Hywel Dda	551
	01/04/2028	2028	SBUHB	Powys Teaching	11
	01/04/2028	2028	SBUHB	Swansea Bay	596
	01/04/2028	2028	BCUHB	Powys Teaching	99
	01/04/2028	2028	BCUHB	Betsi Cadwaladr University	879
	01/04/2029	2029	PETIC	Aneurin Bevan	813
	01/04/2029	2029	PETIC	Betsi Cadwaladr University	0
	01/04/2029	2029	PETIC	Cardiff and Vale University	609
	01/04/2029	2029	PETIC	Cwm Taf	659
	01/04/2029	2029	PETIC	Hywel Dda	0
	01/04/2029	2029	PETIC	Powys Teaching	121
	01/04/2029	2029	PETIC	Swansea Bay	0
	01/04/2029	2029	SBUHB	Cwm Taf	68
	01/04/2029	2029	SBUHB	Hywel Dda	551
	01/04/2029	2029	SBUHB	Powys Teaching	11
	01/04/2029	2029	SBUHB	Swansea Bay	596
	01/04/2029	2029	BCUHB	Powys Teaching	99
	01/04/2029	2029	BCUHB	Betsi Cadwaladr University	879
	01/04/2030	2030	PETIC	Aneurin Bevan	813
	01/04/2030	2030	PETIC	Betsi Cadwaladr University	0
	01/04/2030	2030	PETIC	Cardiff and Vale University	609
	01/04/2030	2030	PETIC	Cwm Taf	659
	01/04/2030	2030	PETIC	Hywel Dda	0
	01/04/2030	2030	PETIC	Powys Teaching	121
	01/04/2030	2030	PETIC	Swansea Bay	0
	01/04/2030	2030	SBUHB	Cwm Taf	68
	01/04/2030	2030	SBUHB	Hywel Dda	551
	01/04/2030	2030	SBUHB	Powys Teaching	11
	01/04/2030	2030	SBUHB	Swansea Bay	596
	01/04/2030	2030	BCUHB	Powys Teaching	99
	01/04/2030	2030	BCUHB	Betsi Cadwaladr University	879
	01/04/2031	2031	PETIC	Aneurin Bevan	813
	01/04/2031	2031	PETIC	Betsi Cadwaladr University	0
	01/04/2031	2031	PETIC	Cardiff and Vale University	609
	01/04/2031	2031	PETIC	Cwm Taf	659

01/04/2031	2031	PETIC	Hywel Dda	0
01/04/2031	2031	PETIC	Powys Teaching	121
01/04/2031	2031	PETIC	Swansea Bay	0
01/04/2031	2031	SBUHB	Cwm Taf	68
01/04/2031	2031	SBUHB	Hywel Dda	551
01/04/2031	2031	SBUHB	Powys Teaching	11
01/04/2031	2031	SBUHB	Swansea Bay	596
01/04/2031	2031	BCUHB	Powys Teaching	99
01/04/2031	2031	BCUHB	Betsi Cadwaladr University	879

Projected Total Activity at Site	% of referrals to site	Healthboard Population	Total population
2151	32%	600,545	
2151	0%	695,367	
2151	24%	505,722	
2151	26%	316,076	
2151	7%	379,291	
2151	5%	126,430	
2151	7%	537,329	
1037	6%	316,076	
1037	45%	379,291	
1037	1%	126,430	
1037	49%	537,329	
829	10%	126,430	
829	90%	695,367	**3,160,761**
2199	37%	602,046	
2199	0%	697,106	
2199	28%	506,986	
2199	30%	316,866	
2199	0%	380,240	
2199	5%	126,747	
2199	0%	538,673	
1227	6%	316,866	
1227	45%	380,240	
1227	1%	126,747	
1227	49%	538,673	
978	10%	126,747	
978	90%	697,106	**3,168,663**
2199	37%	603,551	
2199	0%	698,849	
2199	28%	508,254	
2199	30%	317,658	
2199	0%	381,190	
2199	5%	127,063	
2199	0%	540,019	
1227	6%	317,658	
1227	45%	381,190	
1227	1%	127,063	
1227	49%	540,019	
978	10%	127,063	
978	90%	698,849	**3,176,585**
2199	37%	605,060	
2199	0%	700,596	
2199	28%	509,524	
2199	30%	318,453	
2199	0%	382,143	
2199	5%	127,381	
2199	0%	541,369	
1227	6%	318,453	

% growth:

Additional

1227	45%	382,143	
1227	1%	127,381	
1227	49%	541,369	
978	10%	127,381	
978	90%	700,596	**3,184,526**
2199	37%	606,573	
2199	0%	702,347	
2199	28%	510,798	
2199	30%	319,249	
2199	0%	383,099	
2199	5%	127,700	
2199	0%	542,723	
1227	6%	319,249	
1227	45%	383,099	
1227	1%	127,700	
1227	49%	542,723	
978	10%	127,700	
978	90%	702,347	**3,192,488**
2199	37%	608,089	
2199	0%	704,103	
2199	28%	512,075	
2199	30%	320,047	
2199	0%	384,056	
2199	5%	128,019	
2199	0%	544,080	
1227	6%	320,047	
1227	45%	384,056	
1227	1%	128,019	
1227	49%	544,080	
978	10%	128,019	
978	90%	704,103	**3,200,469**
2199	37%	609,609	
2199	0%	705,863	
2199	28%	513,355	
2199	30%	320,847	
2199	0%	385,016	
2199	5%	128,339	
2199	0%	545,440	
1227	6%	320,847	
1227	45%	385,016	
1227	1%	128,339	
1227	49%	545,440	
978	10%	128,339	
978	90%	705,863	**3,208,470**
2199	37%	611,133	
2199	0%	707,628	
2199	28%	514,639	
2199	30%	321,649	
2199	0%	385,979	
2199	5%	128,660	

2199	0%	546,803	
1227	6%	321,649	
1227	45%	385,979	
1227	1%	128,660	
1227	49%	546,803	
978	10%	128,660	
978	90%	707,628	**3,216,491**
2199	37%	612,661	
2199	0%	709,397	
2199	28%	515,925	
2199	30%	322,453	
2199	0%	386,944	
2199	5%	128,981	
2199	0%	548,170	
1227	6%	322,453	
1227	45%	386,944	
1227	1%	128,981	
1227	49%	548,170	
978	10%	128,981	
978	90%	709,397	**3,224,532**
2199	37%	614,193	
2199	0%	711,171	
2199	28%	517,215	
2199	30%	323,259	
2199	0%	387,911	
2199	5%	129,304	
2199	0%	549,541	
1227	6%	323,259	
1227	45%	387,911	
1227	1%	129,304	
1227	49%	549,541	
978	10%	129,304	
978	90%	711,171	**3,232,594**
2199	37%	615,728	
2199	0%	712,949	
2199	28%	518,508	
2199	30%	324,068	
2199	0%	388,881	
2199	5%	129,627	
2199	0%	550,915	
1227	6%	324,068	
1227	45%	388,881	
1227	1%	129,627	
1227	49%	550,915	
978	10%	129,627	
978	90%	712,949	**3,240,675**
2199	37%	617,268	
2199	0%	714,731	
2199	28%	519,804	
2199	30%	324,878	

2199	0%	389,853	
2199	5%	129,951	
2199	0%	552,292	
1227	6%	324,878	
1227	45%	389,853	
1227	1%	129,951	
1227	49%	552,292	
978	10%	129,951	
978	90%	714,731	**3,248,777**

0.0%

Scans:	0

Welsh Population	2019	Percentage	2020	Percentage
Aneurin Bevan University Health Board	599,047	19%	600,545	19%
Betsi Cadwaladr University Health Board	693,633	22%	695,367	22%
Cardiff & Vale University Health Board	504,461	16%	505,722	16%
Cwm Taf Morgannwg University Health Board	315,288	10%	316,076	10%
Hywel Dda Health Board	378,345	12%	379,291	12%
Powys Teaching Health Board	126,115	4%	126,430	4%
Swansea Bay University Health Board	535,989	17%	537,329	17%
Welsh Population at 0.25% growth*	**3,152,879**		**3,160,761**	
ONS 2018-based principal projections			**3,164,000**	

Assumptions over 10 year period

Population of Wales - data from: ONS Report released on 24th June 2020: "Population estimates fo

*Population increase 0.25% per year based on: https://statswales.gov.wales/Catalogue/Population

2021	Percentage	2022	Percentage	2023	Percentage	2024	Percentage
602,046	19%	603,551	19%	605,060	19%	606,573	19%
697,106	22%	698,849	22%	700,596	22%	702,347	22%
506,986	16%	508,254	16%	509,524	16%	510,798	16%
316,866	10%	317,658	10%	318,453	10%	319,249	10%
380,240	12%	381,190	12%	382,143	12%	383,099	12%
126,747	4%	127,063	4%	127,381	4%	127,700	4%
538,673	17%	540,019	17%	541,369	17%	542,723	17%
3,168,663		**3,176,585**		**3,184,526**		**3,192,488**	
3,175,000		**3,184,000**		**3,193,000**		**3,200,000**	

r the UK, England and Wales, Scotland and Northern Ireland: mid-2019 - National and subnational mid-ye
-and-Migration/Population/Projections/Local-Authority/2018-based/populationprojections-by-localautho

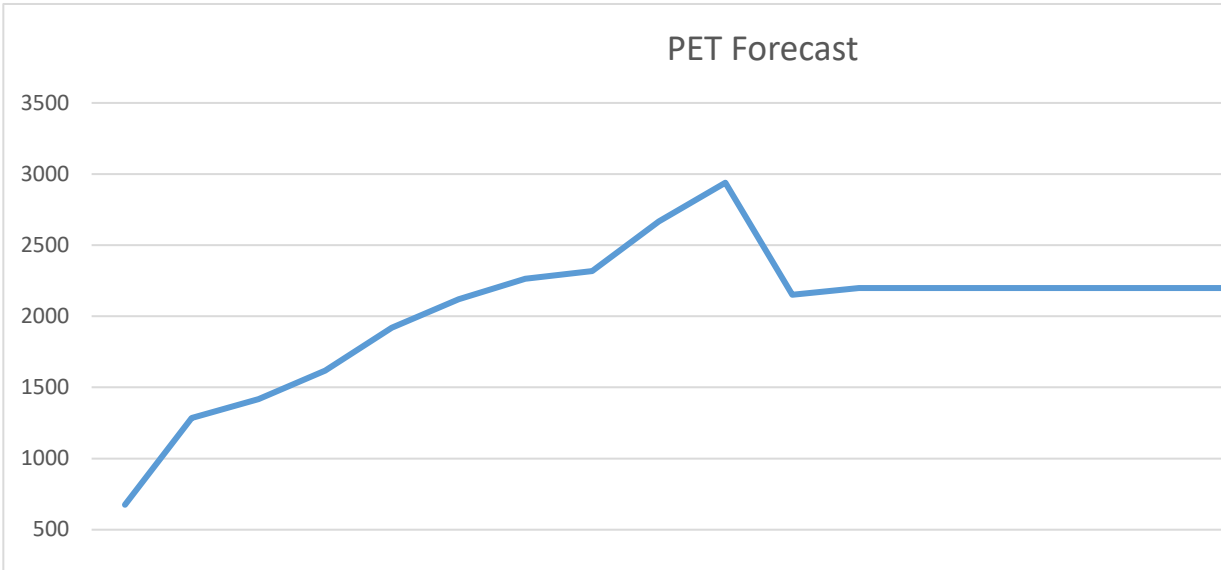
2025	Percentage	2026	Percentage	2027	Percentage	2028	Percentage
608,089	19%	609,609	19%	611,133	19%	612,661	19%
704,103	22%	705,863	22%	707,628	22%	709,397	22%
512,075	16%	513,355	16%	514,639	16%	515,925	16%
320,047	10%	320,847	10%	321,649	10%	322,453	10%
384,056	12%	385,016	12%	385,979	12%	386,944	12%
128,019	4%	128,339	4%	128,660	4%	128,981	4%
544,080	17%	545,440	17%	546,803	17%	548,170	17%
3,200,469		**3,208,470**		**3,216,491**		**3,224,532**	
3,206,000		**3,212,000**		**3,217,000**		**3,223,000**	

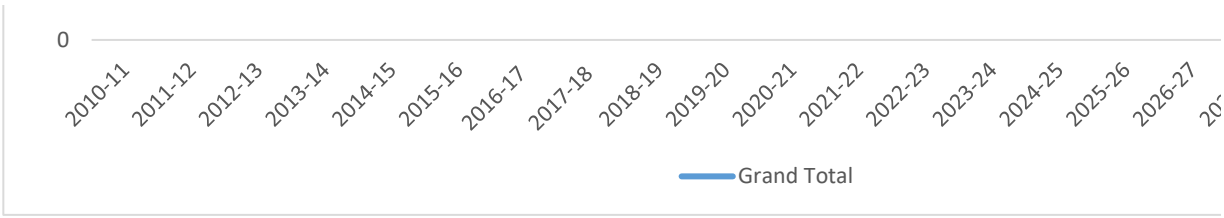
ar population estimates for the UK and its constituent countries by administrative area, age and sex".
ɔrity-year

2029	Percentage	2030	Percentage	2031	Percentage
614,193	19%	615,728	19%	617,268	19%
711,171	22%	712,949	22%	714,731	22%
517,215	16%	518,508	16%	519,804	16%
323,259	10%	324,068	10%	324,878	10%
387,911	12%	388,881	12%	389,853	12%
129,304	4%	129,627	4%	129,951	4%
549,541	17%	550,915	17%	552,292	17%
3,232,594		**3,240,675**		**3,248,777**	
3,227,000		**3,231,000**		**3,235,000**	

Year	ACDT	ADRENOCORTICAL	AMYLOID	ANAL	BLADDER	BREAST	CARDIAC	CERVICAL
2010-11	0	0	0	0	0	0	0	0
2011-12	0	0	0	0	0	0	0	0
2012-13	0	0	0	0	0	0	0	0
2013-14	0	0	0	0	0	0	0	0
2014-15	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0
2016-17	0	0	0	33	0	0	0	0
2017-18	0	0	0	51	0	0	0	0
2018-19	0	0	0	51	0	6	0	0
2019-20	0	0	0	48	19	20	19	0
2020-21	0	0	0	38	17	30	17	0
2021-22	0	0	0	38	17	30	17	0
2022-23	0	0	0	38	17	30	17	0
2023-24	0	0	0	38	17	30	17	0
2024-25	0	0	0	38	17	30	17	0
2025-26	0	0	0	38	17	30	17	0
2026-27	0	0	0	38	17	30	17	0
2027-28	0	0	0	38	17	30	17	0
2028-29	0	0	0	38	17	30	17	0
2029-30	0	0	0	38	17	30	17	0
2030-31	0	0	0	38	17	30	17	0
2031-32	0	0	0	38	17	30	17	0

Share 201	0%	0%	0%	1%	0%	0%	0%	0%
Share 201	0%	0%	0%	2%	0%	0%	0%	0%
Share 201	0%	0%	0%	2%	0%	0%	0%	0%
Share 201	0%	0%	0%	2%	1%	1%	1%	0%




0
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24
2024-25
2025-26
2026-27
Grand Total

CHOLINE	COLORECTAL	CUO	ENDOMETRIAL	EURONET	GYNAE	HEAD & NECK	LUNG	LYMPHOMA
0	103	0	0	0	0	39	271	103
0	211	0	0	0	0	49	521	233
0	191	0	0	0	4	55	668	253
0	192	0	0	0	68	50	689	368
0	200	0	0	0	66	40	898	393
0	212	0	0	0	61	61	966	483
2	202	11	0	0	76	85	1042	462
0	217	15	0	0	89	93	1062	458
61	247	9	0	0	107	193	1122	480
80	306	11	0	2	111	222	1090	484
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438
0	215	12	0	0	86	188	539	438

0%	9%	0%	0%	0%	3%	4%	46%	20%
0%	9%	1%	0%	0%	4%	4%	46%	20%
2%	9%	0%	0%	0%	4%	7%	42%	18%
3%	10%	0%	0%	0%	4%	8%	37%	16%

027-28
2028-29
2029-30
2030-31

MYELOMA	NEUROENDOCRINE	OESOPHAGEAL	OTHER	PANCREAS	PEARL SOC	PMSA	PUO	SABR
0	0	79	80	0	0	0	0	0
0	0	158	112	0	0	0	0	0
0	0	165	81	0	0	0	0	0
0	0	180	71	0	0	0	0	0
0	0	230	93	0	0	0	0	0
0	0	231	104	0	0	0	0	0
0	0	238	111	0	0	0	0	0
0	0	220	113	0	0	0	0	0
4	0	248	135	0		0	0	0
12	0	234	81	76	0	34	26	7
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11
17	0	174	56	78	12	131	33	11

0%	0%	11%	5%	0%	0%	0%	0%	0%
0%	0%	9%	5%	0%	0%	0%	0%	0%
0%	0%	9%	5%	0%	0%	0%	0%	0%
0%	0%	8%	3%	3%	0%	1%	1%	0%

SARCOMA	THYROID	VASCULITIS	Grand Total		
0	0	0	675		
0	0	0	1285		
0	0	0	1417		
0	0	0	1619		
0	0	0	1920		
0	0	0	2119		
0	0	0	2263		
0	0	0	2318		
4	0	0	2667		
38	0	38	2939		
35	0	30	2151		340 additions added to 2021-22
35	0	30	2199		0.278389
35	0	30	2199	1	0.22255
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	
35	0	30	2199	1	

0%	0%	0%
0%	0%	0%
0%	0%	0%
1%	0%	1%

(50% share of 679 confirmed additions)

Cancer Type	RENOCORTI	AMYLOID	ANAL	BLADDER	BREAST	CARDIAC	CERVICAL	CHOLINE	COLORECTA
Jul-20	0	0	3	2	4	0	4	3	10
Aug-20	0	0	2	2	3	0	4	3	5
Sep-20	0	0	1	1	2	0	2	1	5
Oct-20	0	0	0	2	2	0	1	0	8
Nov-20	0	0	1	1	0	0	2	1	8
Total	0	0	7	8	11	0	13	8	36
2020/21	0	0	17	19	26	0	31	19	86
2021-22	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2022-23	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2023-24	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2024-25	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2025-26	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2026-27	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2027-28	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2028-29	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2029-30	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2030-31	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**
2031-32	**0**	**0**	**17**	**19**	**26**	**0**	**31**	**19**	**86**

Cancer of Unknown Origin (CUO)	NDOMETRIA	EURONET	GYNAE	EAD & NEC	LUNG	LYMPHOMA	MYELOMA	UROENDOCR	ESOPHAGEA
1	0	0	0	9	25	14	1	0	3
1	1	0	0	5	19	11	0	0	2
0	0	0	2	7	26	13	2	0	8
1	0	0	1	23	44	13	0	0	0
1	0	0	2	11	31	11	1	0	6
4	1	0	5	55	145	62	4	0	19
10	2	0	12	132	348	149	10	0	46
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**
10	**2**	**0**	**12**	**132**	**348**	**149**	**10**	**0**	**46**

OTHER	OVARY	PANCREAS	PMSA	PUO	SABR	SARCOMA	THYROID	VASCULITIS	rand Tot
0	1	7	0	0	0	0	0	1	88
0	3	3	0	1	0	0	0	1	66
0	1	5	2	0	0	3	0	2	83
1	1	5	2	1	0	0	0	2	107
5	0	3	2	0	0	1	0	1	88
6	6	23	6	2	0	4	0	7	432
14	14	55	14	5	0	10	0	17	1037
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227
14	14	55	14	5	0	10	0	17	1227

al

190 additions added to 2021-22 (28% share of 679 confirmed additions)

1
1
1
1
1
1
1
1
1
1

Fyear	Year	Activity
2016-17	01/04/2016	781
2017-18	01/04/2017	762
2018-19	01/04/2018	771
2019-20	01/04/2019	819
2020-21	01/04/2020	**829**
2021-22	01/04/2021	**978**
2022-23	01/04/2022	**978**
2023-24	01/04/2023	**978**
2024-25	01/04/2024	**978**
2025-26	01/04/2025	**978**
2026-27	01/04/2026	**978**
2027-28	01/04/2027	**978**
2028-29	01/04/2028	**978**
2029-30	01/04/2029	**978**
2030-31	01/04/2030	**978**
2030-32	01/04/2031	**978**

149 additions added to 2021-22 (22% share

ɛ of 679 confirmed additons)

Programme Business Case
for an **All Wales Positron Emission Tomography (PET) Service**

Gap analysis of PET provision Wales compared to England 2021

Strategic Case - Appendix 5

Author: Patrick Fielding (March 2021)

This year's report is going to be very brief. Because of the COVID -19 pandemic, there has been a big impact on numbers of PET scans performed for oncology and non-oncology indications throughout the world, affecting both England and Wales. Prior gap analysis reports have looked at trends in PET imaging rates per million population per year but this is omitted from the current report.

Also omitted from the current report are detailed explanations of the differences in wording of commissioning policy between the policies for England (based on "Evidence based indications for the use of PET-CT in the United Kingdom" 2016.RCR/RCP) and Wales CP50a (ver 6.3)

This document assumes that the proposed version of the policy and its associated increased expenses will be agreed, funded and implemented.

Notes

For each indication the Welsh policy is compared to the UK document wording. There are four possible categories: None, some, most, covered. These are broad categorisations and aim to give a rough guide as to how the policies compare. These are a best approximation of a comparison of the policies.

In a few cases there has been a recent expansion of the Welsh policy, but not enough quite to achieve as a category change. These have been marked by **.An example of this is lymphoma for which there is now specific inclusion of mantle cell and follicular lymphoma, the policy still does not however quite match the UK document. In particular in the Welsh document interim assessments of non-Hodgkin lymphoma are not included and this is still characterised as "most".

It is also worth noting that where "none" appears on the table this does not mean that there is no access at all, teams can still apply for IPFR funding for these investigations.

Need to address

The author has also a suggested a few areas that going forward, the AWPET might want to address. (1) At the moment there is no formal policy or cover for testicular tumours, some of these are done under the "other" category, but perhaps this could be formalised? Similarly there is no specific category/ commissioning policy for skin malignancies especially melanoma and again this is perhaps something to address in the future. From personal communications there is an ongoing perception of under provision of imaging for Myeloma, both WB MRI and FDG PET. (3) Ideally this again needs to be addressed. Finally (4) there are early indications that disease modifying drugs in Alzheimer's disease may become available. These are likely to require amyloid imaging as a prerequisite prior to therapy. If approved/ funded this may lead to a need for commissioning of more FDG brain scans and amyloid brain PET scans.

A - At a glance comparison of UK PET commissioning

		England	Wales (2016)	Wales (2018)	Wales (2020)	Wales (2021)	Need to address
FDG Oncology	Brain	Covered	None	None	None	None	
	Head and Neck	Covered	Some	Most	Covered	Covered	
	Thyroid	Covered	None	Covered	Covered	Covered	
	Lung	Covered	Some	Covered	Covered	Covered	
	Pleura	Covered	Some	Some	Some	Some	
	Thymus	Covered	None	None	None	None	
	Oesophagogastric	Covered	Most	Most	Covered	Covered	
	GIST	Covered	None	None	None	Covered	
	Breast	Covered	None	Covered	Covered	Covered	
	HPB	Covered	None	None	Some	Most	
	Colorectal	Covered	Most	Most	Most	Most**	
	Urology	Covered	None	None	Some	Most	
	Gynaecology	Covered	Some	Most	Covered	Covered	
	Testicular	Covered	None	None	None	None	(1)
	Anal and penile	Covered	Some	Some	Some	Some	
	Lymphoma	Covered	Most	Most	Most	Most **	
	Myeloma	Covered	Some	Most	Most	Most	(3)
	Skin	Covered	None	None	None	None	(2)
	Musculoskeletal	Covered	None	Most	Most	Most	
	Paraneoplastic	Covered	Some	Some	Some	Most	
	Carcinoma unknown primary	Covered	Some	Some	Some	Some	
	Neuroendocrine	Covered	None	Covered	Covered	Covered	
	Rare childhood	Covered	None	None	Most	Most	
	Pre SABR	Not specifically covered	None	None	Covered	Covered	
Non oncology FDG	Neurology	Covered	Some	Some	Some	Most	(4)
	Cardiology	Covered	Some	Some	Some	Some	
	Vasculitis	Covered	None	None	Covered	Covered	
	Sarcoid	Covered	None	None	Most	Most	
	Infection	Covered	None	None	Covered	Covered	
	PUO	Covered	None	None	Covered	Covered	
Non FDG	Methionine/ FET	Covered	None	None	Some	Some	
	Ammonia	Covered	None	None	None	Nome	
	Choline/ PSMA	Covered	None	Some	Most	Covered	
	11 C Acetate	Covered	None	None	None	None	
	Ga 68 DOTA	Covered	Most	Most	Covered	Covered	
	F-DOPA	Covered	None	None	None	None	
	18 F Fluoride	Covered	None	None	None	None	
	Amyloid	None	None	None	None	None	(4)

** there has been an expansion of indications between 2020 and 2021 but not quite matching the UK document thus not quite fulfilling criteria for “covered”

Programme Business Case
for an **All Wales Positron Emission Tomography (PET) Service**

Clinical Demand Model Narrative

Strategic Case - Appendix 6

Methodology

To best inform the All Wales Programme Business Case (PBC) submission to Welsh Government, a Clinical Board was set-up within the programme. The Clinical Board of this Programme met nine times between February 2020 and November 2020 was tasked with developing a Clinical Model of PET-CT demand up to 2031. The main Aims of the group were:

- Develop and promote the vision, values and culture of a quality PET service through fit-for-purpose service models that are practicable, and meet the required national and local clinical standards while realising equitable quality outcomes across Wales.
- Develop a strategic and delivery focussed PET service model to enable timely delivery of service reconfiguration while ensuring it is fit for purpose, of high quality and does not adversely impact on the patient, partner organisations or outcomes.

The Clinical Model will serve as the foundation upon which to design future PET Service Provision across Wales, and consequently will inform the PBC. Members of the Clinical Board are considered experts in the field of PET in Wales and the TOR can be found here:

Clinical Programme Board TOR

The dataset presented within the clinical model involves both qualitative and quantitative data.

Clinical Board members made use of their networks and expertise in reviewing published peer-reviewed papers to obtain comparator data. In addition, colleagues within WHSSC worked to collate existing data on current and previous PET scanning activity across Wales. Additionally, a questionnaire was developed to gather views from relevant clinical staff across Wales on the future scope of PET scanning (see Appendix 1).

Where quantitative data was extracted from other sources, the verified reference is clearly marked within each section below.

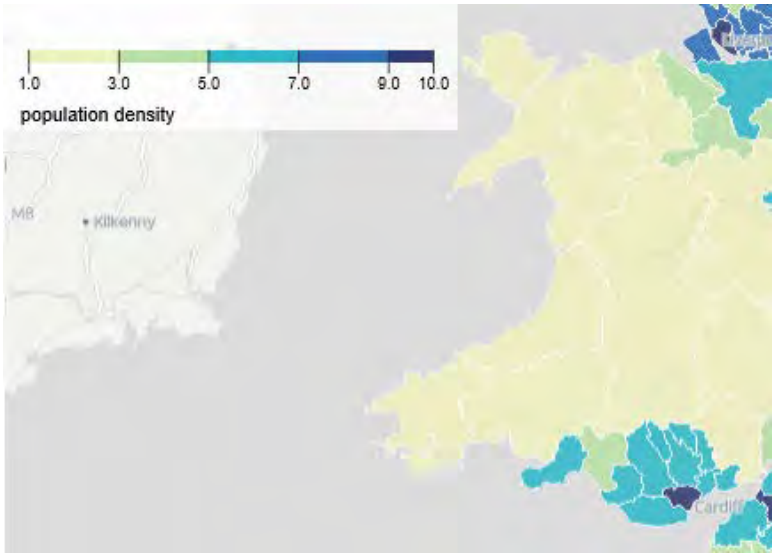
Data analysis was undertaken by an Information Analyst within WHSSC, who is experienced in evaluating and generating datasets to inform specialist commissioning and health service planning. An internal review of the data was carried out prior to presentation to the PET Clinical Board and Strategic Programme Board for decisions on the final PET 2031 Clinical Model included within the PBC.

Welsh Population

Based on the June 2020 report from the ONS on "Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland", the mid-2019 population of Wales was 3,152,879 (1,554,678 males at 49.3%, and 1,598,201 females at 50.7%).

According to "Stats Wales: Population projections by local authority and year" (2018), a percentage population increase in Wales i.e. "population growth", would be 0.25%. We have therefore applied this percentage year-on-year population growth to Table X, which shows 2031 population of Wales to be approximately 3.2 million. This is largely in line with the 2018 National Population Projections by the Office of National Statistics, which estimated and projected the population of Wales to be around 3.2 million by 2023. This is a modest growth for the Welsh population.

The population density across Wales can be seen in Figure X below, where it is clear that Cardiff and the surrounding South Wales areas have the highest density of people. The highest density of Welsh citizens in North Wales is centred on Wrexham.

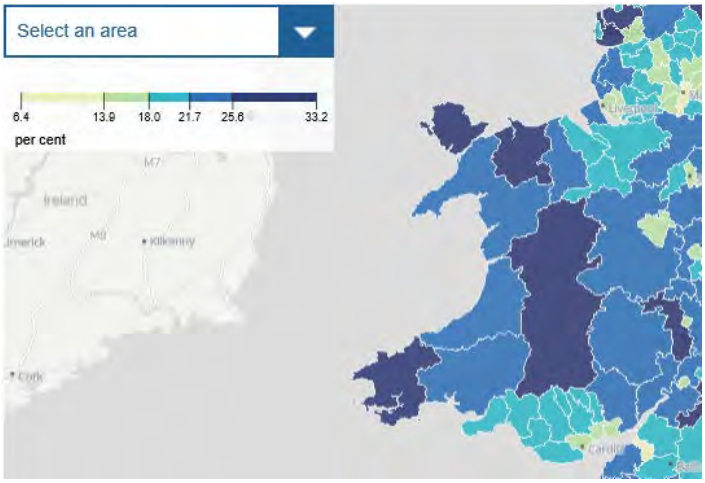


According to the World Population Prospects: the 2019 Revision, for the first time in history in 2018, persons aged 65 or above outnumbered children under five years of age globally. Indeed, a population trend across the UK is that the "number of those aged 65 years and over continues to increase faster than the rest of the population", with the population aged 65 years and over having the highest level of growth of any broad age group in 2019 (ONS, Dataset: Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland). There was a relatively uniform increase in the number of people aged 65 years and over in the year to mid-2019 across the constituent countries of the UK, with England (1.7%), Scotland (1.8%), Wales (1.6%) and Northern Ireland (2.1%) all experiencing a similar proportion of growth.

Based on this 1.6% growth we predict that in 2031, 24.7% of the Welsh population will be 65 or older, based on population of 3,248,777, with 801,386 people in the 65+ range.

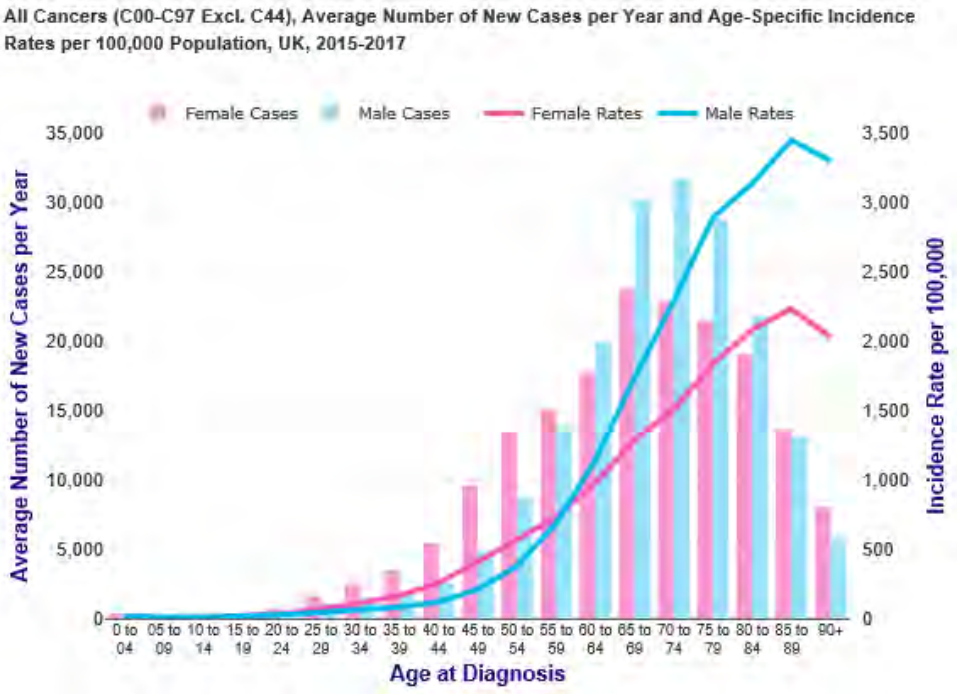
Healthboard
population estimate

The 2019 ONS Dataset critically demonstrated how Welsh rural areas typically have older populations than cities. This is an important consideration in service provision and access to key clinical services.



Disease Prevalence within the Welsh population

Although Welsh population growth over the next 10 years will be modest, Wales is projected to realise growth in the 65+ population of around 130,000, which is a significant demographic shift. An aging population will mean increased overall demand for health and care services (Future of an Ageing Population, Government Office for Science., 2016). Population ageing will mean a greater prevalence of age-related conditions, such as dementia and chronic conditions affecting the heart, musculoskeletal and circulatory system. Data in Figure X below demonstrate the increased incidence of cancer with age at diagnosis (Cancer Research UK, https://www.cancerresearchuk.org/health-professional/cancer-statistics/incidence/age#heading-Zero , Accessed January 2021).



This disproportionate demand on services will include increased requests for imaging diagnostics, which is an important consideration when looking to predict future demand for PET-CT scans.

Table 1 - Disease prevalence in Wales compared to UK average

Quality and Outcomes Framework 2015-2019

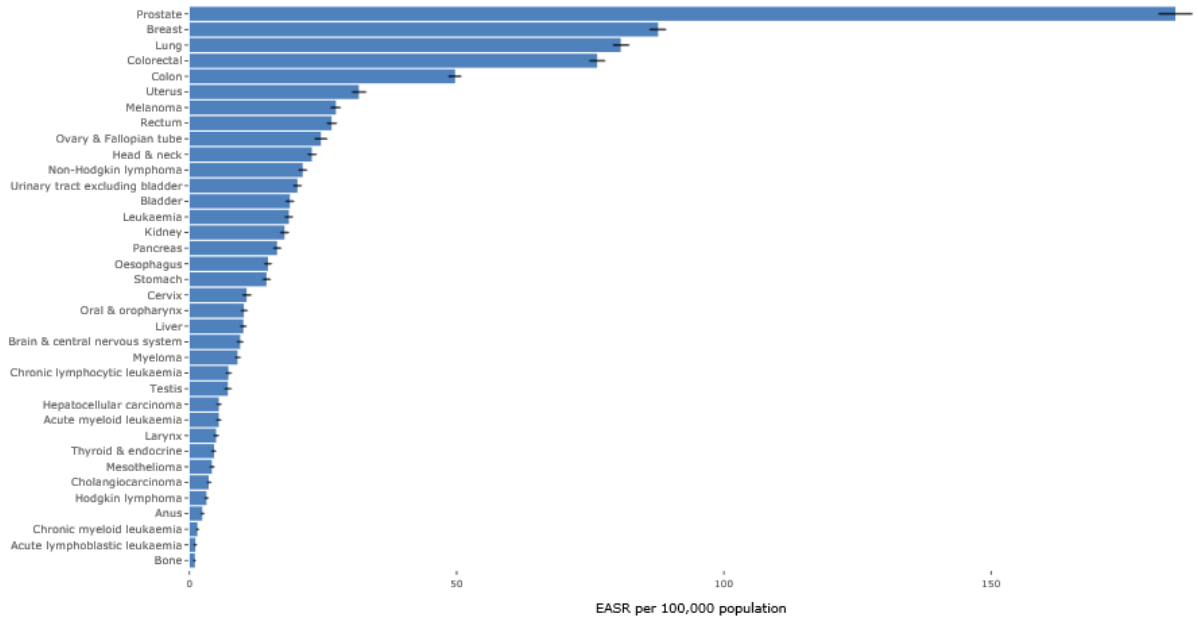
	2015		2016		2017		2018		2019	
	Wales	UK	Wales	UK	Wales	UK	Wales	UK	Wales	UK
Cancer Disease Prevalence	2.44%	2.26%	2.60%	2.42%	2.80%	2.58%	2.95%	2.73%	3.11%	2.97%
Dementia Disease Prevalence	0.60%	0.73%	0.64%	0.76%	0.67%	0.76%	0.68%	0.76%	0.70%	0.78%
Chronic Heart Disease Prevalence	3.79%	3.36%	3.75%	3.31%	4.17%	3.23%	3.66%	3.18%	3.63%	3.14%

Source: https://www.gpcontract.co.uk/browse/WAL/15

Data in Table 1 show the relative prevalence of cancer, dementia and CHD in Wales compared to the rest of the UK. Wales has a higher prevalence for cancer and chronic heart disease than the UK average. The reason for focusing on these disease areas here is that they are believed to be the biggest drivers for future PET scanning (see below).

Dementia in Wales is at a slightly lower prevalence to the UK average. However projections are for a substantial increase in the overall number of cases from 822,000 to 940,000 by 2031 in the UK, and more than 1.7million by 2051 (Alzheimer's Society (2014) Dementia UK: Update, https://www.alzheimers.org.uk/dementiauk, Accessed January 2021). As such, dementia rates in Wales will likely rise, in line with the rest of the UK and as a marker of an aging population of Wales.

The most common cancers in Wales are prostate, breast, lung and colorectal. Further detail can be found here:https://publichealthwales.shinyapps.io/Cancer_incidence_in_Wales_2001-2017/



Welsh PET-CT commissioning

The Welsh Health Specialised Services Committee (WHSSC) commission and approved funding of PET scans for the population of Wales in line with the criteria presented in commissioning policy CP50a. In addition, WHSSC will only commission PET services from providers in accordance with the criteria outlined in their specification CP50b (which covers requirements for both fixed site and mobile scanners). The purpose of the service specification is to define the requirements and standard of care essential for delivering PET-CT for people of all ages resident in Wales. The objectives of this service specification are to:

- detail the specifications required to deliver PET-CT for people who are residents in Wales
- ensure minimum standards of care are met for the use of PET-CT
- ensure equitable access to PET-CT
- deliver a high quality PET service for people resident in Wales
- identify centres that are able to provide PET-CT for people resident in Wales
- improve outcomes for people accessing PET-CT services.

WHSSC is committed to regularly reviewing and updating all of its clinical commissioning policies based upon the best available evidence of both clinical and cost effectiveness. In September 2016, WHSCC established the multidisciplinary All Wales PET Advisory Group (AWPET). This Group is tasked to review the evidence base for PET-CT and advise WHSSC on the introduction of new indications (including non-oncological indications), ensuring that all decisions are made following a systematic review of the available evidence.

The number of clinical indications commissioned in Wales has historically lagged behind both devolved UK nations and comparable international healthcare systems. However this discrepancy is improving and more indications have been supported by WHSSC since 2016 and are now commissioned (Table 2).

Table 2 - Comparison of the indications allowed in the relevant year from WHSSC CP50a policy, mapped against the RCR Appropriate use publication.

		England	Wales (2016)	Wales (2018)	Wales (2020)	Wales (2021)	Need to address
FDG Oncology	Brain	Covered	None	None	None	None	
	Head and Neck	Covered	Some	Most	Covered	Covered	
	Thyroid	Covered	None	Covered	Covered	Covered	
	Lung	Covered	Some	Covered	Covered	Covered	
	Pleura	Covered	Some	Some	Some	Some	
	Thymus	Covered	None	None	None	None	
	Oesophagogastric	Covered	Most	Most	Covered	Covered	
	GIST	Covered	None	None	None	Covered	
	Breast	Covered	None	Covered	Covered	Covered	
	HPB	Covered	None	None	Some	Most	
	Colorectal	Covered	Most	Most	Most	Most**	
	Urology	Covered	None	None	Some	Most	
	Gynaecology	Covered	Some	Most	Covered	Covered	
	Testicular	Covered	None	None	None	None	(1)
	Anal and penile	Covered	Some	Some	Some	Some	
	Lymphoma	Covered	Most	Most	Most	Most **	
	Myeloma	Covered	Some	Most	Most	Most	(3)
	Skin	Covered	None	None	None	None	(2)
	Musculoskeletal	Covered	None	Most	Most	Most	
	Paraneoplastic	Covered	Some	Some	Some	Most	
	Carcinoma unknown primary	Covered	Some	Some	Some	Some	
	Neuroendocrine	Covered	None	Covered	Covered	Covered	
	Rare childhood	Covered	None	None	Most	Most	

	Pre SABR	Not specifically covered	None	None	Covered	Covered	
Non oncology FDG	Neurology	Covered	Some	Some	Some	Most	(4)
	Cardiology	Covered	Some	Some	Some	Some	
	Vasculitis	Covered	None	None	Covered	Covered	
	Sarcoid	Covered	None	None	Most	Most	
	Infection	Covered	None	None	Covered	Covered	
	PUO	Covered	None	None	Covered	Covered	
Non FDG	Methionine/ FET	Covered	None	None	Some	Some	
	Ammonia	Covered	None	None	None	Nome	
	Choline/ PSMA	Covered	None	Some	Most	Covered	
	11 C Acetate	Covered	None	None	None	None	
	Ga 68 DOTA	Covered	Most	Most	Covered	Covered	
	F-DOPA	Covered	None	None	None	None	
	18 F Fluoride	Covered	None	None	None	None	
	Amyloid	None	None	None	None	None	(4)

Table 3 summarises the new indications that AWPET has recommended for inclusion within a revised PET commissioning policy, from April 2021. These indications have been selected based on careful assessment of the evidence base. Behind each overarching indication, specific criteria have been agreed to define the clinical circumstances in which patients should be referred. Table X also shows the estimated annual volumes of referral for each indication (all Wales).

Table 3 - New indications for PET-CT: Estimated volume per (All Wales)	
Clinical indication	**Scans per annum**
Colorectal cancer	40
Cholangiocarcinoma	24
Dementia	250
Gastrointestinal stromal tumours (GIST)	45
Lymphoma	40
Prostate cancer	280
TOTAL	**679**

Whilst the number of indications commissioned can be viewed as an improving picture for Wales, in terms of providing similar care seen in the rest of the UK, there is still progress to be made. In addition, the increased number of scans required per annum will add to the scanning capacity issues that face PET provision across Wales. It should be noted that it appears that tighter “gatekeeping” or reviewing of referrals for PET scans is present in Wales, compared to England, which may be a factor.

	PETIC, Cardiff (South East)		**Wrexham (North)**		**Swansea, (South East)**		**Total number of PET scans**
Year	**NHS Scans**	**Growth**	**NHS Scans**	**Growth**	**NHS Scans**	**Growth**	

2010-11	675	n/a					675
2011-12	1285	90%					1285
2012-13	1417	10%					1417
2013-14	1619	14%					1619
2014-15	1920	19%					1920
2015-16	2119	10%	794	N/A			2913
2016-17	2263	7%	784	-1%			3047
2017-18	2318	2%	763	-3%			3081
2018-19	2667	15%	771	1%			3438
2019-20	2939	10%	819	6%			3758
2020-21 (April to February)	1989 (~2151 for full year#)	N/A*	703 (~829 for full year#)	7%	670 (~1037 for a full year#)	N/A	~4017
2021-22 (Estimated with new indications and **no** growth)	2199	2%	978	18%	1227	18%	4404

TABLE 4. The figures for this table have been submitted to WHSSC by the service providers at each site. South East Wales are provided by Prof Chris Marshall, for South West Wales by Professor Neil Hartman, and for North Wales from Dr Mark Elias. *Fall in activity due to Covid-19 and provision of new capacity Swansea from July 2020. # These figures are predicted scans for the year based on current activity. At the point of writing the site service reports up to date as far as and including November 2020.

Welsh PET-CT Scanner Provision

There are currently three PET providers in Wales. A full-time fixed site at the University Hospital of Wales, Cardiff (PETIC; South East Wales) and a 2 day per week mobile service in North Wales (Wrexham Maelor Hospital) and in South West Wales (Morriston Hospital, Swansea).

Wales significantly under performs in terms of PET scans per head of population (Table X) and PET-CT infrastructure, when compared to England, Scotland, and Northern Europe.

As mentioned above, the situation has improved significantly in the last 3 years, with the expansion of funded indications, and the opening of a second WHSSC-commissioned mobile PET unit for 2 days per week in Swansea in summer 2020.

Table 5 - Number of PET-CT scans per million population					
	PET-CT scans per million population				
	2015/16	2016/17	2017/18	2018/19	2019-20
England	1849	2100	2600	3150	3533
Wales	922	975	985	1100	1192

Welsh actual number of scans sourced from WHSSC. England number of scans sourced from Diagnostic Imaging Dataset Annual Statistical Release 2019/20 *Number of scans divided by population numbers from ONS.

Table 5 provides a comparison of Wales to the number of scans carried out in England, per million of population. It is clear that Wales is currently carrying out significantly lower numbers (approximately 33%) of PET scans per head of population compared to England, despite having a higher prevalence of cancer (and other chronic diseases). There are various reasons for this difference, including

1. Less commissioned indications in Wales compared to England,
2. Lack of geographic access to PET-CT for North Wales and South,
3. Historic under-referral, and
4. Tighter gatekeeping in Wales compared to England.

In 2018, there were 607,000 PET-CT scans undertaken in France, with Italy recording the next highest number (338,000) (Healthcare resource statistics - technical resources and medical technology", Eurostat, 2020).

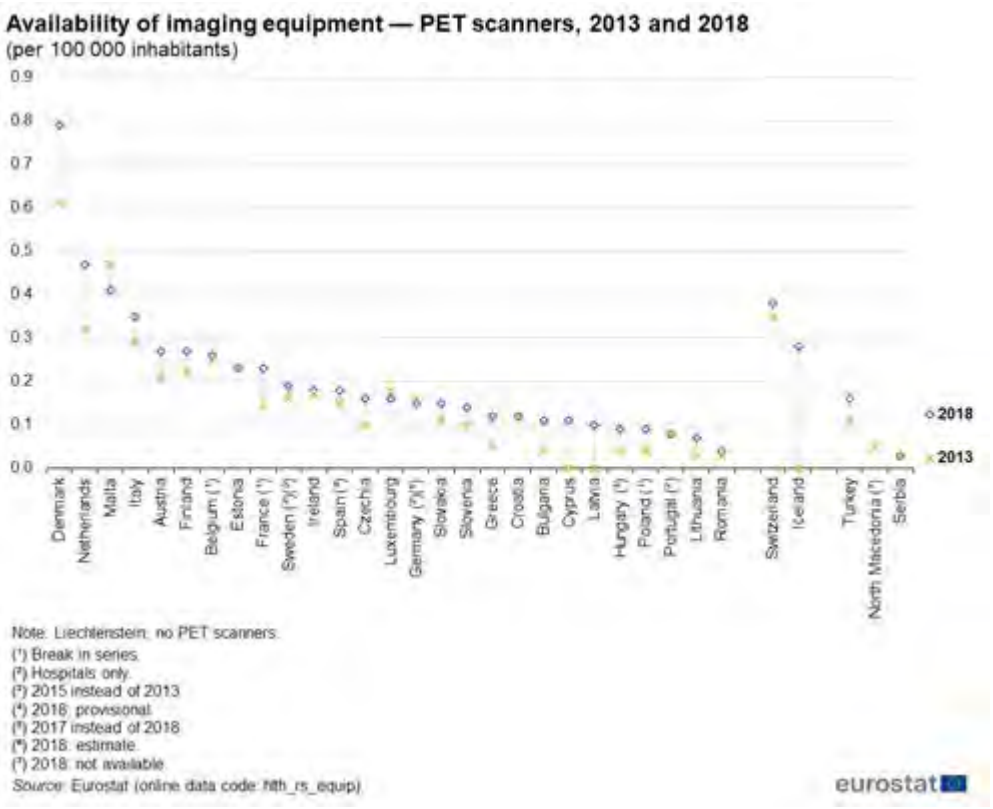
In the Royal College of Radiologists (RCR) 2005 strategy document "PET-CT in the UK: a strategy for development and introduction of a leading edge technology within routine clinical practice", the working party recommended: "Initially, one PET-CT per 1.5 million population is planned to reflect the current role in cancer management."

Progress has been made in other countries since 2005, and according the NCRI there are now 1.05 PET scanners per million population in England.

Table 6 - Comparison of number of scanners within the UK				
Country	Fixed PET CT	Mobile PET CT	PET MR	Scanners per million
England	37	20	1	1.05
NI	2	0	0	1.05
Scotland	6*	0	1	1.27
Wales	1	0.8	0	0.60

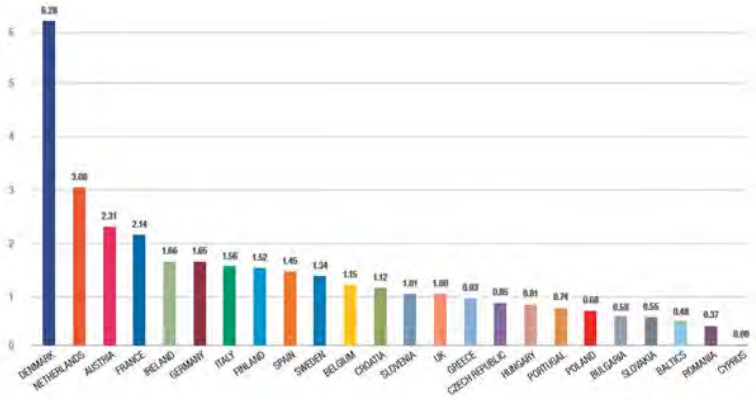
Data sources from: http://www.ncri-pet.org.uk/pet_scanning_and_cyclotron_facilities.php and informal communication between Clinical Programme Board Chairs and Regional Chairs for Scotland, Northern Ireland and England. *5 NHS PET-CT. 1 research PET CT

Furthermore, in the rest of the UK, PET-CT has moved out of specialist commissioning and tertiary centres to become a routine part of the equipment in the nuclear medicine departments of teaching hospitals and large District General Hospitals.



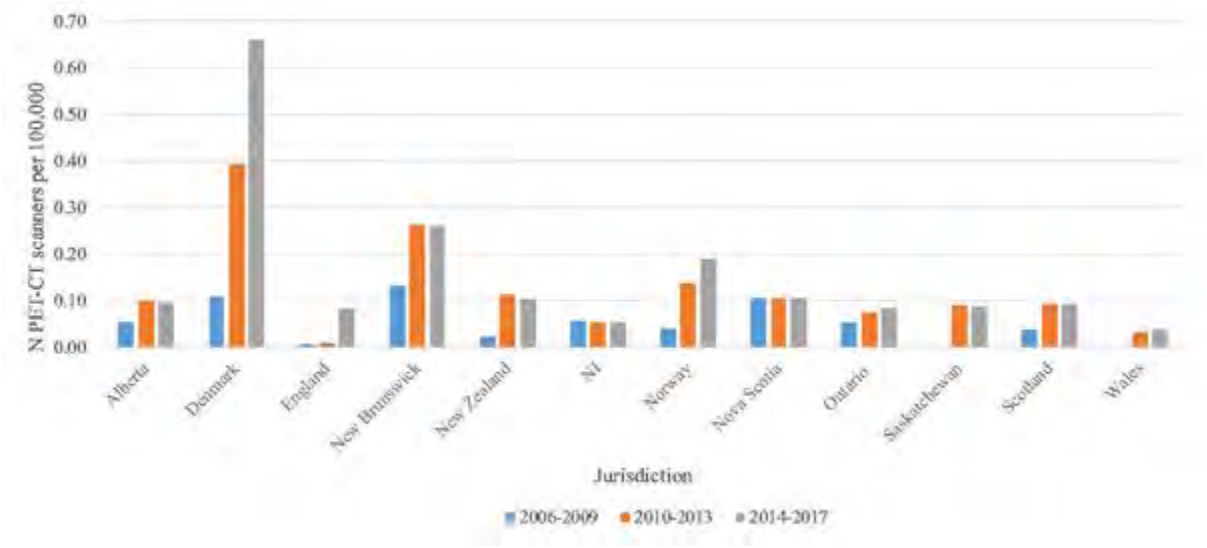
It is very clear from Table 6 that the number of scanners per head of population in Wales is significantly lower than the rest of the UK. The picture becomes worse when comparing the number of scanners in Wales to the rest of Europe and beyond.

The 2016 edition of the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry report on "Medical Imaging Equipment Age Profile and Density" shows the UK position to be a density of 1 PET-CT scanner per million. If we consider Welsh provision at 0.60 scanners per million population, then we are currently comparable to Bulgaria and Poland.



According to "Healthcare resource statistics - technical resources and medical technology" (Eurostat, 2020), there has been "a notable increase in the number of positron emission tomography (PET) scanner units" across Europe, with France increasing its number of PET-CT scanners from 9 in 1998 to 156 in 2018. According to this publication, the number of PET-CT scanners ranged from 0.0 per 100,000 population in countries such as Liechtenstein, Romania and Serbia, to 0.8 per 100,000 population in Denmark.

A more recent publication that explored PET-CT services across 21 jurisdictions in seven countries (Australia, Denmark, Canada, Ireland, New Zealand, Norway and the UK) to assess service provision internationally and further understand the impact variation may have upon cancer services. Lynch et al., (2020), found that the number of PET-CT scanners per 100,000 population in Wales is the lowest at 0.04 in 2017 with 1.2 scanners. With Swansea mobile scanner set-up in 2020, this is now 1.4 scanners and approximately 0.047 scanners per 100,000 population, which would still see Wales at the lowest ranking.



A comparative analysis: international variation in PET-CT service provision in oncology—an International Cancer Benchmarking Partnership study https://academic.oup.com/intqhc/advance-article/doi/10.1093/intqhc/mzaa166/6030987

Lynch et al., (2020) noted that the growth in PET-CT in Denmark is likely to be reflective of changes brought about by the 2007 National Danish Invitation to Tender for Delivery of Cancer Scanners, as well as the introduction of national integrated pathways for cancer care (Hoilund-Carlsen PF et al., 2011). Lynch et al., (2020) went on to highlight that recent ICBP research demonstrated improvements in cancer survival in Denmark, for example from 27.5% 1-year lung cancer survival (1995–1999) to 46.2% (2010–2014) (Arnold et al., 2019). This will have been influenced by a multitude of factors—one of which may well be the increase in capacity of PET-CT services, and subsequently more accurate staging and treatment planning (Lynch et al., 2020; Wait et al., 2017).

Future projections for scanning demand in Wales

The NHS England "Diagnostic Imaging Dataset Annual Statistical Release 2019/20" shows PET-CT in England increasing year-on-year with a large proportional increase in 2019/20 - up 12.6%.

The 2019-20 Diagnostic Imaging Dataset also shows that PET scan imaging in England is dominated by the 60-74 year old age group, accounting for 86,870 scans, or 45% of 2019-2020 PET scanning activity.

Critically, according to the Richards Report (2020), PET scanning activity in England has shown a marked increase in activity of 18.7% per annum between 2014/15 and 2018/19. The report also makes a recommendation that "MRI, PET-CT, plain X-ray equipment (including

mobile X-ray equipment) and ultrasound and DEXA scanning equipment should, as a minimum, be expanded in line with current growth rates and all imaging equipment older than 10 years be replaced".

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scopy	Nuclear Medicine	PET-CT Scans	SPECT Scans	Medical Photography
2012/13[2,3]	21,195,275	7,807,695	3,474,970	2,352,090	1,061,980	439,470	71,485	19,205	6,090
2013/14[3]	21,845,725	8,176,945	3,825,130	2,617,110	1,051,370	444,830	75,650	21,370	10,525
2014/15[3]	22,637,935	8,596,590	4,210,630	2,898,465	1,023,720	436,505	89,245	27,690	16,180
2015/16[3]	22,572,915	8,919,015	4,461,975	3,085,065	1,043,980	428,400	97,990	32,080	23,945
2016/17[3]	22,908,620	9,351,480	4,815,890	3,358,485	1,057,115	427,145	132,745	36,075	31,225
2017/18	22,908,795	9,507,560	5,146,475	3,464,010	1,025,330	417,460	154,270	40,015	37,550
2018/19	23,467,930	10,161,965	5,665,930	3,743,995	1,034,025	421,650	177,330	45,365	52,875
2019/20	23,150,820	10,261,890	5,959,860	3,811,415	1,001,770	396,350	199,585	45,110	57,650
% Growth[4]	-1.4%	1.0%	5.2%	1.8%	-3.1%	-6.0%	12.6%	-0.6%	9.0%

Count of NHS imaging activity in England, 2012/13 to 2019/20, Diagnostic Imaging Dataset Annual Statistical Release 2019/20

The Richards Report estimates demand for PET-CT scanning to continue to increase, noting that "[demand] has been growing at an exceptional rate (18.7% p.a.), having started from a low base. Continuation at this rate may not be needed, but it is important to recognise that England still lags well behind other countries, with an extra 57% [activity demand capacity] needed to meet the OECD average in 2017. Expansion by at least 10% p.a. over the next five years is therefore likely to be needed".

	Additional	Replacement
CT scanners	777	256
MRI scanners	273	193
Ultrasound	1,298	1,331
Mobile X-ray	300	749
Mammography	195 (screening + symptomatic)	695 (screening + symptomatic)
DEXA scanners	25	80
Fluoroscopy	263	860
Nuclear medicine	0	211
PET-CT	45	10 mobile, 6 fixed

Note: Additional scanners are based on predicted growth in activity. Throughput is based on 14 hours per day, six days per week. Replacement scanners are based on the known ages of all equipment and the need to replace after 10 years. In some cases, newer technologies may be used for replacement (e.g. CT scanners that can deliver CT coronary angiography, or SPECT-CT in place of standard nuclear medicine scanners).

Table 7 - Estimated requirement for imaging equipment over

This is an exceptional consideration when turning attention to the estimated growth demand for PET-CT for Wales, especially in light of the fact that Welsh PET-CT scanning provision by way of scanner numbers, scans per population and commissioned indications are currently well below other devolved UK nations and Europe. In addition, the Welsh population is growing and the proportion of Welsh citizens aged 65 years and over is increasing and there is increased disease prevalence in Wales.

Essentially, Welsh PET-CT scanning provision first needs to "catch up" with developed world country comparators, then look to align with the estimated growth demand.

Developing the Welsh PET demand model

Members of the Clinical Programme Board based their demand model on the population growth estimates included above. In addition, the group assessed different scenarios that included an expanded list of commissioned clinical indications in line with comparator countries. Furthermore, members of the group considered feedback from a questionnaire that had been circulated to experts in Wales. The clinical questionnaire was sent to twenty-three clinical specialists to complete between June-July 2020. Twelve of the twenty three colleagues responded to the four questions and provided free-text answers. A number did not respond as they felt not their area. Detailed breakdown of the findings can be found in Appendix 3 of the Programme Strategic Case.

All of these sources of information informed the demand model assumptions for PET-CT use in various clinical indications and modalities outside of cancer diagnostics e.g. use in radiotherapy planning, generic cardiology indications and Dementia.

The clinical demand model includes the additional scans that are estimated to result from the widened commissioning policy that will be in place from April 2021 (679 additional scans). All scenarios can be seen in the below interactive excel sheet and are summarised in Table 7.

PET demand forecast
All Wales

Table 7 - Depiction of scenarios of PET scan demand based on growth and indications commissioned

Numbers of additional scans through widened commissioning of indications	Underlying growth	Projected South Wales activity 2031	Projected North Wales activity 2031	Projected All Wales activity 2031
No new indication scans	10% underlying growth	9712	2752	12464
	15% underlying growth	15794	4460	20253
	20% underlying growth	25159	7082	32241
	25% underlying growth	39327	11039	50366
+50 new indication scans	10% underlying growth	10334	2927	13261
	15% underlying growth	16586	4683	21269
	20% underlying growth	26172	7368	33539
	25% underlying growth	40624	11404	52029
+100 new indication scans	10% underlying growth	10965	3102	14058
	15% underlying growth	17377	4906	22284
	20% underlying growth	27184	7653	34837
	25% underlying growth	41921	11770	53691
+200 new indication scans	10% underlying growth	12199	3453	15652
	15% underlying growth	18961	5353	24314
	20% underlying growth	29209	8224	37433
	25% underlying growth	44515	12502	57017
+400 new indication scans	10% underlying growth	14685	4154	18839
	15% underlying growth	22128	6246	28375
	20% underlying growth	33258	9366	42625
	25% underlying growth	49702	13965	63667

The Clinical Board presented all model scenarios to the Strategic Programme Board in August 2020. In consideration of the need for international benchmarking "levelling-up", alongside the predicted expansion of commissioned clinical indications and the potential for additional modalities of use, a 20% growth model per annum (without additional scans) for the next ten years was deemed as an appropriate option that would account for the inputs noted above. This is the model that has been chosen by the expert membership of the Strategic Programme Board as the most likely real-time demands, based on figures from the Richards report and anecdotal growth in England to date.

Table 8. Summary of likely clinical demand for PET scans across Wales based on 20% underlying growth.

Year	South East Wales	South West Wales	North Wales	Projected All Wales demand
2021	2629	1434	1144	5207
2022	3155	1721	1373	6249
2023	3786	2065	1647	7498
2024	4543	2478	1976	8998
2025	5452	2974	2372	10789
2026	6542	3569	2846	12957
2027	7851	4282	3415	15548
2028	9421	5139	4098	18658
2029	11305	6167	4918	22390
2030	13566	7400	5902	26868
2031	16279	8880	7082	32241

Red cells highlight where clinical demand outstrips current service provision. Amber cells denote where clinical demand will outstrip "do minimum" option. Green cells denote where clinical demand may outstrip "preferred" option.

Modern PET-CT scanners are capable of scanning 5,500 patient episodes per annum, however an assumption is that a scanner is functional 50 out of the 52 weeks of the year to account for routine maintenance and servicing (and breakdown). Therefore we can reasonably assume that a modern, digital PET-CT scanner can provide ~5,288 scans per annum. The current analogue scanners that are in place within Wales (mobile and fixed at PETIC site) are capable of ~2,884 scans per annum, when active for ten sessions per week (50 weeks per year, with 3,000 maximum capability). As such, we can deduce, based on a 20% growth model, the years in which demand for PET scanning will reach the point where existing service models and facilities will not meet demand.

Based on this model, South East Wales is nearing capacity (2021) based on a full-time (10 session per week analogue scanner). Similarly, South West Wales and North Wales have a mobile analogue scanner for four sessions per week and will also be at capacity for current provision in 2021 (based on four sessions per week, six patients per session for fifty weeks, totalling 1,200 scan capacity at each site).

If the mobile analogue capacity at Swansea and Wrexham were expanded to ten sessions per week, then each site will see clinical demand outstrip capacity in 2025 and 2026, respectively. Similarly, the "do minimum" option will see clinical demand outstrip service capacity in South East Wales in 2025.

Replacing all sites with a fixed digital scanner, will realise adequate service provision for clinical demand in South West and North Wales until at least 2028. Additionally, the "preferred

option" will see two digital fixed scanners in the South East of Wales, and be adequate for clinical demand.

These proposed dates however does not take into consideration any of the other aspects of service delivery regarding the facilities and wider service needs, which are considered in this Programme Business Case. Please see the Programme Plan (Section X) for more information.

Should the growth exceed a 20% model, and this may be the case dependent on the rate of introduction of new services/indications, these timelines could be revised to an earlier date. Conversely, if the rate of growth in the next few years is not realised, the dates would be expected to be pushed back.

Fixed vs. Mobile scanner

A critical point of evaluation in this programme will be to determine what type of scanner can and should be located at each geographical locations in order to answer the clinical demand. The scanner at PETIC is an analogue scanner that is past its accepted life expectancy. Equally, the scanners within both mobile facilities are analogue.

Not only is scanning capacity a limiting factor, but there are a plethora of other issues with a mobile scanner, presented in the Table below:

Issue	Mobile scanner	Fixed scanner
Quality	Manufacturers will not guarantee CT and PET alignment to <2.5mm on a mobile (i.e. that the couch movement is guaranteed linear throughout travel), as fundamentally these complex machines are not designed to be bounced around. Radiotherapy requires alignment of 0.2mm.	Fixed site scanner can be maintained, therefore has fundamentally better quality scans for all scans.
Patient experience	Cold, restricted space. Cannot accommodate patients on trolleys. A patient (possibly inpatient) would have to go outside to reach the mobile unit.	All facilities are co-located with the PET scanner, which means the patient does not need to leave the building until the scan is completed.
Maintenance considerations	Mobile units are serviced 3 monthly +/- when they break. This is often out the control of the service provider.	A fixed site with pro-active medical physics will monitor and fine-tune performance frequently, continually maintaining the rigorous demands required for optimised clinical and research scans.
Future needs	Radiotherapy planning cannot be done on a mobile unit, nor can respiratory and cardiac gating. Diagnostic CT, with iv contrast, requires multiple phases. The staff are not trained or permitted by the mobile provider. This prevents 'one-stop shops' whereby patients can	Fixed site scanner can be maintained to a standard to provide radiotherapy planning scans. Potential creation of a "one-stop shop" is possible with a fixed scanner.

	attend a hospital a single time for all required PET/CT, CT +/- radiotherapy planning, all fully integrated rather than multiple visits with associated time delays.	
Research	Very limited on mobile units due to quality assurance (QA) issues.	Accreditation for research is more easily obtained.
Uptake facility	Brown fat activation is triggered by exposure to cold temperatures. This impacts on uptake of FDG and could hinder interpretation in lymphoma and breast cancer patients, in particular. This is a significant issue in winter months.	Fixed sites generally have more uptake rooms available than mobiles, this facilitates a longer FDG uptake period, improving scan quality.
Reliability	Mobiles which are not 'static' mobiles suffer far more failures, often only discovered during warm-up when the 1st patients have arrived. Couch problems are a particular issue. This leads to patient delays.	
Access	Patient access is more difficult to mobile units compared to fixed site Disabled patients require a hoist. Scans on general anaesthetic patients cannot be performed on a mobile.	
Hospital/Staff Benefits	Staff radiation dose is higher on a mobile unit, where space is problematic.	Staff radiation dose is less within a static facility. A fixed unit helps with staff recruitment throughout nuclear medicine.
Booking flexibility	A mobile unit can only use contracted days with the mobile provider.	A fixed site can schedule patients over any days of the week. This not only permits more flexibility when booking patients, it allows for rebooking if there is an issue e.g. with radiopharmaceutical supply. This can also increase the range of radiopharmaceuticals that can be sourced i.e. Wrexham can only get PSMA on 3 out of 7 days. The scanner only onsite for one of those days. This restricts access to that day.

Programme Business Case
for an **All Wales Positron Emission Tomography (PET) Service**

Workforce Assessment

Strategic Case - Appendix 7

Chair: Neil Hartman

Introduction

The All Wales PET Programme Workforce Board is made up of members representing all Welsh Health Boards, all professions with a knowledge of the operations of a PET/CT facility and colleagues with training and workforce planning expertise (Appendix 1).

Members were tasked with:

- Broadly understanding the performance within a PET/CT scanning session and current scanner performance capacity,
- Identifying all staff involved at a PET/CT centre from receipt of referral to report, and
- Deciding the ideal complement of staff involved per PET/CT session (half day).

The group has met four times (between November 2020 and February 2021) and has completed its objectives. The results of this work are included in this paper, including:

- a list of relevant roles involved in running a PET service,
- a list of responsibilities for each role,
- agreed Whole Time Equivalents (WTEs) for each role,
- scaled WTEs linked to increased patients per PET session, and
- gap analysis of these staffing numbers to model against the broader PET/CT Programme Business Case being proposed to Welsh Government.

It is intended that this forecasted model will best inform the All Wales PET Programme Business Case, Health Boards, training providers and commissioners for the coming years and prove a practical tool for training planning in the future.

Background

PET/CT is a complex imaging modality (sub-speciality of nuclear medicine) that requires a specialist skill mix for a service to run. The reasons that necessitate such a specialist skill mix include the handling and administration of radioactive material, dealing with radioactive waste and operating highly technical equipment. As such, it is a tightly regulated field of work (note IR(ME)R 2017, IRR17, Environmental Permitting Regulations 2016). These regulations govern the practice of PET/CT as well as the rest of Nuclear Medicine. Given the specialisation within PET/CT, most staff members within this speciality start their careers in general SPECT nuclear medicine, and specialise later in PET/CT, therefore there is transferability of skills between PET and Nuclear Medicine.

It is a legal requirement under IR(ME)R 2017 for employers to hold an ARSAC licence at each medical radiological installation (hospital, etc.) where radioactive substances are to be administered to humans, and additionally for practitioners to hold individual ARSAC licences in order to justify the administration of those substances. A nuclear medicine service cannot therefore operate without these licences in place. It is the Administration of Radioactive Substances Advisory Committee (ARSAC)[1] who provides advice to the relevant licensing authority on the issue of these licences. Practitioners who wish to apply for a licence to enable them to support a comprehensive diagnostic nuclear medicine imaging service should have satisfactorily completed the Royal College of Radiologists (RCR) Radionuclide Radiology

[1] https://www.gov.uk/government/publications/arsac-notes-for-guidance

Subspecialty Training Programme, the Royal College of Physicians (RCP) Nuclear Medicine Speciality Training Programme or demonstrate an equivalent level of training.

The imaging workforce is in a critical situation across the UK. There is an increasing clinical demand across all imaging modalities, and capacity issues are exacerbated by difficulties in recruiting consultant radiologists[2], radiographers[3], radio pharmacists and other nuclear medicine staff - the level of difficulty varies according to geographical location (Imaging Statement of Intent, 2018 and Radiology Services in Wales, Wales Audit Office, 2018). Clinical imaging remains a popular specialty for medical trainees but training capacity does not match current workforce deficits.

According to the Clinical radiology Wales workforce summary 2019 (RCR, 2019), "there are still not enough consultant radiologists to deliver safe and effective care", with this report further noting regional variation in staffing across Wales and shortages in clinical radiology specialists being areas of concern.

Wales has five consultant clinical radiologists per 100,000 population (RCR, 2019), compared to a European average of 12. Wales has the oldest demographic in the United Kingdom; based on a retirement age of 62 years, 26% are anticipated to retire by 2020 (Statement of Intent, 2018). The number of ARSAC practitioners is reducing with retirement.

The situation for radiographers is no better and clinical scientists face a similar state of affairs. According to a 2019 survey carried out by the Institute of Physics and Engineering in Medicine (IPEM), 33% of centres stated their current staffing provision is sufficient, though 9% of these have a concern with skill mix. 57% of centres felt their staffing provision is not sufficient. This IPEM report also noted, "The precarious nature of staffing this specialism, with most services stretched to capacity, and concerns were expressed of potential increase in demand or area of coverage". This same report also noted the concerns expressed over future workforce supply, and the just-about-managing description of the workforce is not future-proof, and while safe, does not have sufficient capacity to research, develop, and implement new technologies.

As a result of the Imaging Statement of Intent the National Imaging Academy Wales (NIAW) was established in 2018 to "develop a sustainable and flexible imaging workforce to deliver a modern, responsive diagnostic imaging service for Wales". In addition, Health Education and Improvement Wales (HEIW) were tasked with facilitating the development of an integrated workforce training strategy for Radiologists, Radiographers, Sonographers, Advanced Practitioners, Assistant Practitioners and other Imaging Healthcare Professionals in Wales, including Medical Physics.

A subgroup of the National Imaging Strategic Programme Board (NISPB) was established in 2019, called the Imaging Workforce and Education Group (IWEG). IWEG scope is to develop a strategic workforce plan for radiology services across Wales and is in the early stages of development. Clinical scientist and medical physics workforce are discussed as part of the Healthcare Scientist Board.

Recently, in an independent review of diagnostics in England (Richards Report, 2020), a similar statement on workforce was made, establishing several applicable recommendations, such as:

- Recommendation 12: There should be a major expansion in the imaging workforce – an additional 2,000 radiologists and 4,000 radiographers (including advanced

[2] *Also refers to Consultant Nuclear Medicine Physician throughout this document*

[3] *Also refers to Nuclear Medicine Technologists throughout this document*

practitioner radiographers, who undertake reporting) as well as other support staff and key 'navigator' roles. Additional training places should be provided for radiologists and radiographers and initiatives will be needed to meet demand, as well as expansion in assistant practitioner and support staff roles.

- Recommendation 13: There should be an increase in advanced practitioner radiographer roles, including for reporting of plain X-rays (to a minimum of 50%); and expansion of assistant practitioner roles to take on work currently undertaken by radiographers.

The Richards Report (2020) makes several specific notes to put particular emphasis to driving skill-mix initiatives, with a view to future-proofing the wider workforce.

Indeed, we acknowledge that the independent Richards Report is focused on the situation facing NHS England diagnostic services, however the staffing situation is currently worse in Wales (RCR, 2019) and thus it is vital that clarity is reached on the workforce needs for an All Wales PET service. Other areas of consideration when looking into the PET/CT workforce include (Imaging Statement of Intent, 2018):

- avoidance of duplication of imaging between hospitals through IT networking,
- reduced cost of outsourcing of image acquisition and reporting (estimated at over £160 million per annum), and
- skill-mix initiatives across all diagnostics.

Richards (2020) notes that "expansion of the imaging workforce (e.g. radiographers, radiologists and physicists) combined with improvements in productivity will be vital in meeting the increasing demand, but very challenging. Actions will be needed on multiple fronts and by several organisations". In Wales this will include NHS Wales and NHS Improvement, HEIW, NIAW, NWIS, higher education institutions and professional bodies.

PET/CT is not a stand-alone provision in that radiology services typically will not have dedicated PET staff. Instead, staff typically work across several imaging modalities. This is certainly beneficial for skills mix and resilience in a workforce. We do however, need to consider this when planning workforce for future PET/CT services as the needs have to be fed in to wider radiology service on site. Furthermore, PET/CT scanners hold a somewhat critical location consideration regarding the use of radiopharmaceuticals. A PET/CT scanner would ideally be co-located close to other nuclear medicine services and the specialist medical physics workforce.

On reading the various reviews and reports on this topic, they would suggest some prospects that could facilitate skills-mixing and future-proofing of PET/CT workforce. One possibility that is suggested is that there are opportunities for radiographers/technologists/physicists to train and become adept at reporting, thus facilitating consultant radiologist reporting tasks.

Indeed, clinical reporting (interpretation), by non-medical professionals, is established practice in conventional nuclear medicine imaging and other imaging modalities. It is likely that radiographers, clinical scientists and nuclear medicine technologists (with the necessary training/qualification in clinical reporting) can facilitate some limited PET-CT reporting capacity in future, by supplementing the role of the radiologist/nuclear medicine physician, by freeing up medical time for PET-CT reporting. This would be limited to reporting on site only under the guidance of the PET (IR(ME)R) practitioner in possession of an ARSAC licence. Therefore there is a potential route to building some additional resilience within a site team, which will undoubtedly be an interesting prospect for non-medical staff wishing to expand their skill-set.

The IT infrastructure supporting imaging in Wales requires further development and there is a programme addressing these issues: Radiology Informatics System Procurement Programme. It is anticipated (and considered necessary) for these developments to enable the reporting of PET/CT remote from the PET/CT sites. This would facilitate a potential to shift toward a "hub and spoke" service model of reporting radiologists in Wales, where perhaps a consultant radiologist based in Hywel Dda could tele-report on scans carried out at Swansea without leaving their office. This must not be to the detriment of adequate on-site support and it is noted that ARSAC does not encourage remote practitioners, so a practitioner would still be expected to regularly attend the PET centre for which they provide primary support. However, this would be an attractive prospect for consultant radiologists looking to live and work in more rural areas of Wales, and still access the interesting field of PET/CT. This is in line with the RCR (2019) recommendation to provide "innovative delivery models" and is dependent on the RISP Programme.

There is a potential risk to surrounding radiology workforce in that new PET/CT sites could attract vital staff away from other sites. However, the added benefit of retaining and attracting high quality specialists may outweigh the potential risk. This would need to be considered in regional and local plans.

Training processes for staff

Clinical Scientists

Training for Clinical Scientists in Nuclear Medicine results in registration with the Health & Care Professions Council (HCPC) and can be accomplished by either a structured training scheme or an equivalence route. The structured training scheme is called the "Scientific Training Program" (STP) and is overseen by the National School of Healthcare Science (NSHCS). There is in addition also Higher Specialist Scientist Training (HSST) as a five-year workplace-based training programme that provides opportunities for clinical scientists to train to become eligible to apply for available consultant clinical scientist posts.

The STP is a three year supernumerary program in which Physics graduates progress through a series of masters level academic learning and work based placements. During their first year, the trainee rotates across placements covering the whole breadth of Medical Physics (including Radiotherapy Physics, MRI, Ultrasound, Radiation Safety, Diagnostic Radiology and Nuclear Medicine). The relatively small numbers of personnel within some specialist areas prohibits the amount of rotational training possible and thus limits the total number of STP across all Specialism areas. Nuclear Medicine services often have only two or three Clinical Scientists and so the amount of training time even in the 2nd and 3rd year "Specialism" is limited. At Swansea Bay there is only capacity for one trainee to have specialist training at any time, meaning that a maximum of one registered clinical scientist might be "produced" every two years. In practise this is reduced due to additional pressures from rotational training.

HEIW have recently agreed to fund a limited number of training posts to enable the equivalence scheme (IPEM Route 2). One post each for Swansea Bay and North Wales are going to recruitment this year (2021). Candidates will already have attained a master's degree and so the three years of training will be spent solely in Nuclear Medicine & PET, which reduces the overall training "burden" on sites. In addition, Cardiff is also training a clinical scientist through the Academy of Healthcare Science PET equivalence route.

This dual approach will increase the number of trainees being eligible for registration and Swansea Bay should be able to maintain throughput of one every two years.

Radiologists and Nuclear Medicine Physicians

HEIW and the Head of Specialty School for Radiology manage the overall training of radiologists in Wales, with separate schemes based in North and South Wales. The new National Imaging Academy Wales is a facility for the delivery of training predominantly for the South Wales scheme. The Wales Diagnostic Radiology Training Programme is accredited by the RCR and delivers a 5-year structured training programme leading to the award of a Certificate of Completion of Training (CCT). Structured training for Fellowship of the Royal College of Radiologists (FRCR) is provided as part of the 5 year programme. More detail can be found below:

New Academy Training Structure - N

*please note that his was an explanatory document that was written prior to the Academy opening so some minor details may be outdated now. The overall structure of the programme remains the same.

Specialist training in radionuclide radiology can be completed within this 5 year programme, but there is an option to further extend training depending upon the objectives of the trainee. The trainee must though develop an in-depth knowledge of the full range of diagnostic radionuclide studies, becoming skilled to report multiple studies including complex hybrid imaging such as PET/CT. An ARSAC practitioner licence is not a requirement for a CCT.

The Nuclear Medicine Speciality Training curriculum runs for 6 years with a requirement to undertake core radiology training with the RCR and complete the FRCR examination during the first 3 years. After this core training, trainees undertake higher training and complete the Diploma in Nuclear Medicine before obtaining their CCT with the Joint Royal Colleges of Physicians Training Board (JRCPTB). The last year of training includes the opportunity to take on a specialised field of study in advanced imaging techniques which includes PET/CT.

Radionuclide radiologists significantly outnumber nuclear medicine physicians across the UK and it is anticipated that for the foreseeable future reporting of PET/CT within Wales will be performed entirely, or almost entirely, by radiologists.

Radiographers

Radiographers and nuclear medicine technologists both practice as imaging professionals in nuclear medicine and PET-CT. Radiographers qualify initially with a degree in Diagnostic Radiography (endorsed by the HCPC[4] and SCoR[5]), and thereafter undertake a postgraduate course for the nuclear medicine specialism. Technologists train as part of the national scientific healthcare programme and attain a qualification in nuclear medicine, usually a degree. Technologists can also undertake postgraduate level courses in nuclear medicine thereafter. Both professionals require additional training to undertake PET-CT specifically thereafter.

[4] Health and Care Professions Council

[5] Society & College of Radiographers

Local current status

As each of the three current sites in Wales are set-up differently, there is some variance in how staffing is currently structured. This is detailed below:

PETIC (fixed scanning site in South East Wales)

Makes use of a pool of 15 radiographers/nuclear medicine technologists in CVUHB, currently deemed competent and entitled to perform PET scans. These are typically cross trained from the nuclear medicine pool. Having a large pool of staff competent to scan in Cardiff provides some resilience in the need of service expansion. A similar model is employed for booking staff, with one dedicated booking clerk. There is currently a pool of three booking clerks who can book PET/CT scans at PETIC, again providing resilience. In addition, PETIC has several consultant radiologists, one clinical scientist and a business manager. As the site at PETIC consists of a cyclotron, there are multiple technical posts associated with radiopharmaceutical production. In addition, several research posts are at this site.

The appointment of researchers also provides an additional route for clinical scientist accreditation. Students who obtain a PhD in a suitable subject can obtain state registration as clinical scientists through the equivalence route (https://www.ahcs.ac.uk/equivalence/). In addition, researchers may also obtain practical skills in radiochemistry which can translate into technical posts supporting the production of radiopharmaceuticals in Wales, another area with significant staffing issues. The active PhD programme in PETIC offers another pool of staff that may be utilised to meet the increasing demands of the clinical service.

Swansea and Wrexham (mobile scanning sites in South West and North Wales)

Alliance Medical (AML) provide the mobile scanner and three scanning operators per scanner (two to three imaging technologists/radiographers, and one healthcare assistant) and the RPA (radiation protection advisor). The local “host hospital” then provides the booking staff, waste management, governance, management of the PET/CT service, consultant radiologist reporting of scans and finance business partner for the fiscal aspects. The Swansea site has a clinical scientist for dosimetry, however Wrexham does not. Dosimetry is part of the Medical Physics Expert (MPE) role, which is contractually provided by Alliance Medical in North Wales. Additionally, the RPA role is externally contracted by AML and the RPA is rarely on site, but available by phone to the mobile van staff.

Swansea has just written and agreed an SLA with Alliance Medical to allow existing local nuclear medicine staff (technologists/radiographers and clinical scientists) to gain experience/shadowing on the mobile PET scanner, with a view to ensure that staff are partially trained and developed for future needs, and to ensure a degree of resilience when an AML staff member is absent (sickness, etc.). Wrexham has a clause within the contract with AML to facilitate training of BCUHB staff when required.

Currently BCUHB (North Wales) have a Strategic Outline Case which is going through a consultation stage with the aim of consolidating Nuclear Medicine and converting the existing mobile PET-CT service to a fixed scanner, based at the consolidated site. It is expected that the workforce model will have staff working in both conventional Gamma Camera and PET-CT, and supplementary training will be required.

Recommendations

Below are the recommendations from the PET/CT Workforce Board. In addition to the list of professional roles, scalability of their WTE (Table 1) and list of responsibilities (Appendix 3), you will also find an indicative costed proposal which provides a monetary range of investment required to secure the posts needed to run a PET/CT site (Appendix 2).

Table 1. List of professional roles required at a PET/CT scanner

Role	Band	WTE (up to 6 patients per session)	WTE (7-12 patients per session)	Scalability with increased demand
Booking clerk/ Administrator/ Reception staff	3 or 4	1.5	2.5	In consideration of the patient interaction involved in this role, an increased throughput of patients will result in a need for additional staff members.
Radiographer/ Technologist	6-8a	3.0	4.0	Increase in patient throughput is thought to be sufficiently covered by one additional post.
HCA/Clinical Support Staff	4	1.0	2.0	TBC
Clinical Scientist (physics)/ Medical Physics Expert	8a-8c	2.0 (includes RWA & RPA roles)	(2.5 for >12 patients)	The scalability for this post is not linear, but there is a small increment per patient which will need to considered, alongside increased patient throughput.
Finance Business Partner	6-8a	0.2	0.2	Post is not felt to be scalable to patient numbers.
Consultant Radiologist	Consultant pay scale	1.5	3.0	RCR literature denotes consultant radiologist reporting a range from 3.75 - 7.5 reports per session. Agreement from this group is that 5 reports is reasonable.*
PET/CT Manager	8a-8c	0.4	(0.8 for >12 patients)	There will be increased demand for management and HR support to the increased staffing numbers when PET sessions have 7-12+ patients.

* Comments from consultant radiologist workforce are: 1) a full time consultant will typically be at work 42 weeks of the year, to allow for necessary leave. 2) A full time consultant works 10 sessions on a 7:3 split in line with the National Consultant Contract in Wales. 3) An average of 5 PET/CTs would be reported per DCC session. A Royal College of Radiologists document of 2012 discussing clinical radiology workload and a Royal College of Physicians document of 2013 detailing the duties, responsibilities and practice of physicians both suggest 1-2 per hour i.e. 3.75 to 7.5 per session. 4) Studies won't routinely be double read or reported. 5) A full-time consultant would not devote all of their time to PET/CT duties, but most likely 2 to 4 sessions per week. The clinical lead(s) for a service may well provide more than 4 sessions. 6) If there are sufficient consultants to meet the reporting needs of the service then there are sufficient to meet the non-reporting duties. 7) MDT meeting commitments are to be funded separately.
For future consideration: non-certificated support staff to supplement the radiographer/technologist role (1 WTE).

If the All Wales PET Programme Business Case were to be endorsed, then the regional Project leads would be expected to work with local operational colleagues to ensure that more

complex workforce planning is undertaken, so that future PET/CT scanners can be “manned” with a resilient workforce. Again, collaboration with IWEG, HEIW, NIAW and the Healthcare Scientist Board on this matter is essential.

Looking at the gap analysis of professional posts (Appendix 3), the indicative numbers of WTE posts needed on an All Wales basis to staff three analogue scanners is 28.8 WTEs, and three digital scanners is 45.0 WTEs.

The requirements for staffing should be considered carefully when planning the Programme, and against the clinical demand for PET scans. The information presented in Table 2 will need to be considered as a constraint in the phasing of the Programme plan.

Table 2. Gap analysis of roles required at a PET/CT scanner

	All Wales Current staffing (WTE)	All Wales Analogue Scanner requirements (WTE)	All Wales Analogue scanner gap (WTE)	All Wales Digital Scanner requirements (WTE)	All Wales Digital scanner gap (WTE)
Booking clerk/ Administrator/ Reception staff	4.4	4.5	0.1	7.5	3.1
Radiographer/ Technologist	6.2	9.0	2.8	12.0	5.8
HCA/Clinical Support Staff	0.0	3.0	3.0	6.0	6.0
Clinical Scientist (physics)/ Medical Physics Expert	2.1	6.0	3.9	7.5	5.4
Finance Business Partner	1.3	0.6	-0.7*	0.6	-0.7
Consultant Radiologist	3.9	4.5	0.6*	9.0	5.1
PET/CT Manager	1.6	1.2	-0.4*	2.4	0.8
TOTAL WTE	**19.5**	**28.8**	**9.4**	**45.0**	**25.6**

*The current consultant radiologist, finance business partner and PET/CT manager staffing level at PETIC is 2.1WTE, 1.0WTE and 1.0WTE, respectively - which is above the proposal for an analogue scanner. PLEASE NOTE THAT LOCAL/REGIONAL CONSIDERATIONS WILL BE REQUIRED AT OUTLINE AND FULL BUSINESS CASE SUBMISSION.

The indicative range of associated minimum and maximum costs for staffing an analogue and digital scanner are:

	Analogue scanner	Digital scanner
Minimum staffing costs	£544,448.70	£892,354.70
Maximum staffing costs	£667,985.40	£1,060,062.30

Appendix 1

Workforce Group TOR

Appendix 2

Preliminary worforce costings-model v0.6.x

Appendix 3: List of responsibilities for each role

Booking clerk/administrator/reception staff

- *Meet and welcome patients on arrival at PET Centre*
- *Receiving referrals*
- *Booking PET/CT appointments (letter)*
- *Confirming PET/CT appointments (phone)*
- *Confirming patient dietary requirements*
- *Taking patient to scanner*
- *Maintaining records/database of patients scanned and radiopharmaceutical used*
- *Flagging issues to service manager*
- *Obtaining previous relevant images from other sources*
- *Liaise with clinicians regarding timings of relevant treatments*
- *Ensuring referrals are authorised by consultant*
- *Liaise with referrers if referral form is incomplete/contains errors*
- *Completing requisition for radiopharmaceutical purchase*
- *Ensure sufficient water available for patients*

Radiographer / Technologist Duties

QA

- *Operator performed routine QA and escalating action levels*
- *Liaising with engineers / equipment manufacturers*
- *Involvement in optimising parameters e.g. peaking.*

Health & Safety

- *Involvement or leading Imaging Protocol / IRMER written procedures / IRR17 risk assessments*
- *RPS (radiation protection supervisor)*
- *Involvement in RPC*
- *Investigating local incidents/complaints or participating in*

IRMER Operator for:

- *Patient ID*
- *Pregnancy Status / Breastfeeding*
- *Giving breast feeding cessation advice and written information*
- *Dispensing the radiopharmaceutical*
- *Practitioner for Justifying Comforter and Carer Exposure* (not Technologist*)*
- *Recording exposures according to IRMER procedures*
- *Measuring the dispensed activity according to DRL*
- *Administering the radiopharmaceutical / making exposure*
- *Setting correct imaging parameters*
- *Radiographic positioning of the patient*
- *Making CT (X-ray exposure)*
- *Optimisation of exposure parameters*
- *Deciding the examination is complete / imaging optimised*
- *Radiotherapy planning (associated pre imaging processing)*

- *Post image processing*
- *Involvement in research (operational optimisation) and being part of the research team.*
- *Involvement in image interpretation (team approach)*

Examination & Patient wellbeing

- *Confirming patient ID / Pregnancy / Breast feeding status*
- *IV contrast media (giving) / Use of mechanical pressure injection*
- *Discussing Prior Information – Questionnaire*
- *Checking Blood Glucose & contraindications*
- *Dispensing and administering correct radiopharmaceutical and activity by DRL*
- *Patient comfort and emotional wellbeing.*
- *Optimal patient immobilisation with patient consent*
- *Aftercare advice*
- *Deal or handle adverse patient events.*
- *Controlling and Managing radioactive waste – safely and securely & accounting for.*

Teaching

- *Clinical Teaching*
- *Tutorials locally*
- *CPD (own) and assisting others*

HCA / Clinical Support Staff

TBC

- *Patient ID*
- *Pregnancy Status / Breastfeeding*
- *Giving breast feeding cessation advice and written information*
- *Dispensing the radiopharmaceutical*
- *Measuring the dispensed activity according to DRL*
- *Administering the radiopharmaceutical / making exposure*

Clinical Scientist

Institute of Physics and Engineering in Medicine (IPEM) role categorisation

- *Medical Physics Expert (MPE) as required by the Ionising Radiation (Medical Exposure) Regulations 2017 (IR(ME)R 2017) to furthermore ensure compliance with IR(ME)R, IRR17 and EPR (see below)*
- *Radiation Protection Adviser (RPA) as required by the Ionising Radiation Regulations 2017 (IRR17)*
- *Radioactive Waste Adviser (RWA) as required by the Environmental Permitting Regulations 2016 (EPR)*
- *Radiation protection supervisor (RPS) as required by the IRR17*

General Clinical Scientist scientific and technical support

- *Advice and ongoing review for existing procedures and protocols*
- *Support of physicians and implementation of their requirements*
- *Develop and operate a sufficiently appropriate quality management system for clinical PET/CT*
- *Quality Assurance for PET, CT and PET/CT*

- *Support of RPS in maintaining systems/infrastructure for radiation protection, ensuring compliance with regulations, addressing immediate and ongoing radiation safety issues and incidents, individualised advice (including dosimetry) for non-standard cases*
- *Ongoing monitoring and review of equipment QA programmes; especially PET/CT scanners, action on results of individual QC procedures as required. Trend analysis, and repetition of commissioning tests if appropriate to troubleshoot problems. Support for ongoing schedule of PET detector calibration procedures, required as defined by MPE's recommendation with regard to clinical use of system*
- *Ongoing applications support for PET/CT scanner and associated workstations (may be provided in part by manufacturer's applications specialist)*
- *First line troubleshooting, especially for PET/CT scanner(s) e.g. diagnosis and resolution of artefacts, investigation of problems with scanner/computing/data transfer*
- *Liaise with manufacturer on complex fault diagnosis and resolution, especially for PET/CT scanner(s) (could be performed by radiographer/technologist in some cases)*
- *Preventative maintenance & fault repair (usually carried out by service engineer)*
- *Installation and commissioning of (non-major) new equipment and software, and upgrades*
- *Ongoing education and training of staff including radiographic and technical staff (parts of this role could be performed by manufacturer's applications specialist). Staff will need to undertake significant preliminary and on-going training to remain effective in this relatively new and fast changing technology.*
- *Ongoing support for software, systems and infrastructure (some, but not all, aspects of this may be performed by sites/provider's IT support service and/or manufacturers). Maintenance of archiving and PACS where appropriate. Ongoing backup and system security (anti-virus etc.) support. First line support/troubleshooting*
- *Setting up, quality control and data analysis for basic quantification using SUVs.*
- *NRW, HSE, HIW (or equivalent) & local site visits/inspections and associated preparation, follow up etc.*
- *Consequences of changes to legislation and guidance (e.g. need to convert environmental legislative requirements such as Best Practicable Means documents to waste strategy review/Best Available Technology documents - demonstrating waste minimisation etc.)*
- *Participation in research and development*
- *CPD (own) and assisting others*

Activities requiring significant support above the minimal level

- *Commissioning of the unit*
- *Setting up new protocols/services*

Finance Business Partner

- *Review of maintenance contracts*
- *Finance updates and performance reports*
- *Keeping track of breaches*
- *Budget setting of staff for PET/CT*

Consultant Radiologist

- *Justification and authorisation of procedures i.e. gatekeeping of referrals*
- *Supervision of procedures*
- *Reporting*

- *Protocol development*
- *Clinical governance*
- *Management/administration tasks*
- *Dealing with adverse patient events and complaints*
- *Teaching*
- *Research and Development*
- *CPD (own) and assisting others*
- *Liaising with WHSCC*

PET/CT Manager

- *Procurement of radiopharmaceuticals*
- *Usually a Lead Radiographer of Lead Clinical Scientist*
- *Managing performance*
- *Managing Waiting lists*
- *Managing resources*
- *Managing junior staff (HR)*
- *Recruitment*
- *Investigating incidents and risks*
- *Resolving concerns and complaints*
- *Accountable to commissioners*
- *Oversight of dosimetry*
- *Writing business cases*
- *Producing monthly reports*
- *Liaising with partners*
- *CPD (own) and assisting others*
- *Manage aspects of Research and Development*

Programme Business Case
for an **All Wales Positron Emission Tomography (PET) Service**

Artificial Intelligence (AI) in Positron Emission Tomography/Computed Tomography (PET-CT)

Strategic Case - Appendix 8

Author: Life Sciences Hub Wales (March 2021)

There is no universally agreed definition of AI. The term broadly refers to computing technologies that resemble processes associated with human intelligence and currently most applications are narrow, in that they are only able to carry out specific tasks or solve pre-defined problems. Whilst not new, there have been rapid advances in recent years.

Experts believe that AI has the potential to continuously improve medical imaging in many areas such as image reconstruction and quality, detection, classification, monitoring, reporting, workflows and even interventional radiology. Branches of AI – Machine Learning (ML) and Deep Learning (DL) are making significant inroads but there are key barriers to overcome to adopt AI more widely into practice.

Benefits of AI to PET/CT imaging

Improved image quality and reduced scan time: AI provides new opportunities in developing tools for automated analysis of PET/CT. One of the most exciting current applications of AI for PET/CT is the utilisation of tools employing deep learning algorithms to markedly enhance image quality and reduce scan acquisition time. AI-powered solutions offer enhanced PET image quality with reduced noise and increased contrast, thereby providing better images or reducing acquisition time/administered activity [1]. AI can also be employed in an image denoising technique that is trained to identify noise and specific anatomical structures, which is subsequently subtracted from the original images to improve image quality [2].

Improved patient experience: A significant benefit to the use of AI is in optimising the patient radiation dose to arrive at an accurate diagnosis using the lowest dose of radiation that is reasonable to achieve. AI-powered imaging software solutions enable faster and more targeted scans, reducing radiation exposure and requiring less time for the patient to be in the scanner. This provides opportunity to improve workflow productivity and consequently decrease waiting lists [1, 2].

Efficiency, accuracy, and insights: AI can improve the efficiency of the diagnostic process by improving the quality of data gained from the process and finding deeper patterns within the data. Deep learning-based automatic detection algorithms can also be utilised to enhance radiologists performance in reading and analysing scans [3,4], support more accurate decisions, resulting in better overall patient outcomes, and easing the burden of increased workloads for radiologists and to form part of the solution in addressing significant workforce challenges including shortages of radiologists. Importantly the technology offers opportunity not a threat; to augment the work of radiologists, enabling their capacity to be reallocated from the routine to the more complex. It is unlikely to directly impact on the significant challenge of shortages of radiologists [1, 4].

Key Barriers

AI technologies have the potential to help address important health challenges, but rapid development is limited by the quality of available health data. Its use raises a number of ethical and social issues, many of which overlap with issues raised by the use of data and healthcare technologies more broadly. A key challenge for future governance of AI technologies will be ensuring it is developed and used in a way that is transparent and compatible with public interest, whilst stimulating innovation.

Need for facilitation and collaboration

Despite the benefits, implementation of AI into major software suites is slow. The number of PET/CT exams is increasing yearly, but the number of expert readers is not keeping up with the

growth. Hence, there is need for progress in other domains such as software development, laws and education to facilitate the use of AI in clinical practice [1].

The Research Consortium for Medical Image Analysis (RECOMIA) - a not-for-profit organisation that aims to promote research in the fields of AI and medical imaging - has developed a cloud-based platform to facilitate collaboration between medical researchers focusing on patient images and mathematical researchers developing deep learning-based tools.

RECOMIA aims to minimise the time and effort researchers need to spend on technical aspects, such as transfer and display of digital imaging and communications in medicine (DICOM) images and image annotations, as well as legal aspects, such as de-identification, and compliance with General Data Protection Regulation (GDPR). [5].

RECOMIA offers deep learning-based tools that can be trained to analyse medical images using images with manual annotations of organs or pathology, such as tumours. The RECOMIA platform provides deep learning-based tools that can perform organ segmentations in CT, detection of lesions in PET/CT, and automated quantitative analysis of the segmented/detected volumes. RECOMIA invites researchers to apply and evaluate its AI tools on their own PET/CT and researchers can request access to the platform through its website.

Suppliers and technology

GE Healthcare – Discovery PET/CT solutions: GE's Discovery MI Gen 2 PET/CT system uses a dedicated deep neural network to generate TrueFidelity deep-learning image reconstruction to enable image sharpness and improved noise texture. Their intelligence platform, Edison, is designed to help achieve greater efficiency, improve patient outcomes, and increase access to care. Embedded within existing workflows, Edison applications can integrate and assimilate data from disparate sources, and apply analytics or advanced algorithms to generate clinical, operational, and financial insights.

Canon – Advanced intelligent Clear-IQ Engine (AiCE): AiCE is an innovative Deep Learning Reconstruction technology that can help reduce noise and boost signal to deliver sharp, clear and distinct images at speed. Utilizing a Deep Convolutional Neural Network (DCNN), AiCE is trained to differentiate signal from noise so that the algorithm can suppress noise while enhancing signal, to support high spatial resolution and low noise scanning and reconstruction.

Siemens Healthineers – AIDAN AI for Biograph PET/CT portfolio: In April 2020, Siemens Healthineers received clearance from the FDA for its AIDAN AI technologies on the Biograph family of PET/CT systems. AIDAN is built on a foundation of patient-focused bed design and proprietary AI deep-learning technology. Siemens Healthineers PET/CT systems with AIDAN offer enhanced protection against cyber threats via *syngo* Security – a security package that enables compliance with the HIPAA. Siemens' AI-Rad Companion AI-powered imaging solutions help reduce the burden of repetitive tasks and increase diagnostic precision when interpreting MRI, CT and X-ray images, by providing automatic post-processing of imaging datasets through AI-powered algorithms.

Philips – Astonish TF technology for PET/CT systems: Philips' PET/CT systems such as Ingenuity TF PET/CT and GEMINI TF PET/CT offer the time-of-flight (TOF) technology – Astonish TF. TOF technology is designed to offer enhanced contrast and reduced noise compared to non-TOF, helping clinicians with improved lesion detectability, compared with a conventional PET/CT. The technology offers a powerful image reconstruction algorithm that offers full-fidelity reconstruction in as fast as 30 seconds per bed, allowing hospitals to scan three times as many patients as before.

IBM – Watson Health Imaging: Watson Health Imaging offers innovative AI, enterprise imaging and interoperability solutions. Its Merge branded imaging solutions facilitate the management, sharing and storing of billions of patient medical images. *Watson Patient Synopsis* is an AI tool which provides a summary view of patient data in sync with picture archiving and communication systems (PACS) to construct more tailored and concise reports to better inform diagnostic

decisions made by radiologists. *Watson Imaging Clinical Review* is a retrospective AI-enabled data review tool that highlights both primary diagnoses and incidental findings for a more comprehensive patient problem list, which may help limit the need to re-test patients.

Fujifilm – REiLI: Fujifilm's AI-enabled platform REiLI delivers robust machine learning algorithms through Synapse diagnostic applications to facilitate more integrated and comprehensive diagnostic workflows across the healthcare enterprise. The open platform provides AI insights directly within the workflow of radiologists, cardiologists, and other specialty imaging professionals, with a goal of enhancing diagnostic accuracy and efficiency.

Subtle Medical – SubtlePET™ and SubtleMR™: Founded in 2017, Subtle Medical is a healthcare technology company offering DL solutions that improve medical imaging efficiency. The company's SubtlePET™ and SubtleMR™ software solutions, both FDA 510(k) cleared, and CE marked, utilize DL algorithms that integrate seamlessly with any PET or MRI scanner to improve image quality without any alteration in the existing workflow. Subtle is currently in collaboration with top medical device vendors, including Siemens Healthineers, GE Healthcare, Philips (China) and several pharmaceutical partners.

BrainScan – AI based solutions: The company's AI based Brainscan system enables automatic detection and classification of pathological changes occurring in CT examinations of the brain, which provides doctors with additional information that allows for faster and more efficient interpretations.

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Appendix 1: Options Assessment

Options Framework

Methodology

In accordance with the Capital Investment Manual and requirements of HM Treasury's Green Book (A Guide to Investment Appraisal in the Public Sector), this section of the business case documents the wide range of options that have been considered that could deliver the agreed investment objectives for five categories of choice:

- Scope (service and geographical coverage);
- Solution (including services and required infrastructure);
- Service delivery (who will deliver the required services);
- Timing and phasing of delivery;
- Funding of the investment.

The long list must include an option that provides the baseline for measuring improvement and value for money. This option is known as 'Business as Usual'. It must also include a realistic 'Do Minimum' based on the core functionality and essential requirements for the project.

Through discussion in a workshop, the Strategic Programme Board identified and documented a long list of options. Options were generated for each category of choice by ascertaining the least ambitious, most ambitious and intermediate option for scope, solution, service delivery, timing and funding.

A diagram illustrating this process is shown below:

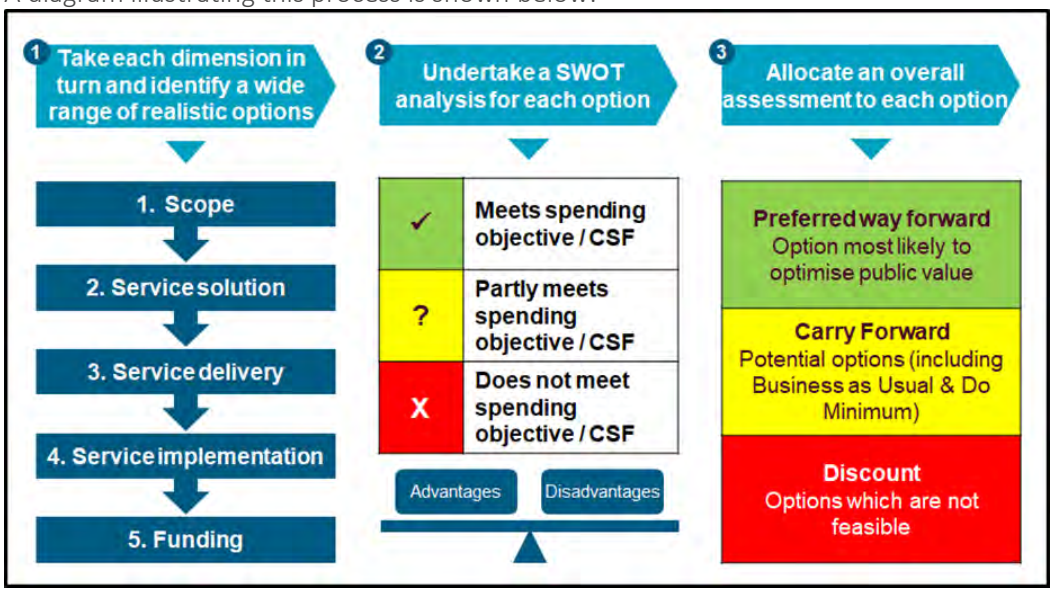

Figure 1 - Process to identify and assess the long list of options

Options were scored on a consensus basis against the agreed critical success factors and investment objectives.

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Service Scope

The following options were considered in relation to the scope of the programme and assessed in relationship to spending objectives and CSFs as follows:

Project		Option 1A	Option 1B	Option 1D	Option 1E	Option 1F
1. Service Scope *As outlined in Strategic Case*		1A: 3 scanners	1B: 3 scanners + 1 cyclotron + Centres of Excellence	1C: 4 scanners + 1 cyclotron + Centres of Excellence	1D: 5 scanners + 1 cyclotron + Centres of Excellence	1E: Do Max - 1D + Additional Cyclotron
SO1	Improve quality/better patient outcomes	?	?	Y	Y	Y
SO2	Workforce to deliver high quality service	?	?	Y	?	?
SO3	Improve delivery – efficient use of facilities and infrastructure	?	?	Y	Y	?
SO4	Cost effective service	?	?	Y	Y	?
SO5	Widen scope/international best practice	?	?	Y	Y	Y
CSF1	Strategic Fit	?	?	Y	Y	?
CSF2	Value for Money	?	?	Y	?	X
CSF3	Supplier Capacity/Capability	Y	Y	Y	?	?
CSF4	Affordability	?	?	?	?	?
CSF5	Achievability	Y	Y	Y	?	?
Conclusion		**Baseline**	**Possible**	**Preferred way forward**	**Possible**	**Discount**

?

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SWOT Analysis

Option 1A: 3 scanners

Strengths:	Weaknesses:	Opportunities:	Threats:
• Lower capital investment • Relatively simple to implement	• Insufficient capacity to meet demand in the long term • Limited ability to improve patient outcomes and provide earlier interventions • Limited ability to improve processes and provide fit-for-purpose premises • Limited ability to broaden scope of services • Only partly aligns with UK and international best practice • Limited ability to apply Prudent Healthcare principles • Radiopharmaceutical supply not guaranteed	•	• Some reliance on outsourcing leading to increased costs • Presents challenges recruiting and retaining workforce • Little service resilience • No opportunity to expand R&D capability • No opportunity to introduce innovative new tools such as AI • Complaints and potential litigation from patients and staff • Service cannot develop to meet future needs • As demand exceeds capacity in the longer term, waiting times and worsening clinical outcomes could still be an issue

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Option 1B: 3 scanners, 1 cyclotron and Centres of Excellence

Strengths:	Weaknesses:	Opportunities:	Threats:
• Improved service resilience • Improved research and development • Easier to attract and retain staff	• Does not provide sufficient capacity to meet demand in the long term • Limited ability to improve patient outcomes and provide earlier interventions in the longer term • Limited ability to improve processes and provide fit-for-purpose premises • Limited ability to broaden scope of services • Only partly aligns with UK and international best practice • Limited ability to apply Prudent Healthcare principles	•	• As demand exceeds capacity in the longer term, waiting times and worsening clinical outcomes could still be an issue • Service cannot develop to meet long-term needs

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Option 1C: 4 scanners, 1 cyclotron and Centres of Excellence

Strengths:	Weaknesses:	Opportunities:	Threats:
• Provides sufficient capacity to meet demand in the long term • Ability to improve patient outcomes and provide earlier interventions • Ability to improve processes and provide fit-for-purpose premises • Ability to broaden scope of services • Aligns with UK and international best practice • Ability to apply Prudent Healthcare principles • Provides service resilience • Improved research and development	• Significant capital investment required • Potential disruption to existing services during construction	• Service can develop to meet future needs • Ability to attract and retain high quality staff due to increased R&D capability • Can increase the number of people taking part in clinical trials	• Funding may be limited or unavailable

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Option 1D: 5 scanners, 1 cyclotron and Centres of Excellence

Strengths:	Weaknesses:	Opportunities:	Threats:
• Provides sufficient capacity to meet demand in the long term • Ability to improve patient outcomes and provide earlier interventions • Ability to improve processes and provide fit-for-purpose premises • Ability to broaden scope of services • Aligns with UK and international best practice • Ability to apply Prudent Healthcare principles • Provides service resilience • Improved research and development • • •	• Significant capital investment required, may be unaffordable in the short term • Potential disruption to existing services during construction	• Service can develop to meet future needs • Ability to attract and retain high quality staff due to increased R&D capability • Can increase the number of people taking part in clinical trials	• Funding may be limited or unavailable

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Option 1E: 5 scanners, 2 cyclotrons and Centres of Excellence

Strengths:	Weaknesses:	Opportunities:	Threats:
• Provides sufficient capacity to meet demand in the long term • Ability to improve patient outcomes and provide earlier interventions • Ability to improve processes and provide fit-for-purpose premises • Ability to broaden scope of services • Aligns with UK and international best practice • Ability to apply Prudent Healthcare principles • Provides service resilience • Can attract and retain high quality workforce • Improved research and development • Reduces spend on outsourced services eg, radiopharmaceutical supply	• Significant capital investment required, may be unaffordable in the short term • Potential disruption to existing services during construction	• Service can develop to meet future needs • Ability to attract and retain high quality staff due to increased R&D capability • Can increase the number of people taking part in clinical trials	• Funding may be limited or unavailable • This option may create additional complexities that delay the programme

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Service Solution

Potential solutions for delivering the programme's preferred way forward for potential scope were considered as follows:

Project		Option 2A	Option 2B	Option 2C	Option 2D	Option 2E
2. Service Solution *In relation to the preferred scope*		Do Nothing	Replace Cardiff scanner and extend North Wales and Swansea mobile capacity	Replace Cardiff scanner and cyclotron. Create 2 new build fixed facilities in North Wales and Swansea	Replace Cardiff scanner and cyclotron. Create 3 new build fixed facilities in North Wales, Swansea and TBD	Replace Cardiff scanner and cyclotron. Create 4 new build fixed facilities: North Wales Swansea, 2xTBD, plus additional cyclotron
SO1	Improve quality/better patient outcomes	X	X	?	Y	Y
SO2	Workforce to deliver high quality service	X	?	?	Y	?
SO3	Improve delivery – efficient use of facilities and infrastructure	X	?	?	Y	Y
SO4	Cost effective service	X	?	?	Y	?
SO5	Widen scope/international best practice	X	X	?	Y	Y
CSF1	Strategic Fit	X	?	?	Y	Y
CSF2	Value for Money	X	?	X	Y	?
CSF3	Supplier Capacity/Capability	Y	Y	Y	Y	?
CSF4	Affordability	?	?	?	?	?
CSF5	Achievability	X	Y	?	Y	Y
Conclusion		**Baseline**	**Possible**	**Discount**	**Preferred way forward**	**Possible**

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SWOT Analysis

Option 2A: Do Nothing

Strengths:	Weaknesses:	Opportunities:	Threats:
• No capital investment required • No disruption to existing services	• Current capacity is not sufficient to meet growing demand • Premises not fit for purpose • Patient experience in mobile scanning units is poor compared with fixed units • Scan quality and patient throughput on analogue scanners is lower than for digital scanners • No opportunity to expand R&D capability • No opportunity to introduce innovative new tools such as AI • Facilities not flexible enough to cope with changing needs • Does not align with UK and international best practice	•	• No service resilience • Ageing equipment could fail, threatening smooth operation of services and resulting in delays for patients and potentially poor clinical outcomes • Complaints and possible litigation from patients and staff • Rising costs due to outsourcing of services such as radiopharmaceutical supply • Inadequate and ageing facilities makes it difficult to attract and retain high quality staff

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Option 2B: Do Minimum - Replace Cardiff scanner and increase mobile operating hours

Strengths:	Weaknesses:	Opportunities:	Threats:
• Minimal investment • No disruption to services • Quick to implement	• Increased capacity will still not be enough to meet demand in the longer term • Quality and throughput issues with analogue scanners remain • Patient experience in mobile units is not improved • No opportunity to expand R&D capability due to quality issues with mobile units • No opportunity to introduce innovative new tools such as AI •	•	• Little service resilience • Complaints and possible litigation from patients and staff • Increased costs due to outsourcing of services such as radiopharmaceutical supply • Inadequate facilities make it difficult to attract and retain high quality staff

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Option 2C: Replace Cardiff scanner and cyclotron, and provide 2 new fixed facilities (North Wales/Swansea)

Strengths:	Weaknesses:	Opportunities:	Threats:
• Improved scan quality and patient throughput associated with fixed facilities and digital scanners • Improved clinical outcomes • Improved patient experience • Modern and updated facilities make it easier to attract and retain high quality staff	• Greater capital investment • Increased capacity will still not be enough to meet demand in the longer term •		• Funding may be limited or unavailable • Service not resilient in the longer term • Still some costs associated with outsourcing of services such as radiopharmaceutical supply •

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Option 2D Replace Cardiff scanner and cyclotron, and provide 3 new fixed facilities (North Wales/Swansea/TBD)

Strengths:	Weaknesses:	Opportunities:	Threats:
• Capacity will meet growing demand • The third scanner can be provided as demand grows and located to best meet population needs • Shorter travel distances for some patients • Improved scan quality and patient throughput associated with fixed facilities and digital scanners • Improved clinical outcomes • Improved patient experience • Improved R&D capability	• Greater capital investment • Increased capacity will still not be enough to meet demand in the longer term •	• Modern and updated facilities make it easier to attract and retain high quality staff • More patients able to take part in clinical trials • Service can develop flexibly to meet future needs	• Funding may be limited or unavailable • Service not resilient in the longer term • Still some costs associated with outsourcing of services such as radiopharmaceutical supply •

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Option 2E: Replace Cardiff scanner and cyclotron, and provide 4 new fixed facilities (North Wales/Swansea/2xTBD) and a further cyclotron

Strengths:	Weaknesses:	Opportunities:	Threats:
• Capacity will meet demand in the long term • The third and fourth scanners and second cyclotron can be provided as demand grows and located to best meet population needs • Shorter travel distances for many patients • Improved scan quality and patient throughput associated with fixed facilities and digital scanners • Improved clinical outcomes • Improved patient experience • Improved R&D capability • Supply chain for radiopharmaceuticals is secure and offers flexibility for future development of new radiotracers	• Significant capital investment	• Modern and updated facilities make it easier to attract and retain high quality staff • More patients able to take part in clinical trials • Service can develop flexibly to meet future needs	• Funding may be limited or unavailable • This option may create additional complexities that delay the programme

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Service Delivery

A range of service delivery options were considered as follows

Project		Option 3A	Option 3B	Option 3C
3. Service Delivery *In relation to the preferred scope and service solution*		Continue with existing arrangements (PETIC and external provider)	Service delivered by NHS Wales workforce and PETIC partnership	Entire service delivered by NHS Wales
SO1	Improve quality/better patient outcomes	?	Y	Y
SO2	Workforce to deliver high quality service	X	Y	?
SO3	Improve delivery – efficient use of facilities and infrastructure	X	Y	?
SO4	Cost effective service	X	Y	?
SO5	Widen scope/international best practice	X	Y	Y
CSF1	Strategic Fit	X	Y	X
CSF2	Value for Money	X	Y	?
CSF3	Supplier Capacity/Capability	Y	Y	?
CSF4	Affordability	?	?	?
CSF5	Achievability	?	Y	X
Conclusion		Baseline	Preferred Way Forward	Discount

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SWOT Analysis

Option 3A: Continue with existing arrangements (PETIC and external provider)

Strengths:	Weaknesses:	Opportunities:	Threats:
• No disruption to existing services	• External provider limits ability to provide earlier interventions and improve outcomes • External provider limits ability to broaden scope of services and align with UK and international best practice • Greater commercial challenges agreeing risk allocations and ownership	• Potential to develop a long-term working relationship with external providers	• Increased reliance on external outsourcing leading to increased costs and potentially lower resilience

Option 3B: Service delivered by NHS Wales workforce and PETIC partnership

Strengths:	Weaknesses:	Opportunities:	Threats:
• This option partly supports NHS Wales and its workforce • Lower costs as less reliance on outsourcing compared with BAU option	•	• Potential to strengthen relationship with PETIC	•

Option 3C: Entire service delivered by NHS Wales workforce

Strengths:	Weaknesses:	Opportunities:	Threats:
• This option fully supports NHS Wales and its workforce • Most affordable option • NHS Wales has autonomy to manage and develop the service flexibly to meet changing needs	•		•

Programme Business Case

Health Board/Trust:		**All Wales WHSSC**
Hospital/Site	:	**Various**
Project Title	:	**All Wales PET CT Programme**
Project No	:	
Option No	:	**2**
Option Title	:	**Do Minimum (replacement only at Cardiff)**
Prepared by	:	**NWSSP SES / WHSSC**
Date	:	**01-Mar-21**

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	**Reported at 1Q2021 and PUBSEC 250**
Equipment cost level	:	***
Location factor	:	0.97
Proposed start on site	:	Apr-22
Proposed completion date	:	Mar-26

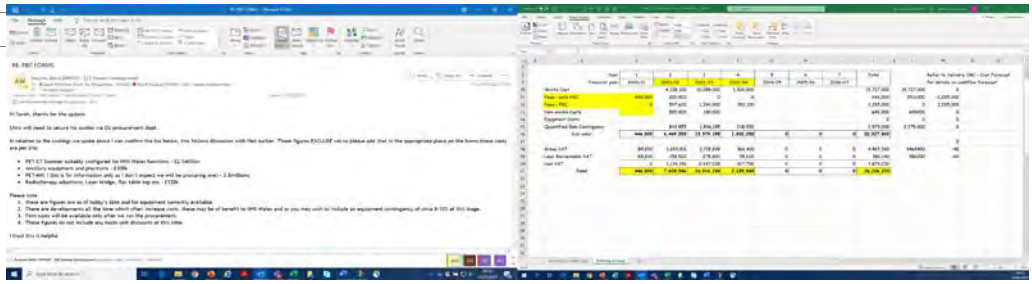
Capital Cost Summary

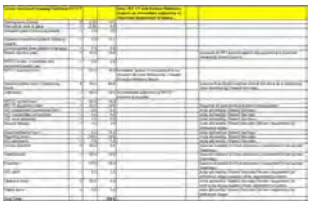
Ref	Cost Centre		Net £	VAT £	Gross £
1	Departmental Cost (PBC2)		45,000	9,000	54,000
2	Oncosts (PBC3)		0	0	0
3	Sub-total		45,000	9,000	54,000
4	Provisional location adjustment	100%	0	0	0
5	Works Cost		45,000	9,000	54,000
6	Fees (PBC4)	(**% of (5))	0	0	0
7	Non-works Costs (PBC4)		15,000	3,000	18,000
8	Equipment Costs (PBC2)	(**% of (1)	4,673,000	934,600	5,607,600
9	Planning Contingency	10.00%	473,300	94,660	567,960
10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***		5,206,300	1,041,260	6,247,560
11	LESS Recoverable VAT (PBC7)			0	0
12	**Project Cost *(1Q2021)***		5,206,300	1,041,260	6,247,560
13	**Project Cost (PUBSEC 250)**				

Project Title All Wales PET CT Programme
Option No 2
Option Title Do Minimum (replacement only at Cardiff)

CAPITAL COSTS: DEPARTMENTAL AND EQUIPMENT COSTS

Accommodation (Assessment of Projects within Programme)	Functional Size	Space allowance		N/A/C	Departmental Allowance	Equipment Allowance
		m2	£/m2		£	£
Cardiff Hot Cell build works					45,000	
PET Scanner						2,500,000
Ancillary Equipment						300,000
Radiotherapy adaptions						120,000
Cyclotron	Ion source replacement					453,000
	Hot cells replacement					1,300,000
Loose equipment						
Swansea Mobile						
N Wales Mobile						
	Total floor area	0	m2			4,673,000
Less: Abatement for transferred equipment 0 %						0
						4,673,000
Departmental Cost - to PBC1 Summary					45,000	
Equipment Cost - to PBC1 Summary						4,673,000





Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

CAPITAL COSTS: ON-COSTS

	Net Cost	% of DCA
1 Communications		
a Space		
b Medical Gases		
c Lifts		
2 "External" Building Work		
a Drainage		
b Roads, paths, parking		
c Site layout, walls, fencing, gates		
d BWIC with "External" engineering work		
3 "External" Engineering Work		
a Steam, condensate, heating, hot water and gas supply mains		
b Cold water mains and storage		
c Electricity mains, sub-stations, standby generating plant		
d Calorifiers and associated plant		
e Miscellaneous services		
4 Auxilliary Buildings		
5 Other on-costs and abnormals		
a Building abnormals(See Annex A)		
b Engineering(See Annex B)		
c Other on-costs(See Annex C)		
Total On-costs - to SOC1 Summary	0	0.00%

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

CAPITAL COSTS: FEES AND NON-WORKS COSTS

		£	% of Works Cost
1	Fees	45,000	
	HB/Trust		
	a. Project Manager	0	
	b. Trust Cost Advisor	0	
	c. Supervisor	0	
	d. Project Director	0	
	e. In-house Project Sponsorship	0	
	f. Financial Vetting	0	
	g. Audit	0	
	h. Specialist Advisors		
	SCP		
	j. Constructor - pre-construction	0	
	k. Project Manager	0	
	l. Health Planner	0	
	m. Architect	0	
	n. Civil and Structural Engineer	0	
	o. Building Services Engineer	0	
	p. Planning Supervisor	0	
	q. Cost Manager	0	
	r. FM Advisor	0	
	s. Building Services Installer- pre-construction	0	
	t. Other	0	
	Total Fees to PBC1 Summary	0	
2	Non-Works Costs		
	a. Land purchase costs and associated legal fees		
	b. Statutory and Local Authority charges		
	c. Planning and Building Control fees	5,000	
	d. Survey Fees		
	d. Other Removals and cleaning	10,000	
	Total Non-Works Costs to PBC1 Summary	15,000	

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

PROJECT CASHFLOW FORECAST

Proposed start on site:
Proposed completion date:

Year	0	1	2	3	4	5	6	Total	
Financial year	2021/2022	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**		
Works Cost		£45,000						£45,000	
Fees	£0							£0	Check value
Non-works Costs	£15,000							£15,000	
Equipment Costs	3,373,000	£1,300,000						£4,673,000	
Quantified Risk/Contingency	£338,800.0	£134,500.0	£0.0	£0.0	£0.0	£0.0	£0.0	£473,300	
Sub-total	**£3,726,800**	**£1,479,500**	**£0**	**£0**	**£0**	**£0**	**£0**	**£5,206,300**	
Gross VAT	£745,360	£295,900	£0	£0	£0	£0	£0	£1,041,260	
Less: Reclaimable VAT	£0	£0	£0	£0	£0	£0	£0	£0	
Net VAT	£745,360	£295,900	£0	£0	£0	£0	£0	£1,041,260	
Total	**£4,472,160**	**£1,775,400**	**£0**	**£0**	**£0**	**£0**	**£0**	**£6,247,560**	

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

CASHFLOW FORECAST OF FUNDING SOURCES

TO BE COMPLETED IF THERE ARE OTHER FUNDING SOURCES PROPOSED OTHER THAN WG NHS CAPITAL

Proposed start on site:

Proposed completion date:

Funding source: Department for Health and Social Services: Welsh Assembly Government

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost	£0	£45,000						£45,000
Fees	£0	£0						£0
Non-works Costs	£15,000							£15,000
Equipment Costs	######	£1,300,000						£4,673,000
Quantified Risk/ Contingency	£338,800	£134,500						£473,300
Sub-total	######	£1,479,500	£0	£0	£0	£0	£0	£5,206,300
Gross Vat	£745,360	£295,900	£0	£0	£0	£0	£0	£1,041,260
Less: Reclaimable VAT	£0	£0	£0	£0	£0	£0	£0	£0
Sub-total	£745,360	£295,900	£0	£0	£0	£0	£0	£1,041,260
Total	£4,472,160	£1,775,400	£0	£0	£0	£0	£0	£6,247,560

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

RECOVERABLE VAT CALCULATION

	a	b	c	d
	Cost Net of VAT	VAT at 20% (ie prior to recovery)	Percentage recoverable (% of col b)	Recoverable VAT (col b x col c)
	£	£	%	£
Works Cost	45,000	9000	0%	0
		0		0
		0		0
Fees	0	0	0%	0
		0		0
Non-works Costs	15,000	3000	0%	0
Equipment Costs	4,673,000	934600	0%	0
Contingencies	0	0		0
Total			£	0

BENCHMARKING REPORT –

Prepared for: Mark Woodward
Office: Liverpool
Date: 11-Feb-20
Prepared by: Liz MacGregor

Notes:

All in TPI used: 331 1Q2020 (BCIS indices published 31 January 2020)
Location factor: 88 North Wales (BCIS factors published 31 January2020)

Data used in the benchmarking exercise are as follows:Location Factor: 1.01

Key	Project Number	Base Date	Asset Description
A	BLQS1120	06/06/2012	New build two storey community hospital the facility will include: 30 inpatient beds minor injury unit as well as diagnostic and X ray departments. The hospital will als rehabilitation services, an outpatient's clinic and a day treatment centre.
B	BLQS1119	07/09/2009	New build community hospital providing Inpatient, Diagnostics, Therapies, Outpat
C	CSRE0271	24/11/2008	New build two storey community hospital
D	CSRE0209	23/02/2009	New build hospital
E	CSRE0210	30/10/2006	New build community hospital
F	CSRE0275	04/03/2010	New build general hospital
G	CSRE0274	04/03/2010	New build community hospital
H	CSRE0273	01/11/2003	New build community hospital

Key	0 Facilitating Works	1 Substructure	2 Superstructure	3 Finishings	4 FF&E	5 Services	6 Bldgs/Bldg Units	7 Extg Bldgs
A	£2.58	£304.80	£1,130.58	£145.94	£141.03	£1,168.04	£0.00	£0.00
B	£38.66	£476.26	£985.13	£130.12	£115.69	£1,241.19	£0.00	£0.00
C	£0.00	£153.62	£1,025.25	£139.07	£103.19	£1,149.61	£0.00	£0.00
D	£0.00	£200.04	£777.65	£182.90	£147.84	£1,106.14	£0.00	£0.00
E	£0.00	£94.64	£748.88	£117.47	£91.78	£898.32	£0.00	£0.00
F	£0.00	£62.28	£742.35	£179.50	£117.06	£1,027.78	£0.00	£61.59
G	£0.00	£139.84	£800.98	£187.54	£69.14	£926.17	£0.00	£0.00
H	£0.00	£111.38	£680.14	£199.69	£151.58	£926.21	£0.00	£33.67

s, a midwifery led maternity unit and a so offer on-going therapy and integrated
tients and Community Health departmen

sub total	8 External Works	sub total	9 Preliminaries	sub total	10 OH&P	12 Other Costs	13 Risk	14 Inflation	Total Cost
£2,892.97	£579.89	£3,472.86	£970.44	£4,443.30	£271.22	£0.00	£0.00	£0.00	£4,714.51
£2,987.05	£237.70	£3,224.75	£587.45	£3,812.20	£292.62	-£91.49	£170.04	£0.00	£4,183.36
£2,570.74	£492.03	£3,062.77	£526.40	£3,589.17	£0.00	£0.00	£0.00	£0.00	£3,589.17
£2,414.57	£558.77	£2,973.34	£401.10	£3,374.44	£0.00	£0.00	£89.83	£0.00	£3,464.26
£1,951.09	£437.34	£2,388.43	£453.69	£2,842.12	£0.00	£0.00	£314.27	£0.00	£3,156.40
£2,190.56	£584.09	£2,774.65	£199.40	£2,974.05	£0.00	£0.00	£0.00	£0.00	£2,974.06
£2,123.67	£523.14	£2,646.81	£182.24	£2,829.05	£0.00	£0.00	£0.00	£0.00	£2,829.04
£2,102.67	£658.93	£2,761.60	£0.00	£2,761.60	£0.00	£0.00	£0.00	£0.00	£2,761.60

MINIMUM £2,761.60
MAXIMUM £4,714.51

0.981060606

Update to 1Q 21

£4,625.22
£4,104.13
£3,521.19
£3,398.65
£3,096.62
£2,917.73
£2,775.46
£2,709.30

£2,709.30
£4,625.22

BCIS Online
Grade II listed office refurbishment

BCIS Online - #33315

Building function:	320. - Offices			
Type of work:	Rehabilitation/Conversion			
Gross floor area:	973 m2			
Job title:	Conversion, Reconfiguration and Refurbishment of Magi			
Location:	Port Talbot, West Glamorgan			
District:	Port Talbot			
Grid reference:	SS7689			
Postcode:	SA13 1SB			
Dates:	Receipt:	11-May-18		
	Base:	11-May-18		
	Acceptance:	13-Jun-18		
	Possession:	13-Aug-18		
	Conversion of former Grade II listed ma			
Project details:				
Site conditions:	Restricted site access and working space.			
Market conditions:	Good.			
Project tender price index:	367 on 1985 BCIS Index Base			
Client:	Neath Port Talbot County Borough Council			
Tender documentation:	Bill of Quantities			
Selection of contractor:	Selected competition			
No of tenders:	Issued:	6	Received:	6
Contract:	NEC3 priced contract 2013 (option A or B)			
Contract period (mths):	Stipulated:	33	Offered:	33
Cost fluctuations:	Fixed			
Basis of cost:	Tender			

Tender list:	£1,747,435	-
	£1,823,921	4.40%
	£1,842,737	5.50%
	£1,860,560	6.50%
	£1,879,239	7.50%
	£1,923,721	10.10%

Contract breakdown	
Measured work:	£1,394,496
Provisional sums:	£112,000
Preliminaries:	£140,939
Contingencies:	£100,000
Contract sum:	£1,747,435

Accommodation and design features: Conversion, reconfiguration and refurbishment of a form
fire escape with strip foundations. Stonework and brick r
screens. Doors. Plaster, plasterboard, ceramic, emulsior
Kitchen units and blinds. Sanitaryware. Mechanical and e

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element u	Element u
01 Substructure	(Costs included	£0	£0	

02 Superstructure	(Costs include c	£519,219	£534
03 Finishes		£170,491	£175
04 Fittings, Furnishings and Equipment		£26,076	£27
05 Services		£576,336	£592
06 Prefabricated Buildings and Building Units		£0	£0
07 Work to Existing Building		£0	£0
Building Sub-total		£1,292,122	£1,328
08 External Works		£177,114	£182
00 Facilitating Works		£37,260	£38
09 Preliminaries		£140,939	£145
10 Main Contractor's Overheads and Profit		£0	£0
Total (less Design Fees)		£1,647,435	£1,693
11 Project/Design Team Fees		£0	£0
12 Other Development/Project Costs		£0	£0
13 Risk (Clients Contingencies)		£100,000	£103
Total Contract sum		**£1,747,435**	**£1,796**

Credits:

Submitted by	Neath Port Talbot County Borough Cou
Client	Neath Port Talbot County Borough Cou
Quantity Surveyor	Neath Port Talbot County Borough Cou
General Contractor	TAD Builders Ltd

BCIS Online - #32689

Building function:	320. - Offices
Type of work:	Rehabilitation/Conversion
Gross floor area:	9,290 m2
Job title:	Office Refurbishment, Arkwright House
Location:	Manchester, Greater Manchester
District:	Manchester
Grid reference:	SJ8398
Postcode:	M3 2LF
Dates:	Receipt: 25-Sep-15
	Base: 25-Sep-15
Project details:	Refurbishment of 6 storey office block with external work
Site conditions:	Works within existing building.
Client:	Catalyst Capital
Tender documentation:	Employers Requirements (for Design and Build)
Selection of contractor:	Design and build
Cost fluctuations:	Fixed

Contract breakdown

Measured work:	£16,297,332
Preliminaries:	£2,877,073
Contingencies:	£779,337
Contractor design fees:	£254,814
Contract sum:	£20,208,556

Accommodation and design features: Refurbishment of 6 storey 1930's Grade II listed classicis walling. Roof and wall cladding. New concrete floors. Pa services. Lifts refurbishment. Asbestos removal.

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element u	Element u
1 Substructure		£257,541	£27	
2 Superstructure		£6,948,000	£748	

3 Finishes	£1,214,403	£130
4 Fittings and Furnishings	£139,214	£15
5 Services	£6,803,030	£732
Building Sub-total	£15,362,187	£1,654
6 External Works	£935,144	£101
7 Preliminaries	£2,877,073	£310
8 Contingencies	£779,337	£84
Total (less Design Fees)	£19,953,742	£2,147
9 Design Fees	£254,814	£27
Total Contract sum	**£20,208,556**	**£2,176**

Credits:

Submitted by	Gardiner & Theobald
Client	Catalyst Capital
Architect	Sheppard Robson
Quantity Surveyor	Gardiner & Theobald
Structural Engineer	Curtins Consulting Ltd
Services Engineer	Crookes Walker Consulting
Planning Supervisor	Deloitte Real Estate

strates Court to Offices

gistrates court into 4Nr office units with external works. Stripping out services, partitions, windows, doors, finis

Agreed: 33

er Grade II listed magistrates court into providing high specification office space with meeting and training roo
epairs. Built up felt and zinc pitched roofing. Staircase balustrading. Replacement aluminium windows. Metal s
ı and plastic wall finishes. Raised access floors, ceramic, vinyl and carpet floor finishes. Plasterboard and sus
electrical services. Lift alterations. Stripping out.

Percentage

30	%
10	%
1	%
33	%
74	%
10	%
2	%
8	%
94	%
6	%
100	**%**

ncil
ncil
ncil

ɪs. Asbestos removal.

ɜt offices with minor extension including ground floor lobby restoration to original form. Additional piled foundat
rtitions and ceilings. Raised access flooring. Ceramic tiling. Soft floor finishes. Painting. Fixtures and fittings. M

Percentage	
1	%
34	%

6	%
1	%
34	%
76	%
5	%
14	%
4	%
99	%
1	%
100	**%**

hes and fittings.

ms. Enclosed external glazed
stud partitions and glazed
pended mineral fibre ceilings.

:ions. Steel frame. Curtain
Mechanical and electrical

Programme Business Case

Health Board/Trust:		**All Wales WHSSC**
Hospital/Site	:	**Various**
Project Title	:	**All Wales PET CT Programme**
Project No	:	
Option No	:	**3**
Option Title	:	**Cardiff plus 3 fixed PET Sites (preferred)**
Prepared by	:	**NWSSP SES / WHSSC**
Date	:	**01/03/2021**

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	***
Equipment cost level	:	***
Location factor	:	0.97
Proposed start on site	:	Apr-22
Proposed completion date	:	Mar-26

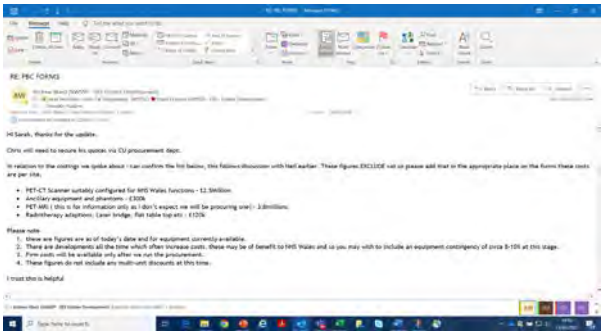
Capital Cost Summary

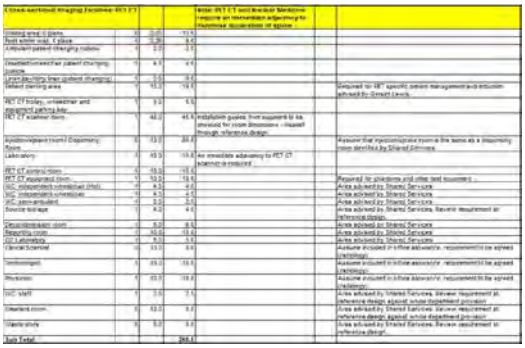
Ref	Cost Centre			Net £	VAT £	Gross £	
1	Departmental Cost (PBC2)			3,402,000	680,400	4,082,400	
2	Oncosts (PBC3)	35%		1,190,700	238,140	1,428,840	
3	Sub-total			4,592,700	918,540	5,511,240	
4	Provisional location adjustment		100%	0	0	0	
5	Works Cost			4,592,700	918,540	5,511,240	
6	Fees (PBC4)	16.00%		734,832	146,966	881,798	
7	Non-works Costs (PBC4)			80,000	16,000	96,000	
8	Equipment Costs (PBC2)	(**% of (1)		13,553,000	2,710,600	16,263,600	
9	Planning Contingency	10.00%		1,896,053	379,211	2,275,264	18,960,532
10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***			20,856,585	4,171,317	25,027,902	
11	LESS Recoverable VAT (PBC7)				146,966	146,966	VAT 20%
12	**Project Cost *(1Q2021)***			20,856,585	4,024,351	24,880,936	
13	**Project Cost *(Reporting PUBSEC 250)***						

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

CAPITAL COSTS: DEPARTMENTAL AND EQUIPMENT COSTS

Accommodation (Assessment of Projects within Programme)		Functional Size	Space allowance		N/A/C	Departmental Allowance	Equipment Allowance
			m2	£/m2		£	£
Cardiff	Hot cell replacement works					45,000	
	PET Scanner						2,500,000
	Ancillary Equipment						300,000
	Radiotherapy adaptions						120,000
	Cyclotron	Ion source replacement					453,000
		Hot cells replacement					1,300,000
Swansea							
	New Build		40	4000		160,000	
	Refurbish existing		176	2000	A	352,000	
	Lead Lining	£232K+10%				255,000	
	PET Scanner						2,500,000
	Ancillary Equipment						300,000
	Radiotherapy adaptions						120,000
N Wales							
	New build		260	4000	N	1,040,000	
	Lead Lining	£232K+10%				255,000	
	PET Scanner						2,500,000
	Ancillary Equipment						300,000
	Radiotherapy adaptions						120,000
4th Facility (TBA)							
	New build		260	4000	N	1,040,000	
	Lead Lining	£232K+10%				255,000	
	PET Scanner						2,500,000
	Ancillary Equipment						300,000
	Radiotherapy adaptions						120,000
Loose equipment (3 sites)							120,000
		Total floor area	736	m2			13,553,000
Less: Abatement for transferred equipment 0 %							0
							13,553,000
	Departmental Cost - to PBC1 Summary					3,402,000	
	Equipment Cost - to PBC1 Summary						13,553,000





Project Title All Wales PET CT Programme
Option No 3
Option Title Cardiff plus 3 fixed PET Sites (preferred)

CAPITAL COSTS: ON-COSTS

	Net Cost	% of DCA
1 Communications		
a Space	See PBC1	
b Medical Gases		
c Lifts		
2 "External" Building Work		
a Drainage		
b Roads, paths, parking		
c Site layout, walls, fencing, gates		
d BWIC with "External" engineering work		
3 "External" Engineering Work		
a Steam, condensate, heating, hot water and gas supply mains		
b Cold water mains and storage		
c Electricity mains, sub-stations, standby generating plant		
d Calorifiers and associated plant		
e Miscellaneous services		
4 Auxilliary Buildings		
5 Other on-costs and abnormals		
a Building abnormals(See Annex A)		
b Engineering(See Annex B)		
c Other on-costs(See Annex C)		
Total On-costs - to SOC1 Summary	0	0.00%

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

CAPITAL COSTS: FEES AND NON-WORKS COSTS

		£	% of Works Cost
1	Fees	4,592,700	
	HB/Trust		
	a. Project Manager	114,818	2.50%
	b. Trust Cost Advisor	Inc	
	c. Supervisor	Inc	
	d. Host organisation Programme Management and Admin su	114,818	2.50%
	e. In-house Project Sponsorship	Inc	
	f. Financial Vetting	Inc	
	g. Audit	Inc	
	h. Specialist Advisors	45,927	1.00%
	SCP / Constructor		
	j. Constructor - pre-construction	0	
	k. Project Manager	0	
	l. Health Planner	0	
	m. Architect	459,270	10%
	n. Civil and Structural Engineer	Inc	
	o. Building Services Engineer	Inc	
	p. Planning Supervisor	Inc	
	q. Cost Manager	Inc	
	r. FM Advisor	Inc	
	s. Building Services Installer- pre-construction	Inc	
	t. Other	0	
	Total Fees to SOC1 Summary	734,832	16.00%
2	Non-Works Costs		
	a. Land purchase costs and associated legal fees		
	b. Statutory and Local Authority charges		
	c. Planning and Building Control fees	20,000	
	d. Survey Fees	40,000	
	d. Other	20,000	
	Total Non-Works Costs to PBC1 Summary	80,000	

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

PROJECT CASHFLOW FORECAST

Proposed start on site:
Proposed completion date:

Year	0	1	2	3	4	5	6	6	Total
Financial year	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2027/2028	
Works Cost	£0	£60,750	£2,783,700	£0	£1,748,250	£0	£0	£0	£4,592,700
Fees	£139,450	£182,045	£217,534	£111,888	£83,916	£0	£0	£0	£734,832
Non-works Costs	£10,000	£20,000	£10,000	£20,000	£20,000	£0	£0	£0	£80,000
Equipment Costs	£3,413,000	£1,300,000	£5,880,000	£0	£2,960,000	£0	£0	£0	£13,553,000
Quantified Risk/Contingency	£356,245	£156,279	£889,123	£13,189	£481,217	£0	£0	£0	£1,896,053
Sub-total	**£3,918,695**	**£1,719,074**	**£9,780,357**	**£145,077**	**£5,293,383**	**£0**	**£0**	**£0**	**£20,856,585**
									£0
Gross VAT	£783,739	£343,815	£1,956,071	£29,015	£1,058,677	£0	£0	£0	£4,171,317
Less: Reclaimable VAT	£27,890	£36,409	£43,507	£22,378	£16,783	£0	£0	£0	£146,966
Net VAT	£755,849	£307,406	£1,912,565	£6,638	£1,041,893	£0	£0	£0	£4,024,351
Total	**£4,674,544**	**£2,026,480**	**£11,692,922**	**£151,715**	**£6,335,276**	**£0**	**£0**	**£4**	**£24,880,936**

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

CASHFLOW FORECAST OF FUNDING SOURCES

TO BE COMPLETED IF THERE ARE OTHER FUNDING SOURCES PROPOSED OTHER THAN WG NHS CAPITAL

Proposed start on site:

Proposed completion date:

Funding source: Department for Health and Social Services: Welsh Assembly Government

Year	0	1	2	3	4	5	6	Total
Financial year	2021/2022	2022/2023	2023/2024	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								£0
Fees								£0
Non-works Costs								£0
Equipment Costs								£0
Quantified Risk/ Contingency								£0
Sub-total	£0	£0	£0	£0	£0	£0	£0	£0
Gross Vat	£0	£0	£0	£0	£0	£0	£0	£0
Less: Reclaimable VAT	£0	£0	£0	£0	£0	£0	£0	£0
Sub-total	£0	£0	£0	£0	£0	£0	£0	£0
Total	£0	£0	£0	£0	£0	£0	£0	£0

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

RECOVERABLE VAT CALCULATION

	a	b	c	d
	Cost Net of VAT	VAT at 20% (ie prior to recovery)	Percentage recoverable (% of col b)	Recoverable VAT (col b x col c)
	£	£	%	£
Works Cost	4,592,700	918540	0%	0
		0		0
		0		0
Fees	734,832	146966.4	0%	0
		0		0
Non-works Costs	80,000	16000	0%	0
Equipment Costs	13,553,000	2710600	0%	0
Contingencies	0	0		0
Total			£	0

BENCHMARKING REPORT –

Prepared for: Mark Woodward
Office: Liverpool
Date: 11-Feb-20
Prepared by: Liz MacGregor

Notes:

All in TPI used: 331 1Q2020 (BCIS indices published 31 January 2020)
Location factor: 88 North Wales (BCIS factors published 31 January2020)

Data used in the benchmarking exercise are as follows:Location Factor: 1.01

Key	Project Number	Base Date	Asset Description
A	BLQS1120	06/06/2012	New build two storey community hospital the facility will include: 30 inpatient beds minor injury unit as well as diagnostic and X ray departments. The hospital will als rehabilitation services, an outpatient's clinic and a day treatment centre.
B	BLQS1119	07/09/2009	New build community hospital providing Inpatient, Diagnostics, Therapies, Outpat
C	CSRE0271	24/11/2008	New build two storey community hospital
D	CSRE0209	23/02/2009	New build hospital
E	CSRE0210	30/10/2006	New build community hospital
F	CSRE0275	04/03/2010	New build general hospital
G	CSRE0274	04/03/2010	New build community hospital
H	CSRE0273	01/11/2003	New build community hospital

Key	0 Facilitating Works	1 Substructure	2 Superstructure	3 Finishings	4 FF&E	5 Services	6 Bldgs/Bldg Units	7 Extg Bldgs
A	£2.58	£304.80	£1,130.58	£145.94	£141.03	£1,168.04	£0.00	£0.00
B	£38.66	£476.26	£985.13	£130.12	£115.69	£1,241.19	£0.00	£0.00
C	£0.00	£153.62	£1,025.25	£139.07	£103.19	£1,149.61	£0.00	£0.00
D	£0.00	£200.04	£777.65	£182.90	£147.84	£1,106.14	£0.00	£0.00
E	£0.00	£94.64	£748.88	£117.47	£91.78	£898.32	£0.00	£0.00
F	£0.00	£62.28	£742.35	£179.50	£117.06	£1,027.78	£0.00	£61.59
G	£0.00	£139.84	£800.98	£187.54	£69.14	£926.17	£0.00	£0.00
H	£0.00	£111.38	£680.14	£199.69	£151.58	£926.21	£0.00	£33.67

INSIGHT & ANALYTICS

s, a midwifery led maternity unit and a so offer on-going therapy and integrated
tients and Community Health departmen

sub total	8 External Works	sub total	9 Preliminaries	sub total	10 OH&P	12 Other Costs	13 Risk	14 Inflation	Total Cost
£2,892.97	£579.89	£3,472.86	£970.44	£4,443.30	£271.22	£0.00	£0.00	£0.00	£4,714.51
£2,987.05	£237.70	£3,224.75	£587.45	£3,812.20	£292.62	-£91.49	£170.04	£0.00	£4,183.36
£2,570.74	£492.03	£3,062.77	£526.40	£3,589.17	£0.00	£0.00	£0.00	£0.00	£3,589.17
£2,414.57	£558.77	£2,973.34	£401.10	£3,374.44	£0.00	£0.00	£89.83	£0.00	£3,464.26
£1,951.09	£437.34	£2,388.43	£453.69	£2,842.12	£0.00	£0.00	£314.27	£0.00	£3,156.40
£2,190.56	£584.09	£2,774.65	£199.40	£2,974.05	£0.00	£0.00	£0.00	£0.00	£2,974.06
£2,123.67	£523.14	£2,646.81	£182.24	£2,829.05	£0.00	£0.00	£0.00	£0.00	£2,829.04
£2,102.67	£658.93	£2,761.60	£0.00	£2,761.60	£0.00	£0.00	£0.00	£0.00	£2,761.60

MINIMUM £2,761.60
MAXIMUM £4,714.51

Say
plus 20% on Costs

0.981060606

Update to 1Q 21

£4,625.22
£4,104.13
£3,521.19
£3,398.65
£3,096.62
£2,917.73
£2,775.46
£2,709.30

£2,709.30
£4,625.22

4000

BCIS Online
Grade II listed office refurbishment

BCIS Online - #33315

Building function:	320. - Offices			
Type of work:	Rehabilitation/Conversion			
Gross floor area:	973 m2			
Job title:	Conversion, Reconfiguration and Refurbishment of Magis			
Location:	Port Talbot, West Glamorgan			
District:	Port Talbot			
Grid reference:	SS7689			
Postcode:	SA13 1SB			
Dates:	Receipt:	11-May-18		
	Base:	11-May-18		
	Acceptance:	13-Jun-18		
	Possession:	13-Aug-18		
	Conversion of former Grade II listed mag			
Project details:				
Site conditions:	Restricted site access and working space.			
Market conditions:	Good.			
Project tender price index:	367 on 1985 BCIS Index Base			
Client:	Neath Port Talbot County Borough Council			
Tender documentation:	Bill of Quantities			
Selection of contractor:	Selected competition			
No of tenders:	Issued:	6	Received:	6
Contract:	NEC3 priced contract 2013 (option A or B)			
Contract period (mths):	Stipulated:	33	Offered:	33
Cost fluctuations:	Fixed			
Basis of cost:	Tender			

Tender list:	£1,747,435	-
	£1,823,921	4.40%
	£1,842,737	5.50%
	£1,860,560	6.50%
	£1,879,239	7.50%
	£1,923,721	10.10%

Contract breakdown	
Measured work:	£1,394,496
Provisional sums:	£112,000
Preliminaries:	£140,939
Contingencies:	£100,000
Contract sum:	£1,747,435

Accommodation and design features: Conversion, reconfiguration and refurbishment of a forme fire escape with strip foundations. Stonework and brick re screens. Doors. Plaster, plasterboard, ceramic, emulsion Kitchen units and blinds. Sanitaryware. Mechanical and e

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element ur	Element u
01 Substructure	(Costs included	£0	£0	

02 Superstructure	(Costs include c	£519,219	£534
03 Finishes		£170,491	£175
04 Fittings, Furnishings and Equipment		£26,076	£27
05 Services		£576,336	£592
06 Prefabricated Buildings and Building Units		£0	£0
07 Work to Existing Building		£0	£0
Building Sub-total		£1,292,122	£1,328
08 External Works		£177,114	£182
00 Facilitating Works		£37,260	£38
09 Preliminaries		£140,939	£145
10 Main Contractor's Overheads and Profit		£0	£0
Total (less Design Fees)		£1,647,435	£1,693
11 Project/Design Team Fees		£0	£0
12 Other Development/Project Costs		£0	£0
13 Risk (Clients Contingencies)		£100,000	£103
Total Contract sum		**£1,747,435**	**£1,796**
			£2,000

Credits:

Submitted by	Neath Port Talbot County Borough Cour
Client	Neath Port Talbot County Borough Cour
Quantity Surveyor	Neath Port Talbot County Borough Cour
General Contractor	TAD Builders Ltd

BCIS Online - #32689

Building function:	320. - Offices
Type of work:	Rehabilitation/Conversion
Gross floor area:	9,290 m2
Job title:	Office Refurbishment, Arkwright House
Location:	Manchester, Greater Manchester
District:	Manchester
Grid reference:	SJ8398
Postcode:	M3 2LF
Dates:	Receipt: 25-Sep-15
	Base: 25-Sep-15
Project details:	Refurbishment of 6 storey office block with external works
Site conditions:	Works within existing building.
Client:	Catalyst Capital
Tender documentation:	Employers Requirements (for Design and Build)
Selection of contractor:	Design and build
Cost fluctuations:	Fixed

Contract breakdown

Measured work:	£16,297,332
Preliminaries:	£2,877,073
Contingencies:	£779,337
Contractor design fees:	£254,814
Contract sum:	£20,208,556

Accommodation and design features: Refurbishment of 6 storey 1930's Grade II listed classicis walling. Roof and wall cladding. New concrete floors. Par services. Lifts refurbishment. Asbestos removal.

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element ur	Element u
1 Substructure		£257,541	£27	
2 Superstructure		£6,948,000	£748	

3 Finishes	£1,214,403	£130
4 Fittings and Furnishings	£139,214	£15
5 Services	£6,803,030	£732
Building Sub-total	£15,362,187	£1,654
6 External Works	£935,144	£101
7 Preliminaries	£2,877,073	£310
8 Contingencies	£779,337	£84
Total (less Design Fees)	£19,953,742	£2,147
9 Design Fees	£254,814	£27
Total Contract sum	**£20,208,556**	**£2,176**

Credits:

Submitted by	Gardiner & Theobald
Client	Catalyst Capital
Architect	Sheppard Robson
Quantity Surveyor	Gardiner & Theobald
Structural Engineer	Curtins Consulting Ltd
Services Engineer	Crookes Walker Consulting
Planning Supervisor	Deloitte Real Estate

strates Court to Offices

gistrates court into 4Nr office units with external works. Stripping out services, partitions, windows, doors, finisl

Agreed: 33

er Grade II listed magistrates court into providing high specification office space with meeting and training roon
epairs. Built up felt and zinc pitched roofing. Staircase balustrading. Replacement aluminium windows. Metal s
and plastic wall finishes. Raised access floors, ceramic, vinyl and carpet floor finishes. Plasterboard and susp
lectrical services. Lift alterations. Stripping out.

Percentage

30	%
10	%
1	%
33	%
74	%
10	%
2	%
8	%
94	%
6	%
100	**%**

ncil
ncil
ncil

s. Asbestos removal.

t offices with minor extension including ground floor lobby restoration to original form. Additional piled foundati
titions and ceilings. Raised access flooring. Ceramic tiling. Soft floor finishes. Painting. Fixtures and fittings. M

Percentage	
1	%
34	%

6	%
1	%
34	%
76	%
5	%
14	%
4	%
99	%
1	%
100	**%**

hes and fittings.

ns. Enclosed external glazed
tud partitions and glazed
pended mineral fibre ceilings.

ons. Steel frame. Curtain
echanical and electrical

Programme Business Case

Health Board/Trust:		**All Wales WHSSC**
Hospital/Site	:	**Various**
Project Title	:	**All Wales PET CT Programme**
Project No	:	
Option No	:	**4**
Option Title	:	**Cardiff plus 4 PET sites**
Prepared by	:	**NWSSP SES / WHSSC**
Date	:	**01-Mar-21**

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	***
Equipment cost level	:	***
Location factor	:	0.97
Proposed start on site	:	Apr-22
Proposed completion date	:	Mar-26

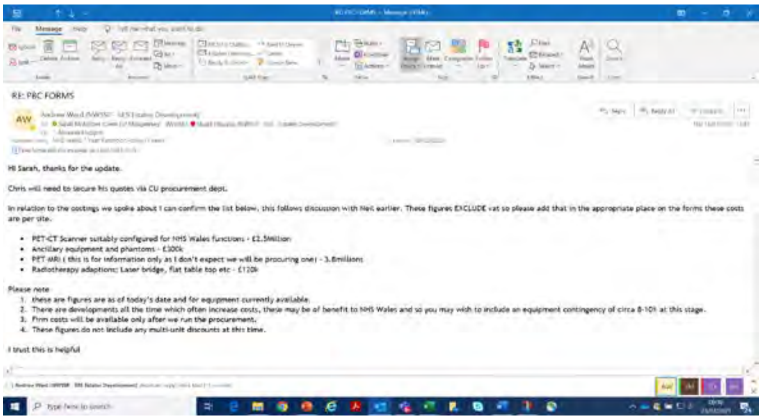
Capital Cost Summary

Ref	Cost Centre			Net £	VAT £	Gross £	
1	Departmental Cost (PBC2)			4,697,000	939,400	5,636,400	
2	Oncosts (PBC3)	35%		1,643,950	328,790	1,972,740	
3	Sub-total			6,340,950	1,268,190	7,609,140	
4	Provisional location adjustment		100%	0	0	0	
5	Works Cost			6,340,950	1,268,190	7,609,140	
6	Fees (PBC4)	16.00%		1,014,552	202,910	1,217,462	
7	Non-works Costs (PBC4)			120,000	24,000	144,000	
8	Equipment Costs (PBC2)	(**% of (1)		16,513,000	3,302,600	19,815,600	
9	Planning Contingency	10.00%		2,398,850	479,770	2,878,620	23,988,502
10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***			26,387,352	5,277,470	31,664,823	
11	LESS Recoverable VAT (PBC7)	inc			-202,910	-202,910	
12	**Project Cost (1Q2021)**			26,387,352	5,074,560	31,461,912	
13	**Project Cost (Reporting PUBSEC 250)**						

Project Title — All Wales PET CT Programme
Option No — 4
Option Title — Cardiff plus 4 PET sites

CAPITAL COSTS: DEPARTMENTAL AND EQUIPMENT COSTS

Accommodation (Assessment of Projects within Programme)		Functional Size	Space allowance m2	Space allowance £/m2	N/A/C	Departmental Allowance £	Equipment Allowance £		
Cardiff	Hot cell build works					45,000			
	PET Scanner						2,500,000		
	Ancillary Equipment						300,000		
	Radiotherapy adaptions						120,000		
	Cyclotron	Ion source replacement					453,000		
		Hot cells replacement					1,300,000	4,673,000	
Swansea	New build		40	4000		160,000			
	Refurbish existing		176	2000	A	352,000			
	Lead Lining	£232K+10%				255,000			
	PET Scanner						2,500,000		
	Ancillary Equipment						300,000		
	Radiotherapy adaptions						120,000		
								2,920,000	
N Wales									
	New build		260	4000	N	1,040,000			
	Lead Lining	£232K+10%				255,000			
	PET Scanner						2,500,000		
	Ancillary Equipment						300,000		
	Radiotherapy adaptions						120,000		
								2,920,000	
4th Facility (TBA)									
	New build		260	4000	N	1,040,000			
	Lead Lining	£232K+10%				255,000			
	PET Scanner						2,500,000		25/26
	Ancillary Equipment						300,000		
	Radiotherapy adaptions						120,000		
								2,920,000	
5th Facility (TBA)									
	New build		260	4000	N	1,040,000			
	Lead Lining	£232K+10%				255,000			
	PET Scanner						2,500,000		28/29
	Ancillary Equipment						300,000		
	Radiotherapy adaptions						120,000		
								2,920,000	
Loose equipment (4 sites)							160,000		
								40000	
								40000	
								40000	
								40000	
		Total floor area	996	m2					
							16,513,000		
Less: Abatement for transferred equipment 0 %							0		
							16,513,000		
Departmental Cost - to PBC1 Summary						4,697,000			
Equipment Cost - to PBC1 Summary							16,513,000		


RE: PBC FORMS

Hi Sarah, thanks for the update.

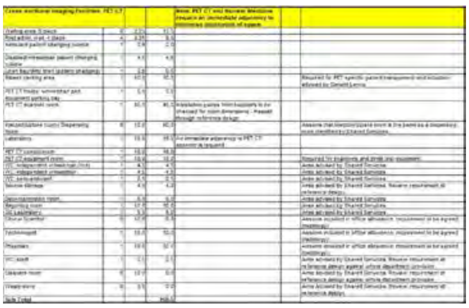
Chris will need to secure his quotes via CU procurement dept.

In relation to the costings we spoke about I can confirm the list below, this follows discussion with Neil earlier. These figures EXCLUDE vat so please add that in the appropriate place on the forms these costs are per site.

- PET-CT Scanner suitably configured for NHS Wales functions - £2.5Million
- Ancillary equipment and phantoms - £300k
- PET-MRI (this is for information only as I don't expect we will be procuring one) - 3.8millions
- Radiotherapy adaptions: Laser bridge, flat table top etc - £120k

Please note
1. these are figures are as of today's date and for equipment currently available.
2. There are developments all the time which often increase costs, these may be of benefit to NHS Wales and so you may wish to include an equipment contingency of circa 8-10% at this stage.
3. Firm costs will be available only after we run the procurement.
4. These figures do not include any multi-unit discounts at this time.

I trust this is helpful



Project Title All Wales PET CT Programme
Option No 4
Option Title Cardiff plus 4 PET sites

CAPITAL COSTS: ON-COSTS

	Net Cost	% of DCA
1 Communications		
a Space	See PBC1	
b Medical Gases		
c Lifts		
2 "External" Building Work		
a Drainage		
b Roads, paths, parking		
c Site layout, walls, fencing, gates		
d BWIC with "External" engineering work		
3 "External" Engineering Work		
a Steam, condensate, heating, hot water and gas supply mains		
b Cold water mains and storage		
c Electricity mains, sub-stations, standby generating plant		
d Calorifiers and associated plant		
e Miscellaneous services		
4 Auxilliary Buildings		
5 Other on-costs and abnormals		
a Building abnormals(See Annex A)		
b Engineering(See Annex B)		
c Other on-costs(See Annex C)		
Total On-costs - to SOC1 Summary	0	0.00%

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

CAPITAL COSTS: FEES AND NON-WORKS COSTS

		£	% of Works Cost
1	Fees	6,340,950	
	HB/Trust		
	a. Project Manager	158,524	2.50%
	b. Trust Cost Advisor	Inc	
	c. Supervisor	Inc	
	d. Host organisation Programme Management and Admin su	158,524	2.50%
	e. In-house Project Sponsorship	Inc	
	f. Financial Vetting	Inc	
	g. Audit	Inc	
	h. Specialist Advisors	63,410	1.00%
	SCP / Constructor		
	j. Constructor - pre-construction	0	
	k. Project Manager	0	
	l. Health Planner	0	
	m. Architect	634,095	10%
	n. Civil and Structural Engineer	Inc	
	o. Building Services Engineer	Inc	
	p. Planning Supervisor	Inc	
	q. Cost Manager	Inc	
	r. FM Advisor	Inc	
	s. Building Services Installer- pre-construction	Inc	
	t. Other	0	
	Total Fees to SOC1 Summary	1,014,552	16.00%
2	Non-Works Costs		
	a. Land purchase costs and associated legal fees		
	Assumed all NHS land	0	
	b. Statutory and Local Authority charges		
	c. Planning and Building Control fees	40,000	
	d. Survey Fees	50,000	
	d. Other	30,000	
	Total Non-Works Costs to PBC1 Summary	120,000	

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

PROJECT CASHFLOW FORECAST

Proposed start on site:
Proposed completion date:

Year	0	1	2	3	4	5	6	6	Total
Financial year	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2027/2028	
Works Cost	£0	£60,750	£2,783,700	£0	£1,748,250	£0	£0	£1,748,250	£6,340,950
Fees	£139,450	£182,045	£217,534	£111,888	£83,916	£83,916	£111,888	£83,916	£1,014,552
Non-works Costs	£20,000	£30,000	£10,000	£20,000	£10,000	£0	£20,000	£10,000	£120,000
Equipment Costs	£3,413,000	£1,300,000	£5,880,000	£0	£2,960,000	£0	£0	£2,960,000	£16,513,000
Quantified Risk/Contingency	£357,245	£157,279	£889,123	£13,189	£480,217	£8,392	£13,189	£480,217	£2,398,850
Sub-total	**£3,929,695**	**£1,730,074**	**£9,780,357**	**£145,077**	**£5,282,383**	**£92,308**	**£145,077**	**£5,282,383**	**£26,387,352**
									£0
Gross VAT	£785,939	£346,015	£1,956,071	£29,015	£1,056,477	£18,462	£29,015	£1,056,477	£5,277,470
Less: Reclaimable VAT	£27,890	£36,409	£43,507	£22,378	£16,783	£16,783	£22,378	£16,783	£202,910
Net VAT	£758,049	£309,606	£1,912,565	£6,638	£1,039,693	£1,678	£6,638	£1,039,693	£5,074,560
Total	**£4,687,744**	**£2,039,680**	**£11,692,922**	**£151,715**	**£6,322,076**	**£93,986**	**£151,715**	**£6,322,080**	£31,461,912

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

CASHFLOW FORECAST OF FUNDING SOURCES

TO BE COMPLETED IF THERE ARE OTHER FUNDING SOURCES PROPOSED OTHER THAN WG NHS CAPITAL

Proposed start on site:

Proposed completion date:

Funding source: Department for Health and Social Services: Welsh Assembly Government

Year	0	1	2	3	4	5	6	Total
Financial year	2021/2022	2022/2023	2023/2024	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost			£6,340,950					£6,340,950
Fees	£304,366	£405,821	£304,366					£1,014,552
Non-works Costs		£120,000						£120,000
Equipment Costs			£16,513,000					£16,513,000
Quantified Risk/ Contingency			£2,398,850					£2,398,850
Sub-total	£304,366	£525,821	£25,557,166	£0	£0	£0	£0	£26,387,352
Gross Vat	£60,873	£105,164	£5,111,433	£0	£0	£0	£0	£5,277,470
Less: Reclaimable VAT	£0	£0	£0	£0	£0	£0	£0	£0
Sub-total	£60,873	£105,164	£5,111,433	£0	£0	£0	£0	£5,277,470
Total	£365,239	£630,985	£30,668,599	£0	£0	£0	£0	£31,664,823

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Funding source:

Year	0	1	2	3	4	5	6	Total
Financial year	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	20**/20**	
Works Cost								0
Fees								0
Non-works Costs								0
Equipment Costs								0
Quantified Risk/ Contingency								0
Sub-total	0	0	0	0	0	0	0	0
Gross Vat	0	0	0	0	0	0	0	0
Less: Reclaimable VAT	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

RECOVERABLE VAT CALCULATION

	a	b	c	d
	Cost Net of VAT	VAT at 20% (ie prior to recovery)	Percentage recoverable (% of col b)	Recoverable VAT (col b x col c)
	£	£	%	£
Works Cost	6,340,950	1268190	0%	0
		0		0
		0		0
Fees	1,014,552	202910.4	0%	0
		0		0
Non-works Costs	120,000	24000	0%	0
Equipment Costs	16,513,000	3302600	0%	0
Contingencies	-202,910	-40582.1		0
Total			£	0

BENCHMARKING REPORT –

Prepared for: Mark Woodward
Office: Liverpool
Date: 11-Feb-20
Prepared by: Liz MacGregor

Notes:

All in TPI used: 331 1Q2020 (BCIS indices published 31 January 2020)
Location factor: 88 North Wales (BCIS factors published 31 January2020)

Data used in the benchmarking exercise are as follows:Location Factor: 1.01

Key	Project Number	Base Date	Asset Description
A	BLQS1120	06/06/2012	New build two storey community hospital the facility will include: 30 inpatient beds minor injury unit as well as diagnostic and X ray departments. The hospital will als rehabilitation services, an outpatient's clinic and a day treatment centre.
B	BLQS1119	07/09/2009	New build community hospital providing Inpatient, Diagnostics, Therapies, Outpat
C	CSRE0271	24/11/2008	New build two storey community hospital
D	CSRE0209	23/02/2009	New build hospital
E	CSRE0210	30/10/2006	New build community hospital
F	CSRE0275	04/03/2010	New build general hospital
G	CSRE0274	04/03/2010	New build community hospital
H	CSRE0273	01/11/2003	New build community hospital

Key	0 Facilitating Works	1 Substructure	2 Superstructure	3 Finishings	4 FF&E	5 Services	6 Bldgs/Bldg Units	7 Extg Bldgs
A	£2.58	£304.80	£1,130.58	£145.94	£141.03	£1,168.04	£0.00	£0.00
B	£38.66	£476.26	£985.13	£130.12	£115.69	£1,241.19	£0.00	£0.00
C	£0.00	£153.62	£1,025.25	£139.07	£103.19	£1,149.61	£0.00	£0.00
D	£0.00	£200.04	£777.65	£182.90	£147.84	£1,106.14	£0.00	£0.00
E	£0.00	£94.64	£748.88	£117.47	£91.78	£898.32	£0.00	£0.00
F	£0.00	£62.28	£742.35	£179.50	£117.06	£1,027.78	£0.00	£61.59
G	£0.00	£139.84	£800.98	£187.54	£69.14	£926.17	£0.00	£0.00
H	£0.00	£111.38	£680.14	£199.69	£151.58	£926.21	£0.00	£33.67

INSIGHT & ANALYTICS

s, a midwifery led maternity unit and a so offer on-going therapy and integrated
tients and Community Health departmen

sub total	8 External Works	sub total	9 Preliminaries	sub total	10 OH&P	12 Other Costs	13 Risk	14 Inflation	Total Cost
£2,892.97	£579.89	£3,472.86	£970.44	£4,443.30	£271.22	£0.00	£0.00	£0.00	£4,714.51
£2,987.05	£237.70	£3,224.75	£587.45	£3,812.20	£292.62	-£91.49	£170.04	£0.00	£4,183.36
£2,570.74	£492.03	£3,062.77	£526.40	£3,589.17	£0.00	£0.00	£0.00	£0.00	£3,589.17
£2,414.57	£558.77	£2,973.34	£401.10	£3,374.44	£0.00	£0.00	£89.83	£0.00	£3,464.26
£1,951.09	£437.34	£2,388.43	£453.69	£2,842.12	£0.00	£0.00	£314.27	£0.00	£3,156.40
£2,190.56	£584.09	£2,774.65	£199.40	£2,974.05	£0.00	£0.00	£0.00	£0.00	£2,974.06
£2,123.67	£523.14	£2,646.81	£182.24	£2,829.05	£0.00	£0.00	£0.00	£0.00	£2,829.04
£2,102.67	£658.93	£2,761.60	£0.00	£2,761.60	£0.00	£0.00	£0.00	£0.00	£2,761.60

MINIMUM £2,761.60
MAXIMUM £4,714.51

Say
plus 20% on Costs

0.981060606

Update to 1Q 21

£4,625.22
£4,104.13
£3,521.19
£3,398.65
£3,096.62
£2,917.73
£2,775.46
£2,709.30

£2,709.30
£4,625.22

4000

BCIS Online
Grade II listed office refurbishment

BCIS Online - #33315

Building function:	320. - Offices			
Type of work:	Rehabilitation/Conversion			
Gross floor area:	973 m2			
Job title:	Conversion, Reconfiguration and Refurbishment of Magis			
Location:	Port Talbot, West Glamorgan			
District:	Port Talbot			
Grid reference:	SS7689			
Postcode:	SA13 1SB			
Dates:	Receipt:	11-May-18		
	Base:	11-May-18		
	Acceptance:	13-Jun-18		
	Possession:	13-Aug-18		
	Conversion of former Grade II listed mag			
Project details:				
Site conditions:	Restricted site access and working space.			
Market conditions:	Good.			
Project tender price index:	367 on 1985 BCIS Index Base			
Client:	Neath Port Talbot County Borough Council			
Tender documentation:	Bill of Quantities			
Selection of contractor:	Selected competition			
No of tenders:	Issued:	6	Received:	6
Contract:	NEC3 priced contract 2013 (option A or B)			
Contract period (mths):	Stipulated:	33	Offered:	33
Cost fluctuations:	Fixed			
Basis of cost:	Tender			

Tender list:	£1,747,435	-
	£1,823,921	4.40%
	£1,842,737	5.50%
	£1,860,560	6.50%
	£1,879,239	7.50%
	£1,923,721	10.10%

Contract breakdown	
Measured work:	£1,394,496
Provisional sums:	£112,000
Preliminaries:	£140,939
Contingencies:	£100,000
Contract sum:	£1,747,435

Accommodation and design features: Conversion, reconfiguration and refurbishment of a forme fire escape with strip foundations. Stonework and brick re screens. Doors. Plaster, plasterboard, ceramic, emulsion Kitchen units and blinds. Sanitaryware. Mechanical and e

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element ur	Element u
01 Substructure	(Costs included	£0	£0	

02 Superstructure	(Costs include c	£519,219	£534	
03 Finishes		£170,491	£175	
04 Fittings, Furnishings and Equipment		£26,076	£27	
05 Services		£576,336	£592	
06 Prefabricated Buildings and Building Units		£0	£0	
07 Work to Existing Building		£0	£0	
Building Sub-total		£1,292,122	£1,328	
08 External Works		£177,114	£182	
00 Facilitating Works		£37,260	£38	
09 Preliminaries		£140,939	£145	
10 Main Contractor's Overheads and Profit		£0	£0	
Total (less Design Fees)		£1,647,435	£1,693	
11 Project/Design Team Fees		£0	£0	
12 Other Development/Project Costs		£0	£0	
13 Risk (Clients Contingencies)		£100,000	£103	
Total Contract sum		**£1,747,435**	**£1,796**	
			£2,000.00	Small work

Credits:

Submitted by	Neath Port Talbot County Borough Cour
Client	Neath Port Talbot County Borough Cour
Quantity Surveyor	Neath Port Talbot County Borough Cour
General Contractor	TAD Builders Ltd

BCIS Online - #32689

Building function:	320. - Offices
Type of work:	Rehabilitation/Conversion
Gross floor area:	9,290 m2
Job title:	Office Refurbishment, Arkwright House
Location:	Manchester, Greater Manchester
District:	Manchester
Grid reference:	SJ8398
Postcode:	M3 2LF
Dates:	Receipt: 25-Sep-15
	Base: 25-Sep-15
Project details:	Refurbishment of 6 storey office block with external works
Site conditions:	Works within existing building.
Client:	Catalyst Capital
Tender documentation:	Employers Requirements (for Design and Build)
Selection of contractor:	Design and build
Cost fluctuations:	Fixed

Contract breakdown

Measured work:	£16,297,332
Preliminaries:	£2,877,073
Contingencies:	£779,337
Contractor design fees:	£254,814
Contract sum:	£20,208,556

Accommodation and design features: Refurbishment of 6 storey 1930's Grade II listed classicis walling. Roof and wall cladding. New concrete floors. Par services. Lifts refurbishment. Asbestos removal.

Accreditation scores: Listed Building Grade II

Elements

Element	Total cost	Cost per m²	Element ur	Element u
1 Substructure		£257,541	£27	
2 Superstructure		£6,948,000	£748	

3 Finishes	£1,214,403	£130
4 Fittings and Furnishings	£139,214	£15
5 Services	£6,803,030	£732
Building Sub-total	£15,362,187	£1,654
6 External Works	£935,144	£101
7 Preliminaries	£2,877,073	£310
8 Contingencies	£779,337	£84
Total (less Design Fees)	£19,953,742	£2,147
9 Design Fees	£254,814	£27
Total Contract sum	**£20,208,556**	**£2,176**

Credits:

Submitted by	Gardiner & Theobald
Client	Catalyst Capital
Architect	Sheppard Robson
Quantity Surveyor	Gardiner & Theobald
Structural Engineer	Curtins Consulting Ltd
Services Engineer	Crookes Walker Consulting
Planning Supervisor	Deloitte Real Estate

strates Court to Offices

gistrates court into 4Nr office units with external works. Stripping out services, partitions, windows, doors, finisl

Agreed: 33

er Grade II listed magistrates court into providing high specification office space with meeting and training roon
epairs. Built up felt and zinc pitched roofing. Staircase balustrading. Replacement aluminium windows. Metal s
and plastic wall finishes. Raised access floors, ceramic, vinyl and carpet floor finishes. Plasterboard and susp
lectrical services. Lift alterations. Stripping out.

Percentage

30 %
10 %
1 %
33 %

74 %
10 %
2 %
8 %

94 %

6 %
100 %

ks

ncil
ncil
ncil

s. Asbestos removal.

t offices with minor extension including ground floor lobby restoration to original form. Additional piled foundati
titions and ceilings. Raised access flooring. Ceramic tiling. Soft floor finishes. Painting. Fixtures and fittings. M

Percentage

1 %
34 %

6	%
1	%
34	%
76	%
5	%
14	%
4	%
99	%
1	%
100	**%**

hes and fittings.

ns. Enclosed external glazed
tud partitions and glazed
pended mineral fibre ceilings.

ons. Steel frame. Curtain
echanical and electrical

Summary indicative revenue costs

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	4,869	5,843	7,011	8,412	10,096
Option 2: Do Minimum	4,806	5,736	6,850	8,187	9,268
Option 3: 4 scanners	4,806	5,736	6,850	8,125	8,546
Option 4: 5 scanners	4,806	5,736	6,850	8,125	8,546

Average cost per scan £	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	£935.00	£935.00	£935.00	£935.00	£935.00
Option 2: Do Minimum	£923.05	£917.89	£913.59	£910.00	£858.32
Option 3: 4 scanners	£923.05	£917.89	£913.59	£903.07	£791.46
Option 4: 5 scanners	£923.05	£917.89	£913.59	£903.07	£791.46

Sensitivty testing

Scenario 1 - Demand growth is 15% year on year

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	4,869	5,599	6,439	7,404	8,515
Option 2: Do Minimum	4,806	5,503	6,304	7,226	7,224
Option 3: 4 scanners	4,806	5,503	6,304	7,502	7,678
Option 4: 5 scanners	4,806	5,503	6,304	7,502	7,678

Average cost per scan £	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	£935.00	£935.00	£935.00	£935.00	£935.00
Option 2: Do Minimum	£923.05	£919.01	£915.50	£912.45	£793.25
Option 3: 4 scanners	£923.05	£919.01	£915.50	£947.29	£843.13
Option 4: 5 scanners	£923.05	£919.01	£915.50	£947.29	£843.13

Scenario 2 - Demand growth is 12.5% year on year

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	4,869	5,477	6,162	6,932	7,798
Option 2: Do Minimum	4,806	5,387	6,040	6,775	6,291

Option 3: 4 scanners	4,806	5,387	6,040	7,210	7,348
Option 4: 5 scanners	4,806	5,387	6,040	7,210	7,348

Average cost per scan £	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	£935.00	£935.00	£935.00	£935.00	£935.00
Option 2: Do Minimum	£923.05	£919.61	£916.55	£913.83	£754.23
Option 3: 4 scanners	£923.05	£919.61	£916.55	£972.47	£880.94
Option 4: 5 scanners	£923.05	£919.61	£916.55	£972.47	£880.94

Scenario 2 - Demand growth is 10.0% year on year

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	4,869	5,355	5,891	6,480	7,128
Option 2: Do Minimum	4,806	5,271	5,782	6,344	5,413
Option 3: 4 scanners	4,806	5,271	5,782	6,930	7,034
Option 4: 5 scanners	4,806	5,271	5,782	6,930	7,034

Average cost per scan £	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	£935.00	£935.00	£935.00	£935.00	£935.00
Option 2: Do Minimum	£923.05	£920.24	£917.68	£915.35	£710.01
Option 3: 4 scanners	£923.05	£920.24	£917.68	£999.99	£922.60
Option 4: 5 scanners	£923.05	£920.24	£917.68	£999.99	£922.60

Do nothing

	2021/22	2022/23	2023/24	2024/25	2025/26
Total activity (Number of scans)	5,207	6,249	7,498	8,997	10,798
Total recurring revenue costs (£'00	**4,869**	**5,843**	**7,011**	**8,412**	**10,096**
Total cost per scan	£935.00	£935.00	£935.00	£935.00	£935.00

Preferred option

	2021/22	2022/23	2023/24	2024/25	2025/26
South East Wales (PETIC)	2,629	3,155	3,786	4,543	5,288
South West Wales (Fixed digital scar	1,434	1,721	2,065	2,478	2,974
North Wales (Fixed digital scanner)	1,144	1,373	1,647	1,976	2,372
4th scanner (Fixed digital scanner)	0	0	0	0	0

Capacity shortfall - Outsourced	0	0	0	0	164
Total activity (Number of scans)	**5,207**	**6,249**	**7,498**	**8,997**	**10,798**
South East Wales (PETIC)	2,396	2,843	3,379	4,023	4,023
South West Wales (Fixed digital scar	1,341	1,609	1,931	2,126	2,275
North Wales (Fixed digital scanner)	1,070	1,284	1,540	1,976	2,095
4th scanner (Fixed digital scanner)	0	0	0	0	0
Capacity shortfall - Outsourced	0	0	0	0	153
Total recurring revenue costs (£'00	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**
South East Wales (PETIC)	£911.34	£901.11	£892.59	£885.49	£760.74
South West Wales (Fixed digital scar	£935.00	£935.00	£935.00	£858.13	£765.11
North Wales (Fixed digital scanner)	£935.00	£935.00	£935.00	£999.82	£883.05
4th scanner (Fixed digital scanner)					
Capacity shortfall - Outsourced					£935.00
Total cost per scan	£923.05	£917.89	£913.59	£903.07	£791.46

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
12,115	14,537	17,445	20,935	25,122	30,145	156,529	0
11,287	13,709	16,617	20,107	24,294	29,317	150,179	-6,350
8,714	11,251	12,185	14,327	18,279	23,303	122,122	-34,407
8,714	11,251	12,185	14,688	16,305	21,329	118,536	-37,993

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£0.00
£871.10	£881.75	£890.62	£898.02	£904.18	£909.32	£897.07	-£37.93
£672.53	£723.63	£653.09	£639.88	£680.32	£722.77	£729.47	-£205.53
£672.53	£723.63	£653.09	£656.03	£606.86	£661.55	£708.06	-£226.94

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
9,792	11,261	12,950	14,893	17,127	19,696	118,546	0
8,501	9,970	11,660	13,602	15,836	18,405	109,038	-9,507
7,882	9,736	10,278	10,902	11,620	12,809	95,021	-23,524
7,882	9,736	10,278	12,284	13,002	13,828	98,804	-19,742

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£0.00
£811.74	£827.82	£841.80	£853.96	£864.53	£873.72	£860.01	-£74.99
£752.56	£808.33	£742.07	£684.46	£634.37	£608.07	£749.46	-£185.54
£752.56	£808.33	£742.07	£771.23	£709.82	£656.42	£779.29	-£155.71

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
8,773	9,870	11,104	12,492	14,053	15,810	103,339	0
7,266	8,362	9,596	10,984	12,545	14,302	92,354	-10,985

7,503	9,072	9,468	9,914	10,416	10,980	88,143	-15,196
7,503	9,072	9,468	11,296	11,798	12,362	92,289	-11,050

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£0.00
£774.31	£792.17	£808.04	£822.14	£834.68	£845.83	£835.61	-£99.39
£799.59	£859.38	£797.27	£742.06	£692.99	£649.37	£797.51	-£137.49
£799.59	£859.38	£797.27	£845.51	£784.94	£731.10	£835.02	-£99.98

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
7,841	8,625	9,487	10,436	11,480	12,628	90,220	0
6,126	6,910	7,772	8,721	9,765	10,913	77,821	-12,399
7,147	8,654	8,791	9,046	9,381	9,750	82,592	-7,627
7,147	8,654	8,791	10,428	10,764	11,132	86,739	-3,481

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£0.00
£730.47	£749.06	£765.96	£781.33	£795.30	£808.00	£806.51	-£128.49
£852.25	£938.12	£866.36	£810.47	£764.10	£721.94	£855.95	-£79.05
£852.25	£938.12	£866.36	£934.29	£876.66	£824.28	£898.92	-£36.08

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
12,957	15,548	18,658	22,390	26,868	32,241	167,411
12,115	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**156,529**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
5,288	5,288	5,288	5,288	5,288	5,288	51,129
3,569	4,282	5,139	5,288	5,288	5,288	39,526
2,846	3,415	4,098	4,918	5,288	5,288	34,365
1,254	2,563	4,133	5,288	5,288	5,288	23,814

0	0	0	1,608	5,716	11,089	18,577
12,957	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**	**167,411**
4,023	4,023	4,023	4,023	4,023	4,023	40,801
2,454	2,668	2,926	2,971	2,971	2,971	26,243
2,237	2,408	2,613	2,859	2,971	2,971	24,022
0	2,152	2,624	2,971	2,971	2,971	13,687
0	0	0	1,503	5,344	10,368	17,369
8,714	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**	**122,122**
£760.74	£760.74	£760.74	£760.74	£760.74	£760.74	£797.99
£687.64	£623.16	£569.33	£561.75	£561.75	£561.75	£663.93
£786.01	£705.10	£637.65	£581.42	£561.75	£561.75	£699.03
£0.00	£839.63	£634.79	£561.75	£561.75	£561.75	£574.76
			£935.00	£935.00	£935.00	£935.00
£672.53	£723.63	£653.09	£639.88	£680.32	£722.77	£729.47

All Wales PET CT Programme
Revenue costs

			Mar-22	Mar-23
			Year 0	Year 1
South East Wales			2,629	3,155
South West Wales			1,434	1,721
North Wales			1,144	1,373
Total			**5,207**	**6,249**
Option 1: BAU - Outsource all activity				
South East Wales	Average outsource cost	£935.00	2,458	2,950
South West Wales	Average outsource cost	£935.00	1,341	1,609
North Wales	Average outsource cost	£935.00	1,070	1,284
Total			**4,869**	**5,843**
Average cost per scan			£935.00	£935.00
Option 2: Do Minimum				
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	854
South East Wales	Over 5288 - outsource	£935.00		
South East Wales			**2,396**	**2,843**
South West Wales	Average outsource cost	£935.00	1,341	1,609
North Wales	Average outsource cost	£935.00	1,070	1,284
Total			**4,806**	**5,736**
Saving verusus BAU			- 62	- 107
Average cost per scan			£923.05	£917.89
Option 3: 4 scanners				
South East Wales			2,629	3,155
South West Wales			1,434	1,721
North Wales			1,144	1,373
4th scanner				
Outsource			-	-
Total			**5,207**	**6,249**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	854
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,843**
South West Wales	Transitional period	£935.00	1,341	1,609
South West Wales	New scanner - fixed costs			
South West Wales	New scanner - variable costs	£300.40		

South West Wales			**1,341**	**1,609**
North Wales	Transitional period	£935.00	1,070	1,284
North Wales	New scanner - fixed costs			
North Wales	New scanner - variable costs	£300.40		
North Wales			**1,070**	**1,284**
4th scanner	Transitional period			
4th scanner	New scanner - fixed costs			
4th scanner	New scanner - variable costs	£300.40		
4th scanner			**-**	**-**
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			**-**	**-**
Total			**4,806**	**5,736**
Saving verusus BAU			- 62	- 107
Average cost per scan			£923.05	£917.89

Option 4: 5 scanners

South East Wales			2,629	3,155
South West Wales			1,434	1,721
North Wales			1,144	1,373
4th scanner				
5th scanner				
Outsource			-	-
Total			**5,207**	**6,249**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	854
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,843**
South West Wales	Transitional period	£935.00	1,341	1,609
South West Wales	New scanner - fixed costs	£0.00	-	-
South West Wales	New scanner - variable costs	£300.40	-	-
South West Wales			**1,341**	**1,609**
North Wales	Transitional period	£935.00	1,070	1,284
North Wales	New scanner - fixed costs	£0.00	-	-
North Wales	New scanner - variable costs	£300.40	-	-
North Wales			**1,070**	**1,284**
4th scanner	Transitional period	£0.00	-	-
4th scanner	New scanner - fixed costs	£0.00	-	-
4th scanner	New scanner - variable costs	£300.40	-	-
4th scanner			**-**	**-**
5th scanner	Transitional period			
5th scanner	New scanner - fixed costs			
5th scanner	New scanner - variable costs	£300.40		

5th scanner			-	-
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			-	-
Total			**4,806**	**5,736**
Saving verusus BAU			- 62	- 107
Average cost per scan			£923.05	£917.89
			520.70	624.90
			781.05	937.35

Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3,786	4,543	5,452	6,542	7,851	9,421	11,305	13,566	16,279
2,065	2,478	2,974	3,569	4,282	5,139	6,167	7,400	8,880
1,647	1,976	2,372	2,846	3,415	4,098	4,918	5,902	7,082
7,498	**8,997**	**10,798**	**12,957**	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**
3,540	4,248	5,098	6,117	7,341	8,809	10,570	12,684	15,221
1,931	2,317	2,781	3,337	4,004	4,805	5,766	6,919	8,303
1,540	1,848	2,218	2,661	3,193	3,832	4,598	5,518	6,622
7,011	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,391	2,034	2,034	2,034	2,034	2,034	2,034	2,034	2,034
		247	1,266	2,490	3,958	5,719	7,833	10,370
3,379	**4,023**	**4,270**	**5,289**	**6,513**	**7,981**	**9,742**	**11,856**	**14,393**
1,931	2,317	2,781	3,337	4,004	4,805	5,766	6,919	8,303
1,540	1,848	2,218	2,661	3,193	3,832	4,598	5,518	6,622
6,850	**8,187**	**9,268**	**11,287**	**13,709**	**16,617**	**20,107**	**24,294**	**29,317**
- 161	- 225	- 828	- 828	- 828	- 828	- 828	- 828	- 828
£913.59	£910.00	£858.32	£871.10	£881.75	£890.62	£898.02	£904.18	£909.32
3,786	4,543	5,288	5,288	5,288	5,288	5,288	5,288	5,288
2,065	2,478	2,974	3,569	4,282	5,139	5,288	5,288	5,288
1,647	1,976	2,372	2,846	3,415	4,098	4,918	5,288	5,288
			1,254	2,563	4,133	5,288	5,288	5,288
-	-	164	-	-	-	1,608	5,716	11,089
7,498	**8,997**	**10,798**	**12,957**	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,391	2,034	2,034	2,034	2,034	2,034	2,034	2,034	2,034
-								
3,379	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**
1,931								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
	744	893	1,072	1,286	1,544	1,588	1,588	1,588

1,931	**2,126**	**2,275**	**2,454**	**2,668**	**2,926**	**2,971**	**2,971**	**2,971**
1,540								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
	594	713	855	1,026	1,231	1,477	1,588	1,588
1,540	**1,976**	**2,095**	**2,237**	**2,408**	**2,613**	**2,859**	**2,971**	**2,971**
				1,382	1,382	1,382	1,382	1,382
				770	1,242	1,588	1,588	1,588
-	**-**	**-**	**-**	**2,152**	**2,624**	**2,971**	**2,971**	**2,971**
-	-	153	-	-	-	1,503	5,344	10,368
-	**-**	**153**	**-**	**-**	**-**	**1,503**	**5,344**	**10,368**
6,850	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**
- 161	- 287	- 1,550	- 3,401	- 3,286	- 5,260	- 6,608	- 6,843	- 6,843
£913.59	£903.07	£791.46	£672.53	£723.63	£653.09	£639.88	£680.32	£722.77
3,786	4,543	5,288	5,288	5,288	5,288	5,288	5,288	5,288
2,065	2,478	2,974	3,569	4,282	5,139	5,288	5,288	5,288
1,647	1,976	2,372	2,846	3,415	4,098	4,918	5,288	5,288
			1,254	2,563	4,133	5,288	5,288	5,288
						1,608	5,288	5,288
-	-	164	-	-	-	-	428	5,801
7,498	**8,997**	**10,798**	**12,957**	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,391	2,034	2,034	2,034	2,034	2,034	2,034	2,034	2,034
-	-	-	-	-	-	-	-	-
3,379	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**	**4,023**
1,931	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	744	893	1,072	1,286	1,544	1,588	1,588	1,588
1,931	**2,126**	**2,275**	**2,454**	**2,668**	**2,926**	**2,971**	**2,971**	**2,971**
1,540	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	594	713	855	1,026	1,231	1,477	1,588	1,588
1,540	**1,976**	**2,095**	**2,237**	**2,408**	**2,613**	**2,859**	**2,971**	**2,971**
-	-	-	-	-	-	-	-	-
-	-	-	-	1,382	1,382	1,382	1,382	1,382
-	-	-	-	770	1,242	1,588	1,588	1,588
-	**-**	**-**	**-**	**2,152**	**2,624**	**2,971**	**2,971**	**2,971**
						1,382	1,382	1,382
						483	1,588	1,588

-	**-**	**-**	**-**	**-**	**-**	**1,865**	**2,971**	**2,971**
-	-	153	-	-	-	-	400	5,424
-	**-**	**153**	**-**	**-**	**-**	**-**	**400**	**5,424**
6,850	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,688**	**16,305**	**21,329**
- 161	- 287	- 1,550	- 3,401	- 3,286	- 5,260	- 6,246	- 8,816	- 8,816
£913.59	£903.07	£791.46	£672.53	£723.63	£653.09	£656.03	£606.86	£661.55
749.80	899.70	#######	#######	#######	#######	#######	#######	#######
#######	#######	#######	#######	#######	#######	#######	#######	#######

TOTAL

167,411

156,529
£935.00

150,179	
- 6,350	#REF!
£897.07	

122,122	
- 34,407	#REF!
£729.47	

118,536
- 37,993
£708.06

All Wales PET CT Programme

Revenue costs - Sensitivity

			Mar-22	Mar-23
			Year 0	Year 1
South East Wales			2,629	3,023
South West Wales			1,434	1,649
North Wales			1,144	1,316
Total			**5,207**	**5,988**
Option 1: BAU - Outsource all activity				
South East Wales	Average outsource cost	£935.00	2,458	2,827
South West Wales	Average outsource cost	£935.00	1,341	1,542
North Wales	Average outsource cost	£935.00	1,070	1,230
Total			**4,869**	**5,599**
Average cost per scan			£935.00	£935.00
Option 2: Do Minimum				
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	742
South East Wales	Over 5288 - outsource	£935.00		
South East Wales			**2,396**	**2,731**
South West Wales	Average outsource cost	£935.00	1,341	1,542
North Wales	Average outsource cost	£935.00	1,070	1,230
Total			**4,806**	**5,503**
Saving verusus BAU			- 62	- 96
Average cost per scan			£923.05	£919.01
Option 3: 4 scanners				
South East Wales			2,629	3,023
South West Wales			1,434	1,649
North Wales			1,144	1,316
4th scanner				
Outsource			-	- 0
Total			**5,207**	**5,988**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	742
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,731**
South West Wales	Transitional period	£935.00	1,341	1,542
South West Wales	New scanner - fixed costs			

South West Wales	New scanner - variable costs	£300.40		
South West Wales			**1,341**	**1,542**
North Wales	Transitional period	£935.00	1,070	1,230
North Wales	New scanner - fixed costs			
North Wales	New scanner - variable costs	£300.40		
North Wales			**1,070**	**1,230**
4th scanner	Transitional period			
4th scanner	New scanner - fixed costs			
4th scanner	New scanner - variable costs	£300.40		
4th scanner			**-**	**-**
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	- 0
Capacity shortfall			**-**	**- 0**
Total			**4,806**	**5,503**
Saving verusus BAU			- 62	- 96
Average cost per scan			£923.05	£919.01

Option 4: 5 scanners

South East Wales			2,629	3,023
South West Wales			1,434	1,649
North Wales			1,144	1,316
4th scanner			-	-
5th scanner				
Outsource				
Total			**5,207**	**5,988**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	742
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,731**
South West Wales	Transitional period	£935.00	1,341	1,542
South West Wales	New scanner - fixed costs	£0.00	-	-
South West Wales	New scanner - variable costs	£300.40	-	-
South West Wales			**1,341**	**1,542**
North Wales	Transitional period	£935.00	1,070	1,230
North Wales	New scanner - fixed costs	£0.00	-	-
North Wales	New scanner - variable costs	£300.40	-	-
North Wales			**1,070**	**1,230**
4th scanner	Transitional period	£0.00	-	-
4th scanner	New scanner - fixed costs	£0.00	-	-
4th scanner	New scanner - variable costs	£300.40	-	-
4th scanner			**-**	**-**
5th scanner	Transitional period			
5th scanner	New scanner - fixed costs			

5th scanner	New scanner - variable costs	£300.40		
5th scanner			-	-
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			-	-
Total			**4,806**	**5,503**
Saving verusus BAU			- 62	- 96
Average cost per scan			£923.05	£919.01

Demand growth

Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3,477	3,998	4,598	5,288	6,081	6,993	8,042	9,248	10,636
1,896	2,181	2,508	2,884	3,317	3,814	4,387	5,045	5,801
1,513	1,740	2,001	2,301	2,646	3,043	3,500	4,024	4,628
6,886	**7,919**	**9,107**	**10,473**	**12,044**	**13,851**	**15,928**	**18,318**	**21,065**
3,251	3,738	4,299	4,944	5,686	6,539	7,519	8,647	9,944
1,773	2,039	2,345	2,697	3,101	3,567	4,102	4,717	5,424
1,415	1,627	1,871	2,151	2,474	2,845	3,272	3,763	4,327
6,439	**7,404**	**8,515**	**9,792**	**11,261**	**12,950**	**14,893**	**17,127**	**19,696**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,128	1,571	1,571	1,571	1,571	1,571	1,571	1,571	1,571
		- 552	93	835	1,688	2,669	3,797	5,094
3,117	**3,560**	**3,008**	**3,653**	**4,395**	**5,248**	**6,229**	**7,356**	**8,654**
1,773	2,039	2,345	2,697	3,101	3,567	4,102	4,717	5,424
1,415	1,627	1,871	2,151	2,474	2,845	3,272	3,763	4,327
6,304	**7,226**	**7,224**	**8,501**	**9,970**	**11,660**	**13,602**	**15,836**	**18,405**
- 134	- 179	- 1,291	- 1,291	- 1,291	- 1,291	- 1,291	- 1,291	- 1,291
£915.50	£912.45	£793.25	£811.74	£827.82	£841.80	£853.96	£864.53	£873.72
3,477	3,998	4,598	5,288	5,288	5,288	5,288	5,288	5,288
1,896	2,181	2,508	2,884	3,317	3,814	4,387	5,045	5,288
1,513	1,740	2,001	2,301	2,646	3,043	3,500	4,024	4,628
			- 0	793	1,705	2,754	3,960	5,288
- 0	0	0	-	-	-	-	-	573
6,886	**7,919**	**9,107**	**10,473**	**12,044**	**13,851**	**15,928**	**18,318**	**21,065**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,128	1,571	1,571	1,571	1,571	1,571	1,571	1,571	1,571
-								
3,117	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**
1,773								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382

	655	753	866	996	1,146	1,318	1,515	1,588
1,773	**2,037**	**2,135**	**2,248**	**2,378**	**2,528**	**2,700**	**2,897**	**2,971**
1,415								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
	523	601	691	795	914	1,051	1,209	1,390
1,415	**1,905**	**1,983**	**2,073**	**2,177**	**2,296**	**2,433**	**2,591**	**2,772**
				1,382	1,382	1,382	1,382	1,382
				238	512	827	1,190	1,588
-	**-**	**-**	**-**	**1,620**	**1,894**	**2,209**	**2,572**	**2,971**
- 0	0	0	-	-	-	-	-	536
- 0	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**536**
6,304	**7,502**	**7,678**	**7,882**	**9,736**	**10,278**	**10,902**	**11,620**	**12,809**
- 134	97	- 837	- 1,911	- 1,526	- 2,672	- 3,991	- 5,507	- 6,887
£915.50	£947.29	£843.13	£752.56	£808.33	£742.07	£684.46	£634.37	£608.07
3,477	3,998	4,598	5,288	5,288	5,288	5,288	5,288	5,288
1,896	2,181	2,508	2,884	3,317	3,814	4,387	5,045	5,288
1,513	1,740	2,001	2,301	2,646	3,043	3,500	4,024	4,628
-	-	-	- 0	793	1,705	2,754	3,960	5,288
						-	-	573
								-
6,886	**7,919**	**9,107**	**10,473**	**12,044**	**13,851**	**15,928**	**18,318**	**21,065**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,128	1,571	1,571	1,571	1,571	1,571	1,571	1,571	1,571
-	-	-	-	-	-	-	-	-
3,117	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**	**3,560**
1,773	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	655	753	866	996	1,146	1,318	1,515	1,588
1,773	**2,037**	**2,135**	**2,248**	**2,378**	**2,528**	**2,700**	**2,897**	**2,971**
1,415	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	523	601	691	795	914	1,051	1,209	1,390
1,415	**1,905**	**1,983**	**2,073**	**2,177**	**2,296**	**2,433**	**2,591**	**2,772**
-	-	-	-	-	-	-	-	-
-	-	-	-	1,382	1,382	1,382	1,382	1,382
-	-	-	-	238	512	827	1,190	1,588
-	**-**	**-**	**-**	**1,620**	**1,894**	**2,209**	**2,572**	**2,971**
						1,382	1,382	1,382

						-	-	172
-	**-**	**-**	**-**	**-**	**-**	**1,382**	**1,382**	**1,554**
-	-	-	-	-	-	-	-	-
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6,304	**7,502**	**7,678**	**7,882**	**9,736**	**10,278**	**12,284**	**13,002**	**13,828**
- 134	97	- 837	- 1,911	- 1,526	- 2,672	- 2,609	- 4,125	- 5,868
£915.50	£947.29	£843.13	£752.56	£808.33	£742.07	£771.23	£709.82	£656.42

1,018

####
TOTAL
126,787
118,546
£935.00
109,038
- 9,507
£860.01

Baseline
2,396
541
1,105

	95,021
-	23,524
	£749.46

	98,804
-	19,742
	£779.29

All Wales PET CT Programme

Revenue costs - Sensitivity

			Mar-22	Mar-23
			Year 0	Year 1
South East Wales			2,629	2,958
South West Wales			1,434	1,613
North Wales			1,144	1,287
Total			**5,207**	**5,858**
Option 1: BAU - Outsource all activity				
South East Wales	Average outsource cost	£935.00	2,458	2,765
South West Wales	Average outsource cost	£935.00	1,341	1,508
North Wales	Average outsource cost	£935.00	1,070	1,203
Total			**4,869**	**5,477**
Average cost per scan			£935.00	£935.00
Option 2: Do Minimum				
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	686
South East Wales	Over 5288 - outsource	£935.00		
South East Wales			**2,396**	**2,675**
South West Wales	Average outsource cost	£935.00	1,341	1,508
North Wales	Average outsource cost	£935.00	1,070	1,203
Total			**4,806**	**5,387**
Saving verusus BAU			- 62	- 90
Average cost per scan			£923.05	£919.61
Option 3: 4 scanners				
South East Wales			2,629	2,958
South West Wales			1,434	1,613
North Wales			1,144	1,287
4th scanner				
Outsource			-	-
Total			**5,207**	**5,858**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	686
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,675**
South West Wales	Transitional period	£935.00	1,341	1,508
South West Wales	New scanner - fixed costs			

South West Wales	New scanner - variable costs	£300.40		
South West Wales			**1,341**	**1,508**
North Wales	Transitional period	£935.00	1,070	1,203
North Wales	New scanner - fixed costs			
North Wales	New scanner - variable costs	£300.40		
North Wales			**1,070**	**1,203**
4th scanner	Transitional period			
4th scanner	New scanner - fixed costs			
4th scanner	New scanner - variable costs	£300.40		
4th scanner			**-**	**-**
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			**-**	**-**
Total			**4,806**	**5,387**
Saving verusus BAU			- 62	- 90
Average cost per scan			£923.05	£919.61

Option 4: 5 scanners

South East Wales			2,629	2,958
South West Wales			1,434	1,613
North Wales			1,144	1,287
4th scanner			-	-
5th scanner				
Outsource				
Total			**5,207**	**5,858**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	686
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,675**
South West Wales	Transitional period	£935.00	1,341	1,508
South West Wales	New scanner - fixed costs	£0.00	-	-
South West Wales	New scanner - variable costs	£300.40	-	-
South West Wales			**1,341**	**1,508**
North Wales	Transitional period	£935.00	1,070	1,203
North Wales	New scanner - fixed costs	£0.00	-	-
North Wales	New scanner - variable costs	£300.40	-	-
North Wales			**1,070**	**1,203**
4th scanner	Transitional period	£0.00	-	-
4th scanner	New scanner - fixed costs	£0.00	-	-
4th scanner	New scanner - variable costs	£300.40	-	-
4th scanner			**-**	**-**
5th scanner	Transitional period			
5th scanner	New scanner - fixed costs			

5th scanner	New scanner - variable costs	£300.40		
5th scanner			-	-
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			-	-
Total			**4,806**	**5,387**
Saving verusus BAU			- 62	- 90
Average cost per scan			£923.05	£919.61

Demand growth

Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3,327	3,743	4,211	4,738	5,330	5,996	6,745	7,589	8,537
1,815	2,042	2,297	2,584	2,907	3,271	3,679	4,139	4,657
1,448	1,629	1,832	2,062	2,319	2,609	2,935	3,302	3,715
6,590	**7,414**	**8,341**	**9,383**	**10,556**	**11,876**	**13,360**	**15,030**	**16,909**
3,111	3,500	3,937	4,430	4,983	5,606	6,307	7,095	7,982
1,697	1,909	2,148	2,416	2,718	3,058	3,440	3,870	4,354
1,354	1,523	1,713	1,928	2,168	2,440	2,744	3,088	3,473
6,162	**6,932**	**7,798**	**8,773**	**9,870**	**11,104**	**12,492**	**14,053**	**15,810**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,001	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354
		- 913	- 421	133	755	1,456	2,245	3,132
2,989	**3,343**	**2,430**	**2,922**	**3,476**	**4,098**	**4,799**	**5,588**	**6,475**
1,697	1,909	2,148	2,416	2,718	3,058	3,440	3,870	4,354
1,354	1,523	1,713	1,928	2,168	2,440	2,744	3,088	3,473
6,040	**6,775**	**6,291**	**7,266**	**8,362**	**9,596**	**10,984**	**12,545**	**14,302**
- 122	- 157	- 1,508	- 1,508	- 1,508	- 1,508	- 1,508	- 1,508	- 1,508
£916.55	£913.83	£754.23	£774.31	£792.17	£808.04	£822.14	£834.68	£845.83
3,327	3,743	4,211	4,738	5,288	5,288	5,288	5,288	5,288
1,815	2,042	2,297	2,584	2,907	3,271	3,679	4,139	4,657
1,448	1,629	1,832	2,062	2,319	2,609	2,935	3,302	3,715
			-	42	708	1,457	2,301	3,249
-	-	-	-	-	-	-	-	-
6,590	**7,414**	**8,341**	**9,383**	**10,556**	**11,876**	**13,360**	**15,030**	**16,909**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,001	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354
-								
2,989	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**
1,697								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382

	613	690	776	873	982	1,105	1,243	1,399
1,697	**1,995**	**2,072**	**2,158**	**2,255**	**2,365**	**2,487**	**2,625**	**2,781**
1,354								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
	489	550	619	697	784	882	992	1,116
1,354	**1,871**	**1,933**	**2,001**	**2,079**	**2,166**	**2,264**	**2,374**	**2,498**
				1,382	1,382	1,382	1,382	1,382
				13	213	438	691	976
-	**-**	**-**	**-**	**1,395**	**1,595**	**1,820**	**2,073**	**2,358**
-	-	-	-	-	-	-	-	-
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6,040	**7,210**	**7,348**	**7,503**	**9,072**	**9,468**	**9,914**	**10,416**	**10,980**
- 122	278	- 451	- 1,271	- 798	- 1,636	- 2,578	- 3,637	- 4,830
£916.55	£972.47	£880.94	£799.59	£859.38	£797.27	£742.06	£692.99	£649.37
3,327	3,743	4,211	4,738	5,288	5,288	5,288	5,288	5,288
1,815	2,042	2,297	2,584	2,907	3,271	3,679	4,139	4,657
1,448	1,629	1,832	2,062	2,319	2,609	2,935	3,302	3,715
-	-	-	-	42	708	1,457	2,301	3,249
						-	-	-
								-
6,590	**7,414**	**8,341**	**9,383**	**10,556**	**11,876**	**13,360**	**15,030**	**16,909**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
1,001	1,354	1,354	1,354	1,354	1,354	1,354	1,354	1,354
-	-	-	-	-	-	-	-	-
2,989	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**	**3,343**
1,697	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	613	690	776	873	982	1,105	1,243	1,399
1,697	**1,995**	**2,072**	**2,158**	**2,255**	**2,365**	**2,487**	**2,625**	**2,781**
1,354	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	489	550	619	697	784	882	992	1,116
1,354	**1,871**	**1,933**	**2,001**	**2,079**	**2,166**	**2,264**	**2,374**	**2,498**
-	-	-	-	-	-	-	-	-
-	-	-	-	1,382	1,382	1,382	1,382	1,382
-	-	-	-	13	213	438	691	976
-	**-**	**-**	**-**	**1,395**	**1,595**	**1,820**	**2,073**	**2,358**
						1,382	1,382	1,382

						-	-	-
-	**-**	**-**	**-**	**-**	**-**	**1,382**	**1,382**	**1,382**
-	-	-	-	-	-	-	-	-
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6,040	**7,210**	**7,348**	**7,503**	**9,072**	**9,468**	**11,296**	**11,798**	**12,362**
- 122	278	- 451	- 1,271	- 798	- 1,636	- 1,196	- 2,255	- 3,448
£916.55	£972.47	£880.94	£799.59	£859.38	£797.27	£845.51	£784.94	£731.10

1,382

####
TOTAL
110,523
103,339
£935.00
92,354
- 10,985
£835.61

Baseline
2,396
541
1,105

	88,143
-	15,196
	£797.51

92,289
- 11,050
£835.02

All Wales PET CT Programme

Revenue costs - Sensitivity

			Mar-22	Mar-23
			Year 0	Year 1
South East Wales			2,629	2,892
South West Wales			1,434	1,577
North Wales			1,144	1,258
Total			**5,207**	**5,728**
Option 1: BAU - Outsource all activity				
South East Wales	Average outsource cost	£935.00	2,458	2,704
South West Wales	Average outsource cost	£935.00	1,341	1,475
North Wales	Average outsource cost	£935.00	1,070	1,177
Total			**4,869**	**5,355**
Average cost per scan			£935.00	£935.00
Option 2: Do Minimum				
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	631
South East Wales	Over 5288 - outsource	£935.00		
South East Wales			**2,396**	**2,619**
South West Wales	Average outsource cost	£935.00	1,341	1,475
North Wales	Average outsource cost	£935.00	1,070	1,177
Total			**4,806**	**5,271**
Saving verusus BAU			- 62	- 85
Average cost per scan			£923.05	£920.24
Option 3: 4 scanners				
South East Wales			2,629	2,892
South West Wales			1,434	1,577
North Wales			1,144	1,258
4th scanner				
Outsource			-	0
Total			**5,207**	**5,728**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	631
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,619**
South West Wales	Transitional period	£935.00	1,341	1,475
South West Wales	New scanner - fixed costs			

South West Wales	New scanner - variable costs	£300.40		
South West Wales			**1,341**	**1,475**
North Wales	Transitional period	£935.00	1,070	1,177
North Wales	New scanner - fixed costs			
North Wales	New scanner - variable costs	£300.40		
North Wales			**1,070**	**1,177**
4th scanner	Transitional period			
4th scanner	New scanner - fixed costs			
4th scanner	New scanner - variable costs	£300.40		
4th scanner			**-**	**-**
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	0
Capacity shortfall			**-**	**0**
Total			**4,806**	**5,271**
Saving verusus BAU			- 62	- 85
Average cost per scan			£923.05	£920.24

Option 4: 5 scanners

South East Wales			2,629	2,892
South West Wales			1,434	1,577
North Wales			1,144	1,258
4th scanner			-	-
5th scanner				
Outsource				
Total			**5,207**	**5,728**
South East Wales	First 2150	£925.00	1,989	1,989
South East Wales	2151 - 5288	£850.00	407	631
South East Wales	Over 5288 - outsource	£935.00	-	-
South East Wales			**2,396**	**2,619**
South West Wales	Transitional period	£935.00	1,341	1,475
South West Wales	New scanner - fixed costs	£0.00	-	-
South West Wales	New scanner - variable costs	£300.40	-	-
South West Wales			**1,341**	**1,475**
North Wales	Transitional period	£935.00	1,070	1,177
North Wales	New scanner - fixed costs	£0.00	-	-
North Wales	New scanner - variable costs	£300.40	-	-
North Wales			**1,070**	**1,177**
4th scanner	Transitional period	£0.00	-	-
4th scanner	New scanner - fixed costs	£0.00	-	-
4th scanner	New scanner - variable costs	£300.40	-	-
4th scanner			**-**	**-**
5th scanner	Transitional period			
5th scanner	New scanner - fixed costs			

5th scanner	New scanner - variable costs	£300.40		
5th scanner			-	-
Capacity shortfall	Capacity shortfall - outsource	£935.00	-	-
Capacity shortfall			-	-
Total			**4,806**	**5,271**
Saving verusus BAU			- 62	- 85
Average cost per scan			£923.05	£920.24

Demand growth

Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3,181	3,499	3,849	4,234	4,657	5,123	5,635	6,199	6,819
1,735	1,909	2,100	2,309	2,540	2,794	3,074	3,381	3,719
1,384	1,523	1,675	1,842	2,027	2,229	2,452	2,697	2,967
6,300	**6,931**	**7,624**	**8,386**	**9,225**	**10,147**	**11,162**	**12,278**	**13,506**
2,974	3,272	3,599	3,959	4,355	4,790	5,269	5,796	6,376
1,622	1,785	1,963	2,159	2,375	2,613	2,874	3,162	3,478
1,294	1,424	1,566	1,723	1,895	2,084	2,293	2,522	2,774
5,891	**6,480**	**7,128**	**7,841**	**8,625**	**9,487**	**10,436**	**11,480**	**12,628**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
876	1,147	1,147	1,147	1,147	1,147	1,147	1,147	1,147
		- 1,252	- 892	- 496	- 61	418	945	1,525
2,865	**3,136**	**1,884**	**2,244**	**2,639**	**3,075**	**3,554**	**4,081**	**4,661**
1,622	1,785	1,963	2,159	2,375	2,613	2,874	3,162	3,478
1,294	1,424	1,566	1,723	1,895	2,084	2,293	2,522	2,774
5,782	**6,344**	**5,413**	**6,126**	**6,910**	**7,772**	**8,721**	**9,765**	**10,913**
- 109	- 136	- 1,715	- 1,715	- 1,715	- 1,715	- 1,715	- 1,715	- 1,715
£917.68	£915.35	£710.01	£730.47	£749.06	£765.96	£781.33	£795.30	£808.00
3,181	3,499	3,849	4,234	4,657	5,123	5,288	5,288	5,288
1,735	1,909	2,100	2,309	2,540	2,794	3,074	3,381	3,719
1,384	1,523	1,675	1,842	2,027	2,229	2,452	2,697	2,967
			- 0	-	-	347	911	1,531
0	0	- 0	-	-	-	-	-	-
6,300	**6,931**	**7,624**	**8,386**	**9,225**	**10,147**	**11,162**	**12,278**	**13,506**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
876	1,147	1,147	1,147	1,147	1,147	1,147	1,147	1,147
-								
2,865	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**
1,622								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382

	573	631	694	763	839	923	1,016	1,117
1,622	**1,955**	**2,013**	**2,076**	**2,145**	**2,222**	**2,305**	**2,398**	**2,499**
1,294								
	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
	457	503	553	609	670	737	810	891
1,294	**1,839**	**1,885**	**1,936**	**1,991**	**2,052**	**2,119**	**2,192**	**2,273**
				1,382	1,382	1,382	1,382	1,382
				-	-	104	274	460
-	**-**	**-**	**-**	**1,382**	**1,382**	**1,486**	**1,656**	**1,842**
0	0	- 0	-	-	-	-	-	-
0	**0**	**- 0**	**-**	**-**	**-**	**-**	**-**	**-**
5,782	**6,930**	**7,034**	**7,147**	**8,654**	**8,791**	**9,046**	**9,381**	**9,750**
- 109	450	- 95	- 694	29	- 697	- 1,390	- 2,098	- 2,877
£917.68	£999.99	£922.60	£852.25	£938.12	£866.36	£810.47	£764.10	£721.94
3,181	3,499	3,849	4,234	4,657	5,123	5,288	5,288	5,288
1,735	1,909	2,100	2,309	2,540	2,794	3,074	3,381	3,719
1,384	1,523	1,675	1,842	2,027	2,229	2,452	2,697	2,967
-	-	-	- 0	-	-	347	911	1,531
						-	-	-
								-
6,300	**6,931**	**7,624**	**8,386**	**9,225**	**10,147**	**11,162**	**12,278**	**13,506**
1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989	1,989
876	1,147	1,147	1,147	1,147	1,147	1,147	1,147	1,147
-	-	-	-	-	-	-	-	-
2,865	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**	**3,136**
1,622	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	573	631	694	763	839	923	1,016	1,117
1,622	**1,955**	**2,013**	**2,076**	**2,145**	**2,222**	**2,305**	**2,398**	**2,499**
1,294	-	-	-	-	-	-	-	-
-	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
-	457	503	553	609	670	737	810	891
1,294	**1,839**	**1,885**	**1,936**	**1,991**	**2,052**	**2,119**	**2,192**	**2,273**
-	-	-	-	-	-	-	-	-
-	-	-	-	1,382	1,382	1,382	1,382	1,382
-	-	-	-	-	-	104	274	460
-	**-**	**-**	**-**	**1,382**	**1,382**	**1,486**	**1,656**	**1,842**
						1,382	1,382	1,382

						-	-	-
-	**-**	**-**	**-**	**-**	**-**	**1,382**	**1,382**	**1,382**
-	-	-	-	-	-	-	-	-
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5,782	**6,930**	**7,034**	**7,147**	**8,654**	**8,791**	**10,428**	**10,764**	**11,132**
- 109	450	- 95	- 694	29	- 697	- 8	- 716	- 1,495
£917.68	£999.99	£922.60	£852.25	£938.12	£866.36	£934.29	£876.66	£824.28

1,382

####
TOTAL
96,492
90,220
£935.00
77,821
- 12,399
£806.51

Baseline
2,396
541
1,105

82,592
- 7,627
£855.95

86,739
- 3,481
£898.92

	Total annual cost	Average cost per		
Average number of scans		**5,000**		
Workforce to operate digital scanner (7-12 patients per session)	1,060	£212.01	Prelimary workforce costs between £892k - £1,060k p.a. (Assumed maximum for prudence)	Fixed
Pay costs	**1,060**	**£212.01**		
Equipment maintenance	296	£59.20	10% of capital expenditure p.a. (PBC forms £2.96m for PET-CT + additions)	Fixed
Radiopharmaceuticals	1,308	£261.64	Average cost per patient = F-FDG £250 per patient (94% opf activity) ; F-PSMA £447 per patient 6% of activity)	Variable
Consumables	47	£9.30	Based on North Wales SOC (£11k for 2021/22 activity)	Variable
Delivery and transport	147	£29.45	Based on North Wales SOC (£36k for 2021/22 activity)	Variable
Building running costs	26	£5.20	Based on £100 average cost per m2	Fixed
Non pay costs	**1,824**	**£364.80**		
Total costs	**2,884**	**£576.81**		

Fixed costs	1,382	£276.41
Variable costs	1,502	£300.40

Equipment maintenance

Capital cost of PET CT scanner	2,960	
Annual maintenance charges %	10%	Confirmed by Sarah 22/4
Annual maintenance charges £'000	296	

Radiopharmaceuticals

See 'Radiopharm' worksheet

Consumables

North Wales SOC	£10,641.00	
Estimated activity 2021/22	1144.00	Includes Utilities, Hard FM, Soft FM
Cost per scan	£9.30	
Total cost at full capacity £'000	47	

Consumables

North Wales SOC	£33,696.00	
Estimated activity 2021/22	1144.00	Includes Utilities, Hard FM, Soft FM
Cost per scan	£29.45	
Total cost at full capacity £'000	147	

Building running costs

Floor area	260	
Hard FM - average cost per m2	£35.00	Average based on similar projects
Soft FM - average cost per m2	£35.00	Average based on similar projects
Utilities - average cost per m2	£30.00	Average based on similar projects
Cost per m2	£100.00	Includes Utilities, Hard FM, Soft FM
Total cost at full capacity £'000	26	

Radiopharmaceuticals

F-FDG

External supplier cost for 12 doses	£ 2,880.00
Delivery cost	£ 300.00
Total	£ 3,180.00
Average cost per dose including delivery	£ 265.00
External supplier cost for 17 doses	£ 3,705.00
Delivery cost	£ 300.00
Total	£ 4,005.00
Average cost per dose	£ 235.59
F-FDG average cost per patient	£ 250.29

PETIC produces a single batch of FDG each day at a consumable cost of around £500. The cost of each batch is independent of the number of patient doses. PETIC typically produces 12 patient doses for £500 of consumables is able to produce 17 patient doses for the same price. Other sites providing a PETCT service would need to source their FDG from one of the commercial manufacturers based in either London or Nottingham which would cost around £165 per patient dose and delivery charges of around £300. 12 patient doses from an external supplier cost £2,580 and 17 doses cost £3,705 in total.

F-PSMA

Assume twice as expensive as F-FDG	179%
F-PSMA average cost per patient	£ 446.95

PETIC produces 18F-FDG for on-site use at a cost of £560 per "batch" / PETIC produces 18F-PSMA at a cost of £1,000 per bath

Activity split

Based on actual activity Swansea (from January Service Report)

F-FDG	98	94%
F-PSMA	6	6%
Total activity	104	100%

18F-FDG (98 patients) was 95% delivered and on time – delay in one session caused cancelation of one (1) booked patient.
18F-PSMA (6 patients) was 100% delivered on time.
No 18FEC patients were booked/requested in January.

	Number of patients	Average cost per patient	Total costs £'000
F-FDG	4712	£ 250	1,179
F-PSMA	288	£ 447	129
Total	5000	£ 262	1,308

All Wales PET CT Programme

Baseline Costs

	Total annual cost £'000	
BCU	1,105	2020/21 Budget
SB and PETIC	2,937	2020/21 Budget
New indications Wales	500	2020/21 Budget
Total cost to WHSSC	**4,542**	
Average number of scans	**5,207**	**Predicted 2021 demand**
Average cost per scan	**£872.29**	

Year	South East Wales	South West Wales	North Wales
2021	2629	1434	1144
2022	3155	1721	1373
2023	3786	2065	1647
2024	4543	2478	1976
2025	5452	2974	2372
2026	6542	3569	2846
2027	7851	4282	3415
2028	9421	5139	4098
2029	11305	6167	4918
2030	13566	7400	5902
2031	16279	8880	7082

Projected All Wales demand
5207
6249
7498
8998
10789
12957
15548
18658
22390
26868
32241

	Scanning capacity of machine	Scanning capacity of machine at 50 weeks/annum function (2 weeks downtime)	Number of sessions per week	Number of patients seen per session (min)	Number of patients seen per session (max)	Number of patients seen per session (LIKELY)	Number of scans carried out per annum (min)	Number of scans carried out per annum (max)
Anologue scanner	3,000	2885	10	4	6	6	2000	3000
Digital scanner	5,500	5288	10	7	12	10	3500	6000

Number of scans carried out per annum (LIKELY)
3000
5000

	Anologue scanner 6 patients per session Cost of WTE	Digital scanner 7-12 patients per session Cost of WTE
Administrator	1.5	2.5
Band 3	37480.5	62467.5
Band 4	42450	70750
Radiographer/Technologist	3.0	4.0
Band 6	127308	169744.0
Band 7	155955	207940.0
Band 8a	181380	241840.0
HCA/Clinical Support Staff	1.0	2.0
Band 4	28300.0	56600.0
Clinical Scientist (physics)/ Medical Physics Expert	2.0	2.5
Band 8a	120920.0	151150.0
Band 8b	144342.0	180427.5
Band 8c	171662.0	214577.5
Finance Business Partner	0.2	0.2
Band 6	8487.2	8487.2
Band 7	10397	10397.0
Band 8a	12092	12092.0
PET-CT Manager	0.4	0.8
Band 8a	24184.0	48368.0
Band 8b	28868.4	57736.8
Band 8c	34332.4	68664.8
Consultant Radiologist	1.5	3.0
	197769.0	395538.0

Minimum costs	£	544,448.70	£	892,354.70
Maximum costs	£	667,985.40	£	1,060,062.30
Mid-point	£	606,217.05	£	976,208.50

Number of scans (likely)	3000	5000
Minimum cost per scan	£181.48	£178.47
Maximum cost per scan	£222.66	£212.01
Median	£202.07	£195.24

2019-2020 NHS Payscales		
Band	**Point**	**£(inc. on-costs)**
Band 3	Mid-point	24987
Band 4	Mid-point	28300
Band 5	Mid-point	34007
Band 6	Mid-point	42436
Band 7	Mid-point	51985
Band 8A	Mid-point	60460
Band 8B	Mid-point	72171
Band 8C	Mid-point	85831
Consultant	Top-point*	131,846

*consultants usually costsed at top of scale

	Swansea current	PETIC current	Wrexham current	All Wales current
	WTE	**WTE**	**WTE**	**WTE**
Administrator (WTE)	2.0	1.2	1.2	4.4
Band 2			0.4	
Band 3	2.0		0.8	
Band 4				
Radiographer/ Technologist (WTE)	1.8	4.0	0.4	6.2
Band 6	1.8	3.0		
Band 7		1.0		
Band 8a			0.4	
HCA/Clinical Support Staff	0.0	0.0	0.0	0.0
Band 4				
Clinical Scientist (physics)/ Medical Physics Expert	1.0	1.0	0.1	2.1
Band 8a				
Band 8b	0.3			
Band 8c	0.7			
Finance Business Partner	0.2	1.0	0.05	1.3
Band 6				
Band 7	0.2			
Band 8a				
Consultant Radiologist	1.0	2.1	0.8	3.9
PET-CT Manager	0.2	1.0	0.4	1.6
Band 8a				
Band 8b				
Band 8c				
Total	**6.2**	**10.3**	**3.0**	**19.5**

Site Analogue Scanner requirements	All Wales Analogue Scanner requirements	All Wales Analogue scanner gap	Site Digital Scanner requirements	All Wales Digital Scanner requirements
WTE	WTE	WTE	WTE	WTE
1.5	4.5	0.1	2.5	7.5
3.0	9	2.8	4.0	12.0
1.0	3	3.0	2.0	6.0
2.0	6	3.9	2.5	7.5
0.2	0.6	-0.7	0.2	0.6
1.5	4.5	0.6	3.0	9.0
0.4	1.2	-0.4	0.8	2.4
9.6	**28.8**	**9.4**	**15.0**	**45.0**

All Wales Digital scanner gap
WTE
3.1
5.8
6.0
5.4
-0.7
5.1
0.8
25.6

	20/21 £
BCU	1,105,312
SB & Petic	2,937,138
New Indications Wales	500,000
Total	4,542,450

PETIC	£925	for first 2150 scans	
	£850	for additional	
Wrexham	£6,273	mobile scanner per session (7 patients)	£896 per scan
	£806	Additonal scans	
		BCU pay for admin, Radiology support, consumables and pay	
Swansea	£935	Average charge WHSSC depending on scan	

All Wales PET CT Programme

Revenue costs

North Wales

	£
Baseline costs	
PET Staffing	54,176
Mobile leasing	806,997
Total costs	**861,173**

Future costs

Pay costs	
PET maintenance	67,365
PET consumables	10,641
PET pharmaceuticals	210,000
PET delivery and transport	33,696
Utilities	25,000
Non pay costs	**346,702**

All Wales PET CT Programme
Revenue costs

North Wales

Table 14 Pre COVID-19 Financial Projections for PETIC Expenditure based on PETIC Predicted workload and guaranteed research to date (August 2020)

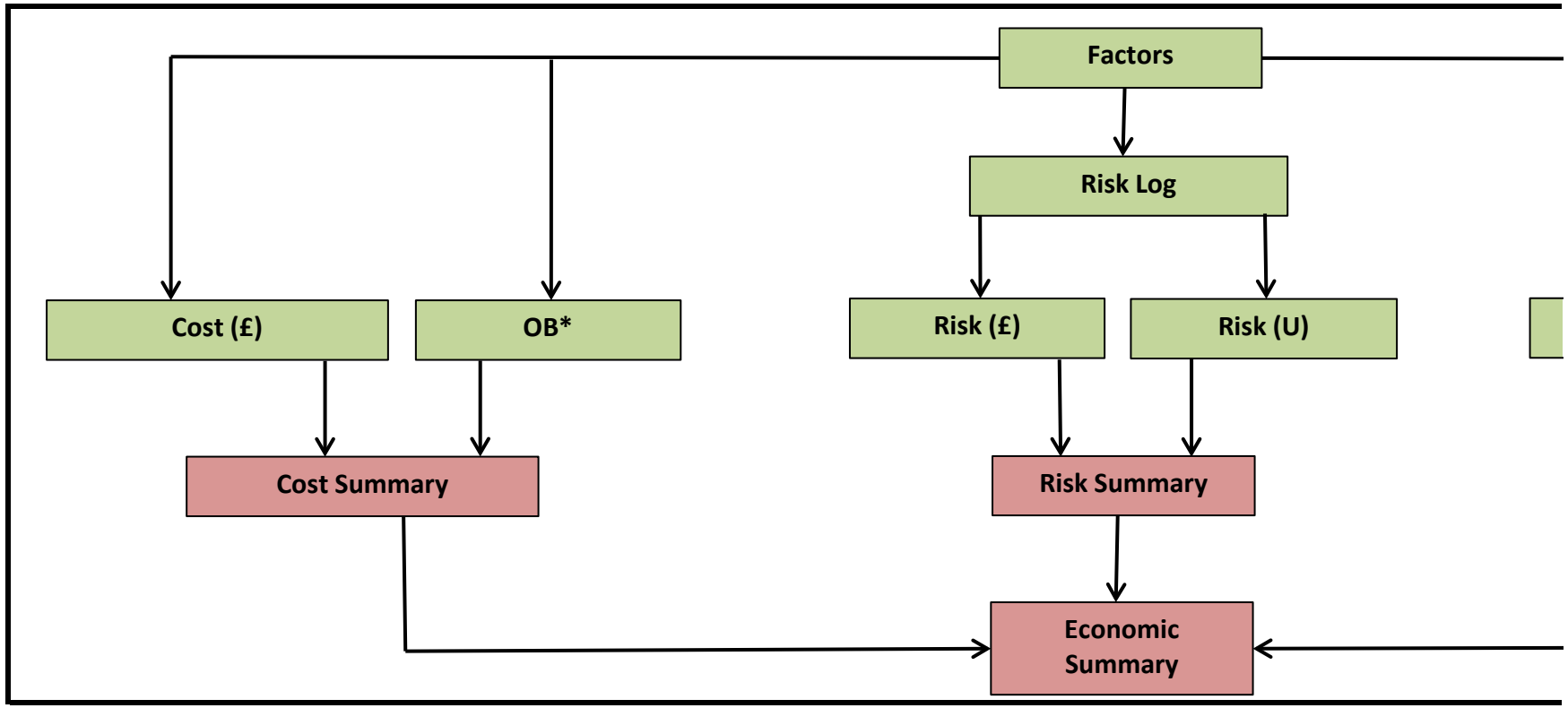
Revenue	20/21	21/22	22/23	23/24
Total Income (£k)	2725	2977	3276	3637
Total Expenditure (£k)	2878	2591	2803	2988
Total Net Revenue Balance (£k)	-154	£386	£473	£649

24/25	25/26	26/27
4072	4568	5149
3103	3212	3293
£968	£1,355	£1,856

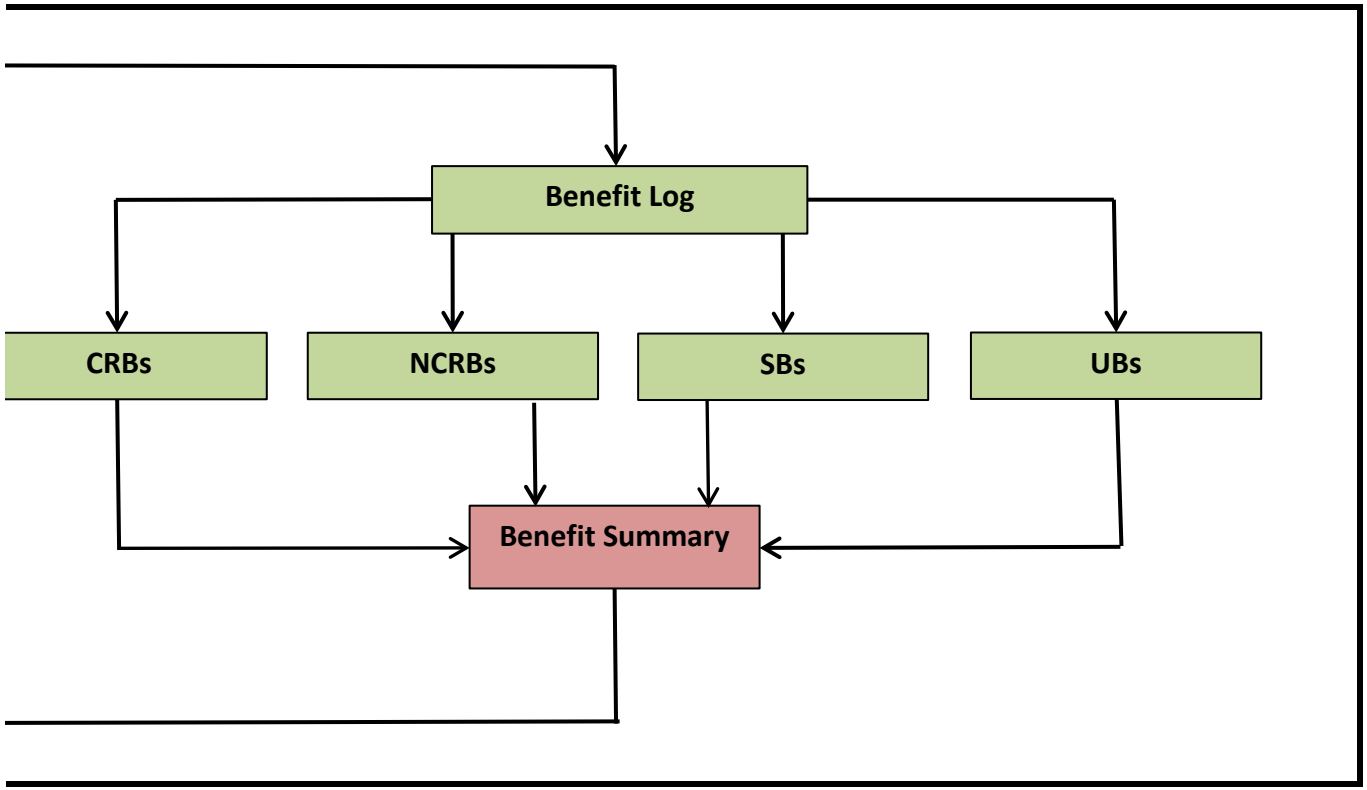
MODEL STRUCTURE (hyperlinked)

Back to User Instructions

User Input Required
No Input Required



* the OB worksheets should only be filled out if Optimism Bias percentages are being calculated within the CIA Model. If they are being calculate



d outside of the model, the Optimism Bias uplift (£) should be added to the Cost sheet under Optimism Bias.

USER INSTRUCTIONS

To note:
- All values should be entered as a positive number, including costs and risks (the summary sheets will convert these to negative numbers where necessary)
- All values should be entered as real numbers (i.e excluding inflation)
- Cells in which data should be entered are unshaded whereas cells that should not be edited are shaded and locked
- If copying and pasting text or figures from another document, please ensure that data is pasted 'Matching destination formatting'. Otherwise the cells might become protected and impossible to edit in the future. If this happens accidentally, please use the 'undo' button
- If you have unused risk rows or unused years, simply leave the relevant cells blank
- The User Guide provides more information on the approaches that should be taken with economic appraisal, and provides further information on how to use this model

Worksheet	Explanation	Instructions
User Instructions	Summarises the purpose of each worksheet and provides guidance on how to complete them.	Use the hyperlinks (column A) to navigate the workbook; the "Back to User Instructions" hyperlinks located on each worksheet will allow the user to return to this worksheet.
Model Structure	Provides a visual guide to the structure of the model.	This worksheet requires no input from the user.
Factors	Used to insert specific values for various factors that are used throughout the workbook.	Insert values and information into unshaded cells. The information in shaded cells (e.g. discount rates) will feed into other worksheets automatically.
Economic Summary	Summarises the benefits, costs and risks worksheets, and concludes with an overall value for money position for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from the costs, risks and benefits summary worksheets.
Cost Summary	Presents a summary of the economic costs, comparing each type of cost (opportunity, capital, revenue, transitional, externality & net contribution) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from cost worksheets.
Cost Option 0	Evaluate the economic costs for up to 6 options, assessed using undiscounted and discounted cashflows.	Enter cashflow description (column A) and values (column D onwards). Use one worksheet per option that is assessed - if you have just a single option then just use a single worksheet.
Cost Option 1		
Cost Option 2		
Cost Option 3		
Cost Option 4		
Cost Option 5		
Cost Option 6		
OB Mitigation	Provides information on how to apply mitigation factors.	For information, not for completion.
OB Option 0	Calculate optimism bias (OB) and apply mitigation factors.	Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigation factors (column I) with appropriate justification/evidence (column J). The OB worksheets should only be filled out if Optimism Bias percentages are being calculated within the CIA Model. If they are being calculated outside of the model, the Optimism Bias uplift (£) should be added to the Cost sheet under Optimism Bias.
OB Option 1		
OB Option 2		
OB Option 3		
OB Option 4		
OB Option 5		
OB Option 6		
Risk Summary	Presents a summary of the quantitative risks, comparing each type of risk (design, construction, performance, operating, revenue, termination, technology, control, residual value & other) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from risk worksheets.
Risk Log	Presents an overview of the quantitative risks before exploring each one in detail within the relevant risk worksheet [Risk (£) Option 0-6].	Populate columns C and D. There are some suggested risks included under each category. This is not an exhaustive list - there is space below to add additional risks (column B). If a suggested risk is not applicable then leave the row blank.
Risk (£) Option 0		

Risk (£) Option 1	Evaluate economic risks for each option using undiscounted and discounted cashflows of expected risk values.	Enter a percentage for each risk scenario (columns C-F) and a corresponding monetary value (columns H-J) to calculate an expected value per annum. Enter the year in which the risk commences (column M) and finishes (column N) to calculate the discounted risk value (column R).
Risk (£) Option 2		
Risk (£) Option 3		
Risk (£) Option 4		
Risk (£) Option 5		
Risk (£) Option 6		
Risk (U)	Evaluates unmonetisable risks for all options using a weighted scoring system.	Populate columns B-E to explain each unmonetised risk. Enter percentage values in the probability columns (e.g column K for option 1) and scores in the impact columns (e.g columns L - N for option 1) to calculate unmonetised risk scores for each option.
Benefit Summary	Presents a summary of the benefits, comparing each type of benefit (CRBs, NCRBs, SBs & UBs) for all options assessed.	Do not edit this worksheet. All cells will be updated automatically from benefit worksheets.
Benefit Log	Presents an overview of the economic benefits for all options assessed.	Populate columns B-H. This information will populate the subsequent benefit worksheets automatically.
CRBs	Evaluates economic cash releasing benefits (CRB) for all options using undiscounted and discounted values.	Enter monetised values for benefits in column G onwards.
NCRBs	Evaluates economic non-cash releasing benefits (NCRB) for all options using undiscounted and discounted values.	
SBs	Evaluates economic societal benefits (SB) for all options using undiscounted and discounted values.	
UBs	Evaluates unmonetisable benefits (UB) for all options using a weighted scoring system.	Provide detail on unmonetisable benefits and use the dropdowns from columns D to J to select which unmonetisable benefit applies to which option.

FACTORS USED WITHIN THE MODEL

Back to User Instructions
Back to Model Structure

CIA Model v3*

Organisation and User Information	
Organisation Name	WHSSC
Name of Model User(s)	All Wales PET CT PBC
Model Responsible Owner	Anouska Huggins
Contact Details	a.huggins@archus.uk.com

Numerical Parameters	
Are figures in £, £000 or £m?	£'000
Year 0 / base year (e.g. type 2020 for 2020/21)	2021

Option Appraisal	
Option number	Option description
Option 0	Business as
Option 1	2. Do min: Replace 1 fixed + extend
Option 2	3. Provide 4 fixed scar
Option 3	4. Provide 5 fixed scar
Option 4	
Option 5	
Option 6	

Investment Objectives (IOs)	
Investment Objective	Investment Objective description
IO1	
IO2	
IO3	
IO4	
IO5	
IO6	
IO7	
IO8	

Discount Rates		
Non-QALY Discount Rate	Years 0-30	3.5%
	Years 31-70	3%
QALY Discount Rate	Years 0-30	1.5%
	Years 31-70	1.3%

Option 0	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 1	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 2	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 3	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 4	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 5	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

Option 6	Yr 0	Yr 1	Yr 2
	2021/22	2022/23	2023/24
Non-QALY Discount Factors @ 3.5% / 3.0%	1.00	0.97	0.93
QALY Discount Factors @ 1.5% / 1.286%	1.00	0.99	0.97
Include	1.00	1.00	1.00

	Project life (whole years)	**Final project year**
s Usual	31	2051/52
l capacity of 2 mobile scanners	31	2051/52
nners over 10 yrs	31	2051/52
nners over 10 yrs	31	2051/52
	15	2035/36
	15	2035/36
	15	2035/36

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
0.90	0.87	0.84	0.81	0.79	0.76
0.96	0.94	0.93	0.91	0.90	0.89
1.00	1.00	1.00	1.00	1.00	1.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43
0.73	0.71	0.68	0.66	0.58	0.56	0.54	0.52	0.50	0.49
0.87	0.86	0.85	0.84	0.79	0.78	0.76	0.75	0.74	0.73
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43
0.73	0.71	0.68	0.66	0.58	0.56	0.54	0.52	0.50	0.49
0.87	0.86	0.85	0.84	0.79	0.78	0.76	0.75	0.74	0.73
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43
0.73	0.71	0.68	0.66	0.58	0.56	0.54	0.52	0.50	0.49
0.87	0.86	0.85	0.84	0.79	0.78	0.76	0.75	0.74	0.73
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43
0.73	0.71	0.68	0.66	0.58	0.56	0.54	0.52	0.50	0.49
0.87	0.86	0.85	0.84	0.79	0.78	0.76	0.75	0.74	0.73
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	-	-	-	-	-	-
0.73	0.71	0.68	0.66	-	-	-	-	-	-
0.87	0.86	0.85	0.84	-	-	-	-	-	-
1.00	1.00	1.00	1.00	-	-	-	-	-	-

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	-	-	-	-	-	-
0.73	0.71	0.68	0.66	-	-	-	-	-	-
0.87	0.86	0.85	0.84	-	-	-	-	-	-
1.00	1.00	1.00	1.00	-	-	-	-	-	-

Yr 9	Yr 10	Yr 11	Yr 12	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2030/31	2031/32	2032/33	2033/34	-	-	-	-	-	-
0.73	0.71	0.68	0.66	-	-	-	-	-	-
0.87	0.86	0.85	0.84	-	-	-	-	-	-
1.00	1.00	1.00	1.00	-	-	-	-	-	-

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52
0.47	0.45	0.44	0.42	0.41	0.40	0.38	0.37	0.36
0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65	0.64
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52
0.47	0.45	0.44	0.42	0.41	0.40	0.38	0.37	0.36
0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65	0.64
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52
0.47	0.45	0.44	0.42	0.41	0.40	0.38	0.37	0.36
0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65	0.64
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52
0.47	0.45	0.44	0.42	0.41	0.40	0.38	0.37	0.36
0.72	0.71	0.70	0.69	0.68	0.67	0.66	0.65	0.64
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 31	Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	19.39
-	-	-	25.02
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	19.39
-	-	-	25.02
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	19.39
-	-	-	25.02
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	19.39
-	-	-	25.02
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	11.92
-	-	-	13.54
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	11.92
-	-	-	13.54
-	-	-	

Yr 67	Yr 68	Yr 69	Total (EAC Factor)
-	-	-	
-	-	-	11.92
-	-	-	13.54
-	-	-	

ECONOMIC SUMMARY - £'000 Back to Model Structure Back to User Instructions

Economic Summary (Discounted) - £'000

	Option 0 - Business as Usual	Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2 - 3. Provide 4 fixed scanners over 10 yrs	Option 3 - 4. Provide 5 fixed scanners over 10 yrs	Option 4 -	Option 5 -	Option 6 -
Incremental costs - total	**£0.00**	**-£14,490.65**	**-£41,470.69**	**-£49,576.88**	**£0.00**	**£0.00**	**£0.00**
Incremental benefits - total	**£0.00**	**£62.21**	**£95,428.69**	**£117,887.60**	**£428,610.69**	**£428,610.69**	**£428,610.69**
Risk-adjusted Net Present Social Value (NPSV)	**£0.00**	**-£14,428.43**	**£53,958.00**	**£68,310.72**	**£428,610.69**	**£428,610.69**	**£428,610.69**
Benefit-cost ratio		**0.00**	**2.30**	**2.38**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Detailed Economic Summary (Discounted) - £'000

	Option 0 - Business as Usual	Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2 - 3. Provide 4 fixed scanners over 10 yrs	Option 3 - 4. Provide 5 fixed scanners over 10 yrs	Option 4 -	Option 5 -	Option 6 -
Costs							
Incremental cost increase - opportunity cost	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - capital (including optimism bias)	£0.00	-£13,947.66	-£40,458.19	-£48,319.08	£0.00	£0.00	£0.00
Incremental cost increase - revenue	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - transitional	£0.00	-£542.99	-£1,012.50	-£1,257.79	£0.00	£0.00	£0.00
Incremental cost increase - externality	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - net contribution	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost increase - risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental costs - total	**£0.00**	**-£14,490.65**	**-£41,470.69**	**-£49,576.88**	**£0.00**	**£0.00**	**£0.00**
Benefits							
Incremental cost reduction - opportunity cost	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - capital (including optimism bias)	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - revenue	£0.00	£62.21	£95,428.69	£117,887.60	£428,610.69	£428,610.69	£428,610.69
Incremental cost reduction - transitional	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - externality	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - net contribution	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental cost reduction - risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefit - cash releasing	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefit - non-cash releasing	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefit - societal	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Incremental benefits - total	**£0.00**	**£62.21**	**£95,428.69**	**£117,887.60**	**£428,610.69**	**£428,610.69**	**£428,610.69**
Value for Money							
Risk-adjusted Net Present Social Value (NPSV)		**-£14,428.43**	**£53,958.00**	**£68,310.72**	**£428,610.69**	**£428,610.69**	**£428,610.69**
Benefit-cost ratio		**0.00**	**2.30**	**2.38**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Cost and Risk Summary (Discounted) - £'000

	Option 0 - Business as Usual	Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2 - 3. Provide 4 fixed scanners over 10 yrs	Option 3 - 4. Provide 5 fixed scanners over 10 yrs	Option 4 -	Option 5 -	Option 6 -
Present Cost	-£428,610.69	-£443,039.12	-£374,652.69	-£360,299.97	£0.00	£0.00	£0.00
Total Risk	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Risk-adjusted Present Cost	-£428,610.69	-£443,039.12	-£374,652.69	-£360,299.97	£0.00	£0.00	£0.00

Detailed Cost, Risk and Benefit Summary (Discounted) - £'000

	Option 0 - Business as Usual	Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2 - 3. Provide 4 fixed scanners over 10 yrs	Option 3 - 4. Provide 5 fixed scanners over 10 yrs	Option 4 -	Option 5 -	Option 6 -
Opportunity Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Capital Expenditure	£0.00	-£13,947.66	-£40,458.19	-£48,319.08	£0.00	£0.00	£0.00
Capital Expenditure Optimism Bias Uplift	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Revenue Expenditure	-£428,610.69	-£428,548.47	-£333,182.00	-£310,723.09	£0.00	£0.00	£0.00
Transitional Costs	£0.00	-£542.99	-£1,012.50	-£1,257.79	£0.00	£0.00	£0.00
Externality Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Net Contribution Costs	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Present Cost	**-£428,610.69**	**-£443,039.12**	**-£374,652.69**	**-£360,299.97**	**£0.00**	**£0.00**	**£0.00**
Design Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Construction Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Performance Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Operating Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Revenue Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Termination Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Technology Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Control Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Residual Value Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Other Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Additional Risks	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Total Risk	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**
Unmonetised Risk Score	0	0	0	0	0	0	0
Risk-adjusted Present Cost	**-£428,610.69**	**-£443,039.12**	**-£374,652.69**	**-£360,299.97**	**£0.00**	**£0.00**	**£0.00**
Cash Releasing Benefits	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Non-Cash Releasing Benefits	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Societal Benefits	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Total Benefits	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

ECONOMIC COSTS ANALYSIS - £'000

Back to User Instructions
Back to Model Structure

Summary (Discounted) - £'000	Option 0 - Business as Usual
Opportunity costs	£0.00
Capital costs	£0.00
Capital costs optimism bias uplift	£0.00
Capital costs + optimism bias uplift	£0.00
Revenue costs	£428,610.69
Transitional costs	£0.00
Externality costs	£0.00
Net Contribution costs	£0.00
Total costs	£428,610.69

Opportunity costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£0.00
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£0.00
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£0.00
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Capital costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£13,947.66
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£40,458.19
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£48,319.08
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Capital costs optimism bias uplift - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£0.00
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£0.00
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£0.00
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Revenue Costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£428,610.69
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£428,548.47

Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£333,182.00
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£310,723.09
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Transitional costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£542.99
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£1,012.50
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£1,257.79
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Externality costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£0.00
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£0.00
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£0.00
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Net Contribution costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£0.00
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£0.00
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£0.00
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£0.00
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Total costs - £'000	
Option	Present Cost
Option 0 - Business as Usual	£428,610.69
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	£443,039.12
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	£374,652.69
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	£360,299.97
Option 4 -	£0.00
Option 5 -	£0.00
Option 6 -	£0.00

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2- 3. Provide 4 fixed scanners over 10 yrs	Option 3- 4. Provide 5 fixed scanners over 10 yrs
£0.00	£0.00	£0.00
£13,947.66	£40,458.19	£48,319.08
£0.00	£0.00	£0.00
£13,947.66	£40,458.19	£48,319.08
£428,548.47	£333,182.00	£310,723.09
£542.99	£1,012.50	£1,257.79
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£443,039.12	**£374,652.69**	**£360,299.97**

% of highest cost	Rank

% of highest cost	Rank
29%	1
84%	2
100%	3

% of highest cost	Rank

% of highest cost	Rank
100%	4
100%	3

78%	2
72%	1

% of highest cost	Rank
43%	1
80%	2
100%	3

% of highest cost	Rank

% of highest cost	Rank

% of highest cost	Rank
97%	3
100%	4
85%	2
81%	1

Option 4-	Option 5-	Option 6-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£3,726.80	£1,429.47	£0.00
£3,918.69	£1,660.94	£9,130.07
£3,929.69	£1,671.57	£9,130.07
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£4,868.55	£5,645.23	£6,544.50
£4,806.33	£5,645.23	£6,544.50

£4,806.33	£5,541.92	£6,394.61
£4,806.33	£5,541.92	£6,394.61
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£542.99	£0.00	£0.00
£643.46	£97.07	£93.79
£643.46	£97.07	£93.79
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Discounted Costs		
Yr 0	Yr 1	Yr 2
£4,868.55	£5,645.23	£6,544.50
£9,076.12	£7,074.70	£6,544.50
£9,368.49	£7,299.94	£15,618.47
£9,379.49	£7,310.57	£15,618.47
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£3,975.33
£147.00	£4,628.48	£22.74	£21.97	£21.23	£20.51	£19.81	£3,994.48
£147.00	£4,618.89	£100.46	£139.99	£4,180.29	£27.42	£26.49	£4,000.93
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£7,587.32	£8,798.19	£10,200.33	£11,826.17	£13,711.79	£15,898.02	£18,432.48	£21,370.60
£7,587.32	£8,798.19	£10,200.33	£11,826.17	£13,711.79	£15,898.02	£18,432.48	£21,370.60

£7,328.18	£7,447.50	£7,336.92	£9,152.74	£9,577.52	£10,879.94	£13,411.82	£16,519.71
£7,328.18	£7,447.50	£7,336.92	£9,152.74	£9,577.52	£11,154.56	£11,963.63	£15,120.50
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£90.62	£87.55	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£90.62	£87.55	£84.59	£81.73	£78.97	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
£7,587.32	£8,798.19	£10,200.33	£11,826.17	£13,711.79	£15,898.02	£18,432.48	£21,370.60
£7,587.32	£8,798.19	£10,200.33	£11,826.17	£13,711.79	£15,898.02	£18,432.48	£25,345.93
£7,565.80	£12,163.53	£7,359.66	£9,174.70	£9,598.75	£10,900.45	£13,431.63	£20,514.19
£7,565.80	£12,153.95	£7,521.98	£9,374.46	£13,836.78	£11,181.98	£11,990.13	£19,121.43
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£18.50	£4,719.18	£17.27	£2,211.04	£16.12	£15.57	£15.05	£14.54
£24.73	£4,725.21	£23.09	£2,216.67	£21.55	£20.82	£1,999.31	£19.44
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£20,647.92	£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99	£16,797.09	£16,229.08
£20,647.92	£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99	£16,797.09	£16,229.08

£15,961.07	£15,421.33	£14,899.83	£14,395.97	£13,909.15	£13,438.80	£12,984.34	£12,545.26
£14,609.18	£14,115.15	£13,637.83	£13,176.64	£12,731.06	£12,300.54	£11,884.58	£11,482.68
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18
£20,647.92	£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99	£16,797.09	£16,229.08
£20,647.92	£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99	£16,797.09	£16,229.08
£15,979.57	£20,140.51	£14,917.10	£16,607.02	£13,925.27	£13,454.37	£12,999.39	£12,559.80
£14,633.91	£18,840.35	£13,660.91	£15,393.31	£12,752.61	£12,321.36	£13,883.89	£11,502.12
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£2,818.19	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£14.05	£2,831.76	£13.11	£3,345.52	£12.24	£1,567.45	£11.43	£11.04
£18.78	£2,836.34	£17.53	£3,349.79	£16.37	£1,571.44	£15.28	£14.76

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£15,680.27	£15,150.02	£14,637.70	£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£15,680.27	£15,150.02	£14,637.70	£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55

£12,121.02	£11,711.13	£11,315.11	£10,932.47	£10,562.77	£10,205.58	£9,860.46	£9,527.01
£11,094.38	£10,719.21	£10,356.72	£10,006.50	£9,668.11	£9,341.17	£9,025.29	£8,720.08

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£15,680.27	£15,150.02	£14,637.70	£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£15,680.27	£17,968.21	£14,637.70	£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£12,135.07	£14,542.89	£11,328.22	£14,277.98	£10,575.01	£11,773.03	£9,871.89	£9,538.06
£11,113.16	£13,555.54	£10,374.26	£13,356.28	£9,684.48	£10,912.61	£9,040.56	£8,734.85
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£1,997.87				
£10.67	£10.31	£9.96	£2,007.49				
£1,417.35	£13.78	£13.32	£2,010.73				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£11,907.78	£11,505.10	£11,116.04	£10,740.13				
£11,907.78	£11,505.10	£11,116.04	£10,740.13				

£9,204.85	£8,893.57	£8,592.82	£8,302.24				
£8,425.20	£8,140.29	£7,865.01	£7,599.05				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				
£0.00	£0.00	£0.00	£0.00				

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33	Yr 34
£11,907.78	£11,505.10	£11,116.04	£10,740.13	£0.00	£0.00	£0.00	£0.00
£11,907.78	£11,505.10	£11,116.04	£12,738.00	£0.00	£0.00	£0.00	£0.00
£9,215.51	£8,903.88	£8,602.78	£10,309.73	£0.00	£0.00	£0.00	£0.00
£9,842.55	£8,154.07	£7,878.33	£9,609.78	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42

Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50

Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48	Yr 49	Yr 50
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58

Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69

Yr 67	Yr 68	Yr 69
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 0 - Business as Usual
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Capital costs
Lifecycle Costs
Lifecycle costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs
Building running costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
Programme management and dual running costs
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

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		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£759,435.99	£4,868.55	£5,842.82
	£0.00		
	£0.00		
	£0.00		

	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£22,102.40	**£759,435.99**	**£4,868.55**	**£5,842.82**
£0.00	**£0.00**	**£0.00**	**£0.00**
£22,102.40	**£759,435.99**	**£4,868.55**	**£5,842.82**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£759,435.99	**£4,868.55**	**£5,842.82**
	19.39	**1.00**	**0.97**
£22,102.40	**£428,610.69**	**£4,868.55**	**£5,645.23**

31
19.39

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£22,102.40	£428,610.69	£4,868.55	£5,645.23
£0.00	£0.00	£0.00	£0.00
£22,102.40	£428,610.69	£4,868.55	£5,645.23
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£22,102.40	£428,610.69	£4,868.55	£5,645.23

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£7,010.63	£8,412.20	£10,096.13	£12,114.80	£14,537.38

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£6,544.50	**£7,587.32**	**£8,798.19**	**£10,200.33**	**£11,826.17**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17
£0.00	£0.00	£0.00	£0.00	£0.00
£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£17,445.23	£20,934.65	£25,121.58	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£17,445.23	**£20,934.65**	**£25,121.58**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£17,445.23	**£20,934.65**	**£25,121.58**	**£30,145.34**	**£30,145.34**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£17,445.23	**£20,934.65**	**£25,121.58**	**£30,145.34**	**£30,145.34**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£13,711.79	**£15,898.02**	**£18,432.48**	**£21,370.60**	**£20,647.92**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£13,711.79	£15,898.02	£18,432.48	£21,370.60	£20,647.92
£0.00	£0.00	£0.00	£0.00	£0.00
£13,711.79	£15,898.02	£18,432.48	£21,370.60	£20,647.92
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£13,711.79	£15,898.02	£18,432.48	£21,370.60	£20,647.92

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	2036/37	2037/38
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
0.66	**0.64**	**0.62**	**0.60**	**0.58**
£19,949.68	**£19,275.05**	**£18,623.24**	**£17,993.47**	**£17,384.99**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99
£0.00	£0.00	£0.00	£0.00	£0.00
£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2038/39	2039/40	2040/41	2041/42	2042/43
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
0.56	**0.54**	**0.52**	**0.50**	**0.49**
£16,797.09	**£16,229.08**	**£15,680.27**	**£15,150.02**	**£14,637.70**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£16,797.09	£16,229.08	£15,680.27	£15,150.02	£14,637.70
£0.00	£0.00	£0.00	£0.00	£0.00
£16,797.09	£16,229.08	£15,680.27	£15,150.02	£14,637.70
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£16,797.09	£16,229.08	£15,680.27	£15,150.02	£14,637.70

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2043/44	2044/45	2045/46	2046/47	2047/48
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
0.47	**0.45**	**0.44**	**0.42**	**0.41**
£14,142.70	**£13,664.45**	**£13,202.36**	**£12,755.91**	**£12,324.55**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£0.00	£0.00	£0.00	£0.00	£0.00
£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2048/49	2049/50	2050/51	2051/52	-
£30,145.34	£30,145.34	£30,145.34	£30,145.34	

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£0.00**
0.40	**0.38**	**0.37**	**0.36**	**-**
£11,907.78	**£11,505.10**	**£11,116.04**	**£10,740.13**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£11,907.78	£11,505.10	£11,116.04	£10,740.13	
£0.00	£0.00	£0.00	£0.00	
£11,907.78	£11,505.10	£11,116.04	£10,740.13	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	

£11,907.78	£11,505.10	£11,116.04	£10,740.13	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00

£0.00	£0.00	£0.00
-	-	-
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Capital costs
Lifecycle Costs
Lifecycle costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism bias
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs
Building running costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
Programme management and dual running costs
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£5,206.30	£3,726.80	£1,479.50
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£16,822.80	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00	£0.00	£0.00
£265.90	**£5,206.30**	**£3,726.80**	**£1,479.50**
£453.35	**£16,822.80**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£719.25	**£22,029.10**	**£3,726.80**	**£1,479.50**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£759,373.77	£4,806.33	£5,842.82
	£0.00		
	£0.00		
	£0.00		

	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£22,099.19	**£759,373.77**	**£4,806.33**	**£5,842.82**
£0.00	**£0.00**	**£0.00**	**£0.00**
£22,099.19	**£759,373.77**	**£4,806.33**	**£5,842.82**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£542.99	£542.99	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£28.00	**£542.99**	**£542.99**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£781,945.86	**£9,076.12**	**£7,322.32**
	19.39	**1.00**	**0.97**
£22,846.44	**£443,039.12**	**£9,076.12**	**£7,074.70**

31
19.39

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£265.90	£5,156.27	£3,726.80	£1,429.47
£453.35	£8,791.39	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£719.25	£13,947.66	£3,726.80	£1,429.47
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£22,099.19	£428,548.47	£4,806.33	£5,645.23
£0.00	£0.00	£0.00	£0.00
£22,099.19	£428,548.47	£4,806.33	£5,645.23
£28.00	£542.99	£542.99	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£22,846.44	£443,039.12	£9,076.12	£7,074.70

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£7,010.63	£8,412.20	£10,096.13	£12,114.80	£14,537.38

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£7,010.63	**£8,412.20**	**£10,096.13**	**£12,114.80**	**£14,537.38**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£6,544.50	**£7,587.32**	**£8,798.19**	**£10,200.33**	**£11,826.17**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17
£0.00	£0.00	£0.00	£0.00	£0.00
£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£6,544.50	£7,587.32	£8,798.19	£10,200.33	£11,826.17

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£5,607.60	£0.00
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£17,445.23	£20,934.65	£25,121.58	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£17,445.23	**£20,934.65**	**£25,121.58**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£17,445.23	**£20,934.65**	**£25,121.58**	**£30,145.34**	**£30,145.34**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£17,445.23	**£20,934.65**	**£25,121.58**	**£35,752.94**	**£30,145.34**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£13,711.79	**£15,898.02**	**£18,432.48**	**£25,345.93**	**£20,647.92**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£3,975.33	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£3,975.33	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£13,711.79	£15,898.02	£18,432.48	£21,370.60	£20,647.92
£0.00	£0.00	£0.00	£0.00	£0.00
£13,711.79	£15,898.02	£18,432.48	£21,370.60	£20,647.92
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£13,711.79	£15,898.02	£18,432.48	£25,345.93	£20,647.92

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
0.66	**0.64**	**0.62**	**0.60**	**0.58**
£19,949.68	**£19,275.05**	**£18,623.24**	**£17,993.47**	**£17,384.99**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99
£0.00	£0.00	£0.00	£0.00	£0.00
£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£19,949.68	£19,275.05	£18,623.24	£17,993.47	£17,384.99

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£5,607.60	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£35,752.94**	**£30,145.34**
0.56	**0.54**	**0.52**	**0.50**	**0.49**
£16,797.09	**£16,229.08**	**£15,680.27**	**£17,968.21**	**£14,637.70**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£2,818.19	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£2,818.19	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£16,797.09	£16,229.08	£15,680.27	£15,150.02	£14,637.70
£0.00	£0.00	£0.00	£0.00	£0.00
£16,797.09	£16,229.08	£15,680.27	£15,150.02	£14,637.70
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£16,797.09	£16,229.08	£15,680.27	£17,968.21	£14,637.70

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£30,145.34	£30,145.34	£30,145.34	£30,145.34	£30,145.34

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£30,145.34**
0.47	**0.45**	**0.44**	**0.42**	**0.41**
£14,142.70	**£13,664.45**	**£13,202.36**	**£12,755.91**	**£12,324.55**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£0.00	£0.00	£0.00	£0.00	£0.00
£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£14,142.70	£13,664.45	£13,202.36	£12,755.91	£12,324.55

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£5,607.60	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£5,607.60**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£30,145.34	£30,145.34	£30,145.34	£30,145.34	

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£30,145.34	**£30,145.34**	**£30,145.34**	**£30,145.34**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

£30,145.34	**£30,145.34**	**£30,145.34**	**£35,752.94**	**£0.00**
0.40	**0.38**	**0.37**	**0.36**	**-**
£11,907.78	**£11,505.10**	**£11,116.04**	**£12,738.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£1,997.87	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£1,997.87	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£11,907.78	£11,505.10	£11,116.04	£10,740.13	
£0.00	£0.00	£0.00	£0.00	
£11,907.78	£11,505.10	£11,116.04	£10,740.13	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	

£11,907.78	£11,505.10	£11,116.04	£12,738.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00

£0.00	£0.00	£0.00
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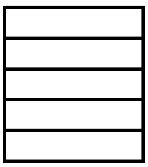
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00



COSTS ANALYSIS - £'000
OPTION 2 - 3. Provide 4 fixed scanners over 10 yrs
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Capital costs
Lifecycle Costs
Lifecycle costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs
Building running costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
Programme management and dual running costs
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£20,856.59	£3,918.69	£1,719.07
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£38,872.74	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00	£0.00	£0.00
£1,003.17	**£20,856.59**	**£3,918.69**	**£1,719.07**
£1,083.16	**£38,872.74**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£2,086.33	**£59,729.32**	**£3,918.69**	**£1,719.07**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£588,175.75	£4,806.33	£5,735.89
	£0.00		
	£0.00		
	£0.00		

	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£17,181.37	**£588,175.75**	**£4,806.33**	**£5,735.89**
£0.00	**£0.00**	**£0.00**	**£0.00**
£17,181.37	**£588,175.75**	**£4,806.33**	**£5,735.89**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£1,045.34	£643.46	£100.47
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£52.21	**£1,045.34**	**£643.46**	**£100.47**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£648,950.41	**£9,368.49**	**£7,555.44**
	19.39	**1.00**	**0.97**
£19,319.92	**£374,652.69**	**£9,368.49**	**£7,299.94**

31
19.39

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£1,003.17	£19,453.43	£3,918.69	£1,660.94
£1,083.16	£21,004.76	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£2,086.33	£40,458.19	£3,918.69	£1,660.94
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£17,181.37	£333,182.00	£4,806.33	£5,541.92
£0.00	£0.00	£0.00	£0.00
£17,181.37	£333,182.00	£4,806.33	£5,541.92
£52.21	£1,012.50	£643.46	£97.07
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£19,319.92	£374,652.69	£9,368.49	£7,299.94

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£9,780.36	£145.08	£5,293.38	£0.00	£0.00
£0.00	£17.90	£17.90	£27.01	£27.01
£0.00	£0.00	£0.00	£0.00	£0.00
£9,780.36	**£145.08**	**£5,293.38**	**£0.00**	**£0.00**
£0.00	**£17.90**	**£17.90**	**£27.01**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£9,780.36	**£162.98**	**£5,311.28**	**£27.01**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£6,850.07	£8,124.89	£8,546.18	£8,713.96	£11,251.05

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£6,850.07	**£8,124.89**	**£8,546.18**	**£8,713.96**	**£11,251.05**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£6,850.07	**£8,124.89**	**£8,546.18**	**£8,713.96**	**£11,251.05**

2023/24	2024/25	2025/26	2026/27	2027/28
£100.47	£100.47	£100.47	£0.00	£0.00
£100.47	**£100.47**	**£100.47**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£16,730.90	**£8,388.34**	**£13,957.94**	**£8,740.97**	**£11,278.05**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£15,618.47	**£7,565.80**	**£12,163.53**	**£7,359.66**	**£9,174.70**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£9,130.07	£130.85	£4,612.88	£0.00	£0.00
£0.00	£16.15	£15.60	£22.74	£21.97
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£9,130.07	£147.00	£4,628.48	£22.74	£21.97
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£6,394.61	£7,328.18	£7,447.50	£7,336.92	£9,152.74
£0.00	£0.00	£0.00	£0.00	£0.00
£6,394.61	£7,328.18	£7,447.50	£7,336.92	£9,152.74
£93.79	£90.62	£87.55	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£15,618.47	£7,565.80	£12,163.53	£7,359.66	£9,174.70

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£27.01	£27.01	£27.01	£5,634.61	£27.01
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£12,185.28	£14,326.80	£18,278.93	£23,302.68	£23,302.68

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£12,185.28	**£14,326.80**	**£18,278.93**	**£23,302.68**	**£23,302.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£12,185.28	**£14,326.80**	**£18,278.93**	**£23,302.68**	**£23,302.68**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£12,212.29	**£14,353.81**	**£18,305.93**	**£28,937.29**	**£23,329.69**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£9,598.75	**£10,900.45**	**£13,431.63**	**£20,514.19**	**£15,979.57**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£21.23	£20.51	£19.81	£3,994.48	£18.50
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£21.23	£20.51	£19.81	£3,994.48	£18.50
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£9,577.52	£10,879.94	£13,411.82	£16,519.71	£15,961.07
£0.00	£0.00	£0.00	£0.00	£0.00
£9,577.52	£10,879.94	£13,411.82	£16,519.71	£15,961.07
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£9,598.75	£10,900.45	£13,431.63	£20,514.19	£15,979.57

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£7,131.01	£27.01	£3,579.01	£27.01	£27.01
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,131.01	**£27.01**	**£3,579.01**	**£27.01**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,131.01	**£27.01**	**£3,579.01**	**£27.01**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£23,302.68	£23,302.68	£23,302.68	£23,302.68	£23,302.68

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00

£30,433.69	**£23,329.69**	**£26,881.69**	**£23,329.69**	**£23,329.69**
0.66	**0.64**	**0.62**	**0.60**	**0.58**
£20,140.51	**£14,917.10**	**£16,607.02**	**£13,925.27**	**£13,454.37**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£4,719.18	£17.27	£2,211.04	£16.12	£15.57
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£4,719.18	£17.27	£2,211.04	£16.12	£15.57
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£15,421.33	£14,899.83	£14,395.97	£13,909.15	£13,438.80
£0.00	£0.00	£0.00	£0.00	£0.00
£15,421.33	£14,899.83	£14,395.97	£13,909.15	£13,438.80
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£20,140.51	£14,917.10	£16,607.02	£13,925.27	£13,454.37

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£27.01	£27.01	£27.01	£5,634.61	£27.01
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£23,302.68	£23,302.68	£23,302.68	£23,302.68	£23,302.68

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00

£23,329.69	**£23,329.69**	**£23,329.69**	**£28,937.29**	**£23,329.69**
0.56	**0.54**	**0.52**	**0.50**	**0.49**
£12,999.39	**£12,559.80**	**£12,135.07**	**£14,542.89**	**£11,328.22**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£15.05	£14.54	£14.05	£2,831.76	£13.11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£15.05	£14.54	£14.05	£2,831.76	£13.11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£12,984.34	£12,545.26	£12,121.02	£11,711.13	£11,315.11
£0.00	£0.00	£0.00	£0.00	£0.00
£12,984.34	£12,545.26	£12,121.02	£11,711.13	£11,315.11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£12,999.39	£12,559.80	£12,135.07	£14,542.89	£11,328.22

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

2043/44	2044/45	2045/46	2046/47	2047/48
£7,131.01	£27.01	£3,579.01	£27.01	£27.01
£0.00	£0.00	£0.00	£0.00	£0.00
£7,131.01	£27.01	£3,579.01	£27.01	£27.01
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£7,131.01	£27.01	£3,579.01	£27.01	£27.01
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2043/44	2044/45	2045/46	2046/47	2047/48
£23,302.68	£23,302.68	£23,302.68	£23,302.68	£23,302.68

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£23,302.68**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

£30,433.69	**£23,329.69**	**£26,881.69**	**£23,329.69**	**£23,329.69**
0.47	**0.45**	**0.44**	**0.42**	**0.41**
£14,277.98	**£10,575.01**	**£11,773.03**	**£9,871.89**	**£9,538.06**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£3,345.52	£12.24	£1,567.45	£11.43	£11.04
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£3,345.52	£12.24	£1,567.45	£11.43	£11.04
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£10,932.47	£10,562.77	£10,205.58	£9,860.46	£9,527.01
£0.00	£0.00	£0.00	£0.00	£0.00
£10,932.47	£10,562.77	£10,205.58	£9,860.46	£9,527.01
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£14,277.98	£10,575.01	£11,773.03	£9,871.89	£9,538.06

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£27.01	£27.01	£27.01	£5,634.61	
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£27.01	**£27.01**	**£27.01**	**£5,634.61**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£23,302.68	£23,302.68	£23,302.68	£23,302.68	

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£23,302.68	**£23,302.68**	**£23,302.68**	**£23,302.68**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

£23,329.69	**£23,329.69**	**£23,329.69**	**£28,937.29**	**£0.00**
0.40	**0.38**	**0.37**	**0.36**	**-**
£9,215.51	**£8,903.88**	**£8,602.78**	**£10,309.73**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£10.67	£10.31	£9.96	£2,007.49	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£10.67	£10.31	£9.96	£2,007.49	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£9,204.85	£8,893.57	£8,592.82	£8,302.24	
£0.00	£0.00	£0.00	£0.00	
£9,204.85	£8,893.57	£8,592.82	£8,302.24	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	

£9,215.51	£8,903.88	£8,602.78	£10,309.73	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00

£0.00	£0.00	£0.00
-	-	-
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 3 - 4. Provide 5 fixed scanners over 10 yrs
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Capital costs
Lifecycle Costs
Lifecycle costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs
Building running costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
Programme management and dual running costs
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£26,387.35	£3,929.69	£1,730.07
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£46,195.24	£0.00	£0.00
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00	£0.00	£0.00
£1,227.98	**£26,387.35**	**£3,929.69**	**£1,730.07**
£1,263.71	**£46,195.24**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£2,491.70	**£72,582.59**	**£3,929.69**	**£1,730.07**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£545,115.44	£4,806.33	£5,735.89
	£0.00		
	£0.00		
	£0.00		

	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£16,023.22	**£545,115.44**	**£4,806.33**	**£5,735.89**
£0.00	**£0.00**	**£0.00**	**£0.00**
£16,023.22	**£545,115.44**	**£4,806.33**	**£5,735.89**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£1,346.76	£643.46	£100.47
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£64.86	**£1,346.76**	**£643.46**	**£100.47**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£619,044.79	**£9,379.49**	**£7,566.44**
	£19.39	**£1.00**	**£0.97**
£18,579.78	**£360,299.97**	**£9,379.49**	**£7,310.57**

31
19.39

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£1,227.98	£23,813.12	£3,929.69	£1,671.57
£1,263.71	£24,505.96	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£2,491.70	£48,319.08	£3,929.69	£1,671.57
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£16,023.22	£310,723.09	£4,806.33	£5,541.92
£0.00	£0.00	£0.00	£0.00
£16,023.22	£310,723.09	£4,806.33	£5,541.92
£64.86	£1,257.79	£643.46	£97.07
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£18,579.78	£360,299.97	£9,379.49	£7,310.57

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£9,780.36	£145.08	£5,282.38	£92.31	£145.08
£0.00	£17.90	£17.90	£27.01	£27.01
£0.00	£0.00	£0.00	£0.00	£0.00
£9,780.36	**£145.08**	**£5,282.38**	**£92.31**	**£145.08**
£0.00	**£17.90**	**£17.90**	**£27.01**	**£27.01**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£9,780.36	**£162.98**	**£5,300.28**	**£119.31**	**£172.08**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£6,850.07	£8,124.89	£8,546.18	£8,713.96	£11,251.05

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£6,850.07	**£8,124.89**	**£8,546.18**	**£8,713.96**	**£11,251.05**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£6,850.07	**£8,124.89**	**£8,546.18**	**£8,713.96**	**£11,251.05**

2023/24	2024/25	2025/26	2026/27	2027/28
£100.47	£100.47	£100.47	£100.47	£100.47
£100.47	**£100.47**	**£100.47**	**£100.47**	**£100.47**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£16,730.90	**£8,388.34**	**£13,946.94**	**£8,933.75**	**£11,523.60**
£0.93	**£0.90**	**£0.87**	**£0.84**	**£0.81**
£15,618.47	**£7,565.80**	**£12,153.95**	**£7,521.98**	**£9,374.46**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£9,130.07	£130.85	£4,603.29	£77.72	£118.02
£0.00	£16.15	£15.60	£22.74	£21.97
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£9,130.07	£147.00	£4,618.89	£100.46	£139.99
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£6,394.61	£7,328.18	£7,447.50	£7,336.92	£9,152.74
£0.00	£0.00	£0.00	£0.00	£0.00
£6,394.61	£7,328.18	£7,447.50	£7,336.92	£9,152.74
£93.79	£90.62	£87.55	£84.59	£81.73
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£15,618.47	£7,565.80	£12,153.95	£7,521.98	£9,374.46

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£5,282.38	£0.00	£0.00	£0.00	
£36.11	£36.11	£36.11	£5,643.71	£36.11
£0.00	£0.00	£0.00	£0.00	
£5,282.38	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£36.11	**£36.11**	**£36.11**	**£5,643.71**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£5,318.49	**£36.11**	**£36.11**	**£5,643.71**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£12,185.28	£14,688.42	£16,305.21	£21,328.96	£21,328.96

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£12,185.28	**£14,688.42**	**£16,305.21**	**£21,328.96**	**£21,328.96**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£12,185.28	**£14,688.42**	**£16,305.21**	**£21,328.96**	**£21,328.96**

2028/29	2029/30	2030/31	2031/32	2032/33
£100.47	£0.00	£0.00	£0.00	
£100.47	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£17,604.24	**£14,724.53**	**£16,341.31**	**£26,972.67**	**£21,365.07**
£0.79	**£0.76**	**£0.73**	**£0.71**	**£0.68**
£13,836.78	**£11,181.98**	**£11,990.13**	**£19,121.43**	**£14,633.91**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£4,151.90	£0.00	£0.00	£0.00	£0.00
£28.38	£27.42	£26.49	£4,000.93	£24.73
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£4,180.29	£27.42	£26.49	£4,000.93	£24.73
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£9,577.52	£11,154.56	£11,963.63	£15,120.50	£14,609.18
£0.00	£0.00	£0.00	£0.00	£0.00
£9,577.52	£11,154.56	£11,963.63	£15,120.50	£14,609.18
£78.97	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£13,836.78	£11,181.98	£11,990.13	£19,121.43	£14,633.91

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£7,140.11	£36.11	£3,588.11	£36.11	£36.11
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,140.11	**£36.11**	**£3,588.11**	**£36.11**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,140.11	**£36.11**	**£3,588.11**	**£36.11**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£21,328.96	£21,328.96	£21,328.96	£21,328.96	£21,328.96

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00

£28,469.07	**£21,365.07**	**£24,917.07**	**£21,365.07**	**£21,365.07**
£0.66	**£0.64**	**£0.62**	**£0.60**	**£0.58**
£18,840.35	**£13,660.91**	**£15,393.31**	**£12,752.61**	**£12,321.36**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£4,725.21	£23.09	£2,216.67	£21.55	£20.82
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£4,725.21	£23.09	£2,216.67	£21.55	£20.82
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£14,115.15	£13,637.83	£13,176.64	£12,731.06	£12,300.54
£0.00	£0.00	£0.00	£0.00	£0.00
£14,115.15	£13,637.83	£13,176.64	£12,731.06	£12,300.54
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£18,840.35	£13,660.91	£15,393.31	£12,752.61	£12,321.36

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£3,588.11	£36.11	£36.11	£5,643.71	£36.11
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£3,588.11	**£36.11**	**£36.11**	**£5,643.71**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£3,588.11	**£36.11**	**£36.11**	**£5,643.71**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£21,328.96	£21,328.96	£21,328.96	£21,328.96	£21,328.96

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2038/39	2039/40	2040/41	2041/42	2042/43
£0.00	£0.00	£0.00	£0.00	£0.00

£24,917.07	**£21,365.07**	**£21,365.07**	**£26,972.67**	**£21,365.07**
£0.56	**£0.54**	**£0.52**	**£0.50**	**£0.49**
£13,883.89	**£11,502.12**	**£11,113.16**	**£13,555.54**	**£10,374.26**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£1,999.31	£19.44	£18.78	£2,836.34	£17.53
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£1,999.31	£19.44	£18.78	£2,836.34	£17.53
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£11,884.58	£11,482.68	£11,094.38	£10,719.21	£10,356.72
£0.00	£0.00	£0.00	£0.00	£0.00
£11,884.58	£11,482.68	£11,094.38	£10,719.21	£10,356.72
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£13,883.89	£11,502.12	£11,113.16	£13,555.54	£10,374.26

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£7,140.11	£36.11	£3,588.11	£36.11	£36.11
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,140.11	**£36.11**	**£3,588.11**	**£36.11**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£7,140.11	**£36.11**	**£3,588.11**	**£36.11**	**£36.11**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£21,328.96	£21,328.96	£21,328.96	£21,328.96	£21,328.96

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£21,328.96**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2043/44	2044/45	2045/46	2046/47	2047/48
£0.00	£0.00	£0.00	£0.00	£0.00

£28,469.07	**£21,365.07**	**£24,917.07**	**£21,365.07**	**£21,365.07**
£0.47	**£0.45**	**£0.44**	**£0.42**	**£0.41**
£13,356.28	**£9,684.48**	**£10,912.61**	**£9,040.56**	**£8,734.85**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£3,349.79	£16.37	£1,571.44	£15.28	£14.76
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£3,349.79	£16.37	£1,571.44	£15.28	£14.76
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£10,006.50	£9,668.11	£9,341.17	£9,025.29	£8,720.08
£0.00	£0.00	£0.00	£0.00	£0.00
£10,006.50	£9,668.11	£9,341.17	£9,025.29	£8,720.08
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£13,356.28	£9,684.48	£10,912.61	£9,040.56	£8,734.85

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

2048/49	2049/50	2050/51	2051/52	-
£3,588.11	£36.11	£36.11	£5,643.71	
£0.00	£0.00	£0.00	£0.00	£0.00
£3,588.11	£36.11	£36.11	£5,643.71	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£3,588.11	£36.11	£36.11	£5,643.71	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2048/49	2049/50	2050/51	2051/52	-
£21,328.96	£21,328.96	£21,328.96	£21,328.96	

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£21,328.96	**£21,328.96**	**£21,328.96**	**£21,328.96**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00

£24,917.07	**£21,365.07**	**£21,365.07**	**£26,972.67**	**£0.00**
£0.40	**£0.38**	**£0.37**	**£0.36**	**£0.00**
£9,842.55	**£8,154.07**	**£7,878.33**	**£9,609.78**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£1,417.35	£13.78	£13.32	£2,010.73	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£1,417.35	£13.78	£13.32	£2,010.73	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£8,425.20	£8,140.29	£7,865.01	£7,599.05	
£0.00	£0.00	£0.00	£0.00	
£8,425.20	£8,140.29	£7,865.01	£7,599.05	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	
£0.00	£0.00	£0.00	£0.00	

£9,842.55	**£8,154.07**	**£7,878.33**	**£9,609.78**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00

£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 4 -
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Lifecycle Costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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£0.00	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£0.00	**£0.00**	**£0.00**
	11.92	**1.00**	**0.97**
£0.00	**£0.00**	**£0.00**	**£0.00**

15
11.92

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.66	**0.64**	**0.62**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	**Yr 13**	**Yr 14**	**Yr 15**	**Yr 16**
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
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£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00

£0.00	£0.00	£0.00
-	-	-
£0.00	£0.00	£0.00

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 5 -
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Lifecycle Costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£0.00	**£0.00**	**£0.00**
	11.92	**1.00**	**0.97**
£0.00	**£0.00**	**£0.00**	**£0.00**

15
11.92

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.66	**0.64**	**0.62**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	**Yr 13**	**Yr 14**	**Yr 15**	**Yr 16**
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
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£0.00	£0.00	£0.00		

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
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£0.00	£0.00	£0.00	£0.00	£0.00

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Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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£0.00	£0.00	£0.00	£0.00	£0.00

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Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
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£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69
-	-	-
£0.00	£0.00	£0.00

-	-	-
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00
£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**

-	-	-
£0.00	**£0.00**	**£0.00**

-	-	-
£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**
-	**-**	**-**
£0.00	**£0.00**	**£0.00**

Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

COSTS ANALYSIS - £'000
OPTION 6 -
(1) OPPORTUNITY COSTS - See section 4.4 in user guide
TOTAL: OPPORTUNITY COSTS

(2) CAPITAL COSTS - See section 5 in user guide
Initial Capital Costs
Lifecycle Costs
Other Capital Costs
Residual Value (will be subtracted from cost)
Optimism Bias (enter here if not calculated in Optimism Bias worksheets within the model, otherwise leave blank)
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)

(3) REVENUE COSTS - See section 6 in user guide
Clinical Services
Non-Clinical Costs
Building Running Costs

Other Revenue Costs
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS

(4) TRANSITIONAL COSTS - See section 7 in user guide
TOTAL: TRANSITIONAL COSTS

(5) EXTERNALITIES - See section 8 in user guide
TOTAL: EXTERNALITIES

(6) NET CONTRIBUTIONS - See section 9 in user guide
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (UNDISCOUNTED)
Non-QALY Discount Factors @ 3.5% / 3.0%
TOTAL: COSTS (DISCOUNTED)

Project life (whole years)
Sum of Discount Factors (EAC Factor)

DISCOUNTED CASHFLOW ANALYSIS
TOTAL: OPPORTUNITY COSTS
Subtotal: Initial Capital Costs
Subtotal: Lifecycle Costs
Subtotal: Other Capital Costs
Subtotal: Residual Value
TOTAL: CAPITAL COSTS
TOTAL: OB UPLIFT (WHERE CALCULATED WITHIN CIA MODEL)
TOTAL: OB UPLIFT (WHERE CALCULATED OUTSIDE OF CIA MODEL)
Subtotal: Clinical Services
Subtotal: Non-Clinical Costs
Subtotal: Building Running Costs
Subtotal: Other Revenue Costs
TOTAL: REVENUE COSTS
TOTAL: TRANSITIONAL COSTS
TOTAL: EXTERNALITIES
TOTAL: NET CONTRIBUTIONS

TOTAL: COSTS (DISCOUNTED)

[Back to User Instructions]

		Yr 0	Yr 1
Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
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	£0.00		

	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	**£0.00**	**£0.00**	**£0.00**

Equivalent Annual Cost (EAC)	Sum of Cashflows	2021/22	2022/23
	£0.00		
	£0.00		
	£0.00		
	£0.00		
	£0.00		
£0.00	£0.00	£0.00	£0.00

	£0.00	**£0.00**	**£0.00**
	11.92	**1.00**	**0.97**
£0.00	**£0.00**	**£0.00**	**£0.00**

15
11.92

Equivalent Annual Cost (EAC)	Present Cost	Yr 0	Yr 1
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00

Back to Model Structure

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2023/24	2024/25	2025/26	2026/27	2027/28

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2023/24	2024/25	2025/26	2026/27	2027/28
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.93	**0.90**	**0.87**	**0.84**	**0.81**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2028/29	2029/30	2030/31	2031/32	2032/33

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2028/29	2029/30	2030/31	2031/32	2032/33
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.79	**0.76**	**0.73**	**0.71**	**0.68**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 7	Yr 8	Yr 9	Yr 10	Yr 11
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

2033/34	2034/35	2035/36	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

2033/34	**2034/35**	**2035/36**	**-**	**-**
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
0.66	**0.64**	**0.62**	**-**	**-**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 12	**Yr 13**	**Yr 14**	**Yr 15**	**Yr 16**
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
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£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		
£0.00	£0.00	£0.00		

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 22	Yr 23	Yr 24	Yr 25	Yr 26

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

-	-	-	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**
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Yr 27	Yr 28	Yr 29	Yr 30	Yr 31

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36
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Yr 32	Yr 33	Yr 34	Yr 35	Yr 36

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 37	Yr 38	Yr 39	Yr 40	Yr 41
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Yr 37	Yr 38	Yr 39	Yr 40	Yr 41

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Yr 42	Yr 43	Yr 44	Yr 45	Yr 46
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Yr 42	Yr 43	Yr 44	Yr 45	Yr 46

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Yr 47	Yr 48	Yr 49	Yr 50	Yr 51
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Yr 47	Yr 48	Yr 49	Yr 50	Yr 51

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Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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Yr 52	Yr 53	Yr 54	Yr 55	Yr 56

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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61

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Yr 62	Yr 63	Yr 64	Yr 65	Yr 66
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Yr 62	Yr 63	Yr 64	Yr 65	Yr 66

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Yr 67	Yr 68	Yr 69
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Yr 67	Yr 68	Yr 69

	£0.00	£0.00	£0.00

OPTIMISM BIAS MITIGATION

Back to User Instructions Back to Model Structure

Mitigation Factors Table		
Contributory Factor to Upper Bound	**% Factor Contributes**	**Stage**
Progress with Planning Approval	4	SOC
		OBC
		FBC
Other Regulatory	4	SOC
		OBC
		FBC
Depth of surveying of site/ground information	3	SOC
		OBC
		FBC
Detail of design	4	SOC
		OBC
		FBC
Innovative project/design (i.e. has this type of project/design been undertaken before)	3	SOC
		OBC
		FBC
Design complexity	4	SOC
		OBC
		FBC
Likely variations from Standard Contract	2	SOC
		OBC
		FBC
Design Team capabilities	3	SOC
		OBC
		FBC
Contractors' capabilities (excluding design team covered above)	2	SOC
		OBC
		FBC
Contractor Involvement	2	SOC
		OBC
		FBC
Client capability and capacity (NB do not double count with design team capabilities)	6	SOC
		OBC
		FBC
Robustness of Output Specification	25	SOC
		OBC
		FBC
Involvement of Stakeholders, including Public and Patient Involvement	5	SOC
		OBC
		FBC
Agreement to output specification by stakeholders	5	SOC
		OBC
		FBC
New service or traditional	3	SOC
		OBC
		FBC
Local community consent	3	SOC
		OBC
		FBC
Stable policy environment	20	SOC
		OBC
		FBC

Likely competition in the market for the project	2	SOC
		OBC
		FBC
TOTAL	**100**	

Mitigation Factor Examples
Opened discussion with planning authority, some engagement
Outline consent in place, with any Planning Conditions and requirements for Section 106 or similar agreements
Full Consent in place. Judicial Review period passed.
Degree of sign off from Fire Authority, Health and Safety Executive, transport authorities, local government etc.
Desktop study undertaken of own site.
Investigations undertaken, historical records examined.
Full survey of conditions, site services and topographics.
Concept/masterplan/Design Change Proposal
1:500s agreed and selected 1:200s.
All 1:200s in place, key 1:50s (depends on procurement route)
Yes/no
This might include complex mechanical and electrical (M&E) solutions
No contract chosen.
Yes/no with measurement of scale of variations
Previous relevant experience of individuals involved. Capacity
Previous relevant experience of individuals involved. Capacity. Track record of delivery.
Buildability. Opportunity to influence design.
Degree of team in place with relevant experience.
Full team in place for procurement.
Robust implementation plan in place.
Definition of scope and extent of services. Degree of outstanding decisions.
Scope of stakeholders to be involved. Plan in place to engage.
Implementation of Plan
Involvement demonstrated.
Letters of support from clinicians, Trade Unions, staff groups, patient representatives/groups.
Assessment of how innovative/new service model is at national/regional/local level. Has this ever been tried before?
Consideration of traffic noise/existence of protestors or pressure groups
Degree to which new policy/standards are applicable depending upon which stage is reached.

Degree project has been marketed.
Evidence of market interest.
Mitigated.

OPTIMISM BIAS
Option 0 - Business as Usual

Back to User Instructions

Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigat
appropriate justification/evidence (column J).

Upper Bound Calculation for Build	
Actual % Upper Bound for this project	
Mitigated Optimism Bias % for this project	

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

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Contribution to upper bound
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Contribution to upper bound
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Contribution to upper bound
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Contribution to upper bound
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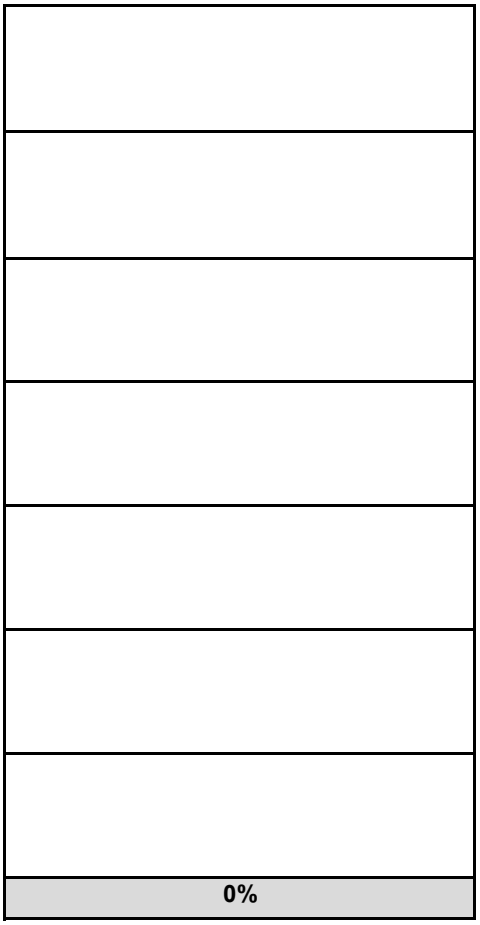
Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

Back to User Instructions

Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigati appropriate justification/evidence (column J).

Upper Bound Calculation for Build	
Actual % Upper Bound for this project	
Mitigated Optimism Bias % for this project	

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

`

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

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Contribution to upper bound
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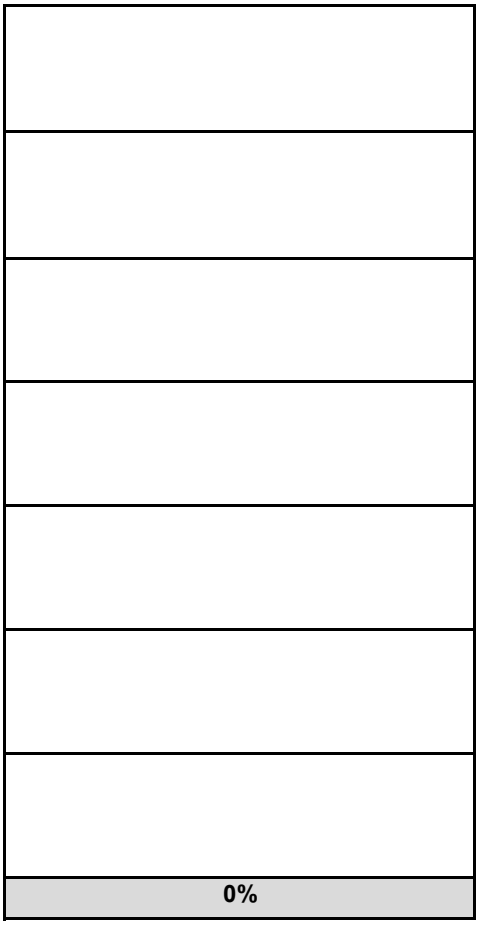
Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS
Option 2 - 3. Provide 4 fixed scanners over 10 yrs

Back to User Instructions

Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigati appropriate justification/evidence (column J).

Upper Bound Calculation for Build
Actual % Upper Bound for this project
Mitigated Optimism Bias % for this project

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

0.0%
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
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0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
0.0%

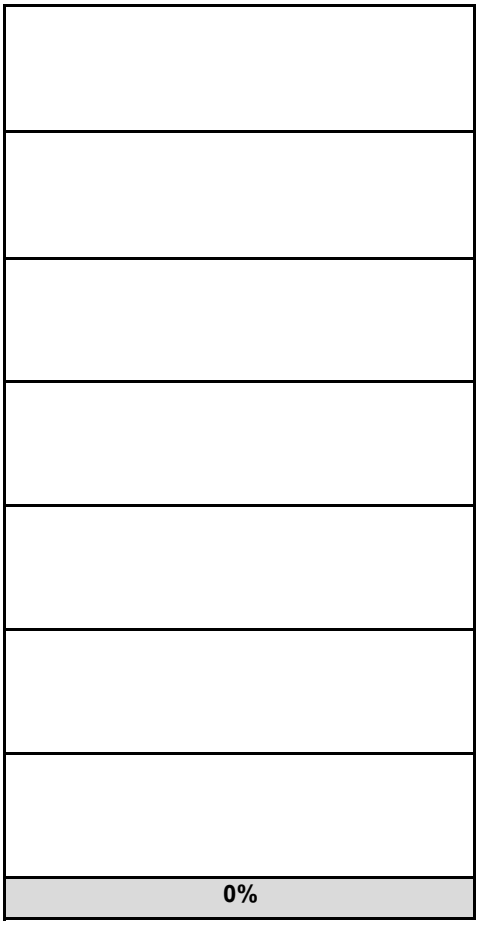
0.0%

Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS	Back to User Instructions
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigati appropriate justification/evidence (column J).

Upper Bound Calculation for Build	
Actual % Upper Bound for this project	
Mitigated Optimism Bias % for this project	

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

0.0%
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
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Contribution to upper bound
0.0%

Contribution to upper bound
0.0%

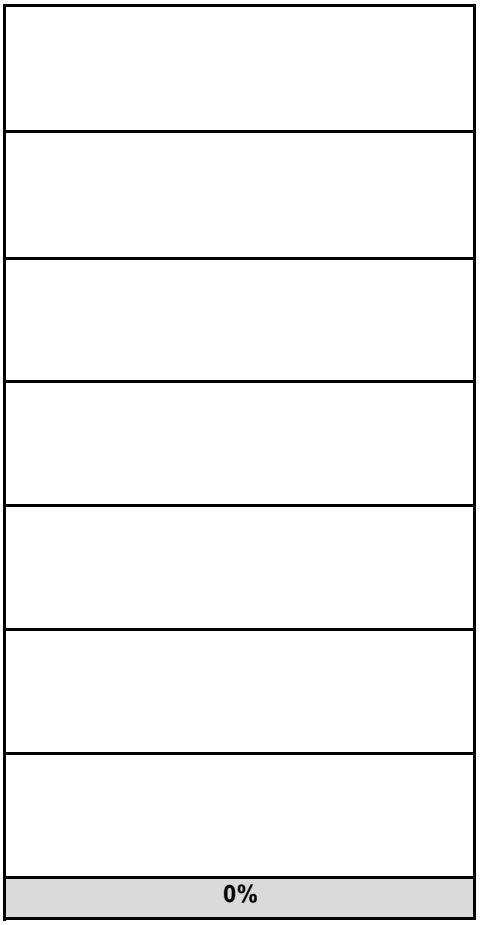
0.0%

Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS	Back to User Instructions
Option 4 -	Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigati appropriate justification/evidence (column J).

Upper Bound Calculation for Build
Actual % Upper Bound for this project
Mitigated Optimism Bias % for this project

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

0.0%
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
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0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
0.0%

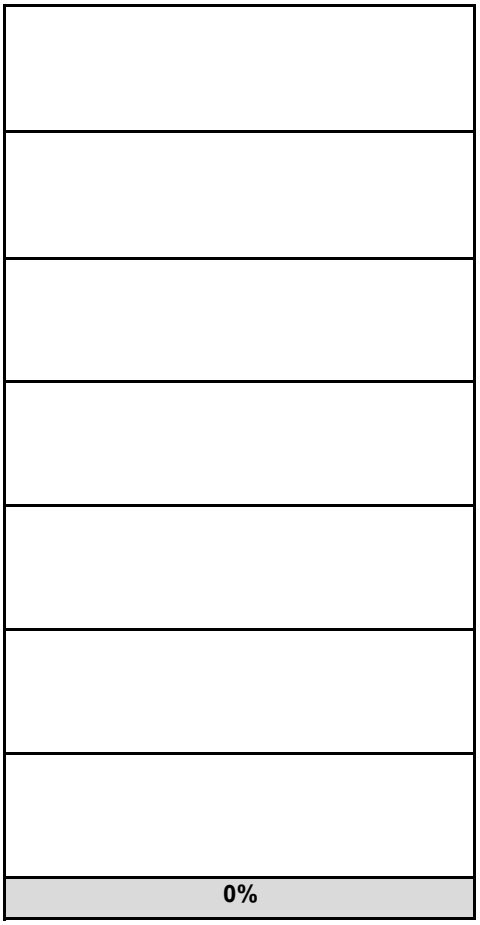
0.0%

Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS	Back to User Instructions
Option 5 -	Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigati
appropriate justification/evidence (column J).

Upper Bound Calculation for Build	
Actual % Upper Bound for this project	
Mitigated Optimism Bias % for this project	

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

0.0%
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
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0.0%
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
0.0%

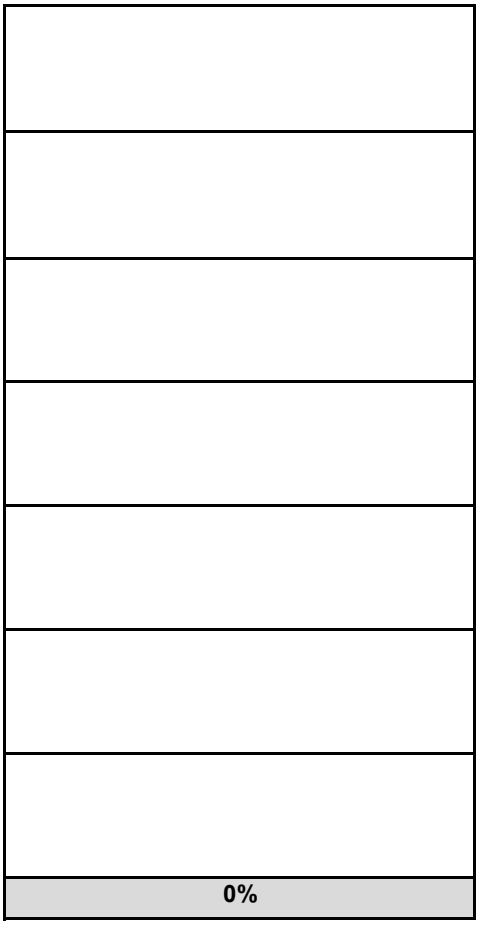
0.0%

Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

OPTIMISM BIAS	Back to User Instructions
Option 6 -	Back to Model Structure

Answer questions 1-5 by selecting from the drop down menus in column D. Apply mitigat
appropriate justification/evidence (column J).

Upper Bound Calculation for Build	
Actual % Upper Bound for this project	
Mitigated Optimism Bias % for this project	

(1) BUILD COMPLEXITY	Drop down
Length of Build	
Number of phases	
Number of sites involved (before and after change)	

(2) LOCATION	Drop down
Description of site	

(3) SCOPE OF SCHEME	Drop down
Facilities Management (FM)	
Equipment	
IT	
External Stakeholders	
Other stakeholders - Universities/Private/Voluntary sector/Local government	

(4) SERVICE CHANGES	Drop down
Service delivery	

(5) GATEWAY	Drop down
Risk Potential Assessment (RPA) Score	

Total

ion factors (column I) with

0.0%
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
0.0%
0.0%
0.0%
0.0%
0.0%

Contribution to upper bound
0.0%

Contribution to upper bound
0.0%

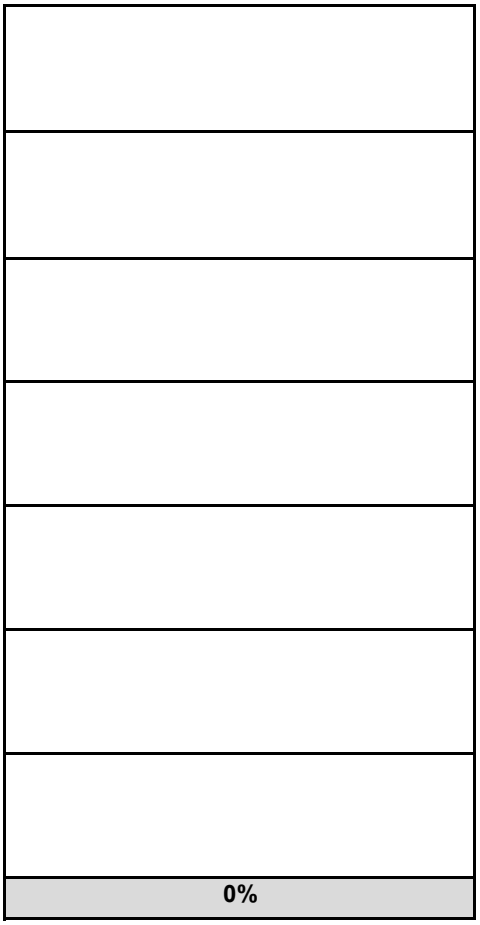
0.0%

Mitigation Factors Table	
Contributory Factor to Upper Bound	**% Factor Contributes**
Progress with Planning Approval	4%
Other Regulatory	4%
Depth of surveying of site/ground information	3%
Detail of design	4%
Innovative project/design (i.e. has this type of project/design been undertaken before)	3%
Design complexity	4%
Likely variations from Standard Contract	2%
Design Team capabilities	3%
Contractors' capabilities (excluding design team covered above)	2%
Contractor Involvement	2%
Client capability and capacity (NB do not double count with design team capabilities)	6%

Robustness of Output Specification	25%
Involvement of Stakeholders, including Public and Patient Involvement	5%
Agreement to output specification by stakeholders	5%
New service or traditional	3%
Local community consent	3%
Stable policy environment	20%
Likely competition in the market for the project	2%
TOTAL	**100%**

Note: Across all contributory factors, mitigation would b

% Factor Contributes after mitigation



e expected to be greater the greater the exte

Explanation for rate of mitigation

ent of risk quantification and risk management.

RISKS SUMMARY Back to User Instructions

Quantitative Risks (Discounted) - £'000	Option 0 - Business as Usual
Design	£0
Construction	£0
Performance	£0
Operating	£0
Revenue	£0
Termination	£0
Technology	£0
Control	£0
Residual value	£0
Other	£0
Additional	£0
Total	**£0**

Unmonetisable Risks - weighted score	Option 0 - Business as Usual
Design	0.0
Construction	0.0
Performance	0.0
Operating	0.0
Revenue	0.0
Termination	0.0
Technology	0.0
Control	0.0
Residual value	0.0
Other	0.0
Additional	0.0
Total	**0.0**

Back to Model Structure

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2- 3. Provide 4 fixed scanners over 10 yrs	Option 3- 4. Provide 5 fixed scanners over 10 yrs
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	**£0**	**£0**

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2- 3. Provide 4 fixed scanners over 10 yrs	Option 3- 4. Provide 5 fixed scanners over 10 yrs
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	**0.0**	**0.0**

Option 4-	Option 5-	Option 6-
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	£0	£0
£0	**£0**	**£0**

Option 4-	Option 5-	Option 6-
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
0.0	**0.0**	**0.0**

RISK LOG
Code
A. Design R
A1
A2
A3
A4
A5
A6
B. Construc
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18
B19
B20
C. Performa
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
D. Operatin
D1
D2

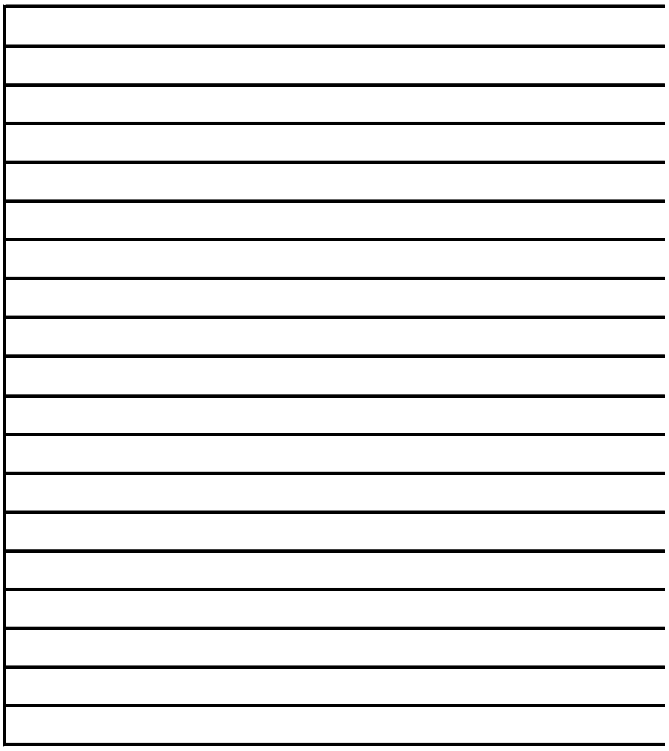
D3
D4
D5
D6
D7
D8
D9
D10
D11
E. Revenue
E1
E2
E3
E4
E5
E6
E7
E8
F. Terminat
F1
F2
F3
G. Technol
G1
G2
H. Control
H1
H2
I. Residual
I1
J. Other Ris
J1
J2
J3
K. Addition
K1
K2
K3
K4
K5
K6

K7
K8
K9
K10
K11
K12
K13
K14
K15
K16
K17
K18
K19
K20
K21
K22
K23
K24
K25

Risk Description
isks
Failure to translate design
Continuing development of design
Change in requirements of the NHS trust
Change in design required by operator
Change in design required due to external influences specific to NHS
Failure to build to brief
ction Risks
Incorrect cost estimates
Incorrect time estimates
Unforeseen ground/site conditions
Unforeseen ground/site conditions under the footprint of existing facilities
Delay in gaining access to the site
Responsibility for maintaining on-site security
Responsibility for maintaining site safety
Third party claims
"Delay" (and compensation events) caused by non-performance of Trust parties
"Relief event"
Force Majeure
Termination due to force majeure
Legislative/regulatory change: non-NHS specific
Legislative/regulatory change: NHS specific
Contractor default
Poor project management
Contractor/sub-contractor industrial action
Protestor action
Incorrect cost and time estimates for decanting from existing buildings
Incorrect cost and time estimates for commissioning new buildings
ance Risks
Latent effects in new build
Change in specification initiated by procuring entity
Performance of sub-contractors
Default by contractor or sub-contractor
Industrial action
Failure to meet performance standards
Availability of facilities
"Delay" (and compensation events)
"Relief event"
Force Majeure
Termination due to force majeure
g Risks
Incorrect estimated cost of providing specific services under the contract: within market testing periods
Incorrect established cost of providing specific services under the contract: at the point of market testing period

Legislative/regulatory change having capital consequences: NHS specific
Legislative/regulatory change: non-NHS specific
Incorrect estimated cost of providing clinical services
Incorrect estimated cost of maintenance
Incorrect estimated cost of energy used
Patient infection caused by poor facilities management
Patient infection - other
Estimated cost of transferring the employment to staff to new employer is incorrect
Estimated cost of restructuring the workforce providing services under the contract is incorrect
Risks
Non-performance "Unavailability" of services
Poor performance of services
Changes in the allocation of resources for the provision of health care
Changes in the volume of demand for patient services
Unexpected changes in medical technology
Unexpected changes in the epidemiology of the people in the catchment area
Unexpected sudden increases in demand, due to major incident
Estimated income from income generating schemes is incorrect
ion Risks
Termination due to default by the procuring entity
Default by the operator leading to step-in by financiers
Termination due to default by the operator
ogy Risks
Technological change/asset Obsolescence
Technological change
Risks
Control of clinical services
Control of services provided under the PFI contract. Hard FM only
Value Risks
Procuring entity no longer requires assets at the end of contract
sks
Incorrect cost estimate for planning approval
Delayed planning approval
Land sale receipts
al Risks

Risk Impact



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Assumptions/Calculations

Back to Model Structure

MONETIS
Option 0 -

RISK ANA
Code
A. Design
A1
A2
A3
A4
A4
A6
B. Constru
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18
B19
B20
C. Perform
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11

D. Operati
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
E. Revenu
E1
E2
E3
E4
E5
E6
E7
E8
F. Termina
F1
F2
F3
G. Techno
G1
G2
H. Control
H1
H2
I. Residua
I1
J. Other R
J1
J2
J3
K. Additio
K1
K2

K3
K4
K5
K6
K7
K8
K9
K10
K11
K12
K13
K14
K15
K16
K17
K18
K19
K20
K21
K22
K23
K24
K25

ABLE RISKS

Business as Usual

LYSIS - £'000

Risk Description
Risks
Failure to translate design
Continuing development of design
Change in requirements of the NHS trust
Change in design required by operator
Change in design required due to external influences specific to NHS
Failure to build to brief
uction Risks
Incorrect cost estimates
Incorrect time estimates
Unforeseen ground/site conditions
Unforeseen ground/site conditions under the footprint of existing facilities
Delay in gaining access to the site
Responsibility for maintaining on-site security
Responsibility for maintaining site safety
Third party claims
"Delay" and (compensation events) caused by non-performance of Trust parties
"Relief event"
Force Majeure
Termination due to force majeure
Legislative/regulatory change: non-NHS specific
Legislative/regulatory change: NHS specific
Contractor default
Poor project management
Contractor/sub-contractor industrial action
Protestor action
Incorrect cost and time estimates for decanting from existing buildings
Incorrect cost and time estimates for commissioning new buildings
nance Risks
Latent effects in new build
Change in specification initiated by procuring entity
Performance of sub-contractors
Default by contractor or sub-contractor
Industrial action
Failure to meet performance standards
Availability of facilities
"Delay" and (compensation events)
"Relief event"
Force Majeure
Termination due to force majeure

ng Risks
Incorrect estimated cost of providing specific services under the contract: within market testing periods
Incorrect established cost of providing specific services under the contract: at the point of market testing period
Legislative/regulatory change having capital consequences: NHS specific
Legislative/regulatory change: non-NHS specific
Incorrect estimated cost of providing clinical services
Incorrect estimated cost of maintenance
Incorrect estimated cost of energy used
Patient infection caused by poor facilities management
Patient infection - other
Estimated cost of transferring the employment to staff to new employer is incorrect
Estimated cost of restructuring the workforce providing services under the contract is incorrect

e Risks
Non-performance "Unavailability" of services
Poor performance of services
Changes in the allocation of resources for the provision of health care
Changes in the volume of demand for patient services
Unexpected changes in medical technology
Unexpected changes in the epidemiology of the people in the catchment area
Unexpected sudden increases in demand, due to major incident
Estimated income from income generating schemes is incorrect

ation Risks
Termination due to default by the procuring entity
Default by the operator leading to step-in by financiers
Termination due to default by the operator

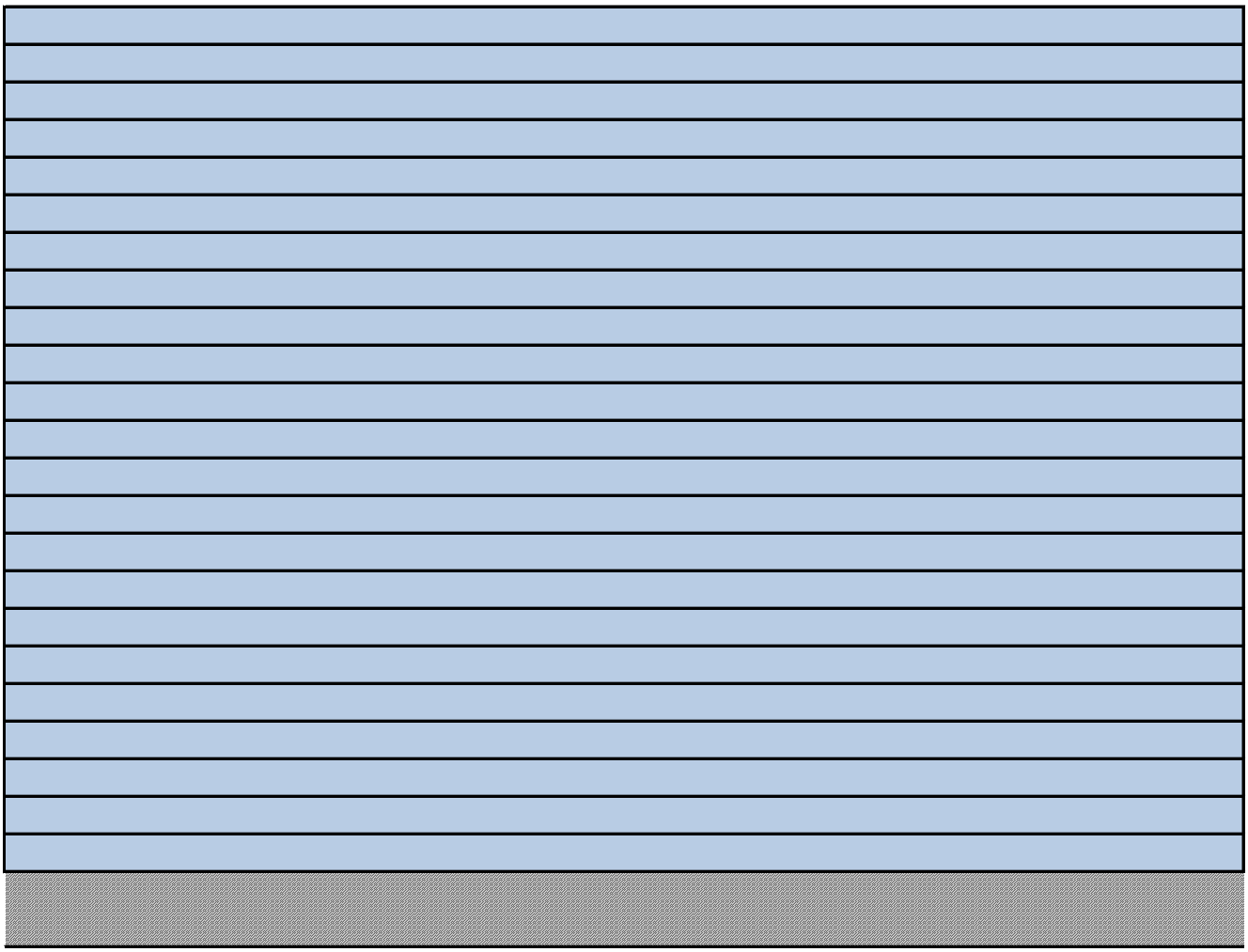
logy Risks
Technological change/asset Obsolescence
Technological change

Risks
Control of clinical services
Control of services provided under the PFI contract. Hard FM only

l Value Risks
Procuring entity no longer requires assets at the end of contract

isks
Incorrect cost estimate for planning approval
Delayed planning approval
Land sale receipts

nal Risks



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[Back to Model Structure](#)

Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
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				0%
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Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
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			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00

			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
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		1	1.00	£0.00
			3.00	**£0.00**
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		1	1.00	£0.00
		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
£0.00
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MONETIS
Option 1 -

RISK ANA
Code
A. Design
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B. Constru
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B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18
B19
B20
C. Perform
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11

D. Operati
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
E. Revenu
E1
E2
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E6
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E8
F. Termina
F1
F2
F3
G. Techno
G1
G2
H. Control
H1
H2
I. Residua
I1
J. Other R
J1
J2
J3
K. Additio
K1
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ABLE RISKS

2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

LYSIS - £'000

Risk Description
Risks
Failure to translate design
Continuing development of design
Change in requirements of the NHS trust
Change in design required by operator
Change in design required due to external influences specific to NHS
Failure to build to brief
uction Risks
Incorrect cost estimates
Incorrect time estimates
Unforseen ground/site conditions
Unforseen ground/site conditions under the footprint of existing facilities
Delay in gaining access to the site
Responsibility for maintaining on-site security
Responsibility for maintaining site safety
Third party claims
"Delay" and (compensation events) caused by non-performance of Trust parties
"Relief event"
Force Majeure
Termination due to force majeure
Legislative/regulatory change: non-NHS specific
Legislative/regulatory change: NHS specific
Contractor default
Poor project management
Contractor/sub-contractor industrial action
Protestor action
Incorrect cost and time estimates for decanting from existing buildings
Incorrect cost and time estimates for commissioning new buildings
nance Risks
Latent effects in new build
Change in specification initiated by procuring entity
Performance of sub-contractors
Default by contractor or sub-contractor
Industrial action
Failure to meet performance standards
Availability of facilities
"Delay" and (compensation events)
"Relief event"
Force Majeure
Termination due to force majeure

ng Risks
Incorrect estimated cost of providing specific services under the contract: within market testing periods
Incorrect established cost of providing specific services under the contract: at the point of market testing period
Legislative/regulatory change having capital consequences: NHS specific
Legislative/regulatory change: non-NHS specific
Incorrect estimated cost of providing clinical services
Incorrect estimated cost of maintenance
Incorrect estimated cost of energy used
Patient infection caused by poor facilities management
Patient infection - other
Estimated cost of transferring the employment to staff to new employer is incorrect
Estimated cost of restructuring the workforce providing services under the contract is incorrect

e Risks
Non-performance "Unavailability" of services
Poor performance of services
Changes in the allocation of resources for the provision of health care
Changes in the volume of demand for patient services
Unexpected changes in medical technology
Unexpected changes in the epidemiology of the people in the catchment area
Unexpected sudden increases in demand, due to major incident
Estimated income from income generating schemes is incorrect

ation Risks
Termination due to default by the procuring entity
Default by the operator leading to step-in by financiers
Termination due to default by the operator

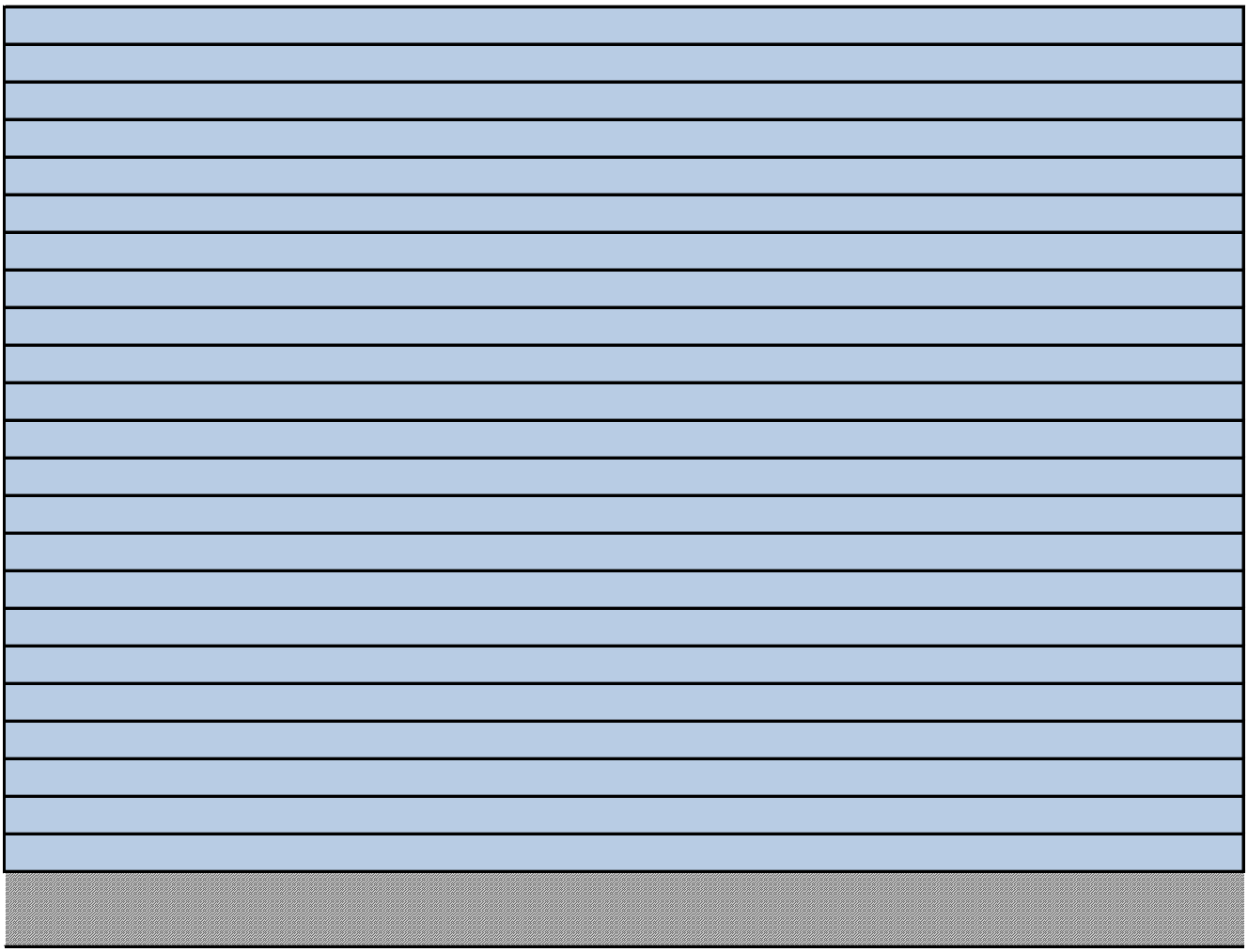
logy Risks
Technological change/asset Obsolescence
Technological change

Risks
Control of clinical services
Control of services provided under the PFI contract. Hard FM only

l Value Risks
Procuring entity no longer requires assets at the end of contract

isks
Incorrect cost estimate for planning approval
Delayed planning approval
Land sale receipts

nal Risks



[Back to User Instructions](#)
[Back to Model Structure](#)

Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
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Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
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			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
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			Total	**£0.00**
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			Total	**£0.00**
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
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			11.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
			11.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
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			3.00	**£0.00**
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		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
£0.00
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MONETIS
Option 2 -

RISK ANA
Code
A. Design
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A6
B. Constru
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C. Perform
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C4
C5
C6
C7
C8
C9
C10
C11

D. Operati
D1
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D8
D9
D10
D11
E. Revenu
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E2
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E8
F. Termina
F1
F2
F3
G. Techno
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G2
H. Control
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I. Residua
I1
J. Other R
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K. Additio
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ABLE RISKS

3. Provide 4 fixed scanners over 10 yrs

LYSIS - £'000

Risk Description
Risks
Failure to translate design
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Change in design required by operator
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Procuring entity no longer requires assets at the end of contract

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Delayed planning approval
Land sale receipts

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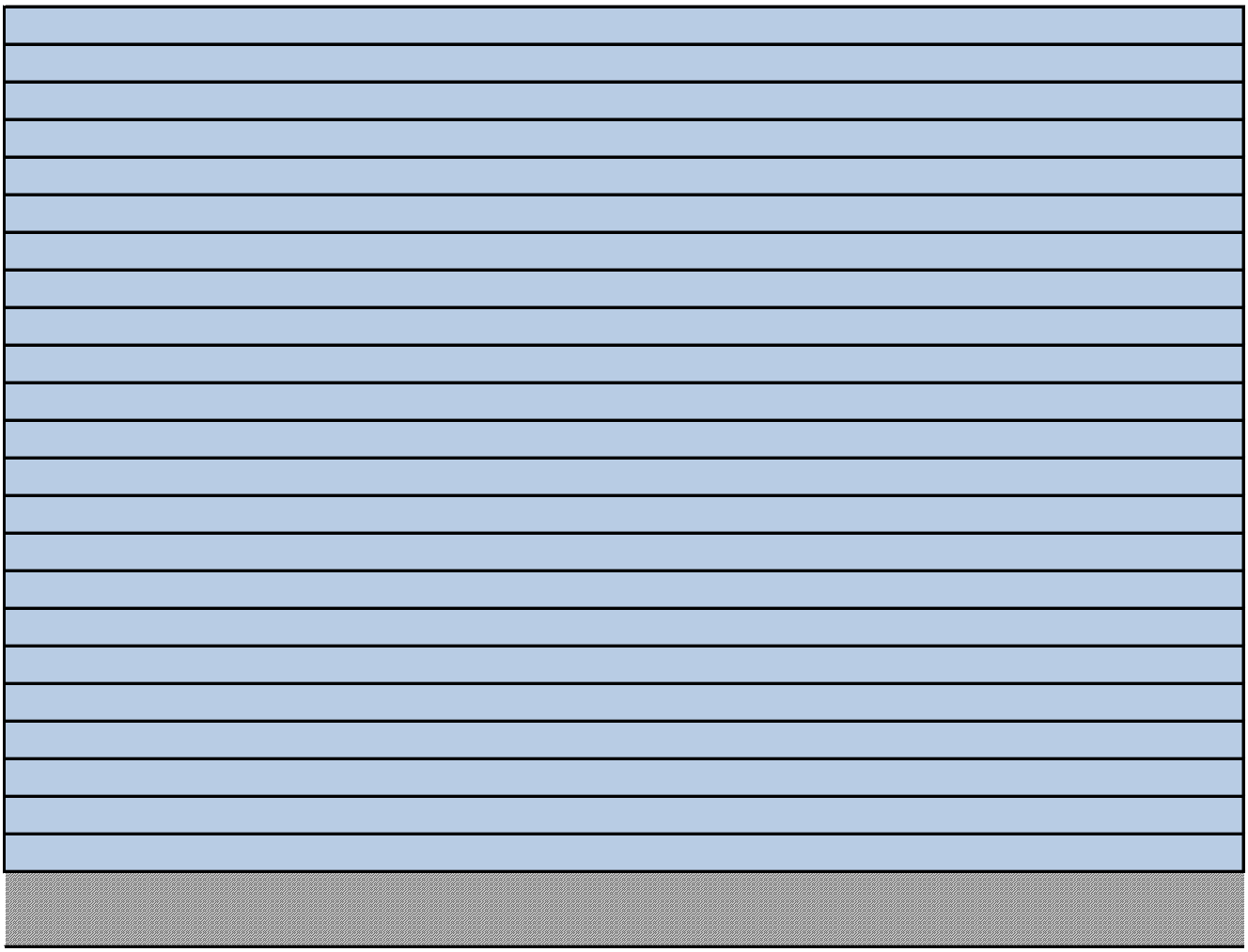

Back to User Instructions

Back to Model Structure

Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
				0%
				0%
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				0%

Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
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			Total	**£0.00**
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			Total	**£0.00**
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			Total	**£0.00**
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			Total	**£0.00**
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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			11.00	**£0.00**
		1	1.00	£0.00
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			11.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
			3.00	**£0.00**
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
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MONETIS
Option 3 -

RISK ANA
Code
A. Design
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B. Constru
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C. Perform
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D. Operati
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ABLE RISKS

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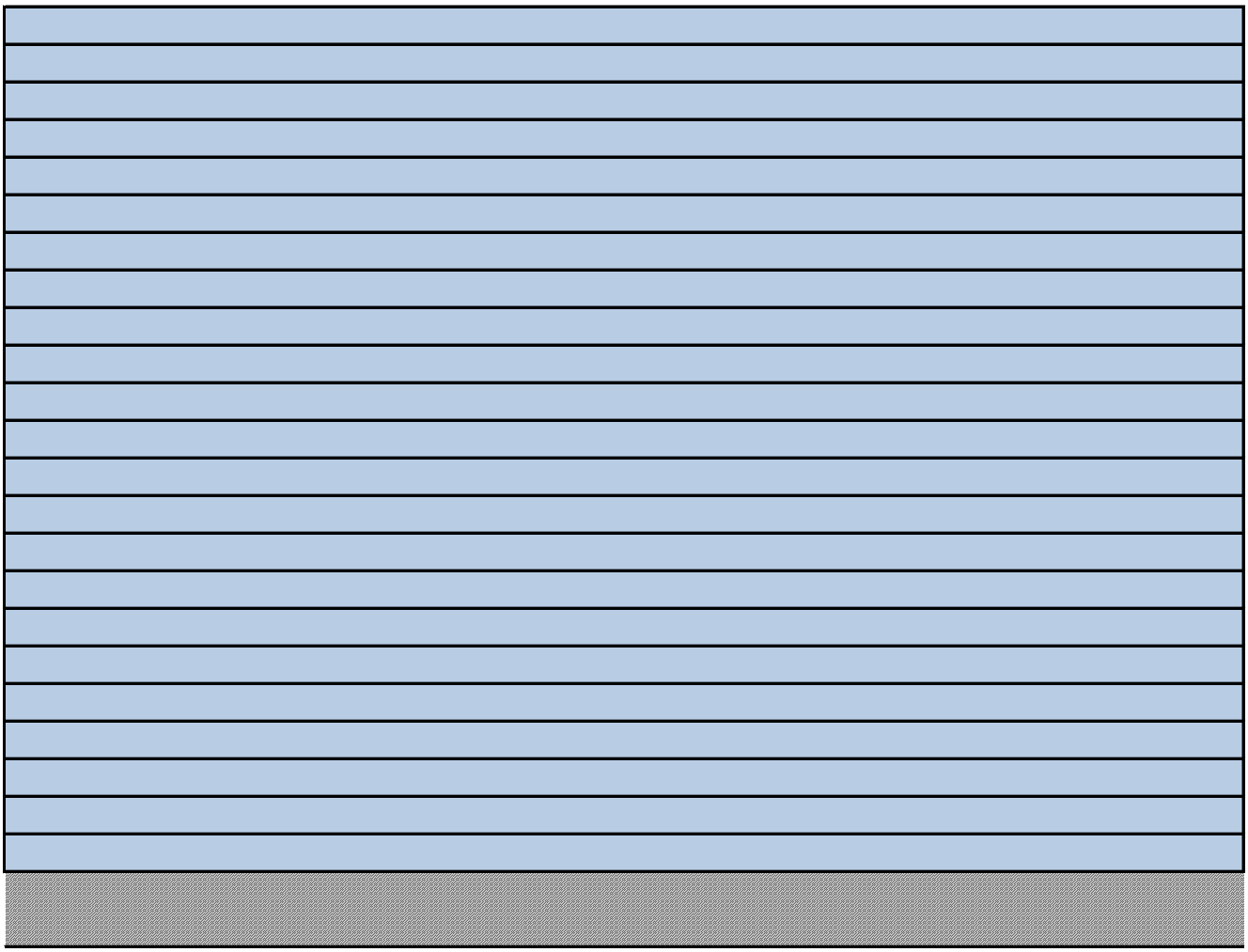

Back to User Instructions

Back to Model Structure

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				0%
				0%
				0%
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Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
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			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			£0.00	£0.00
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			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
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			Total	**£0.00**
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00

			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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			11.00	**£0.00**
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		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
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		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
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MONETIS
Option 4 -

RISK ANA
Code
A. Design
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A6
B. Constru
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B14
B15
B16
B17
B18
B19
B20
C. Perform
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C3
C4
C5
C6
C7
C8
C9
C10
C11

D. Operati
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D8
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E. Revenu
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F. Termina
F1
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G. Techno
G1
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H. Control
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I. Residua
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J. Other R
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K. Additio
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ABLE RISKS

LYSIS - £'000

Risk Description
Risks
Failure to translate design
Continuing development of design
Change in requirements of the NHS trust
Change in design required by operator
Change in design required due to external influences specific to NHS
Failure to build to brief
uction Risks
Incorrect cost estimates
Incorrect time estimates
Unforseen ground/site conditions
Unforseen ground/site conditions under the footprint of existing facilities
Delay in gaining access to the site
Responsibility for maintaining on-site security
Responsibility for maintaining site safety
Third party claims
"Delay" and (compensation events) caused by non-performance of Trust parties
"Relief event"
Force Majeure
Termination due to force majeure
Legislative/regulatory change: non-NHS specific
Legislative/regulatory change: NHS specific
Contractor default
Poor project management
Contractor/sub-contractor industrial action
Protestor action
Incorrect cost and time estimates for decanting from existing buildings
Incorrect cost and time estimates for commissioning new buildings
nance Risks
Latent effects in new build
Change in specification initiated by procuring entity
Performance of sub-contractors
Default by contractor or sub-contractor
Industrial action
Failure to meet performance standards
Availability of facilities
"Delay" and (compensation events)
"Relief event"
Force Majeure
Termination due to force majeure

ng Risks
Incorrect estimated cost of providing specific services under the contract: within market testing periods
Incorrect established cost of providing specific services under the contract: at the point of market testing period
Legislative/regulatory change having capital consequences: NHS specific
Legislative/regulatory change: non-NHS specific
Incorrect estimated cost of providing clinical services
Incorrect estimated cost of maintenance
Incorrect estimated cost of energy used
Patient infection caused by poor facilities management
Patient infection - other
Estimated cost of transferring the employment to staff to new employer is incorrect
Estimated cost of restructuring the workforce providing services under the contract is incorrect

e Risks
Non-performance "Unavailability" of services
Poor performance of services
Changes in the allocation of resources for the provision of health care
Changes in the volume of demand for patient services
Unexpected changes in medical technology
Unexpected changes in the epidemiology of the people in the catchment area
Unexpected sudden increases in demand, due to major incident
Estimated income from income generating schemes is incorrect

ation Risks
Termination due to default by the procuring entity
Default by the operator leading to step-in by financiers
Termination due to default by the operator

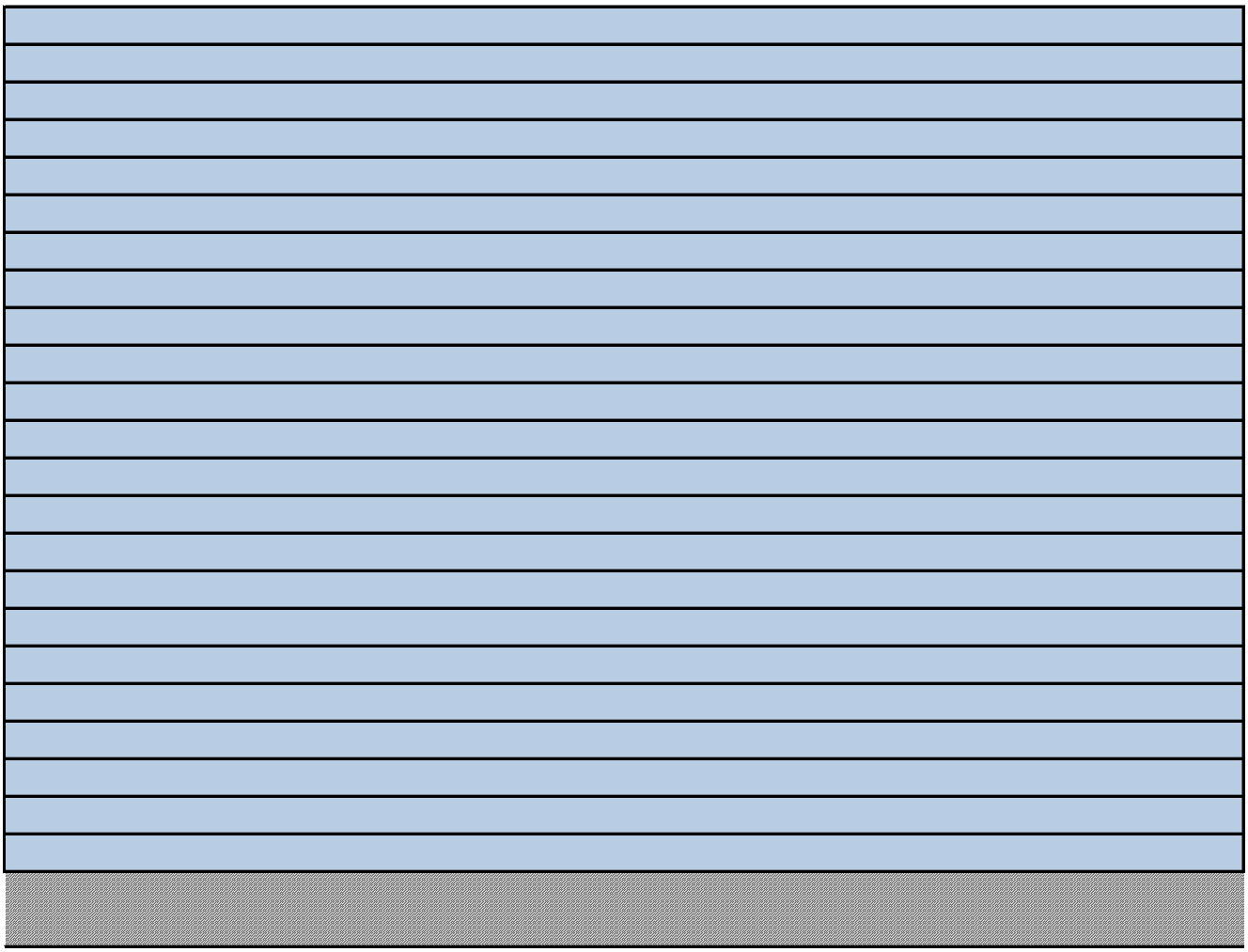
logy Risks
Technological change/asset Obsolescence
Technological change

Risks
Control of clinical services
Control of services provided under the PFI contract. Hard FM only

l Value Risks
Procuring entity no longer requires assets at the end of contract

isks
Incorrect cost estimate for planning approval
Delayed planning approval
Land sale receipts

nal Risks



[Back to User Instructions](#)

[Back to Model Structure](#)

Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
				0%
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Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
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			Total	**£0.00**
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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			11.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			11.00	**£0.00**
		1	1.00	£0.00
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			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
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		1	1.00	£0.00
			3.00	**£0.00**
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		1	1.00	£0.00
		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
£0.00
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MONETIS
Option 5 -

RISK ANA
Code
A. Design
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A2
A3
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A5
A6
B. Constru
B1
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B19
B20
C. Perform
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11

D. Operati
D1
D2
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D6
D7
D8
D9
D10
D11
E. Revenu
E1
E2
E3
E4
E5
E6
E7
E8
F. Termina
F1
F2
F3
G. Techno
G1
G2
H. Control
H1
H2
I. Residua
I1
J. Other R
J1
J2
J3
K. Additio
K1
K2

K3
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ABLE RISKS

LYSIS - £'000

Risk Description
Risks
Failure to translate design
Continuing development of design
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Change in design required by operator
Change in design required due to external influences specific to NHS
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Protestor action
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Technological change

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Control of services provided under the PFI contract. Hard FM only

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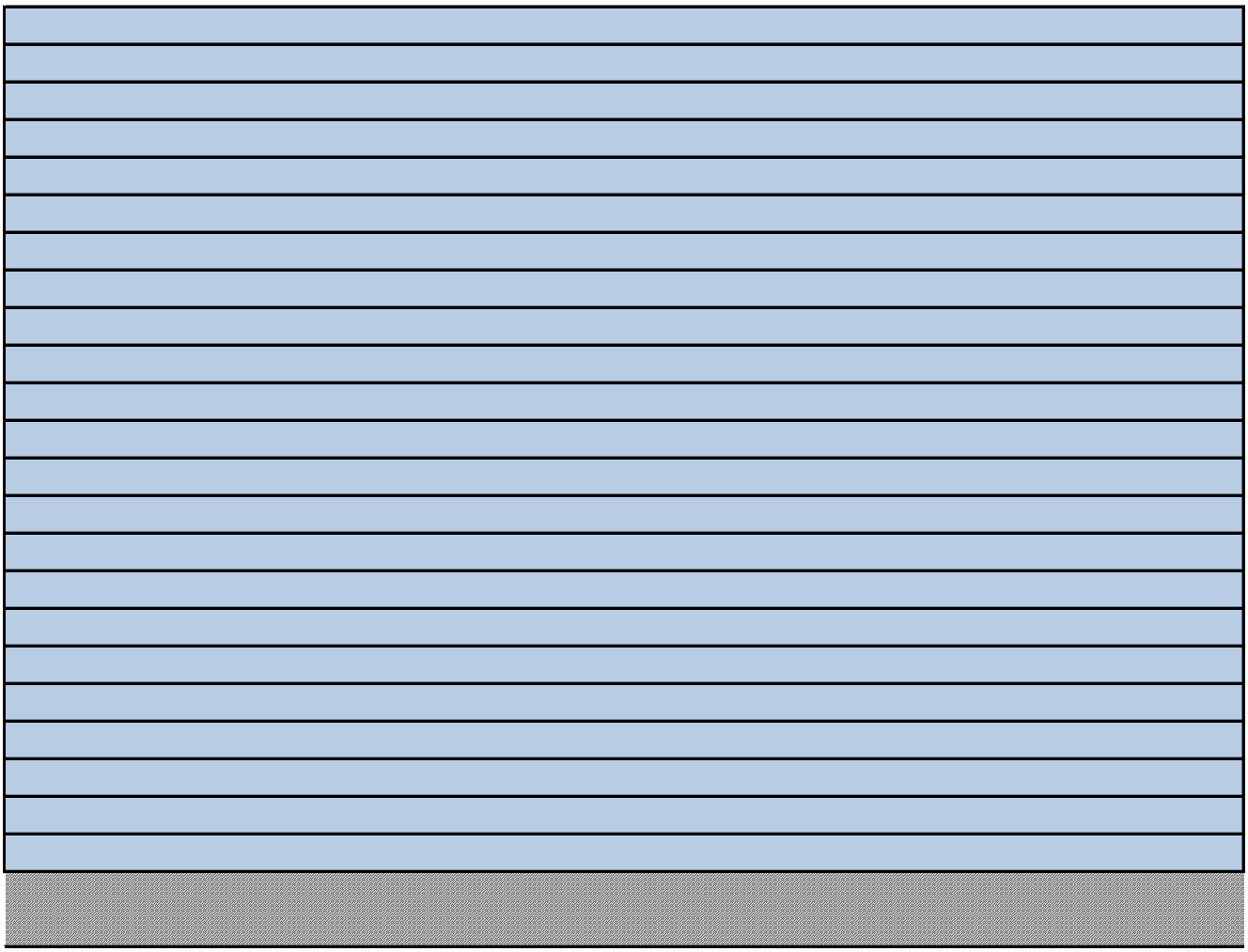
Procuring entity no longer requires assets at the end of contract

isks
Incorrect cost estimate for planning approval
Delayed planning approval
Land sale receipts

nal Risks



[Back to User Instructions]
[Back to Model Structure]

Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
				0%
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				0%

Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
0	1	2	1.97	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.97	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00

			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
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		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			25.00	**£0.00**
			92.97	**£0.00**

Discounted Risk Value
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MONETIS
Option 6 -

RISK ANA
Code
A. Design
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B. Constru
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C. Perform
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C11

D. Operati
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D11
E. Revenu
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F. Termina
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G. Techno
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H. Control
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I. Residua
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J. Other R
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K. Additio
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LYSIS - £'000

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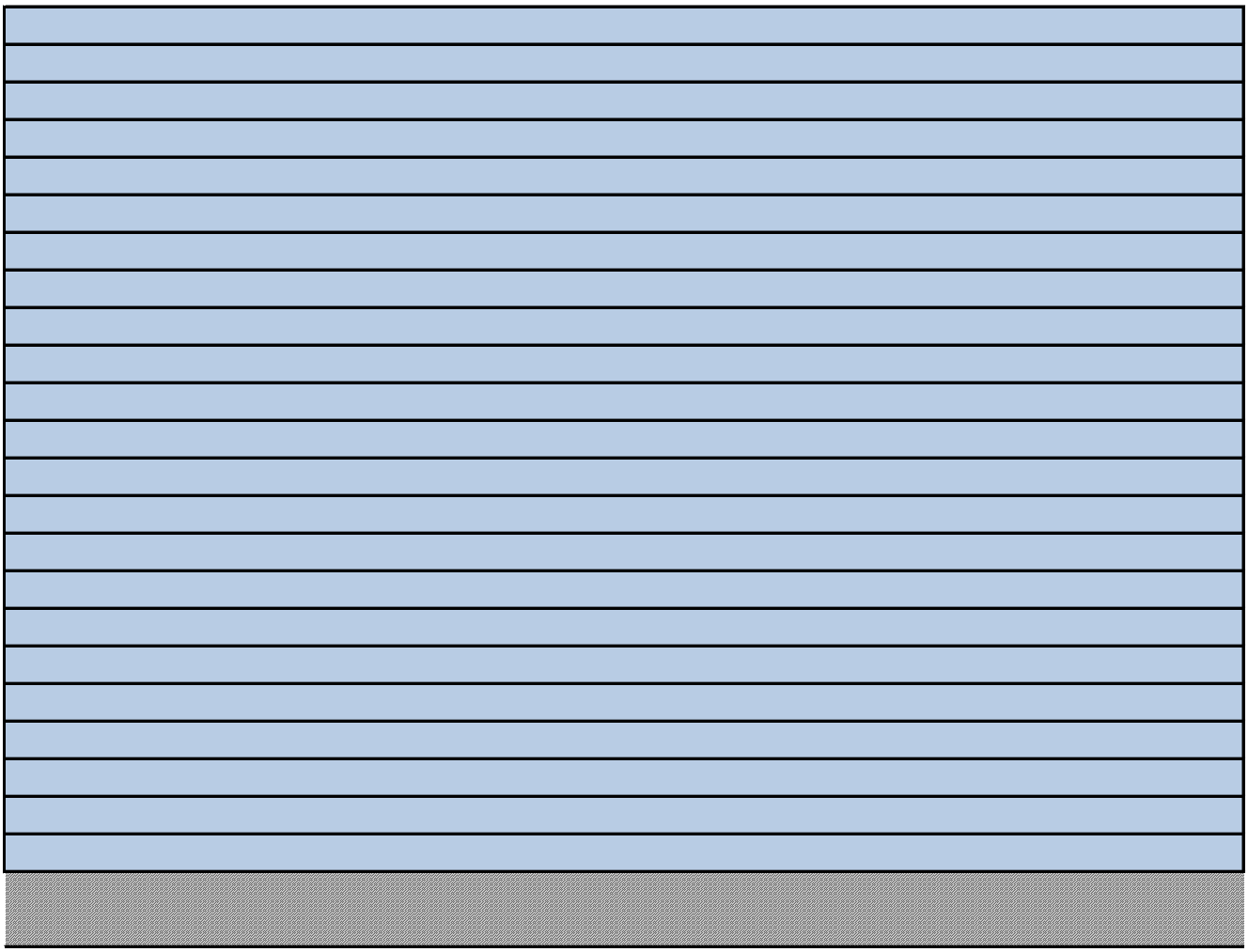
Land sale receipts

nal Risks



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Probability of risk materialising				
High impact	Medium impact	Low impact	No impact	Sum of probabilities
				0%
				0%
				0%
				0%
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				0%
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				0%
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				0%
				0%
				0%

Value per annum (£) if risk materialises				Expected Value per Annum
High impact	Medium impact	Low impact	No impact	
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00

			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
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			Total	**£0.00**
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			Total	**£0.00**
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			Total	**£0.00**
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			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			£0.00	£0.00
			£0.00	£0.00

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			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			£0.00	£0.00
			Total	**£0.00**
			Total Risk	**£0.00**

Time period that risk is present			Discount Factor	Undiscounted Risk Value
From (year)	To (year)	No. of Years		
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			6.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			20.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00

			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			11.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			8.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
			2.00	**£0.00**
		1	1.00	£0.00
			1.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			3.00	**£0.00**
		1	1.00	£0.00
		1	1.00	£0.00

		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
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		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
		1	1.00	£0.00
			25.00	**£0.00**
			92.00	**£0.00**

Discounted Risk Value
£0.00
£0.00
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UNMONETISABLE RISKS - ALL OPTIONS	
Code	Risk Description
A. Design Risks	
A1	
A2	
A3	
A4	
B. Construction Risks	
B1	
B2	
B3	
B4	
C. Performance Risks	
C1	
C2	
C3	
C4	
D. Operating Risks	
D1	
D2	
D3	
D4	
E. Revenue Risks	
E1	
E2	
E3	
E4	
F. Termination Risks	
F1	
F2	
F3	
F4	
G. Technology Risks	
G1	
G2	
G3	
G4	
H. Control Risks	

H1	
H2	
H3	
H4	

I. Residual Value Risks	
I1	
I2	
I3	
I4	

J. Other Risks	
J1	
J2	
J3	
J4	

K. Additional Risks	
K1	
K2	
K3	
K4	
K5	
K6	
K7	
K8	
K9	
K10	
K11	
K12	
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K15	
K16	
K17	
K18	
K19	
K20	
K21	
K22	
K23	
K24	
K25	

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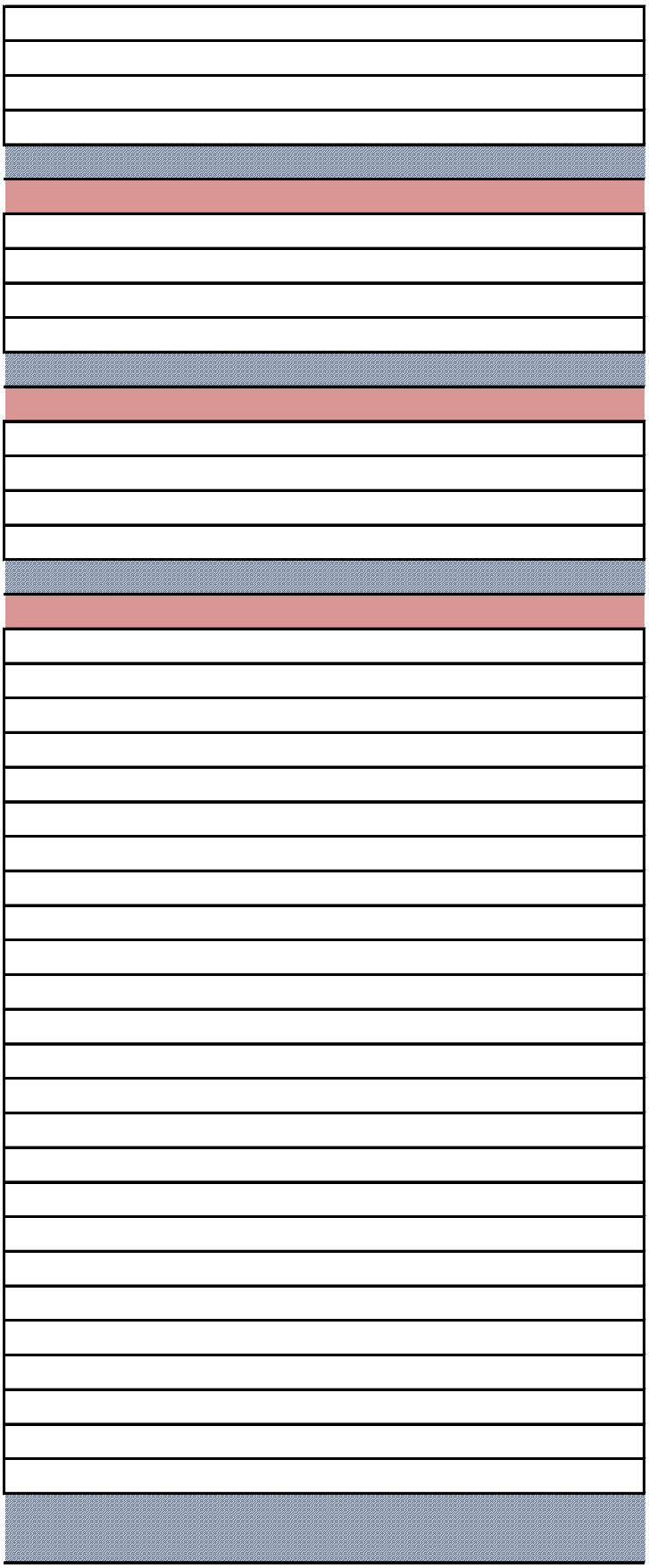
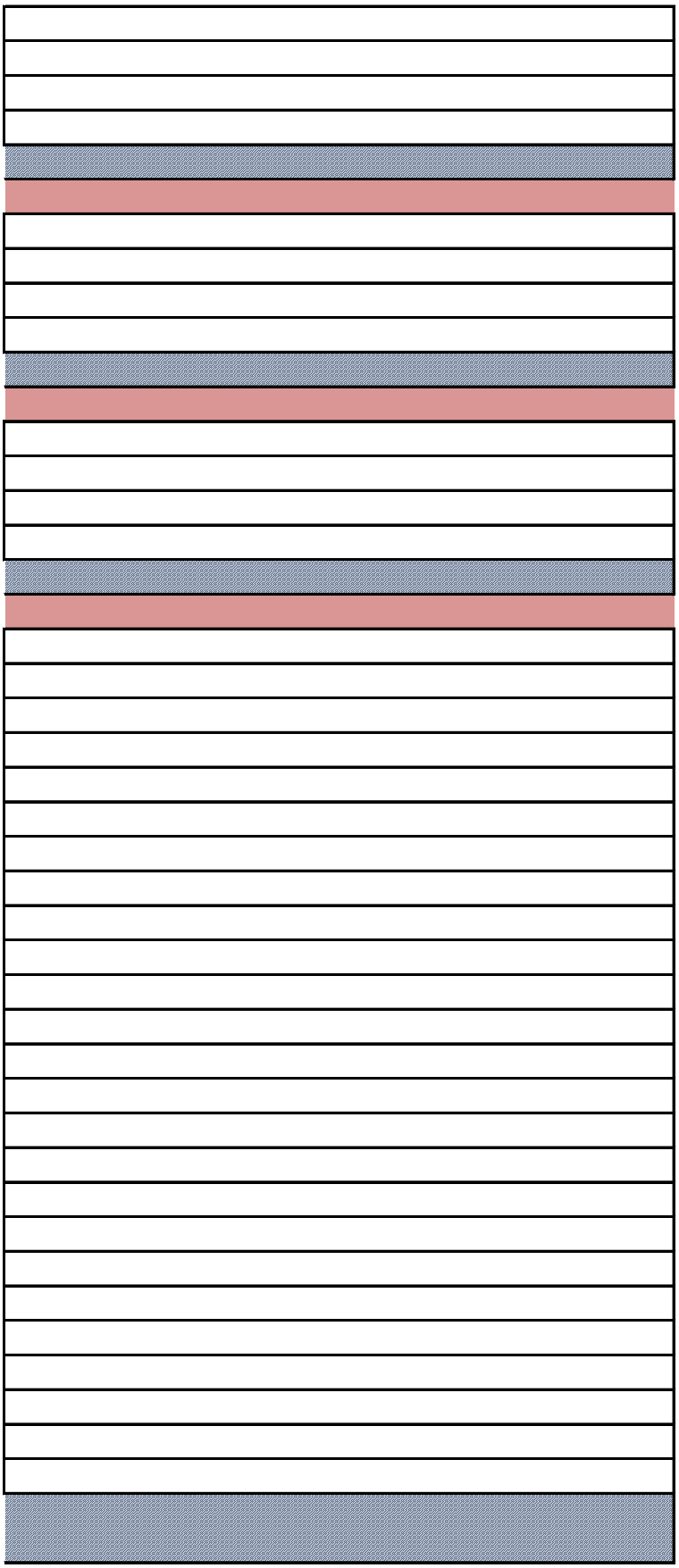
Back to Model Structure

Risk Impact



Mitigation



	Option 0 -
Explanation of probability and impact values	Probability	Impact (Cost)
Total		
Total		
Total		
Total		
Total		
Total		
Total		

Total		

Total		

Total		

Total		
Total Risk Score		

Business as Usual			Option 1 -2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners					Option 2 -3. Provide 4 fixed sc		
Impact (Quality)	Impact (Other)	Weighted Score	Probability	Impact (Cost)	Impact (Quality)	Impact (Other)	Weighted Score	Probability	Impact (Cost)	Impact (Quality)
		0.0					0.0			
		0.0					0.0			
		0.0					0.0			
		0.0					0.0			
		0.0					**0.0**			
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		0.0					**0.0**			
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		0.0					**0.0**			
		0.0					0.0			
		0.0					0.0			
		0.0					0.0			
		0.0					0.0			
		0.0					**0.0**			

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		0.0					0.0			
		0.0					**0.0**			
		0.0					**0.0**			

anners over 10 yrs		Option 3 -4. Provide 5 fixed scanners over 10 yrs					Option 4 -			
Impact (Other)	Weighted Score	Probability	Impact (Cost)	Impact (Quality)	Impact (Other)	Weighted Score	Probability	Impact (Cost)	Impact (Quality)	Impact (Other)
	0.0					0.0				
	0.0					0.0				
	0.0					0.0				
	0.0					0.0				
	0.0					**0.0**				
	0.0					0.0				
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	0.0					**0.0**				
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	0.0					**0.0**				
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	0.0					**0.0**				

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	Option 5 -					Option 6 -				
Weighted Score	Probability	Impact (Cost)	Impact (Quality)	Impact (Other)	Weighted Score	Probability	Impact (Cost)	Impact (Quality)	Impact (Other)	
0.0					0.0					
0.0					0.0					
0.0					0.0					
0.0					0.0					
0.0					**0.0**					
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0.0					**0.0**					

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0.0					0.0				
0.0					**0.0**				
0.0					**0.0**				

Weighted Score
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ECONOMIC BENEFITS ANALYSIS - £'000

Back to User Instructions
Back to Model Structure

Summary (Discounted) - £'000	Option 0 - Business as Usual	Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	Option 2- 3. Provide 4 fixed scanners over 10 yrs
Cash releasing benefits	£0.00	£0.00	£0.00
Non-cash releasing benefits	£0.00	£0.00	£0.00
Societal benefits	£0.00	£0.00	£0.00
Total benefits	**£0.00**	**£0.00**	**£0.00**

Cash Releasing Benefits - £'000			
Option	Discounted Total	% of highest benefit	Rank
Option 0 - Business as Usual	**£0.00**		1
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	**£0.00**		1
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	**£0.00**		1
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	**£0.00**		1
Option 4 -	**£0.00**		1
Option 5 -	**£0.00**		1
Option 6 -	**£0.00**		1

Non-Cash Releasing Benefits - £'000			
Option	Discounted Total	% of highest benefit	Rank
Option 0 - Business as Usual	**£0.00**		1
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	**£0.00**		1
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	**£0.00**		1
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	**£0.00**		1
Option 4 -	**£0.00**		1
Option 5 -	**£0.00**		1
Option 6 -	**£0.00**		1

Societal Benefits - £'000			
Option	Discounted Total	% of highest benefit	Rank
Option 0 - Business as Usual	**£0.00**		1
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners	**£0.00**		1
Option 2 - 3. Provide 4 fixed scanners over 10 yrs	**£0.00**		1
Option 3 - 4. Provide 5 fixed scanners over 10 yrs	**£0.00**		1
Option 4 -	**£0.00**		1
Option 5 -	**£0.00**		1
Option 6 -	**£0.00**		1

Option 3- 4. Provide 5 fixed scanners over 10 yrs	Option 4-	Option 5-	Option 6-
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**

Discounted benefits					
Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Discounted benefits					
Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Discounted benefits					
Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32	Yr 33
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 62	Yr 63	Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

BENEFITS LOG

Back to User Instructions
Back to Model Structure

Reference	Benefit Name	Benefit Description	Investment Objective (IO) Associated with Benefit	QALY or non-QALY? (for discount rate)	Calculation of benefit	Assumptions made in calculation	Data sources used to calculate benefit
Cash Releasing Benefits							
CRB1				Non-QALY			
CRB2				Non-QALY			
CRB3				Non-QALY			
CRB4				Non-QALY			
CRB5				Non-QALY			
CRB6				Non-QALY			
CRB7				Non-QALY			
CRB8				Non-QALY			
CRB9				Non-QALY			
CRB10				Non-QALY			
CRB11				Non-QALY			
CRB12				Non-QALY			
CRB13				Non-QALY			
CRB14				Non-QALY			
CRB15				Non-QALY			
Non-cash Releasing Benefits							
NCRB1				Non-QALY			
NCRB2				Non-QALY			
NCRB3				Non-QALY			
NCRB4				Non-QALY			
NCRB5				Non-QALY			
NCRB6				Non-QALY			
NCRB7				Non-QALY			
NCRB8				Non-QALY			
NCRB9				Non-QALY			
NCRB10				Non-QALY			
NCRB11				Non-QALY			
NCRB12				Non-QALY			
NCRB13				Non-QALY			
NCRB14				Non-QALY			
NCRB15				Non-QALY			
Societal Benefits							
SB1				Non-QALY			
SB2				Non-QALY			
SB3				Non-QALY			
SB4				Non-QALY			
SB5				Non-QALY			
SB6				Non-QALY			
SB7				Non-QALY			
SB8				Non-QALY			
SB9				Non-QALY			
SB10				Non-QALY			
SB11				Non-QALY			
SB12				Non-QALY			
SB13				Non-QALY			
SB14				Non-QALY			
SB15				Non-QALY			
Unmonetisable Benefits							
UB1				N/A			
UB2				N/A			
UB3				N/A			
UB4				N/A			
UB5				N/A			
UB6				N/A			
UB7				N/A			
UB8				N/A			
UB9				N/A			
UB10				N/A			
UB11				N/A			
UB12				N/A			
UB13				N/A			
UB14				N/A			
UB15				N/A			

CASH RELEASING BENEFITS - £'000

Back to User Instructions

Back to Model Structure

Option 0 - Business as Usual

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	

CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	

CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 4 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 5 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	

CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 6 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
CRB1		Non-QALY	£0.00	£0.00	£0.00	
CRB2		Non-QALY	£0.00	£0.00	£0.00	
CRB3		Non-QALY	£0.00	£0.00	£0.00	
CRB4		Non-QALY	£0.00	£0.00	£0.00	
CRB5		Non-QALY	£0.00	£0.00	£0.00	
CRB6		Non-QALY	£0.00	£0.00	£0.00	
CRB7		Non-QALY	£0.00	£0.00	£0.00	
CRB8		Non-QALY	£0.00	£0.00	£0.00	
CRB9		Non-QALY	£0.00	£0.00	£0.00	
CRB10		Non-QALY	£0.00	£0.00	£0.00	
CRB11		Non-QALY	£0.00	£0.00	£0.00	
CRB12		Non-QALY	£0.00	£0.00	£0.00	
CRB13		Non-QALY	£0.00	£0.00	£0.00	
CRB14		Non-QALY	£0.00	£0.00	£0.00	
CRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

	Yr 0
Non-QALY Discount Factors @ 3.5% / 3.0%	1.0
QALY Discount Factors @ 1.5% / 1.286%	1.0

DISCOUNTED BENEFITS ANALYSIS

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Discounted Total		Yr 0 2021/22
Option 0 - Business as Usual						
CRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners						
CRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB3			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
CRB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs						
CRB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00

CRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs

CRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB12			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
CRB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 4 -

CRB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
CRB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 5 -						
CRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 6 -						
CRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00

CRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
CRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76
0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89

Yr 1 2022/23	Yr 2 2023/24	Yr 3 2024/25	Yr 4 2025/26	Yr 5 2026/27	Yr 6 2027/28	Yr 7 2028/29	Yr 8 2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-

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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58
0.87	0.86	0.85	0.84	0.82	0.81	0.80	0.79

Yr 9 2030/31	Yr 10 2031/32	Yr 11 2032/33	Yr 12 2033/34	Yr 13 2034/35	Yr 14 2035/36	Yr 15 2036/37	Yr 16 2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44
0.78	0.76	0.75	0.74	0.73	0.72	0.71	0.70

Yr 17 2038/39	Yr 18 2039/40	Yr 19 2040/41	Yr 20 2041/42	Yr 21 2042/43	Yr 22 2043/44	Yr 23 2044/45	Yr 24 2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-

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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-

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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
0.42	0.41	0.40	0.38	0.37	0.36	0.35
0.69	0.68	0.67	0.66	0.65	0.64	0.63

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27
0.62	0.62	0.61	0.60	0.59	0.59	0.58	0.57

Yr 32	Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
0.27	0.26	0.25	0.24	0.24	0.23	0.22	0.22
0.56	0.56	0.55	0.54	0.53	0.53	0.52	0.51

Yr 40	Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17
0.51	0.50	0.50	0.49	0.48	0.48	0.47	0.46

Yr 48	Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.13
0.46	0.45	0.45	0.44	0.44	0.43	0.43	0.42

Yr 56	Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-

£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
0.13	0.13	0.12	0.12	0.12	0.11
0.41	0.41	0.40	0.40	0.39	0.39

Yr 64	Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

NON-CASH RELEASING BENEFITS - £'000

Back to User Instructions

Back to Model Structure

Option 0 - Business as Usual

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	

NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	

NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 4 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 5 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	

NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 6 -

Reference	Benefit Name	QALY or Non-QALY? (for discount rate)	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
NCRB1		Non-QALY	£0.00	£0.00	£0.00	
NCRB2		Non-QALY	£0.00	£0.00	£0.00	
NCRB3		Non-QALY	£0.00	£0.00	£0.00	
NCRB4		Non-QALY	£0.00	£0.00	£0.00	
NCRB5		Non-QALY	£0.00	£0.00	£0.00	
NCRB6		Non-QALY	£0.00	£0.00	£0.00	
NCRB7		Non-QALY	£0.00	£0.00	£0.00	
NCRB8		Non-QALY	£0.00	£0.00	£0.00	
NCRB9		Non-QALY	£0.00	£0.00	£0.00	
NCRB10		Non-QALY	£0.00	£0.00	£0.00	
NCRB11		Non-QALY	£0.00	£0.00	£0.00	
NCRB12		Non-QALY	£0.00	£0.00	£0.00	
NCRB13		Non-QALY	£0.00	£0.00	£0.00	
NCRB14		Non-QALY	£0.00	£0.00	£0.00	
NCRB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

	Yr 0
Non-QALY Discount Factors @ 3.5% / 3.0%	1.0
QALY Discount Factors @ 1.5% / 1.286%	1.0

DISCOUNTED BENEFITS ANALYSIS

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Discounted Benefits	Total	Yr 0 2021/22
Option 0 - Business as Usual						
NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**
Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners						
NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00

NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs

NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB7			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
NCRB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs

NCRB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00

NCRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Option 4 -

NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Option 5 -						
NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Option 6 -						
NCRB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
NCRB4			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
NCRB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
NCRB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0**	**£0.00**

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76
0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-

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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58
0.87	0.86	0.85	0.84	0.82	0.81	0.80	0.79

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44
0.78	0.76	0.75	0.74	0.73	0.72	0.71	0.70

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
0.42	0.41	0.40	0.38	0.37	0.36	0.35	0.34
0.69	0.68	0.67	0.66	0.65	0.64	0.63	0.62

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00		
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Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.27
0.62	0.61	0.60	0.59	0.59	0.58	0.57	0.56

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21
0.56	0.55	0.54	0.53	0.53	0.52	0.51	0.51

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
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Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17
0.50	0.50	0.49	0.48	0.48	0.47	0.46	0.46

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13
0.45	0.45	0.44	0.44	0.43	0.43	0.42	0.41

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
0.13	0.12	0.12	0.12	0.11
0.41	0.40	0.40	0.39	0.39

Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**

SOCIETAL BENEFITS - £'000

Back to User Instructions

Back to Model Structure

Option 0 - Business as Usual

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	

SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	

SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 4 -

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 5 -

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	

SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
			Undiscounted Total			**£0.00**
			Discounted Total			**£0.00**

Option 6 -

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Undiscounted Total	Discounted Total	Yr 0 2021/22
SB1		Non-QALY	£0.00	£0.00	£0.00	
SB2		Non-QALY	£0.00	£0.00	£0.00	
SB3		Non-QALY	£0.00	£0.00	£0.00	
SB4		Non-QALY	£0.00	£0.00	£0.00	
SB5		Non-QALY	£0.00	£0.00	£0.00	
SB6		Non-QALY	£0.00	£0.00	£0.00	
SB7		Non-QALY	£0.00	£0.00	£0.00	
SB8		Non-QALY	£0.00	£0.00	£0.00	
SB9		Non-QALY	£0.00	£0.00	£0.00	
SB10		Non-QALY	£0.00	£0.00	£0.00	
SB11		Non-QALY	£0.00	£0.00	£0.00	
SB12		Non-QALY	£0.00	£0.00	£0.00	
SB13		Non-QALY	£0.00	£0.00	£0.00	
SB14		Non-QALY	£0.00	£0.00	£0.00	
SB15		Non-QALY	£0.00	£0.00	£0.00	
		Total	**£0.00**	**£0.00**	**£0.00**	
				Undiscounted Total		**£0.00**
				Discounted Total		**£0.00**

	Yr 0
Non-QALY Discount Factors @ 3.5% / 3.0%	1.0
QALY Discount Factors @ 1.5% / 1.286%	1.0

DISCOUNTED BENEFITS ANALYSIS

Reference	Benefit Name	Discount Rate	Equivalent Annual Benefit (EAB)	Discounted Benefits	Total (undiscounted)	Yr 0
						2021/22
Option 0 - Business as Usual						
SB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 1 - 2. Do min: Replace 1 fixed + extend capacity of 2 mobile scanners

SB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 2 - 3. Provide 4 fixed scanners over 10 yrs

SB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB4			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
SB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 3 - 4. Provide 5 fixed scanners over 10 yrs						
SB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00

SB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB11		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB12		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB13		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB14		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB15		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 4 -

SB1		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB2		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB3		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB4		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB5		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB6		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB7		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB8		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB9		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB10		Non-QALY	£0.00	£0.00	Undiscounted	£0.00
					Discounted	£0.00
SB11			£0.00	£0.00	Undiscounted	£0.00

		Non-QALY			Discounted	£0.00
SB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 5 -						
SB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00

SB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Option 6 -

SB1			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB2			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB3			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB4			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB5			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB6			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB7			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB8			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB9			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB10			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB11			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB12			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB13			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB14			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
SB15			£0.00	£0.00	Undiscounted	£0.00
		Non-QALY			Discounted	£0.00
		Total	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76
0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.89

Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58
0.87	0.86	0.85	0.84	0.82	0.81	0.80	0.79

Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38
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£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44
0.78	0.76	0.75	0.74	0.73	0.72	0.71	0.70

Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24
2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-

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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
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Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
0.42	0.41	0.40	0.38	0.37	0.36	0.35	0.34
0.69	0.68	0.67	0.66	0.65	0.64	0.63	0.62

Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30	Yr 31	Yr 32
2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.27
0.62	0.61	0.60	0.59	0.59	0.58	0.57	0.56

Yr 33	Yr 34	Yr 35	Yr 36	Yr 37	Yr 38	Yr 39	Yr 40
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21
0.56	0.55	0.54	0.53	0.53	0.52	0.51	0.51

Yr 41	Yr 42	Yr 43	Yr 44	Yr 45	Yr 46	Yr 47	Yr 48
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-

£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17
0.50	0.50	0.49	0.48	0.48	0.47	0.46	0.46

Yr 49	Yr 50	Yr 51	Yr 52	Yr 53	Yr 54	Yr 55	Yr 56
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
£0.00	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**	**£0.00**

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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00

Yr 57	Yr 58	Yr 59	Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13
0.45	0.45	0.44	0.44	0.43	0.43	0.42	0.41

Yr 57	Yr 58	Yr 59	Yr 59	Yr 59	Yr 59	Yr 59	Yr 59
-	-	-	-	-	-	-	-
£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
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Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
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Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
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Yr 65	Yr 66	Yr 67	Yr 68	Yr 69
0.13	0.12	0.12	0.12	0.11
0.41	0.40	0.40	0.39	0.39

Yr 60	Yr 61	Yr 62	Yr 63	Yr 64
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UNMONETISABLE BENEFITS

Reference	Benefit Name
UB1	
UB2	
UB3	
UB4	
UB5	
UB6	
UB7	
UB8	
UB9	
UB10	
UB11	
UB12	
UB13	
UB14	
UB15	

Back to User Instructions
Back to Model Structure

Benefit Description	Applies to Option 0?

Applies to Option 1?	Applies to Option 2?	Applies to Option 3?	Applies to Option 4?	Applies to Option 5?	Applies to Option 6?

Economic and Financial Case Calculations

Organisation	WHSSC
Project Name	All Wales PET CT Programme

Version Control

Version	Comments	Owner
1.0	First iteration	Anouska Huggins

Options

CIA Model Reference	Option Name
0	1. Do nothing
1	2. Do min: 1 fixed + 2 mobile scanner
2	3. 4 fixed scanners over 10 yrs
3	4. 5 fixed scanners over 10 yrs

All Wales PET CT Programme
Economic appraisal
Summary Tables

Capital costs analysis - Summary

Initial capital costs (£'000)	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Construction	0	45	4,593
Fees	0	0	735
Non works	0	15	80
Equipment costs	0	4,673	13,553
Quantified risk	0	473	1,896
Total capital costs excluding VAT	**0**	**5,206**	**20,857**
VAT	0	1,041	4,024
Total capital costs per PB1 forms	**0**	**6,248**	**24,881**

Capital costs analysis - By Project

Initial capital costs (£'000)	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Project 1 - Replace Cardiff equipment	0	6,248	6,248
Project 2 - Fixed scanner North Wales	0	0	6,573
Project 3 - Fixed scanner Swansea	0	0	5,486
Project 4 - 4th fixed scanner	0	0	6,573
Project 5 - 5th fixed scanner	0	0	0
Total capital costs including VAT	**0**	**6,248**	**24,881**

Capital costs analysis - Phasing

Initial capital costs (£'000)	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
2021/22		4,472	4,675
2022/23		1,775	2,026
2023/24		0	11,693
2024/25		0	152
2025/26		0	6,335
2026/27		0	0
2027/28		0	0
2028/29		0	0
Total capital costs including VAT	**0**	**6,248**	**24,881**
Check	*0*	*0*	*0*

Lifecycle costs analysis

Lifecycle costs (£'000)	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Lifecycle for refurbished areas	0	0	173
Lifecycle for new build areas	0	0	442
Equipment replacement	0	14,019	31,779
Allowances	0	2,804	6,479
Total lifecycle (30 year period)	**0**	**16,823**	**38,873**
Equivalent annual cost	**0**	**543**	**1,254**

All Wales PET CT Programme
Economic appraisal
Summary Tables

Transitional costs

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Programme team	0	0	502
Dual running costs	0	543	543
Total transitional costs	**0**	**543**	**1,045**

Transitional costs - Phasing

Initial capital costs (£'000)	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
2021/22	0	543	643
2022/23	0	0	100
2023/24	0	0	100
2024/25	0	0	100
2025/26	0	0	100
2026/27	0	0	0
2027/28	0	0	0
2028/29	0	0	0
Total capital costs including VAT	**0**	**543**	**1,045**
Check	*0*	*0*	*0*

Revenue costs

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Total costs (30 years)	759,436	759,374	588,176
Total revenue costs (30-year appraisal period)	**759,436**	**759,374**	**588,176**
Equivalent annual cost	**25,315**	**25,312**	**19,606**

All Wales PET CT Programme
Economic appraisal
Summary Tables

NPSV 30 year appraisal period

Undiscounted costs	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Initial capital costs	0	5,206	20,857
Lifecycle capital costs	0	16,823	38,873
Total capital costs	**0**	**22,029**	**59,729**
Transitional revenue costs	0	543	1,045
Recurring revenue costs	759,436	759,374	588,176
Total revenue costs	**759,436**	**759,917**	**589,221**
Total Net Present Cost (undiscounted)	**759,436**	**781,946**	**648,950**

Discounted costs	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Initial capital costs	0	5,156	19,453
Lifecycle capital costs	0	8,791	21,005
Total capital costs	**0**	**13,948**	**40,458**
Transitional revenue costs	0	543	1,012
Recurring revenue costs	428,611	428,548	333,182
Total revenue costs	**428,611**	**429,091**	**334,194**
Total Net Present Cost (discounted)	**428,611**	**443,039**	**374,653**
Rank	**3**	**4**	**2**

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Incremental costs - total	#REF!	#REF!	#REF!
Incremental benefits - total	#REF!	#REF!	#REF!
Incremental Net Present Social Value	**0**	**#REF!**	**#REF!**
Benefit-cost ratio	**0.00**	**#REF!**	**#REF!**
Rank	**#REF!**	**#REF!**	**#REF!**

Sensitivity analysis

Switching analysis

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Incremental costs - total		#REF!	#REF!
Incremental benefits - total		#REF!	#REF!
Risk-adj Net Present Social Value (NPSV)		**#REF!**	**#REF!**
Adj required	**#REF!**	**#REF!**	**#REF!**

Capital costs - Overall programme

	Net (£'000)	VAT (£'000)	Total (£'000)
Construction	4,593	919	5,511
Fees	735	0	735
Non works	80	16	96
Equipment costs	13,553	2,711	16,264
Quantified risk	1,896	379	2,275
Total capital costs	**20,857**	**4,024**	**24,881**

All Wales PET CT Programme
Economic appraisal
GEM Input

1. Do nothing

GEM price base	2020-21

	Price	Deflator	TOTAL	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19	Mar-42 Year 20	Mar-43 Year 21	Mar-44 Year 22	Mar-45 Year 23	Mar-46 Year 24	Mar-47 Year 25	Mar-48 Year 26	Mar-49 Year 27	Mar-50 Year 28	Mar-51 Year 29	Mar-52 Year 30	Mar-53 Year 31
Initial Capital Costs																																			
Input cost price base (select drop down)																																			
Capital costs	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0																					
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Optimism bias	2020-21	107.062	0																																
Initial capital costs at original price base			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			#DIV/0!																																
Rebased for GEM (select drop down)																																			
Capital costs	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																																			
Input cost price base (select drop down)																																			
Lifecyle costs	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Lifecycle costs at original price base			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																																			
Lifecyle costs	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs																																			
Input cost price base (select drop down)																																			
Programme team	2020-21	107.062	0	0	0	0	0	0	0	0	0	0																							
Dual running costs	2020-21	107.062	0	0	0	0	0	0	0	0	0																								
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Transitional costs at original price base			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																																			
Programme team	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																																			
Input cost price base (select drop down)				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Total revenue costs	2020-21	107.062	759,436	4,869	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Revenue costs			**759,436**	**4,869**	**5,843**	**7,011**	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**0**
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			759,436	4,869	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0
Rebased for GEM (select drop down)																																			
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	2020-21	107.062	759,436	4,869	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs			**759,436**	**4,869**	**5,843**	**7,011**	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			759,436	4,869	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0

All Wales PET CT Programme
Economic appraisal
GEM Input

1. Do nothing

GEM price base

	Mar-54 Year 32	Mar-55 Year 33	Mar-56 Year 34	Mar-57 Year 35	Mar-58 Year 36	Mar-59 Year 37	Mar-60 Year 38	Mar-61 Year 39	Mar-62 Year 40	Mar-63 Year 41	Mar-64 Year 42	Mar-65 Year 43	Mar-66 Year 44	Mar-67 Year 45	Mar-68 Year 46	Mar-69 Year 47	Mar-70 Year 48	Mar-71 Year 49	Mar-72 Year 50	Mar-73 Year 51	Mar-74 Year 52	Mar-75 Year 53	Mar-76 Year 54	Mar-77 Year 55	Mar-78 Year 56	Mar-79 Year 57	Mar-80 Year 58	Mar-81 Year 59	Mar-82 Year 60
Initial Capital Costs																													
Input cost price base (select drop down)																													
Capital costs																													
Optimism bias																													
Initial capital costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Capital costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																													
Input cost price base (select drop down)																													
Lifecyle costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Lifecyle costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs																													
Input cost price base (select drop down)																													
Programme team																													
Dual running costs																													
Transitional costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Programme team	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																													
Input cost price base (select drop down)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total revenue costs																													
Revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

All Wales PET CT Programme
Economic appraisal
GEM Input

2. Do min: 1 fixed + 2 mobile scanner

GEM price base	2020-21

	Price	Deflator	TOTAL	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19	Mar-42 Year 20	Mar-43 Year 21
Initial Capital Costs																									
Input cost price base (select drop down)																									
Capital costs	**2020-21**	107.062	5,206	3,727	1,480	0	0	0	0	0	0	0	0	0											
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Optimism bias	**2020-21**	107.062	0																						
Initial capital costs at original price base			5,206	3,727	1,480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0.00%																						
Rebased for GEM (select drop down)																									
Capital costs	**2020-21**	107.062	5,206	3,727	1,480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM			5,206	3,727	1,480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																									
Input cost price base (select drop down)																									
Lifecyle costs	**2020-21**	107.062	16,823	0	0	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	5,608	0
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Lifecycle costs at original price base			16,823	0	0	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	5,608	0
Rebased for GEM (select drop down)																									
Lifecyle costs	**2020-21**	107.062	16,823	0	0	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	5,608	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM			16,823	0	0	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	5,608	0
Transitional costs																									
Input cost price base (select drop down)																									
Programme team	**2020-21**	107.062	0	0	0	0	0	0	0	0	0														
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0														
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Transitional costs at original price base			543	543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																									
Programme team	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM			543	543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																									
Input cost price base (select drop down)				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Total revenue costs	**2020-21**	107.062	759,374	4,806	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Revenue costs			**759,374**	**4,806**	**5,843**	**7,011**	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

All Wales PET CT Programme
Economic appraisal
GEM Input

2. Do min: 1 fixed + 2 mobile scanner

GEM price base	2020-21

Initial Capital Costs

	Price	Deflator	TOTAL	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19	Mar-42 Year 20	Mar-43 Year 21
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			759,374	4,806	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145
Rebased for GEM (select drop down)																									
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	2020-21	107.062	759,374	4,806	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs			**759,374**	**4,806**	**5,843**	**7,011**	**8,412**	**10,096**	**12,115**	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			759,374	4,806	5,843	7,011	8,412	10,096	12,115	14,537	17,445	20,935	25,122	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145

All Wales PET CT Programme
Economic appraisal
GEM Input

2. Do min: 1 fixed + 2 mobile scanner

GEM price base

	Mar-44	Mar-45	Mar-46	Mar-47	Mar-48	Mar-49	Mar-50	Mar-51	Mar-52	Mar-53	Mar-54	Mar-55	Mar-56	Mar-57	Mar-58	Mar-59	Mar-60	Mar-61	Mar-62
	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40

Initial Capital Costs

Input cost price base (select drop down)																			
Capital costs																			
Optimism bias																			
Initial capital costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Capital costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lifecycle capital costs

Input cost price base (select drop down)																			
Lifecyle costs	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	0
Lifecycle costs at original price base	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Lifecyle costs	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM	0	0	0	0	0	0	0	0	5,608	0	0	0	0	0	0	0	0	0	0

Transitional costs

Input cost price base (select drop down)																			
Programme team																			
Dual running costs																			
Transitional costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Programme team	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Revenue costs

Input cost price base (select drop down)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total revenue costs	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145										
Revenue costs	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Direct benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

All Wales PET CT Programme

Economic appraisal

GEM Input

2. Do min: 1 fixed + 2 mobile scanner

GEM price base

	Mar-44	Mar-45	Mar-46	Mar-47	Mar-48	Mar-49	Mar-50	Mar-51	Mar-52	Mar-53	Mar-54	Mar-55	Mar-56	Mar-57	Mar-58	Mar-59	Mar-60	Mar-61	Mar-62
	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Initial Capital Costs																			
Indirect benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**30,145**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	30,145	0	0	0	0	0	0	0	0	0	0

All Wales PET CT Programme
Economic appraisal
GEM Input

3. 4 fixed scanners over 10 yrs

GEM price base	2020-21

	Price	Deflator	TOTAL	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19	Mar-42 Year 20	Mar-43 Year 21	Mar-44 Year 22	Mar-45 Year 23	Mar-46 Year 24	Mar-47 Year 25	Mar-48 Year 26	Mar-49 Year 27	Mar-50 Year 28	Mar-51 Year 29	Mar-52 Year 30	Mar-53 Year 31
Initial Capital Costs																																			
Input cost price base (select drop down)																																			
Capital costs	**2020-21**	107.062	20,857	3,919	1,719	9,780	145	5,293	0	0	0	0	0	0																					
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Optimism bias	**2020-21**	107.062	0																																
Initial capital costs at original price base			20,857	3,919	1,719	9,780	145	5,293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0.00%																																
Rebased for GEM (select drop down)																																			
Capital costs	**2020-21**	107.062	20,857	3,919	1,719	9,780	145	5,293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM			20,857	3,919	1,719	9,780	145	5,293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																																			
Input cost price base (select drop down)																																			
Lifecyle costs	**2020-21**	107.062	38,873	0	0	0	18	18	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	0
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Lifecycle costs at original price base			38,873	0	0	0	18	18	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	0
Rebased for GEM (select drop down)																																			
Lifecyle costs	**2020-21**	107.062	38,873	0	0	0	18	18	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM			38,873	0	0	0	18	18	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	27	7,131	27	3,579	27	27	27	27	27	5,635	0
Transitional costs																																			
Input cost price base (select drop down)																																			
Programme team	**2020-21**	107.062	502	100	100	100	100	100	0	0	0																								
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0																								
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Transitional costs at original price base			1,045	643	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																																			
Programme team	**2020-21**	107.062	502	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM			1,045	643	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																																			
Input cost price base (select drop down)				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Total revenue costs	**2020-21**	107.062	588,176	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Revenue costs			**588,176**	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**0**
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0																																
	2020-21	107.062	0																																
	2020-21	107.062	0																																
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			588,176	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	0
Rebased for GEM (select drop down)																																			
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	**2020-21**	107.062	588,176	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs			**588,176**	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**23,303**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			588,176	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	23,303	0

All Wales PET CT Programme
Economic appraisal
GEM Input

3. 4 fixed scanners over 10 yrs

GEM price base

	Mar-54 Year 32	Mar-55 Year 33	Mar-56 Year 34	Mar-57 Year 35	Mar-58 Year 36	Mar-59 Year 37	Mar-60 Year 38	Mar-61 Year 39	Mar-62 Year 40	Mar-63 Year 41	Mar-64 Year 42	Mar-65 Year 43	Mar-66 Year 44	Mar-67 Year 45	Mar-68 Year 46	Mar-69 Year 47	Mar-70 Year 48	Mar-71 Year 49	Mar-72 Year 50	Mar-73 Year 51	Mar-74 Year 52	Mar-75 Year 53	Mar-76 Year 54	Mar-77 Year 55	Mar-78 Year 56	Mar-79 Year 57	Mar-80 Year 58	Mar-81 Year 59	Mar-82 Year 60
Initial Capital Costs																													
Input cost price base (select drop down)																													
Capital costs																													
Optimism bias																													
Initial capital costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Capital costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																													
Input cost price base (select drop down)																													
Lifecyle costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Lifecyle costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs																													
Input cost price base (select drop down)																													
Programme team																													
Dual running costs																													
Transitional costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
Programme team	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																													
Input cost price base (select drop down)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total revenue costs																													
Revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																													
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

All Wales PET CT Programme
Economic appraisal
GEM Input

4. 5 fixed scanners over 10 yrs

GEM price base	2020-21

	Price	Deflator	TOTAL	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19	Mar-42 Year 20	Mar-43 Year 21
Initial Capital Costs																									
Input cost price base (select drop down)																									
Capital costs	**2020-21**	107.062	26,387	3,930	1,730	9,780	145	5,282	92	145	5,282	0	0	0											
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Optimism bias	**2020-21**	107.062	0																						
Initial capital costs at original price base			26,387	3,930	1,730	9,780	145	5,282	92	145	5,282	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0.00%																						
Rebased for GEM (select drop down)																									
Capital costs	**2020-21**	107.062	26,387	3,930	1,730	9,780	145	5,282	92	145	5,282	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	**2020-21**	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM			26,387	3,930	1,730	9,780	145	5,282	92	145	5,282	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle capital costs																									
Input cost price base (select drop down)																									
Lifecycle costs	**2020-21**	107.062	46,195	0	0	0	18	18	27	27	36	36	36	5,644	36	7,140	36	3,588	36	36	3,588	36	36	5,644	36
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Lifecycle costs at original price base			46,195	0	0	0	18	18	27	27	36	36	36	5,644	36	7,140	36	3,588	36	36	3,588	36	36	5,644	36
Rebased for GEM (select drop down)																									
Lifecycle costs	**2020-21**	107.062	46,195	0	0	0	18	18	27	27	36	36	36	5,644	36	7,140	36	3,588	36	36	3,588	36	36	5,644	36
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM			46,195	0	0	0	18	18	27	27	36	36	36	5,644	36	7,140	36	3,588	36	36	3,588	36	36	5,644	36
Transitional costs																									
Input cost price base (select drop down)																									
Programme team	**2020-21**	107.062	804	100	100	100	100	100	100	100	100														
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0														
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Transitional costs at original price base			1,347	643	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rebased for GEM (select drop down)																									
Programme team	**2020-21**	107.062	804	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	**2020-21**	107.062	543	543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM			1,347	643	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs																									
Input cost price base (select drop down)				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Total revenue costs	**2020-21**	107.062	545,115	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,688	16,305	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Revenue costs			**545,115**	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,688**	**16,305**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

All Wales PET CT Programme
Economic appraisal
GEM Input

4. 5 fixed scanners over 10 yrs

GEM price base	2020-21

	Price	Deflator	TOTAL	Mar-22	Mar-23	Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32	Mar-33	Mar-34	Mar-35	Mar-36	Mar-37	Mar-38	Mar-39	Mar-40	Mar-41	Mar-42	Mar-43
				Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21
Initial Capital Costs																									
	2020-21	107.062	0																						
	2020-21	107.062	0																						
	2020-21	107.062	0																						
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			545,115	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,688	16,305	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329
Rebased for GEM (select drop down)																									
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	**2020-21**	107.062	545,115	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,688	16,305	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs			**545,115**	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**	**8,714**	**11,251**	**12,185**	**14,688**	**16,305**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2020-21	107.062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base			545,115	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,688	16,305	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329

All Wales PET CT Programme
Economic appraisal
GEM Input

4. 5 fixed scanners over 10 yrs

GEM price base

	Mar-44	Mar-45	Mar-46	Mar-47	Mar-48	Mar-49	Mar-50	Mar-51	Mar-52	Mar-53	Mar-54	Mar-55	Mar-56	Mar-57	Mar-58	Mar-59	Mar-60	Mar-61	Mar-62
	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40

Initial Capital Costs

Input cost price base (select drop down)																			
Capital costs																			
Optimism bias																			
Initial capital costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Capital costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Optimism bias	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial capital costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lifecycle capital costs

Input cost price base (select drop down)																			
Lifecyle costs	7,140	36	3,588	36	36	3,588	36	36	5,644	0	0	0	0	0	0	0	0	0	0
Lifecycle costs at original price base	7,140	36	3,588	36	36	3,588	36	36	5,644	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Lifecyle costs	7,140	36	3,588	36	36	3,588	36	36	5,644	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lifecycle costs rebased for the GEM	7,140	36	3,588	36	36	3,588	36	36	5,644	0	0	0	0	0	0	0	0	0	0

Transitional costs

Input cost price base (select drop down)																			
Programme team																			
Dual running costs																			
Transitional costs at original price base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)																			
Programme team	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dual running costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transitional costs rebased for the GEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Revenue costs

Input cost price base (select drop down)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total revenue costs	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329										
Revenue costs	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Direct benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

All Wales PET CT Programme

Economic appraisal

GEM Input

4. 5 fixed scanners over 10 yrs

GEM price base

Initial Capital Costs

	Mar-44 Year 22	Mar-45 Year 23	Mar-46 Year 24	Mar-47 Year 25	Mar-48 Year 26	Mar-49 Year 27	Mar-50 Year 28	Mar-51 Year 29	Mar-52 Year 30	Mar-53 Year 31	Mar-54 Year 32	Mar-55 Year 33	Mar-56 Year 34	Mar-57 Year 35	Mar-58 Year 36	Mar-59 Year 37	Mar-60 Year 38	Mar-61 Year 39	Mar-62 Year 40
Indirect benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	0	0	0	0	0	0	0	0	0	0

Rebased for GEM (select drop down)

	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue costs	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue costs	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**21,329**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direct benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indirect benefits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue costs at original price base	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	21,329	0	0	0	0	0	0	0	0	0	0

All Wales PET CT Programme
Economic appraisal
Capital costs - PB1 forms

Total programme	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner	3. 4 fixed scanners over 10 yrs
Departmental Costs (OB2)		45	3,402
On costs (OB3)		0	1,191
Sub-total	**0**	**45**	**4,593**
Provisional inflation adjustment		0	0
Works costs	**0**	**45**	**4,593**
Fees (OB4)		0	735
Non works costs (OB4)		15	80
Equipment costs (OB2)		4,673	13,553
Quantified risk contingency		473	1,896
Total net capital costs per OB1 forms	**0**	**5,206**	**20,857**
Optimism bias			
Total net capital costs per OB1 forms	**0**	**5,206**	**20,857**
Inflation adjustment			
Total net capital costs per OB1 forms	**0**	**5,206**	**20,857**
VAT		1,041	4,024
Recoverable VAT			
Total gross capital costs per OB1 forms	**0**	**6,248**	**24,881**

Total excl VAT

Year 0 - 2021/22		3,727	3,919
Year 1 - 2022/23		1,480	1,719
Year 2 - 2023/24		0	9,780
Year 3 - 2024/25		0	145
Year 4 - 2025/26		0	5,293
Year 5 - 2026/27		0	0
Year 6 - 2027/28		0	0
Year 7 - 2028/29		0	0
Year 8 - 2029/30		0	0
Year 9 - 2030/31		0	0
Year 10 - 2031/32			
Total	**0**	**5,206**	**20,857**
Check	***0***	***0***	***0***

All Wales PET CT Programme
Economic appraisal
Lifecycle

	GIFA m2	Cost per m2	From	To	Cost over 60 years	Mar-22 Year 0	Mar-23 Year 1	Mar-24 Year 2	Mar-25 Year 3	Mar-26 Year 4	Mar-27 Year 5	Mar-28 Year 6	Mar-29 Year 7	Mar-30 Year 8	Mar-31 Year 9	Mar-32 Year 10	Mar-33 Year 11	Mar-34 Year 12	Mar-35 Year 13	Mar-36 Year 14	Mar-37 Year 15	Mar-38 Year 16	Mar-39 Year 17	Mar-40 Year 18	Mar-41 Year 19
Programme																								
Baseline m2																								
New build areas m2																								
Refurbished areas m2																								
Baseline		£35.02			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas		£29.18			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refurbished areas		£35.02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment and IT					-																			
Allowance for management and fees		10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allowance for contingency and optimism bias		10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Do nothing					**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Programme																								
Baseline m2																								
New build areas m2																								
Refurbished areas m2																								
Baseline		£35.02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas		£29.18			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refurbished areas		£35.02			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment and IT					14,019	-	-	-	-	-	-	-	-	-	-	4,673	-	-	-	-	-	-	-	-
Allowance for management and fees		10%			1,402	-	-	-	-	-	-	-	-	-	-	467	-	-	-	-	-	-	-	-
Allowance for contingency and optimism bias		10%			1,402	-	-	-	-	-	-	-	-	-	-	467	-	-	-	-	-	-	-	-
2. Do min: 1 fixed + 2 mobile scanner					**16,823**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5,608**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Programme																								
Baseline m2																								
New build areas m2									300	300	560	560	560	560	560	560	560	560	560	560	560	560	560	560
Refurbished areas m2									176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
Baseline		£35.02			-							-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas		£29.18			442	-	-	-	9	9	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Refurbished areas		£35.02			173	-	-	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Equipment and IT					31,779	-	-	-	-	-	-	-	-	-	-	4,673	-	5,920	-	2,960	-	-	-	-
Allowance for management and fees		10%			3,239	-	-	-	1	1	2	2	2	2	2	470	2	594	2	298	2	2	2	2
Allowance for contingency and optimism bias		10%			3,239	-	-	-	1	1	2	2	2	2	2	470	2	594	2	298	2	2	2	2
3. 4 fixed scanners over 10 yrs					**38,873**	**-**	**-**	**-**	**18**	**18**	**27**	**27**	**27**	**27**	**27**	**5,635**	**27**	**7,131**	**27**	**3,579**	**27**	**27**	**27**	**27**

All Wales PET CT Programme
Economic appraisal
Lifecycle

	Mar-42 Year 20	Mar-43 Year 21	Mar-44 Year 22	Mar-45 Year 23	Mar-46 Year 24	Mar-47 Year 25	Mar-48 Year 26	Mar-49 Year 27	Mar-50 Year 28	Mar-51 Year 29	Mar-52 Year 30	Mar-53 Year 31	Mar-54 Year 32	Mar-55 Year 33	Mar-56 Year 34	Mar-57 Year 35	Mar-58 Year 36	Mar-59 Year 37	Mar-60 Year 38	Mar-61 Year 39	Mar-62 Year 40
Programme																					
Baseline m2																					
New build areas m2																					
Refurbished areas m2																					
Baseline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refurbished areas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment and IT																					
Allowance for management and fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allowance for contingency and optimism bias	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Do nothing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Programme																					
Baseline m2																					
New build areas m2																					
Refurbished areas m2																					
Baseline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refurbished areas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment and IT	4,673	-	-	-	-	-	-	-	-	-	4,673										
Allowance for management and fees	467	-	-	-	-	-	-	-	-	-	467	-	-	-	-	-	-	-	-	-	-
Allowance for contingency and optimism bias	467	-	-	-	-	-	-	-	-	-	467	-	-	-	-	-	-	-	-	-	-
2. Do min: 1 fixed + 2 mobile scanner	**5,608**	-	-	-	-	-	-	-	-	-	**5,608**	-	-	-	-	-	-	-	-	-	-
Programme																					
Baseline m2																					
New build areas m2	560	560	560	560	560	560	560	560	560	560	560										
Refurbished areas m2	176	176	176	176	176	176	176	176	176	176	176										
Baseline	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New build areas	16	16	16	16	16	16	16	16	16	16	16	-	-	-	-	-	-	-	-	-	-
Refurbished areas	6	6	6	6	6	6	6	6	6	6	6	-	-	-	-	-	-	-	-	-	-
Equipment and IT	4,673	-	5,920	-	2,960	-	-	-	-	-	4,673										
Allowance for management and fees	470	2	594	2	298	2	2	2	2	2	470	-	-	-	-	-	-	-	-	-	-
Allowance for contingency and optimism bias	470	2	594	2	298	2	2	2	2	2	470	-	-	-	-	-	-	-	-	-	-
3. 4 fixed scanners over 10 yrs	**5,635**	**27**	**7,131**	**27**	**3,579**	**27**	**27**	**27**	**27**	**27**	**5,635**	-	-	-	-	-	-	-	-	-	-

All Wales PET CT Programme
Economic appraisal
Non-recurring revenue costs

Programme team

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner
Programme Manager (Band 8b)		
Programme Support (Band 4)		
Total WTE	-	-
Programme Manager (Band 8b)	-	-
Programme Support (Band 4)	-	-
Total annual cost	-	-

Year 0 - 2021/22	0	0
Year 1 - 2022/23	0	0
Year 2 - 2023/24	0	0
Year 3 - 2024/25	0	0
Year 4 - 2025/26	0	0
Year 5 - 2026/27		
Year 6 - 2027/28		
Year 7 - 2028/29		
Total transitional costs - Programme Team	-	-

Dual running costs

	1. Do nothing	2. Do min: 1 fixed + 2 mobile scanner
Project 1 - Replace Cardiff equipment		12
Number of weeks	**-**	**12**
Project 1 - Replace Cardiff equipment	-	543
Total annual cost	**-**	**543**

Note: Only applies to Cardiff as other sites will continue to use mobile units

Year 0 - 2021/22	0	543
Year 1 - 2022/23		
Year 2 - 2023/24		
Year 3 - 2024/25		
Year 4 - 2025/26		
Year 5 - 2026/27		
Year 6 - 2027/28		
Year 7 - 2028/29		
Total transitional costs - Programme Team	**-**	**543**

Total transitional costs

Year 0 - 2021/22	0	543
Year 1 - 2022/23	0	0

Year 2 - 2023/24	0	0
Year 3 - 2024/25	0	0
Year 4 - 2025/26	0	0
Year 5 - 2026/27	0	0
Year 6 - 2027/28	0	0
Year 7 - 2028/29	0	0
Total transitional costs - Programme Team	**-**	**543**

3. 4 fixed scanners over 10 yrs	4. 5 fixed scanners over 10 yrs
1.0	1.0
1.0	1.0
2.0	**2.0**
72	72
28	28
100	**100**

100	100
100	100
100	100
100	100
100	100
	100
	100
	100
502	**804**

Band
Band 3
Band 4
Band 5
Band 6
Band 7
Band 8A
Band 8B
Band 8C
Consultant

*consultants usually cost

3. 4 fixed scanners over 10 yrs	4. 5 fixed scanners over 10 yrs
12	12
12	**12**
543	543
543	**543**

Cardiff 2021/22

543	543
543	**543**

643	643
100	100

100	100
100	100
100	100
0	100
0	100
0	100
1,045	**1,347**

2019-2020 NHS Payscales

Point	£(inc. on-costs)
Mid-point	24987
Mid-point	28300
Mid-point	34007
Mid-point	42436
Mid-point	51985
Mid-point	60460
Mid-point	72171
Mid-point	85831
Top-point*	131,846

sed at top of scale

No of scans per week	No of scans per week	Cost per week
51	£895.00	£45,249

Total costs £'000	2021/22	2022/23	2023/24	2024/25	2025/26
Option 1: BAU - Outsource all activity	4,869	5,843	7,011	8,412	10,096
Option 2: Do Minimum	4,806	5,736	6,850	8,187	9,268
Option 3: 4 scanners	4,806	5,736	6,850	8,125	8,546
Option 4: 5 scanners	4,806	5,736	6,850	8,125	8,546

Do nothing

	2021/22	2022/23	2023/24	2024/25	2025/26
Capacity shortfall - Outsourced	5,207	6,249	7,498	8,997	10,798
Total activity (Number of scans)	**5,207**	**6,249**	**7,498**	**8,997**	**10,798**
Capacity shortfall - Outsourced	4,869	5,843	7,011	8,412	10,096
Total recurring revenue costs (£'00	**4,869**	**5,843**	**7,011**	**8,412**	**10,096**
Capacity shortfall - Outsourced	£935.00	£935.00	£935.00	£935.00	£935.00
Total cost per scan	£935.00	£935.00	£935.00	£935.00	£935.00

Preferred option

	2021/22	2022/23	2023/24	2024/25	2025/26
South East Wales (PETIC)	2,629	3,155	3,786	4,543	5,288
South West Wales (Fixed digital scar	1,434	1,721	2,065	2,478	2,974
North Wales (Fixed digital scanner)	1,144	1,373	1,647	1,976	2,372
4th scanner (Fixed digital scanner)	0	0	0	0	0
Capacity shortfall - Outsourced	0	0	0	0	164
Total activity (Number of scans)	**5,207**	**6,249**	**7,498**	**8,997**	**10,798**
South East Wales (PETIC)	2,396	2,843	3,379	4,023	4,023
South West Wales (Fixed digital scar	1,341	1,609	1,931	2,126	2,275
North Wales (Fixed digital scanner)	1,070	1,284	1,540	1,976	2,095
4th scanner (Fixed digital scanner)	0	0	0	0	0
Capacity shortfall - Outsourced	0	0	0	0	153
Total recurring revenue costs (£'00	**4,806**	**5,736**	**6,850**	**8,125**	**8,546**
South East Wales (PETIC)	£911.34	£901.11	£892.59	£885.49	£760.74
South West Wales (Fixed digital scar	£935.00	£935.00	£935.00	£858.13	£765.11
North Wales (Fixed digital scanner)	£935.00	£935.00	£935.00	£999.82	£883.05
4th scanner (Fixed digital scanner)					
Capacity shortfall - Outsourced					£935.00
Total cost per scan	£923.05	£917.89	£913.59	£903.07	£791.46

	2021/22	2022/23	2023/24	2024/25	2025/26
Baseline costs	4,542	4,542	4,542	4,542	4,542

Recurring revenue costs - Do nothing	4,869	5,843	7,011	8,412	10,096
Transitional costs - Do nothing					
Total revenue costs - Do nothing	4,869	5,843	7,011	8,412	10,096
Impact on revenue costs - Do nothing	327	1,301	2,469	3,870	5,554

Recurring revenue costs - Preferred	4,806	5,736	6,850	8,125	8,546
Transitional costs - Preferred	643	100	100	100	100
Total revenue costs - Preferred	5,450	5,836	6,951	8,225	8,647
Impact on revenue costs - Preferred v	908	1,294	2,409	3,683	4,105

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total	Benefit vs BAU
12,115	14,537	17,445	20,935	25,122	30,145	156,529	0
11,287	13,709	16,617	20,107	24,294	29,317	150,179	-6,350
8,714	11,251	12,185	14,327	18,279	23,303	122,122	-34,407
8,714	11,251	12,185	14,688	16,305	21,329	118,536	-37,993

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
12,957	15,548	18,658	22,390	26,868	32,241	167,411
12,957	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**	**167,411**
12,115	14,537	17,445	20,935	25,122	30,145	156,529
12,115	**14,537**	**17,445**	**20,935**	**25,122**	**30,145**	**156,529**
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00
£935.00	£935.00	£935.00	£935.00	£935.00	£935.00	£935.00

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
5,288	5,288	5,288	5,288	5,288	5,288	51,129
3,569	4,282	5,139	5,288	5,288	5,288	39,526
2,846	3,415	4,098	4,918	5,288	5,288	34,365
1,254	2,563	4,133	5,288	5,288	5,288	23,814
0	0	0	1,608	5,716	11,089	18,577
12,957	**15,548**	**18,658**	**22,390**	**26,868**	**32,241**	**167,411**
4,023	4,023	4,023	4,023	4,023	4,023	40,801
2,454	2,668	2,926	2,971	2,971	2,971	26,243
2,237	2,408	2,613	2,859	2,971	2,971	24,022
0	2,152	2,624	2,971	2,971	2,971	13,687
0	0	0	1,503	5,344	10,368	17,369
8,714	**11,251**	**12,185**	**14,327**	**18,279**	**23,303**	**122,122**
£760.74	£760.74	£760.74	£760.74	£760.74	£760.74	£797.99
£687.64	£623.16	£569.33	£561.75	£561.75	£561.75	£663.93
£786.01	£705.10	£637.65	£581.42	£561.75	£561.75	£699.03
£0.00	£839.63	£634.79	£561.75	£561.75	£561.75	£574.76
			£935.00	£935.00	£935.00	£935.00
£672.53	£723.63	£653.09	£639.88	£680.32	£722.77	£729.47

2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	10-year total
4,542	4,542	4,542	4,542	4,542	4,542	49,962

12,115	14,537	17,445	20,935	25,122	30,145	156,529
						0
12,115	14,537	17,445	20,935	25,122	30,145	156,529
7,573	9,995	12,903	16,393	20,580	25,603	106,567

8,714	11,251	12,185	14,327	18,279	23,303	122,122
0	0	0	0	0	0	1,045
8,714	11,251	12,185	14,327	18,279	23,303	123,167
4,172	6,709	7,643	9,785	13,737	18,761	73,205

Project Title	All Wales PET CT Programme
Option No	2
Option Title	Do Minimum (replacement only at Cardiff)

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	***
Equipment cost level	:	***
Location factor	:	0.97
Proposed start on site	:	Apr-22
Proposed completion date	:	Mar-26

Capital Cost Summary

Ref	Cost Centre			Net £
1	Departmental Cost (PBC2)			45,000
2	Oncosts (PBC3)			0
3	Sub-total			45,000
4	Provisional location adjustment		100%	0
5	Works Cost			45,000
6	Fees (PBC4)	(**% of (5))		0
7	Non-works Costs (PBC4)			15,000
8	Equipment Costs (PBC2)	(**% of (1)		4,673,000
9	Planning Contingency	10.00%		473,300

10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***	5,206,300
11	LESS Recoverable VAT (PBC7)	
12	**Project Cost *(1Q2021)***	5,206,300
13	**Project Cost (PUBSEC 250)**	

Year 0 - 2021/22	3,726,800
Year 1 - 2022/23	1,479,500
Year 2 - 2023/24	
Year 3 - 2024/25	
Year 4 - 2025/26	
Year 5 - 2026/27	
Year 6 - 2027/28	
Year 7 - 2028/29	
Year 8 - 2029/30	
Year 9 - 2030/31	
	5,206,300
	0

VAT £	Gross £
9,000	54,000
0	0
9,000	54,000
0	0
9,000	54,000
0	0
3,000	18,000
934,600	5,607,600
94,660	567,960

1,041,260	6,247,560
0	0
1,041,260	6,247,560

745,360	4,472,160
295,900	1,775,400

1,041,260	6,247,560
0	0

Project Title	All Wales PET CT Programme
Option No	3
Option Title	Cardiff plus 3 fixed PET Sites (preferred)

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	***	
Equipment cost level	:	***	
Location factor	:	0.97	
Proposed start on site	:		Apr-22
Proposed completion date	:		Mar-26

Capital Cost Summary

Ref	Cost Centre			Net £
1	Departmental Cost (PBC2)			3,402,000
2	Oncosts (PBC3)	35%		1,190,700
3	Sub-total			4,592,700
4	Provisional location adjustment		100%	0
5	Works Cost			4,592,700
6	Fees (PBC4)	0.163275		734,832
7	Non-works Costs (PBC4)			80,000
8	Equipment Costs (PBC2)	(**% of (1)		13,553,000
9	Planning Contingency	10.00%		1,896,053

10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***	20,856,585
11	LESS Recoverable VAT (PBC7)	
12	**Project Cost *(1Q2021)***	20,856,585
13	**Project Cost (PUBSEC 250)**	

Year 0 - 2021/22	3,918,695
Year 1 - 2022/23	1,719,074
Year 2 - 2023/24	9,780,357
Year 3 - 2024/25	145,077
Year 4 - 2025/26	5,293,383
Year 5 - 2026/27	
Year 6 - 2027/28	
Year 7 - 2028/29	
Year 8 - 2029/30	
Year 9 - 2030/31	
	20,856,585
	0

Delivery	Spend		Dept
2021/22	2021/22	Cardiff	45,000
2023/24	2022/23	North Wales	1,295,000
2023/24	2022/23	Swansea	767,000
2026/27	2025/26	4th scanner	1,295,000
2028/29	2027/28	5th scanner	
		Loose equipment	
			3,402,000
			0

VAT £	Gross £
680,400	4,082,400
238,140	1,428,840
918,540	5,511,240
0	0
918,540	5,511,240
146,966	881,798
16,000	96,000
2,710,600	16,263,600
379,211	2,275,264

4,171,317	25,027,902
146,966	146,966
4,024,351	24,880,936

755,849	4,674,544
307,406	2,026,480
1,912,565	11,692,922
6,638	151,715
1,041,893	6,335,276

4,024,351	24,880,936
0	0

On costs	Fees	Non Works	Equipment	Subtotal	Contingency
		15,000	4,673,000	4,733,000	473,300
459,326	283,470	25,074	2,960,000	5,022,870	502,287
272,049	167,893	14,851	2,960,000	4,181,792	418,179
459,326	283,470	25,074	2,960,000	5,022,870	502,287
0	0	0		0	0
1,190,700	**734,832**	**80,000**	**13,553,000**	**18,960,532**	**1,896,053**
0	0	0	0	0	0

Net Total	VAT	Gross	
5,206,300	1,041,260	6,247,560	0
5,525,157	1,053,147	6,578,303	
4,599,972	876,798	5,476,769	
5,525,157	1,053,147	6,578,303	
0	0	0	
20,856,585	**4,024,351**	**24,880,936**	
0	0	0	

Project Title	All Wales PET CT Programme
Option No	4
Option Title	Cardiff plus 4 PET sites

BASIS OF ESTIMATING

Healthcare Capital Investment document Version 2

BIS PUBSEC Index Level FP/VP	:	***	
Equipment cost level	:	***	
Location factor	:	0.97	
Proposed start on site	:		Apr-22
Proposed completion date	:		Mar-26

Capital Cost Summary

Ref	Cost Centre			Net £
1	Departmental Cost (PBC2)			4,697,000
2	Oncosts (PBC3)	35%		1,643,950
3	Sub-total			6,340,950
4	Provisional location adjustment		100%	0
5	Works Cost			6,340,950
6	Fees (PBC4)	0.157801		1,014,552
7	Non-works Costs (PBC4)			120,000
8	Equipment Costs (PBC2)	(**% of (1)		16,513,000
9	Planning Contingency	10.00%		2,398,850

10	***Forecast Project Out-turn Cost (Pre VAT Recovery)***	26,387,352
11	LESS Recoverable VAT (PBC7)	
12	**Project Cost *(1Q2021)***	26,387,352
13	**Project Cost (PUBSEC 250)**	

Year 0 - 2021/22	3,929,695
Year 1 - 2022/23	1,730,074
Year 2 - 2023/24	9,780,357
Year 3 - 2024/25	145,077
Year 4 - 2025/26	5,282,383
Year 5 - 2026/27	92,308
Year 6 - 2027/28	145,077
Year 7 - 2028/29	5,282,383
Year 8 - 2029/30	
Year 9 - 2030/31	
	26,387,352
	0

Delivery	Spend		Dept
2021/22	2021/22	Cardiff	45,000
2023/24	2022/23	North Wales	1,295,000
2023/24	2022/23	Swansea	767,000
2026/27	2025/26	4th scanner	1,295,000
2028/29	2027/28	5th scanner	1,295,000
		Loose equipment	
			4,697,000
			0

VAT £	Gross £
939,400	5,636,400
328,790	1,972,740
1,268,190	7,609,140
0	0
1,268,190	7,609,140
202,910	1,217,462
24,000	144,000
3,302,600	19,815,600
479,770	2,878,620

21615844

5,277,470	31,664,823
-202,910	-202,910
5,074,560	31,461,912

758,049	4,687,744				
309,606	2,039,680				
1,912,565	11,692,922			13.2	
6,638	151,715			25.2	
1,039,693	6,322,076			31.2	
1,678	93,986				
6,638	151,715				
1,039,693	6,322,076				
5,074,560	31,461,912				
0	0				

On costs	Fees	Non Works	Equipment	Subtotal	Contingency
		15,000	4,673,000	4,733,000	473,300
457,634	282,426	29,229	2,960,000	5,024,290	502,429
271,047	167,275	17,312	2,960,000	4,182,633	418,263
457,634	282,426	29,229	2,960,000	5,024,290	502,429
457,634	282,426	29,229	2,960,000	5,024,290	502,429
1,643,950	**1,014,552**	**120,000**	**16,513,000**	**23,988,502**	**2,398,850**
0	0	0	0	0	0

Net Total	VAT	Gross	
5,206,300	1,041,260	6,247,560	0
5,526,719	1,052,399	6,579,117	
4,600,897	876,104	5,477,000	
5,526,719	1,052,399	6,579,117	
5,526,719	1,052,399	6,579,117	
26,387,352	**5,074,560**	**31,461,912**	
0	0	0	

All Wales PET CT Programme
Economic appraisal
Capital charges

Preferred Option

	Mar-21	Mar-22	Mar-23	Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32	Mar-33	Mar-34	Mar-35	Mar-36	Mar-37	Mar-38	Mar-39	Mar-40	Mar-41	Mar-42
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21
Deprecation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PDC interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total capital charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Depreciation years - Buildings	60
Depreciation years - Plant and equipment	10
Impairment	0%
PDC interest	0.0%

Buildings																						
Plant and equipment																						
Total capital costs																						
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total impairment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings	0	0	0	0	0	0	0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Plant and equipment	0	0	0	0	0	0	0	12	12	12	12	12	12	12	12	12	12	0	0	0	0	0
Number of months depreciation applies																						
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net asset balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All Wales PET CT Programme
Economic appraisal
Capital charges

Preferred Option

	Mar-43	Mar-44	Mar-45	Mar-46	Mar-47	Mar-48	Mar-49	Mar-50	Mar-51	Mar-52	Mar-53	Mar-54	Mar-55	Mar-56	Mar-57	Mar-58	Mar-59	Mar-60	Mar-61
	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40
Deprecation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PDC interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total capital charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Depreciation years - Buildings
Depreciation years - Plant and equipment
Impairment
PDC interest

Buildings																			
Plant and equipment																			
Total capital costs																			
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total impairment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Plant and equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of months depreciation applies																			
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net asset balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buildings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All Wales PET CT Programme

Economic appraisal

Financial impact - Preferred Option

	Mar-21	Mar-22	Mar-23	Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Deprecation - released												
PDC interest - released												
Deprecation - new asset	-	-	-	-	-	-	-	-	-	-	-	-
PDC interest - new asset	-	-	-	-	-	-	-	-	-	-	-	-
Impact on capital charges	-	-	-	-	-	-	-	-	-	-	-	-
Increased operational costs	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303
Cash releasing benefits								-	-	-	-	-
Impact on operating costs	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303
Total financial impact	4,806	5,736	6,850	8,125	8,546	8,714	11,251	12,185	14,327	18,279	23,303	23,303

All Wales PET CT Prog

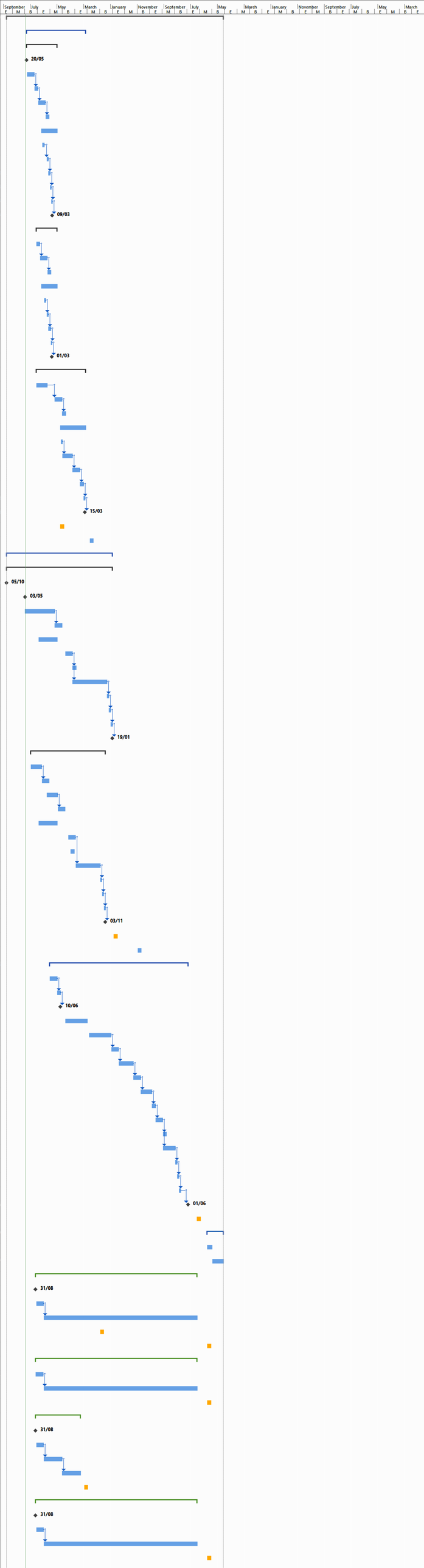
Economic appraisal

Financial impact - Pr

	Mar-33	Mar-34	Mar-35	Mar-36
	Year 12	Year 13	Year 14	Year 15
Deprecation - released				
PDC interest - released				
Deprecation - new asset	-	-	-	-
PDC interest - new asset	-	-	-	-
Impact on capital charges	-	-	-	-
Increased operational costs	23,303	23,303	23,303	23,303
Cash releasing benefits	-	-	-	-
Impact on operating costs	**23,303**	**23,303**	**23,303**	**23,303**
Total financial impact	**23,303**	**23,303**	**23,303**	**23,303**

2000-01	2000-01	67.684	1.82	1,107,366	1,104,074
2001-02	2001-02	68.674	1.46	1,147,125	1,150,867
2002-03	2002-03	70.206	2.23	1,206,906	1,203,341
2003-04	2003-04	71.714	2.15	1,270,825	1,272,015
2004-05	2004-05	73.763	2.86	1,334,628	1,332,488
2005-06	2005-06	75.709	2.64	1,417,614	1,416,731
2006-07	2006-07	77.858	2.84	1,487,940	1,487,724
2007-08	2007-08	80.053	2.82	1,566,500	1,568,149
2008-09	2008-09	82.222	2.71	1,572,822	1,573,012
2009-10	2009-10	83.536	1.60	1,559,454	1,558,950
2010-11	2010-11	85.066	1.83	1,624,581	1,625,391
2011-12	2011-12	86.356	1.52	1,670,141	1,667,346
2012-13	2012-13	88.121	2.04	1,724,150	1,726,358
2013-14	2013-14	89.711	1.80	1,805,768	1,803,892
2014-15	2014-15	90.948	1.38	1,873,833	1,877,255
2015-16	2015-16	91.690	0.82	1,936,795	1,935,573

ID	Task Mode	Task Name	Duration	Start	Finish
1		**All Wales PET Programme Implementation**	**1761 days**	**Mon 05/10/20**	**Mon 05/07/27**
2		**Tranche 1: PETIC scanner and cyclotron refresh**	**482 days**	**Thu 20/05/21**	**Fri 24/03/23**
3		**PET Scanner Replacement**	**247 days**	**Thu 20/05/21**	**Fri 29/04/22**
4		Business Case submission to Welsh Government - BJC	0 days	Thu 20/05/21	Thu 20/05/21
5		Business Case review by Welsh Government - BJC	60 days	Mon 24/05/21	Fri 13/08/21
6		Planning and design	30 days	Mon 16/08/21	Fri 24/09/21
7		Procurement of PET scanner and equipment	60 days	Mon 27/09/21	Fri 17/12/21
8		Enabling works - Planning	30 days	Mon 20/12/21	Fri 28/01/22
9		Service contingency - set-up mobile scanner at site and increase days at Swansea	130 days	Mon 01/11/21	Fri 29/04/22
10		Mobilisation on site and removal of existing equipment	14 days	Mon 15/11/21	Thu 02/12/21
11		Construction / Enabling Works Commence	14 days	Mon 03/01/22	Thu 20/01/22
12		Install to Customer acceptance	14 days	Fri 21/01/22	Wed 09/02/22
13		Operational procedures and Guidlines	10 days	Thu 10/02/22	Wed 23/02/22
14		Training	10 days	Thu 24/02/22	Wed 09/03/22
15		Go live	0 days	Wed 09/03/22	Wed 09/03/22
16		**Cyclotron refresh PETIC**	**170 days**	**Mon 06/09/21**	**Fri 29/04/22**
17		Planning and design	30 days	Mon 06/09/21	Fri 15/10/21
18		Procurement of equipment - VEAT Process	60 days	Mon 18/10/21	Fri 07/01/22
19		Enabling works - Planning	30 days	Mon 10/01/22	Fri 18/02/22
20		Service contingency - Source FDG from MA licensed contractor	130 days	Mon 01/11/21	Fri 29/04/22
21		Mobilisation on site and removal of existing equipment	14 days	Mon 06/12/21	Thu 23/12/21
22		Construction / Enabling Works Commence	14 days	Mon 03/01/22	Thu 20/01/22
23		Operational procedures and Guidlines	21 days	Fri 21/01/22	Fri 18/02/22
24		Training	7 days	Mon 21/02/22	Tue 01/03/22
25		Go live	0 days	Tue 01/03/22	Tue 01/03/22
26		**Hot Cell refresh PETIC**	**405 days**	**Mon 06/09/21**	**Fri 24/03/23**
27		Planning and design	90 days	Mon 06/09/21	Fri 07/01/22
28		Procurement of equipment	60 days	Mon 04/04/22	Fri 24/06/22
29		Enabling works - Planning	30 days	Mon 27/06/22	Fri 05/08/22
30		Service contingency - TBC	210 days	Mon 06/06/22	Fri 24/03/23
31		Mobilisation on site and removal of existing equipment	14 days	Mon 13/06/22	Thu 30/06/22
32		Construction / Enabling Works Commence	80 days	Fri 01/07/22	Thu 20/10/22
33		Operational procedures and Guidlines	60 days	Fri 21/10/22	Thu 12/01/23
34		MHRA inspection of facility	30 days	Fri 13/01/23	Thu 23/02/23
35		Training	14 days	Fri 24/02/23	Wed 15/03/23
36		Go live	0 days	Wed 15/03/23	Wed 15/03/23
37		LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 06/06/22	Fri 15/07/22
38		EVALUATION OF BENEFITS, OUTCOMES & SPENDING OBJECTIVE	30 days	Mon 08/05/23	Fri 16/06/23
39		**Tranche 2: PET Scanner installation (SW and North Wales)**	**860 days**	**Mon 05/10/20**	**Fri 19/01/24**
40		**Project 2: North Wales**	**860 days**	**Mon 05/10/20**	**Fri 19/01/24**
41		Submit SOC to WG	0 days	Mon 05/10/20	Mon 05/10/20
42		SOC approval by WG	0 days	Mon 03/05/21	Mon 03/05/21
43		Business Case preparation and submission to WG - OBC/FBC	240 days	Fri 30/04/21	Thu 31/03/22
44		Business Case review by Welsh Government - OBC/FBC	60 days	Fri 01/04/22	Thu 23/06/22
45		Planning and design - facilities and workforce	150 days	Mon 04/10/21	Fri 29/04/22
46		Procurement of PET scanner and equipment	60 days	Mon 01/08/22	Fri 21/10/22
47		Enabling works - planning	30 days	Mon 24/10/22	Fri 02/12/22
48		Amendments/build of facilities	280 days	Mon 24/10/22	Fri 17/11/23
49		Install to Customer acceptance	15 days	Mon 20/11/23	Fri 08/12/23
50		Operational procedures and Guidlines	15 days	Mon 11/12/23	Fri 29/12/23
51		Training	15 days	Mon 01/01/24	Fri 19/01/24
52		Go live	0 days	Fri 19/01/24	Fri 19/01/24
53		**Project 3: South West**	**610 days**	**Mon 05/07/21**	**Fri 03/11/23**
54		Business Case preparation and submission to WG - OBC	90 days	Mon 05/07/21	Fri 05/11/21
55		Business Case review by Welsh Government - OBC	60 days	Mon 08/11/21	Fri 28/01/22
56		Business Case preparation and submission to WG - FBC	90 days	Mon 03/01/22	Fri 06/05/22
57		Business Case review by Welsh Government - FBC	60 days	Mon 09/05/22	Fri 29/07/22
58		Planning and design - facilities and workforce	150 days	Mon 04/10/21	Fri 29/04/22
59		Procurement of PET scanner and equipment	60 days	Mon 05/09/22	Fri 25/11/22
60		Enabling works - planning	30 days	Mon 03/10/22	Fri 11/11/22
61		Amendments to building/facilities	200 days	Mon 28/11/22	Fri 01/09/23
62		Install to Customer acceptance	15 days	Mon 04/09/23	Fri 22/09/23
63		Operational procedures and Guidlines	15 days	Mon 25/09/23	Fri 13/10/23
64		Training	15 days	Mon 16/10/23	Fri 03/11/23
65		Go live	0 days	Fri 03/11/23	Fri 03/11/23
66		LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 05/02/24	Fri 15/03/24
67		EVALUATION OF BENEFITS, OUTCOMES & SPENDING OBJECTIVE	30 days	Mon 04/11/24	Fri 13/12/24
68		**Tranche 3: Fourth Scanner (location TBD)**	**1125 days**	**Mon 07/02/22**	**Mon 01/06/26**
69		Clinical Demand need review & location review	60 days	Mon 07/02/22	Fri 29/04/22
70		Enagagement with WG on needs	30 days	Mon 02/05/22	Fri 10/06/22
71		GO/NO GO DECISION	0 days	Fri 10/06/22	Fri 10/06/22
72		Appraisal process to identify location of fourth scanner	180 days	Mon 01/08/22	Fri 07/04/23
73		Business Case preparation and submission to Welsh Government - OBC	180 days	Mon 01/05/23	Fri 05/01/24
74		Business Case review by Welsh Government - OBC	60 days	Mon 08/01/24	Fri 29/03/24
75		Business Case preparation and submission to Welsh Government - FBC	120 days	Mon 01/04/24	Fri 13/09/24
76		Business Case review by Welsh Government - FBC	60 days	Mon 16/09/24	Fri 06/12/24
77		Planning and design	90 days	Mon 09/12/24	Fri 11/04/25
78		Commissioning	30 days	Mon 14/04/25	Fri 23/05/25
79		Procurement of PET scanner	60 days	Mon 26/05/25	Fri 15/08/25
80		Enabling works TBC	30 days	Mon 18/08/25	Fri 26/09/25
81		Amendments to facilities	100 days	Mon 18/08/25	Fri 02/01/26
82		Install to Customer acceptance	15 days	Mon 05/01/26	Fri 23/01/26
83		Operational procedures and Guidlines	15 days	Mon 26/01/26	Fri 13/02/26
84		Training	15 days	Mon 16/02/26	Fri 06/03/26
85		Go live	0 days	Mon 01/06/26	Mon 01/06/26
86		LESSONS LEARNED AND POST TRANCHE REVIEW	30 days	Mon 07/09/26	Fri 16/10/26
87		**Tranche 4: Programme Closure and Lessons Learned**	**131 days**	**Mon 04/01/27**	**Mon 05/07/27**
88		Programme Implementation Review	40 days	Mon 04/01/27	Fri 26/02/27
89		Benefits Evaluation	90 days	Tue 02/03/27	Mon 05/07/27
90		**Enabling Workstream 1: Workforce**	**1314 days**	**Tue 31/08/21**	**Fri 11/09/26**
91		PBC endorsed	0 days	Tue 31/08/21	Tue 31/08/21
92		Planning and design of Workstream Group	60 days	Mon 06/09/21	Fri 26/11/21
93		Establishing training needs and carrying out function	1250 days	Mon 29/11/21	Fri 11/09/26
94		LESSONS LEARNED AND MID PROGRESS REVIEW	30 days	Mon 04/09/23	Fri 13/10/23
95		LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27
96		**Enabling Workstream 2: Centres of Excellence**	**1314 days**	**Tue 31/08/21**	**Fri 11/09/26**
97		Planning and design of Workstream Group	60 days	Tue 31/08/21	Mon 22/11/21
98		Establishing needs and carrying out function	1250 days	Mon 29/11/21	Fri 11/09/26
99		LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27
100		**Enabling Workstream 3: Radiopharmaceutical provision for Wales**	**364 days**	**Tue 31/08/21**	**Fri 20/01/23**
101		PBC endorsed	0 days	Tue 31/08/21	Tue 31/08/21
102		Planning and design of Workstream Group	60 days	Mon 06/09/21	Fri 26/11/21
103		Establishing needs surround Marketing Authorisation	150 days	Mon 29/11/21	Fri 24/06/22
104		Contract negotiation with product providers	150 days	Mon 27/06/22	Fri 20/01/23
105		LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 06/03/23	Fri 14/04/23
106		**Enabling Workstream 4: Procurement**	**1314 days**	**Tue 31/08/21**	**Fri 11/09/26**
107		PBC endorsed	0 days	Tue 31/08/21	Tue 31/08/21
108		Planning and design of Workstream Group	60 days	Mon 06/09/21	Fri 26/11/21
109		Establishing training needs and carrying out function	1250 days	Mon 29/11/21	Fri 11/09/26
110		LESSONS LEARNED AND POST WORKSTREAM REVIEW	30 days	Mon 04/01/27	Fri 12/02/27



All Wales Positron Emission Tomography (PET) Service

Draft Internal Audit Brief

July 2021

Welsh Health Specialised Services Committee

NHS Wales Shared Services Partnership
Audit and Assurance Services

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Appendix A - Assurance opinion and action plan risk rating

Please Note:

This audit brief has been prepared for internal use only. Audit & Assurance Services reports are prepared, in accordance with the Internal Audit Charter and Annual Plan, approved by the Audit & Risk Committee.

Audit briefs are prepared by the staff of the NHS Wales Shared Services Partnership – Audit & Assurance Services, and addressed to Independent Members or officers including those designated as Accountable Officer. They are prepared for the sole use of the Welsh Health Specialised Services Committee and no responsibility is taken by the Audit & Assurance Services Internal Auditors to any director or officer in their individual capacity, or to any third party.

1. Introduction and Background

Our review of the Welsh Health Specialised Services Committee's All Wales Positron Emission Tomography (PET) Service Programme Business Case will be completed in line with the 2021/22 Internal Audit Plan.

The Programme Business Case (PBC) is due to be completed shortly, and will set out the case for an All Wales Positron Emission Tomography (PET) Service with sufficient capacity to meet the projected demand for PET scanning over the next ten years with anticipated costs in the region of £28.5m.

The outcome of the review will inform the risk assessment for the future audit requirement at programme and/or individual projects.

Noting the ongoing impact of Covid 19, the delivery of this assignment will include an increased element of remote working. To accommodate the same, single points of contact between the audit and client teams will be established and information request schedules utilised.

2. Scope and Objectives

The overall objective of this audit is to evaluate the delivery of the programme and determine the adequacy of the systems and controls in place. The review will seek to provide assurance to the WHSSC Audit and Risk Committee that risks material to the system's objectives are managed appropriately. The areas that the review will seek to provide assurance on are:

- **Governance –**
    - Programme governance arrangements are sufficiently defined, implemented and aligned with existing corporate governance structures.
    - The programme governance arrangements sufficiently identify and engage key parties/ external key stakeholders.
    - Executive ownership and leadership is demonstrated at the programme.
    - Key groups/meetings have been established and implemented to support the delivery of the programme.
    - Remaining key roles have been allocated and the associated resource requirement has been determined, costed and implemented.
- **Decisions and Approvals** –
    - Appropriate key decisions and approvals have been obtained at key junctures.
    - The Programme progresses within these approvals.
    - Decisions and approvals are recorded appropriately and demonstrate support from key stakeholders.

- **Monitoring & Reporting –**
  - Expected monitoring and reporting arrangements have been sufficiently defined.
  - Arrangements are in place to ensure the accuracy, frequency and circulation of key programme performance information.
  - Information is routinely and sufficiently challenged, to assist management decision making.
- **Risk Management –**
  - There is a defined approach to risk management at the programme.
  - Risks have been identified, recorded and appraised using recognised management techniques.
  - Risks have been assigned to those best placed to manage the risk, with appropriate/ timely management action.
  - Where possible, risks have been quantified to inform the proposed management action.
- **Other issues -**
  - Any other issues that may impact the assurance provided, including performance against project objectives (e.g. time, cost, quality, benefits, critical success factors etc.).

3. Associated Risks

The potential risks considered in the review are as follows:

- Governance arrangements are weak leading to a loss of control on project objectives.
- The programme progresses outside of agreed approvals and at significant financial and/or reputational risk.
- Monitoring and reporting is insufficient, impacting the ability of management to make informed decisions.
- Risks are poorly managed impacting on programme costs and programme.

4. Audit Approach

The approach to audit assignments is risk based, where the risks are identified with the lead manager. Controls are identified to manage those risks and the assignment scope designed to provide assurances on those controls.

The work to be undertaken as part of this review will include:

- Obtaining, reading and understanding relevant policies, procedures and documentation.
- Meeting with key staff to discuss processes.
- Undertaking sample testing where applicable.

The outcomes of this review can be linked or contribute to the Assurance Framework and also the NHS Wales Health and Care Standards.

The audit assignment will be allocated an assurance rating, dependant on the level of assurance Internal Audit are able to provide. There are four potential levels of assurance available, along with three recommendation priorities described in **Appendix A**.

As indicated previously, noting the impact of Covid 19, the delivery of this assignment will include an increased element of remote working.

Any limitations to the audit fieldwork as a consequence of the Covid 19 restrictions will be clearly outlined at the subsequent report.

5. Key Contacts

Name	Designation
Stuart Davies	Director of Finance
Sarah McAllister	Programme Manager

Additionally, we reserve the right to liaise with Audit Wales, Welsh Government, NWSSP (SES) or any other parties pertinent to the review.

6. Timing of the Review

Target dates for the progression of the audit fieldwork are to be agreed with the client at the initial audit set-up meeting.

Audit area	Target dates
Fieldwork	TBD
Debrief meeting	TBD
Management Response	Within two weeks of the draft report issued

7. Audit Brief Agreement

The Director of Finance is requested to formally agree this audit brief by e-mail.

Appendix A - Assurance opinion and action plan risk rating

Audit Assurance Ratings

Substantial assurance - The Board can take **substantial assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Few matters require attention and are compliance or advisory in nature with **low impact on residual risk** exposure.

Reasonable assurance - The Board can take **reasonable assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Some matters require management attention in control design or compliance with **low to moderate impact on residual risk** exposure until resolved.

Limited assurance - The Board can take **limited assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. More significant matters require management attention with **moderate impact on residual risk** exposure until resolved.

No assurance - The Board has **no assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Action is required to address the whole control framework in this area with **high impact on residual risk** exposure until resolved.

Prioritisation of Recommendations

In order to assist management in using our reports, we categorise our recommendations according to their level of priority as follows.

Priority Level	Explanation	Management action
High	Poor key control design OR widespread non-compliance with key controls. PLUS Significant risk to achievement of a system objective OR evidence present of material loss, error or misstatement.	Immediate*
Medium	Minor weakness in control design OR limited non-compliance with established controls. PLUS Some risk to achievement of a system objective.	Within One Month*
Low	Potential to enhance system design to improve efficiency or effectiveness of controls. These are generally issues of good practice for management consideration.	Within Three Months*

* Unless a more appropriate timescale is identified/agreed at the assignment.

Programme Business Case for an **All Wales Positron Emission Tomography (PET) Service**

Blueprint

Version 0.3
27.04.2021

Purpose and Summary of Document:

The purpose of the Blueprint is to provide a model of the capability that must be in place to support achievement of the Vision of a Programme. It provides the focus for delivering the changes to the service that will meet continuing and evolving needs of the population of Wales.

Intended Audience:

This document is intended to be read by the All Wales PET Strategic Programme Board and key stakeholders. It is assumed that the intended audience will be familiar with:

- PET Services in Wales, its challenges and opportunities
- The intended scope/drivers of the Programme
- The role of AWPET (All Wales PET Advisory Group)
- 2018 Statement of Intent

Publication / Distribution:

All Wales PET Strategic Programme Board

Version history

Version	Date Issued	Brief Summary of Change
0.1		

Authors: Sarah McAllister

Senior responsible Officer: Sian Lewis

1. Introduction

Positron Emission Tomography (PET) has become a central diagnostic tool in the management of cancer and other non-cancer conditions. Its role and the evidence base continues to evolve. Although it is a relatively expensive investigation, when used appropriately PET can increase the value of healthcare overall, supporting the principles of prudent healthcare.

PET can significantly improve clinical decision making, particularly with respect to the appropriate use of complex and expensive specialist treatments. There is an increasing body of high quality evidence demonstrating the value of PET to improved patient outcomes in a number of areas. There is also excitement in both the clinical and research communities about the use of PET in a rapidly growing number of new indications and new radiopharmaceuticals.

The latest scanners combine both the functional information of PET and the structural information of Computed Tomography (CT) into one machine, resulting in a fused and detailed PET-CT scan.

In the UK, the development of PET services has been slow compared with other European countries. The development of PET in Wales lags significantly behind the other three devolved nations, in terms of funded indications for PET scans, development of PET scanning infrastructure, specialist workforce, and research opportunities. It is estimated that Wales is currently performing approximately 40% of the PET scans per head of population compared to England. NHS Wales has a list of funded indications for PET-CT which is limited compared to England and Scotland.

Demand for PET scanning is increasing, with demand growth between 12 and 16% per annum. Wales needs to close the gap and provide a PET service that is in line with comparator countries so that Welsh citizens may benefit from the provision.

On 28th March 2019, the Director General, Health and Social Service/NHS Wales Chief Executive, Welsh Government, wrote to the Chair of the AWPET Advisory Group, endorsing the recommendations made in the report and outlining the expectations for NHS Wales to collaborate on their implementation.

Since there was recognition that additional capital investment was required, to enable the broader service to be developed and made equitable for people across Wales. The Director General requested that WHSCC develop a Programme Business Case with support from the National Imaging Network, to guide the development of future service provision for the whole of Wales.

2. Vision Statement

Programme Vision

By 2031 we will deliver a PET service of excellence which provides patients with equitable access to the latest technology, research and brilliant staff that compares with the best across Europe. It will help us to improve survival rates and quality of life for people with cancer in Wales

Programme Aim

The aim of the Programme is to build on the work of the All Wales PET Advisory Group by developing greater strategic focus on the development of sustainable services over a ten year period. This will include bringing the financial, workforce, infrastructure and planning solutions to bear on the issues facing the service.

The nationally directed Programme will oversee a programme of work that will deliver sustainable and high quality PET services across Wales. Features of the service in a

business as usual end-state, will show responsive demand and capacity planning and will be delivering clear quality outcomes through modern facilities, optimally configured workforce in fully accredited units and with assured supply of radiopharmaceuticals. Ultimately, this Programme will ensure that the population of Wales will have equitable access to high quality PET scanning and research, in line with best practice across the UK and Europe.

The aims of this Programme are to:

- plan an infrastructure of high quality PET-CT scanning facilities across Wales which meets the growing demand and is compliant with the WHSSC PET service specification;
- ensure that the agreed infrastructure takes into account the sometimes competing priorities of patient access, cost, workforce capacity, training and research;
- ensure that the agreed infrastructure provides resilience and a culture of excellence through co-operative working between providers;
- support PETIC in developing a business continuity plan during recommissioning of its facilities within the next 12 months;
- support the development of research and development to facilitate world class R&D clinical improvements;
- develop the strategic vision for PET-CT services in Wales up to service implementation, and
- develop an end to end clinical process for radiological reporting of scans in Wales.

Measuring success

We will know if we have succeeded when core capacity is available to meet the clinical demand of PET scanning which includes scanners and workforce; when services routinely meet diagnostic turnaround times with little variation; when breaches in PET scanning waiting times are rare; when Welsh patients are able to easily access and participate in clinical trials and when relevant health board sites have achieved WHSSC PET Service Specification.

3. Programme Phasing

The programme approach is described as being in four phases. In order to set context, a current state of service is provided below:

3.1 Current state of business operations

- Significant capacity constraints with just one fixed analogue PET scanner in place across Wales and externally sourced mobile scanning provision for South West and North Wales just two days a week.
- Clear growing demand through widening of indications commissioned for scanning.
- The fixed scanner in South East Wales is past its useful age.
- There are significant issues and constraints with access, quality and patient experience with mobile scanners.
- There is significant issues with workforce numbers and skill-set, with an external service supplier providing a workforce to run mobile scanners.

- Not enough patients are able to access PET scans or clinical trials, and existing services are inequitable to patients due to the issues of mobile vs. fixed scanners.
- There are issues with IT surrounding referrals and sharing of reports.
- There are issues facing radiopharmaceutical provision, with South East Wales benefiting from a cyclotron that can manufacture radiopharmaceuticals but not able to supply south Wales due to licensing rules. In addition there are issue for North Wales supply and seeking assurances for the future provision.
- No national overview of physical estate and supporting infrastructure (condition and capacity).

3.2 Programme Phases

The delivery of this programme is a significant undertaking. PET scanning services in Wales have a generational opportunity to set themselves up on a long-term sustainable footing. At the same time, the service must also deliver improvements on shorter-term capacity issues, faced through the somewhat critical condition of the PETIC scanning facilities in Cardiff.

The Programme and Health Boards will need to manage a mix of timelines and the risks and benefits associated with what is done to address short to medium term challenges and the impacts that those interventions have for our patients and the future services they will be using.

Phasing the programme will enable tight management of delivery, programme risks and enable managed assurance around delivery i.e. the board will be able to mandate delay or expedition of each phase. The Programme has been divided into tranches, within which are Projects that will undertake the installation of a modern digital PET scanner and associated facilities. Three supporting workstreams will run for the duration of the Programme and support the wider infrastructure during implementation: workforce, centres of excellence and radiopharmaceutical provision.

The first six years of the programme are described in six phases as outlined below:

	Description	Duration	Timeline
Phase 1	Set-up and establishment of Programme groups and leads	2 months	May 2021 – June 2021
Phase 2	Set-up, initiation and establishment of digital PET Scanner at PETIC and cyclotron upgrade	10 Months	July 2021 – April 2022
Phase 3	Set-up, initiation and establishment of digital PET Scanner at Swansea, including site build	26 months	July 2021 – September 2023
Phase 4	Set-up, initiation and establishment of digital PET Scanner in North Wales, including site build	30 months	July 2021 – January 2024
Phase 5	Review and determine future arrangements – go/no-go on fourth scanner	3 months	July 2023

Phase 6	Set-up, initiation and establishment of digital PET Scanner in South East Wales (location TBD), including site build	42 months	December 2023 – June 2027

1.2 Final states to be achieved by end of each Phase:

By end Phase 1:

- Functional programme governance and structure in place, all work streams established with leads appointed and work plan developed.

By end Phase 2:

- Completed installation of a digital PET scanner and upgraded cyclotron at PETIC, which will avert critical service failure and increase scanning capacity so that benefits can begin to be realised for patients, workforce and the wider NHS in South East Wales.

By end Phase 3:

- Completed installation of a digital PET scanner and upgraded facilities at Swansea, which will increase scanning capacity so that benefits can begin to be realised for patients, workforce and the wider NHS in South West Wales. This will also generate outputs that will contribute toward a step change in reaching the Spending Objectives of the Programme.

By end Phase 4:

- Completed installation of a digital PET scanner and new built facilities at a location in North wales, which will increase scanning capacity so that benefits can begin to be realised for patients, workforce and the wider NHS in South West Wales. This will also generate outputs that will contribute toward a step change in reaching the Spending Objectives of the Programme and contribute to the Spending Objectives of the wider Nuclear Medicine Consolidation Programme.

By end Phase 5:

- A thorough understanding of real-time clinical demand data, which can be compared against the clinical demand model. An opportunity to assess workforce and wider infrastructure needs for a potential fourth PET scanner and an assessment of potential location(s). This phase will serve as a go/no-go decision point for Phase 6.

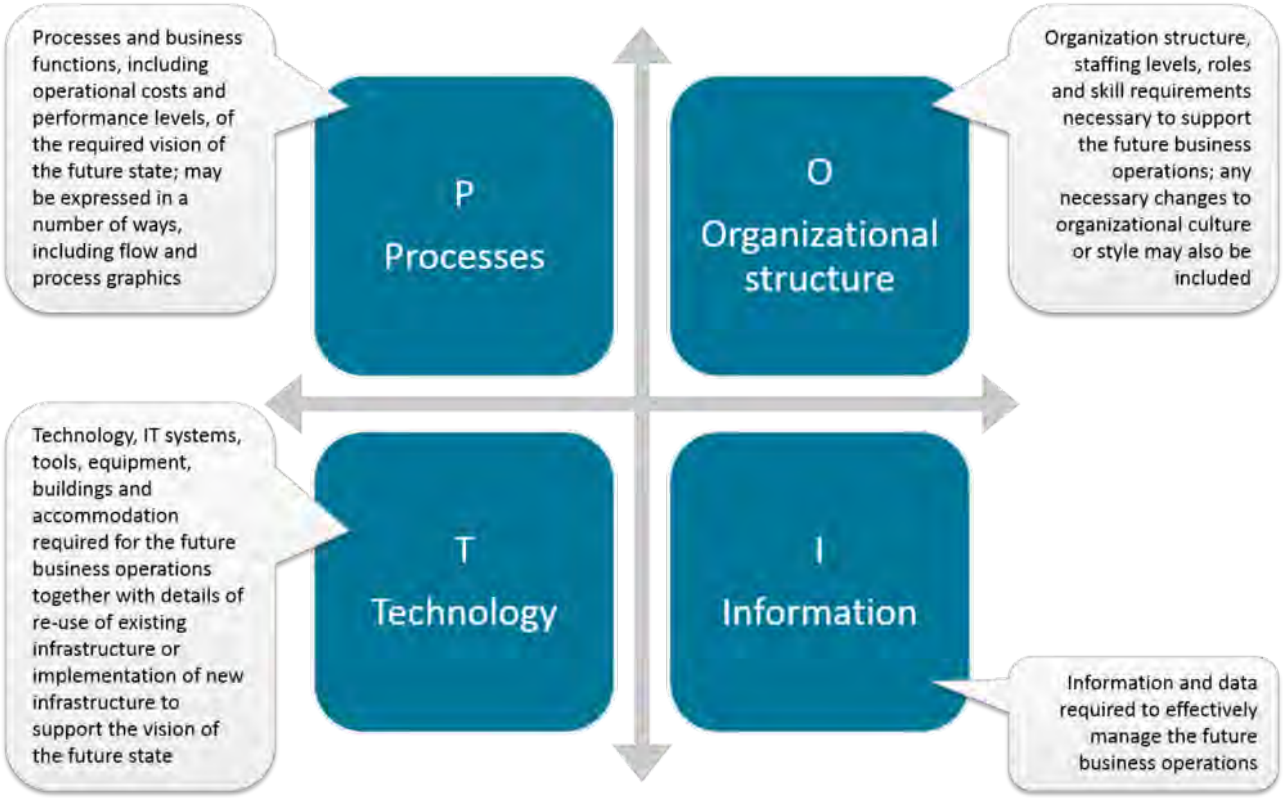
By end Phase 6:

- Completed installation of a digital PET scanner and new built facilities at a location in south Wales, which will answer the final scanning demand needs. This final phase will mean that the Programme benefits will be realised for patients,

workforce and the wider NHS in South West Wales. This will also generate outputs that will contribute toward a step change in reaching the Spending Objectives

4. Scope of Change

Programme blueprints use the POTI model as a way to define the scope of what is going to change once all the projects in the programme are complete. POTI sets out the scope of the programme at a high level: Processes, Organisation, Technology and Information.



2.1 Processes

This is what PET services across Wales must be doing to support its purpose and meet the needs of its patients. There will probably be a combination of new and amended business processes and service performance requirements will include:

- Referral pathway development with Cancer, Neurology and Rheumatology networks
- Increased throughput (volume)
- Consistent process indicators (waiting times)
- Sustainable planned capacity
- Designs for the service expansion of PET scanning for radiotherapy treatment planning
- Plans for the delivery of the expansion of clinical research activity and innovative developments in PET service provision

- Resilience – hold an ability to respond to increased workload or reduced specialty or other staffing availability
- Improving clinical outcomes through appropriate commissioning through an evidence-based mechanism
- Providing equitable access to PET scanning across Wales
- An assured supply of MA licensed radiopharmaceuticals and those under Specials and IMP licenses

2.2 Organisation

The optimal configuration and governance arrangements for PET services in Wales will include new/amended elements of business management with developed national principles for:

- Service structure: the service will involve fixed scanners based within some Health Boards, to which surrounding Health Boards will refer in to. These sites will create Centres of Excellence.
- Functions & roles: there will be a resilient workforce with appropriate skill-mix to deliver a high-quality and efficient service. Roles will include: Clinical Radiologists, Radiographers, Clinical Scientists/Medical Physics Experts, Clinical Support Staff, Administrative Staff, Finance Business Partner and PET/CT Manager.
- Locations: the future PET scanners will be placed in Cardiff, Swansea, with a scanner also in North Wales. Further scanner(s) will be located to answer clinical demand, population density and consideration of the feasibility of surrounding infrastructure.
- Teams: the programme will be hosted by WHSSC, with a programme manager responsible for delivery. Each PET scanning site will have a Lead and they will feed into the AWPET Group and report KPIs to WHSSC on a quarterly basis, with consistency across sites. The AWPET group will continue to advise the WHSSC on an evidence–based approach to commissioning PET scanning. Each scanner will an asset of the hosting organisation and be answerable to local governance arrangements for this.
- Training: existing staff will be offered training so they can benefit from personal development and provide a resilient workforce. There will be an attraction of new staff to the Centres of Excellence.
- Research: there will be an open and collaborative approach to research, with cross-site partnerships for clinical trials. There will be partnerships with academic and private sector organisations.
- Stakeholders will be wide and varied. These include: Collaborative, Health Boards, HEIW, NIAW, IWEG, academic institutions, Cancer network [EXPAND]
- National programme/network arrangements: the All Wales PET Service will be part of the wider National Imaging Strategy Programme Board to ensure that cross-modality impacts are considered.

2.3 Information

The data and information that the organisation will require in order to deliver to its customers:

- Nationally agreed data sets which include consistent coding of scans across all sites.
- Nationally agreed standards and measures – this will fall within the upgraded PACS and RADIS system which the RISPP is delivering. [EXPAND].
- Nationally agreed performance reporting (KPIs) which will be reported consistently to WHSSC.
- Information on staffing and competency levels will need to be kept up-to-date at PET sites to maintain sufficient skill-mix.

2.4 Technology, Tools, Equipment, Facilities

There is a significant need to update and upgrade much of the technology that exists for the All Wales PET service. These include:

- Digital PET scanners that are AI-ready.
- Supporting equipment that will facilitate future development of services, such as radiotherapy planning lasers, flat beds, robotic radiotracer dispensers.
- Modern, warm and welcoming facilities with sufficient numbers of uptake rooms to facilitate throughput and sufficient numbers of “hot” toilets
- A flexible working style, collaborative behaviours and culture.

Benefits Tracker

Organsation Name:	WHSSC
Project Title:	PET CT PBC

Outcome	No	Benefit	Description (Clearly define the benefit)	Beneficiary	Type of benefit	Measuring tool	Baseline position (Current)	Impact of continuing with Business as Usual (BAU)	Impact of preferred option	Calculation of benefit	Assumptions made in calculation	Data sources used to calculate benefit	Timing (when the benefits will be achieved)	Benefit Owner	Lead responsible for monitoring Benefit
Improved quality and reduction in patient harm	B01	Avoid high-cost late-stage interventions	Improved staging would reduce the need for high cost interventions	NHS Wales Patient	Cash releasing benefit	Number of late stage interventions according to specific diseases and patient pathways	Identify baseline position	Baseline position will continue	Target improvement to be agreed	Cost of intervention x number of interventions			Dependent on option (phasing of each project)	Site Leads	Programme Manager
	B02	Improved diagnostic accuracy	Improved imaging in latest software and reduced risk of brown fat uptake in fixed units (mobiles are not heated)	Patient Workforce NHS Wales	Qualitative	Difficult to measure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Site Leads	Programme Manager
	B03	Reduced waiting times	Time to referral to time of scan	Patient	Quantitative (Unmonetised)	Referral to reporting time	No current waiting lists	Waiting lists will lengthen as list of commissioned indications increase and increased number of patients are able to access scans; risk of exceeding 10 day referral to report	Achieve 10 day referral to report	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
	B04	Improved patient experience	Improved access, better facilities and greater convenience, better outcomes lead to better patient experience	Patient	Qualitative	PREMs & patient satisfaction questionnaires although may be difficult to prove direct correlation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Site Leads	Programme Manager
Workforce resilience	B05	Improved recruitment and retention	Greater ability to recruit and ratain highly skilled workforce (linked to B17)	NHS Wales Patient	Qualitative	Difficult to demonstrate direct correlation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Site Leads	Programme Manager
	B06	Improved access to/uptake of training and education	Increased opportunities to provide access to training and education	Workforce	Quantitative (Unmonetised)	Learning needs analysis Learning and education evaluation data	Identify baseline position	Baseline position will continue	Target improvement to be agreed					Site Leads	Programme Manager
	B07	Improved staff satisfaction	Improved working environment, reduced stress and greater opportunities for development contribute to greater staff wellbeing	Workforce	Qualitative	Difficult to demonstrate direct correlation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Site Leads	Programme Manager
Improved efficiency	B08	Increased capacity resulting in ability to meet demand	Ability to meet future demand - reducing cost per unit	NHS Wales	Non-cash releasing	Average cost per scan	Economic appraisal	Economic appraisal	Economic appraisal					Site Leads	Programme Manager
	B09	Reduced downtime	Greater control of lists resulting in reduced cancellations and delays and better utilisation allowing greater throughput	NHS Wales	Non-cash releasing	No of cancelled sessions Utilisation %	Identify baseline position	Position will worsen - estimate scale	Target improvement to be agreed	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
Improved economy	B10	Reduced reliance on mobile scanners	Reduced cost per scan due to establishing in house scanning facilities	NHS Wales	Cash releasing / cost avoidance	Cost of service	Economic appraisal	Economic appraisal	Economic appraisal					Site Leads	Programme Manager
Improved access reduces patient travel time	B11	Reduced patient travel time - value to patients	Value to patient of reduced travel time for scans	Patient	Soceital (monetised)	Number of patient miles travelled p.a.	Identify baseline position	Position will worsen - estimate scale	Target improvement to be agreed	Reduction in mileage converted to travel time saved x value of patient travel time		DfT TAG Data Book		Site Leads	Programme Manager
	B12	Reduced patient travel time - reduced greenhouse gases	Reduction in greenhouse gases as a result of reduced patient mileage	Environment	Soceital (monetised)	Number of patient miles travelled p.a.	Identify baseline position	Position will worsen - estimate scale	Target improvement to be agreed	Convert reduced mileage to reduced fuel consumption and establish change in carbon emissions x value of carbon emissions		DfT TAG Data Book		Site Leads	Programme Manager
Cost effective service supported by income generation	B13	Income generation opportunities	Increased opportunities to protect existing and generate additional income in relation to private practice, commerical trials, NHS England	NHS Wales	Cash releasing	Value of income p.a.	Cardiff currently see aproximately 70-100 patients	All private income is at risk	Protect existing income and oppoirtinities to increase by XX	No of patients x £1,300 - £1,500 per scan less costs			Dependent on option (phasing of each project)	Site Leads	Programme Manager
Provide capacity that meets population needs in line with international best practice	B14	Better equity of access	Increasing access in line with international best practice in terms of scanning capacity in relation to population needs ensures better equity of access which will result in improved patient outcomes	Patients	Quantitative (Unmonetised)	Data on number or range of indications available at each PET centre Data on time from referral to completion of scan from sites Data from PET centres on the 10 working day target between referral to scan, and time to reporting	Identify baseline position	Position will worsen - estimate scale	Target improvement to be agreed	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
Increase opportunities for Research and Development	B15	Increased proprotion of staff research active	Centre of Excellence provides increased opportunities for staff to be involved in research and clinical trials ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)	Number of research posts/professors/chairs Numbers of publications associated with PET site Bibliometric impact factors	Identify baseline position	Baseline position will continue	Target improvement to be agreed	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
	B16	Increased proportion of patients on clinical trials	Centre of Excellence provides increased opportunties for patients to participate in clinical trials ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)	NIHR data PET site data	Identify baseline position	Baseline position will continue	Target improvement to be agreed	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
	B17	Greater number of trials led by and participated in by PET site	Centre of Excellence provides increased opportunties increased opportinities for PET sites to be involved in a greater range of research ensuring the service is aligned with international best practice, leading to better outcomes in the long term	NHS Wales Workforce Patients	Quantitative (Unmonetised)	Number of trials led by PET site Total numbers of trials by PET site Appointment to new academic posts NIHR (+ others) data	Identify baseline position	Baseline position will continue	Target improvement to be agreed	N/A	N/A	N/A	Dependent on option (phasing of each project)	Site Leads	Programme Manager
Increased opportunities for innovation	B18	Improved access to a greater range of diagnostics to support greater range of therapeutics	Providing increased number of dedicated fixed PET-CT facilities provides opportunities to offer an increased range of diagnostics that will support more therapeutics that would not be possible using mobile units, such as - Radiotherapy planning - Cardiology - GA	NHS Wales Workforce Patients	Qualitative	Dependent on number of factors	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Site Leads	Programme Manager

Key	Description
Monetised	Financial benefits (including direct cash releasing and non-cash releasing, as well as indirect and societal benefits that can be monetised)
Quantatitive	Benefits that can be quantified but cannot be valued in monetary equivalent terms
Qualitative	Benefits that cannot be quantified

TRUST BOARD

REVISION TO VELINDRE UNIVERSITY NHS TRUST MODEL STANDING ORDERS & STANDING FINANCIAL INSTRUCTIONS

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Emma Stephens, Head of Corporate Governance
PRESENTED BY	Lauren Fear, Director of Corporate Governance & Chief of Staff
EXECUTIVE SPONSOR APPROVED	Lauren Fear, Director of Corporate Governance & Chief of Staff

REPORT PURPOSE	FOR APPROVAL

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Executive Management Board	05/07/2021	Endorse for Committee Approval
Audit Committee	08/07/2021	Endorse for Board Approval

ACRONYMS	
EASC	Emergency Ambulances Services Committee

HEIW	Health Education and Improvement Wales
SFIs	Standing Financial Instructions
SOs	Standing Orders

1. SITUATION/BACKGROUND

1.1 It is necessary to ensure that the Trust Model Standing Orders (SOs), Reservation and Delegation of Powers and Standing Financial Instructions (SFIs) are kept up to date and take account of any developments. Whilst individual organisations are responsible for review of their respective documents they are informed by Model SOs and SFIs issued by the Minister.

1.2 Model Standing Orders, Reservations and Delegation of Powers (SO's) were last issued in September 2019 for Local Health Boards, Trusts, Welsh Health Specialised Services Committee (WHSSC) and Emergency Ambulances Services Committee (EASC). A review of the Model Standing Financial Instructions (SFI's) was not undertaken at this time. Model SO's and SFI's were issued to Health Education and Improvement Wales (HEIW) in September 2018.

1.3 All documents have recently been reviewed by officials in association with representatives of the Board Secretaries and Directors of Finance Peer Groups.

1.4 The revised model documents have now been issued in accordance with the Ministers powers of direction contained within sections 12(3) (for Local Health Boards) and 19(1) (for NHS Trusts) and 23(1) (Special Health Authorities) of the National Health Service (Wales) Act 2006.

1.5 The Board is required to incorporate and adopt this latest review into the Trusts Standing Orders, Reservation and Delegation of Powers and Standing Financial Instructions (which form part of the Standing Orders).

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Following receipt of the revised Model SOs and SFIs the Trust has reviewed the organisations SOs and SFIs. For ease of reference to aid tracking of the changes incorporated into this revision, **Appendix (A)** outlines the changes to the Model SOs and

Appendix (B) outlines the changes to the Model SFIs. The revised Model SOs and SFIs are included as **Appendices (C) – (F)** to this report.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Yes
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.

4. RECOMMENDATION

4.1 The Trust Board is asked to **APPROVE** the Revised Model SOs and SFIs.

Review of NHS Wales Trust Model Standing Orders – March 2021
Table of Amendments, Cross Reference to Legislation and Confirmation of Sections which are not for variation by NHS Body

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
2			Forward	No amendments made - Refer to legislation before making amendments Trusts to amend as appropriate for their organisation					
2			Forward	New hyperlink inserted to the Governance eManual					
7	**Section A - Introduction**								
7	i)	i)	Statutory Framework	Velindre - 'University' added to title and 'as amended' added after Establishment Order PHW and WAST - no amendments made Refer to legislation before making any further amendments	Velindre National Health Service Trust (Establishment) Order 1993	Welsh Ambulance Services National Health Service Trust (Establishment) Order 1998	The Public Health Wales National Health Service Trust (Establishment) Order 2009	✓	
7	ii)	ii)	Statutory Framework	No amendments made - principal place of business to be added					
7	iii)	iii)	Statutory Framework	No amendments made - insert name of Trust					
7	iv)	iv)	Statutory Framework	No amendments made - Refer to legislation before making amendments	NHS Act 2006 and NHS (Wales) Act 2006	NHS Act 2006 and NHS (Wales) Act 2006	NHS Act 2006 and NHS (Wales) Act 2006	✓	
8	v)	v)	Statutory Framework	No amendments made - Refer to legislation before making amendments Trusts to amend as appropriate for their organisation	The National Health Service Trusts (Membership and Procedure) Regulations 1990 as amended	The National Health Service Trusts (Membership and Procedure) Regulations 1990 as amended	The Public Health Wales National Health Service Trust (Membership and Procedure) Regulations 2009 as amended	✓	
8	vi)	vi)	Statutory Framework	No amendments made - Refer to legislation before making amendments	Sections 18 & 19 & Schedule 3 of the NHS (Wales) Act 2006	Sections 18 & 19 & Schedule 3 of the NHS (Wales) Act 2006	Sections 18 & 19 & Schedule 3 of the NHS (Wales) Act 2006	✓	
8	vii)	vii)	Statutory Framework	No amendments made - Refer to legislation before making amendments	Well-being of Future Generations (Wales) Act 2015	Well-being of Future Generations (Wales) Act 2015	Well-being of Future Generations (Wales) Act 2015	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
8	x)	x)	Statutory Framework	No amendments made - Refer to legislation before making amendments	The Welsh Health Specialised Services Committee (Wales) Directions 2009 & The Emergency Ambulance Services Committee (Wales) Directions 2014	The Welsh Health Specialised Services Committee (Wales) Directions 2009 & The Emergency Ambulance Services Committee (Wales) Directions 2014	The Welsh Health Specialised Services Committee (Wales) Directions 2009 & The Emergency Ambulance Services Committee (Wales) Directions 2014	✓	
8 & 9	xi)	xi)	Statutory Framework	No amendments made - Refer to legislation before making amendments	The Welsh Health Specialised Services Committee (Wales) Directions 2009	The Welsh Health Specialised Services Committee (Wales) Directions 2009	The Welsh Health Specialised Services Committee (Wales) Directions 2009	✓	
9	xii)	xii)	Statutory Framework	No amendments made - Refer to legislation before making amendments	The Emergency Ambulance Services Committee (Wales) Directions 2014	The Emergency Ambulance Services Committee (Wales) Directions 2014	The Emergency Ambulance Services Committee (Wales) Directions 2014	✓	
9	xiii)	xiii)	Statutory Framework	'as amended' added and 'and Special Health Authorities' to reflect extension of Committee to Special Health Authorities.	The Velindre National Health Service Trust Shared Services Committee (Wales) Regulations 2012	The Velindre National Health Service Trust Shared Services Committee (Wales) Regulations 2012	The Velindre National Health Service Trust Shared Services Committee (Wales) Regulations 2012	✓	
9	xiv)	xiv)	Statutory Framework	No amendments made - Refer to legislation before making amendments	National Health Service Bodies and Local Authorities Partnership Arrangements (Wales) Regulations 2000/NHS (Wales) Act 2006	National Health Service Bodies and Local Authorities Partnership Arrangements (Wales) Regulations 2000/NHS (Wales) Act 2006	National Health Service Bodies and Local Authorities Partnership Arrangements (Wales) Regulations 2000/NHS (Wales) Act 2006	✓	
9	xv)	xv)	Statutory Framework	No amendments made - Refer to legislation before making amendments	NHS Act 2006, Section 72	NHS Act 2006, Section 72	NHS Act 2006, Section 72	✓	
10	xvii)	xvii)	Statutory Framework	No amendments made - Refer to legislation before making amendments	The Welsh Language Standards (No.7) Regulations 2018	The Welsh Language Standards (No.7) Regulations 2018	The Welsh Language Standards (No.7) Regulations 2018	✓	
10 & 11	xxii)	xxii)	NHS Framework	New hyperlink inserted to the Governance eManual Values and Behaviour section					
11	xxiii)	xxiii)	NHS Framework	No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate	Well-being of Future Generations (Wales) Act 2015	Well-being of Future Generations (Wales) Act 2015	Well-being of Future Generations (Wales) Act 2015	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
11	xxiv)	xxiv)	NHS Framework	New hyperlink to Governance eManual added					
11	xxvi)	xxvi)	NHS Trust Framework	No amendments made - Trust to insert name					
12	xxix)	xxix)	Applying Standing Orders	No amendments made - Trust to add title of their local Standards of Behaviour Framework/Policy.					
12	xxx)	xxx)	Applying Standing Orders	No amendments made - Trust to insert add title of their Audit Committee					
12 & 13	xxxii)	xxx)	Applying Standing Orders	No amendments made - Bullet 1 - Trust to insert appropriate Regulations, Bullet 2 - Trust to	The National Health Service Trusts (Membership and	The National Health Service Trusts (Membership and	The Public Health Wales National Health Service Trust	✓	
14	xxxv)	xxxv)	The Role of the Board Secretary	No amendments made - contact details for Board Secretary to be added					
15	**Section B : Standing Orders**								
15	1.0.1	1.0.1	The Trust	Velindre - deleted reference to '*manage and provide to or in relation to the health service in Wales and range of information technology systems and associated support and consultancy services, desktop services, web development, telecommunications services, healthcare information services, and'* to reflect the establishment of Digital Health and Care Wales.	Velindre NHS Trust (Establishment) Amendment Order 1999, Article 3 (2)(a) & (b), amended 2002 and Article 3(2) (c) added, amended 2012, and Article 3(2)(d) & (e) added, amended 2017 and Article 3(2)(f) added			✓	
15	1.0.1	1.0.1	The Trust	WAST - No amendments made - Refer to legislation before making amendments		WAST (Establishment) Order 1998 (as amended)		✓	
16	1.0.1	1.0.1	The Trust	PHW - No amendments made - Refer to legislation before making amendments			Public Health Wales (Establishment Order) 2009	✓	
16 & 17	1.0.2	1.0.2	The Trust	No amendments made - Refer to legislation before making amendments - Trusts to insert paragraph as appropriate	Velindre NHS Trust (Establishment) Amendment Order 1999 (as amended)	WAST (Establishment) Order 1998 (as amended)	Public Health Wales (Establishment Order) 2009	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
17	1.1.1	1.1.1	Membership of the Trust	No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate	The National Health Service Trusts (Membership and Procedure) Regulations 1990, amended Velindre National Health Service Trust (Establishment) Order 1993, Amendment Order 2002, Amendment (No. 2) Order 2002 and Amendment) Order 2018	The National Health Service Trusts (Membership and Procedure) Regulations 1990, amended by Welsh Ambulance Services National Health Service Trust (Establishment) Order 1998 and (Amendment) Order 2009	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, as amended in 2011 and 2016	✓	
17	1.1.3	1.1.3	Membership of the Trust	No amendments made - Refer to legislation before making amendments	NHS Trust (Membership and Procedure)Regulations 1990, Reg 3(2)	NHS Trust (Membership and Procedure)Regulations 1990, Reg 3(2)	PHW Public Health Wales Membership Regs 2009, Regulation 3(1)	✓	
17	1.1.4	1.1.4	Membership of the Trust	No amendments made - Refer to legislation before making amendments	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 3(2) and 17	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 3(2) and 17	PHW Public Health Wales Membership Regs 2009, Regulation 3(1) and 21	✓	
18	1.1.5	1.1.5	Membership of the Trust	No amendments made - Refer to legislation before making amendments	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 3(2) and 18	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 3(2) and 18	PHW Public Health Wales Membership Regs 2009, Regulation 3(1) and 22	✓	
18	1.1.6	1.1.6	Membership of the Trust	*Executive Directors* - No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 4(1)	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 4(1)	PHW Public Health Wales Membership Regs 2009, Regulation 4	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
18	1.1.7	1.1.7	Membership of the Trust	*Non-Executive Directors (to be known as Independent Members)* No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate	Velindre NHS Trust (Establishment) Order, Article 4, as amended in 2002 and 2018	Welsh Ambulance Services National Health Service Trust (Establishment) Order 1998, Article 4, as amended in 2009	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, as amended in 2011 and 2016	✓	
18 & 19	1.1.8	1.1.8	Membership of the Trust	New paragraph added to reflect view of Minister that it is not normally appropriate for a Non Officer Member to serve on the Board of more than one NHS body in Wales.					✓
19	1.1.9	1.1.9	Membership of the Trust	*Use of Term Independent Member* - paragraph renumbered. Refer to legislation before making amendments					✓
19	1.2 & 1.2.1	1.2 & 1.2.1	Joint Directors	No amendments made - Refer to legislation before making amendments	The National Health Service Trusts (Membership and Procedure) Regulations 1990, Part 2 Regulation 6	The National Health Service Trusts (Membership and Procedure) Regulations 1990, Part 2 Regulation 6	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 2, Regulation 7	✓	
19	1.3.1	1.3.1	Tenure of Board Members	No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate **Note**: Limitation of 8 years does not apply under the NHS (Membership and Procedure Regulations 1990, therefore no limitation for Velindre and WAST	The National Health Service Trusts (Membership and Procedure) Regulations 1990, Part 2 Regulation 6	The National Health Service Trusts (Membership and Procedure) Regulations 1990, Part 2 Regulation 6	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 2, Regulation 8(1) and 14(3)	✓	
20	1.3.2 & 1.3.3	1.3.2 & 1.3.3	Tenure of Board Members	No amendments made - Refer to legislation before making amendments	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 7(2)	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 7(2)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 2, Regulation 8(2)	✓	
21	1.4.8	1.4.8	Responsibilities of Board Members	**The Vice-Chair** - no amendments made - Refer to legislation before making any changes.	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 14	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 14	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 3, Regulation 18		

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
23	2.2.1	2.2.1	Delegation of Board functions	No amendments made - Refer to legislation before making amendments Trusts to insert paragraphs as appropriate	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 16	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 16	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 3, Regulation 20		
24 - 26	3	3	Committees	Refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 15	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 15	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 3, Regulation 19	✓	
25	3.3.1	3.3.1	Committees	No amendments - refer to legislation and Welsh Government before making any amendments					✓ regarding committees to be established as a minimum in 3.3.1
25	3.3.3 - 3.3.5	3.3.3 - 3.3.5	Committees	No amendments - refer to legislation and Welsh Government before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 19	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 19	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 3, Regulation 23	✓	
26	3.3.6	3.3.6	Committees	No amendments - refer to legislation and Welsh Government before making any amendments					
26	3.4.1	3.4.1	Other Committees	No amendments made - Refer to legislation before making amendments	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 15	NHS Trust (Membership and Procedure)Regulations 1990, Part 3, Regulation 15	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Part 3, Regulation 19	✓	
27 & 28	4	4	NHS Wales Shared Services Partnership	Refer to legislation before making any amendments	Velindre National Health Service Trust Shared Services (Committee) (Wales) Regulations 2012	Velindre National Health Service Trust Shared Services (Committee) (Wales) Regulations 2012	Velindre National Health Service Trust Shared Services (Committee) (Wales) Regulations 2012	✓	
27 & 28	4.0.2	4.0.2	NHS Wales Shared Services Partnership	'as amended' added and 'and Special Health Authorities' to reflect extension of Committee to Special Health Authorities.	As above	As above	As above	✓	
28 - 30	5	5	Advisory Groups	No amendments - refer to legislation and Welsh Government before making any amendments					✓ - requirement for Local Partnership Forum
27	5.1.1	5.1.1	Advisory Groups	no amendments made - Trusts to insert details as appropriate					✓ - requirement for Local Partnership Forum

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
31	6.0.3	6.0.3	Working in Partnership	No amendments made - Refer to legislation before making amendments	Social Services and Wellbeing (Wales) Act 2014 and Wellbeing of Future Generations (Wales) Act 2015	Social Services and Wellbeing (Wales) Act 2014 and Wellbeing of Future Generations (Wales) Act 2015	Social Services and Wellbeing (Wales) Act 2014 and Wellbeing of Future Generations (Wales) Act 2015	✓	
31 & 32	6.1	6.1	Community Health Councils	No amendments made - Refer to legislation before making amendments	Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010/Community Health Councils (Establishment, Transfer of Functions and Abolition) (Wales) Order 2010 Amended by Community Health Councils (Constitution, Membership and Procedures) (Wales) (Amendment) Regulations 2015	Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010/Community Health Councils (Establishment, Transfer of Functions and Abolition) (Wales) Order 2010 Amended by Community Health Councils (Constitution, Membership and Procedures) (Wales) (Amendment) Regulations 2015	Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010/Community Health Councils (Establishment, Transfer of Functions and Abolition) (Wales) Order 2010 Amended by Community Health Councils (Constitution, Membership and Procedures) (Wales) (Amendment) Regulations 2015	✓	
32 & 33	7.1.1	7.1.1	Putting the Citizen First	Bullet point two amended to reflect meetings held virtually. No other amendments made.	Section 44, Welsh Language (Wales) Measure 2011	Section 44, Welsh Language (Wales) Measure 2011	Section 44, Welsh Language (Wales) Measure 2011	✓	
33	7.2.5	7.2.5	Annual General Meeting	Removed need for the agenda to be displayed on principal sites as no-longer a requirement of the Public Bodies (Admission to Meetings) Act.					
33 & 34	7.2.6	7.2.6	Annual General Meeting	Removed reference to Annual Quality Statement as this is not a requirement for 2020/21 and requirements will be changing in future years.					
34	7.3	7.3	Calling Meetings	No amendments made - refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Schedule	NHS Trust (Membership and Procedure)Regulations 1990, Schedule	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 2(1)	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
34	7.4.3	7.4.3	Notifying and Equipping Board members	No amendments made - 'calendar' previously added to clarify number of days for advance publication of papers. Regulations specify 'clear' days but Board Secretaries preferred term 'calendar' **Note** - Trust Regs state 3 days, PHW Regs state 10 days	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 2(3)	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 2(3)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 2(3)	✓	
35	7.4.6	7.4.6	Notifying and Equipping Board members	No amendments made - refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 2(5)	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 2(5)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 2(5)	✓	
35	7.4.7	7.4.7	Notifying the public and others	See above re reference to 'calendar' days. Removed need for public part of agenda to be displayed on principal sites as no-longer a requirement of the Public Bodies (Admission to Meetings) Act.	Public Bodies (Admission to meetings) Act 1960, Section 1, subparagraph 4	Public Bodies (Admission to meetings) Act 1960, Section 1, subparagraph 4	Public Bodies (Admission to meetings) Act 1960, Section 1, subparagraph 4	✓	
35 & 36	7.5.1	7.5.1	Admission of the public, press and observers	No amendments made - refer to legislation before making any amendments	Public Bodies (Admission to meetings) Act 1960, Section 1	Public Bodies (Admission to meetings) Act 1960, Section 1	Public Bodies (Admission to meetings) Act 1960, Section 1	✓	
36	7.5.2	7.5.2	Admission of the public, press and observers	No amendments made - refer to legislation before making any amendments **Note:** Letter issued in November 2009 advising that Audit Committees should 'operate in private'	Public Bodies (Admission to meetings) Act 1960, Section 1	Public Bodies (Admission to meetings) Act 1960, Section 1	Public Bodies (Admission to meetings) Act 1960, Section 1	✓	
37	7.5.10	7.5.10	Quorum	No amendments made - refer to legislation before making any amendments Trust to insert appropriate paragraph	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(5)	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(5)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 3(5)	✓	
39	7.5.24	7.5.24	Voting	No amendments made - refer to Welsh Government before making any amendments **Note:** Legislation does not require Trusts to take account of views					
40	7.5.25	7.5.25	Voting	No amendments made - refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(3)	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(3)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 3(3)	✓	

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
40	7.6	7.6	Record of Proceedings	No amendments made - refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(4) and 3(6)	NHS Trust (Membership and Procedure)Regulations 1990, Schedule, 3(4) and 3(6)	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Schedule 2, 3(4) and 3(6)		
40	7.7.1	7.7.1	Confidentiality	No amendments made - Trust to add title of their local Standards of Behaviour Framework/Policy.					
40 & 41	8.0.1	8.0.1	Values and Standards of Behaviour	No amendments made - Trust to add title of their local Standards of Behaviour Framework/Policy.					
41	8.1.1	8.1.1	Declaration of Interests	No amendments made - Trust to add title of their local Standards of Behaviour Framework/Policy.					
43	8.2.8	8.2.8	Members with pecuniary (financial) interests	No amendments made - refer to legislation before making any amendments	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 20	NHS Trust (Membership and Procedure)Regulations 1990, Regulation 20	The Public Health Wales NHS Trust (Membership and Procedure) Regulations 2009, Regulation 24	✓	
44	8.5.1	8.5.1	Dealing with offers of gifts, hospitality and sponsorship	No amendments made - Trust to add title of their local Standards of Behaviour Framework/Policy.					
46	9.0.1	9.0.1	Signing and Sealing of Documents	No amendments made - refer to legislation before making any amendments	Schedule 3, Part 4, Para 33 of NHS (Wales) Act 2006 re Trusts. Does not appear to be a corresponding requirement for LHBs	Schedule 3, Part 4, Para 33 of NHS (Wales) Act 2006 re Trusts. Does not appear to be a corresponding requirement for LHBs	Schedule 3, Part 4, Para 33 of NHS (Wales) Act 2006 re Trusts. Does not appear to be a corresponding requirement for LHBs	✓	
47	9.0.2	9.0.2	Signing and Sealing of Documents	Paragraph renumbered	Schedule 3, Part 4, Para 33(1) of NHS (Wales) Act 2006 re Trusts	Schedule 3, Part 4, Para 33(1) of NHS (Wales) Act 2006 re Trusts	Schedule 3, Part 4, Para 33(1) of NHS (Wales) Act 2006 re Trusts	✓	
49	10.3.3	10.3.3	External Assurance	Amended to reflect correct titles for organisation.					
55	n/a	n/a	Individuals who have powers delegated to them	Trust to insert details of person to be notified of concerns					
56	Schedule 1	Schedule 1	Schedule of Matters Referred to Board	See separate sheet - Refer to legislation before making future amendments.					
65		Schedule 2.1	NHS Framework	Address of Governance eManual updated.					
66		Schedule 2.1	Standing Financial Instructions	Trusts to insert - See separate workbook for amendments					

Page Number	Previous Paragraph Reference	New or Current Paragraph Reference if no change	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust	Requirement of legislation – local amendment not permissible	Issued under Direction – local amendment not permissible
67		Schedule 3	Board Committee Arrangements	Trust to insert details. No amendments have been made to the details included in the Terms of Reference as these were updated as a suite in November 2020 as part of new Board Committee arrangements. However, they have been re-formatted for consistency.					
68 - 76		Schedule 4	Advisory Groups	Trust to insert details of any advisory groups. No amendments have been made - however, they have been reformatted for consistency.					✓ - requirement for Local Partnership Forum

NHS Trust - Schedule 1 - Schedule of Matters Reserved for the Board

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
Footnote 5	Footnote 5	n/a	n/a	n/a	n/a	Assembly changed to *Welsh* Government	
1	1	General	Board may determine any matter for which it has statutory or delegated authority in accordance with SOs.	Y			
2	2	General	The Board must determine any matter that will be reserved for the whole Board. These are: [Trust to insert details]	Y			
n/a	3	General	Approve the Trusts Governance Framework	Y		New requirement. The need for an overarching Governance Framework not previously recognised. The Governance Framework will provide a broad overview, outline, or skeleton of interlinked items/principles/concepts which supports the approach ensuring standards of governance are maintained within the Trust. More detailed policies and procedures will underpin the Framework as appropriate.	
4	4	Operating arrangements	Approve, vary and amend - SOs; - SFIs; - Scheme of matters reserved to the Trust; - Scheme of delegation to Committees and others; and - Scheme of delegation to officers. In accordance with any directions set by Welsh Ministers.	Y		Note : agreed with Board Secretaries that Scheme of Delegation should remain high level.	Regulation 23 - The Public Health Wales National Health Service (Membership and Procedure) Regulations 2009 and Regulation 19 - The National Health Service Trusts (Membership and Procedure) Regulations 1990

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
8	5	Operating arrangements	Ratify any urgent decision taken by the Chair and the Chief Executive in accordance with SO requirements	Y		No amendments Note : agreed with Board Secretaries that Scheme of Delegation should remain high level.	Section B, Paragraph 2.1 - Chair's action on urgent matters, page 22 - Model Standing Orders
NEW	6	Operating arrangements	Formal consideration of report of Board Secretary on any non-compliance with Standing Orders, making proposals to the Board on any action to be taken.	N	Audit Committee	Wording not consistent with SOs which under xxx) which state non-compliance should be reported to the BS, who will ask the Audit Committee to formally consider the matter and make proposals to the Board on any action to be taken.	Section A, paragraph xxx), Applying Standing Orders, page 12 - Model Standing Orders
9	8	Operating arrangements	Receive report and proposals regarding any non-compliance with Standing Orders, and where required ratify in public session any action required in response to failure to comply with SOs.	Y		As above and section moved to improve flow of the Scheme of Delegation	Section A, paragraph xxx), Applying Standing Orders, page 12 - Model Standing Orders
15	9	Operating arrangements	Authorise use of the Trusts official seal	Y		Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 9, page 46-47 - Signing and Sealing of Documents - Model Standing Orders

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
5	10	Operating arrangements	Approve the Trust's Values and Standards of Behaviour Framework **[Trust to insert title of the relevant policy]**	Y		A Framework is a broad overview, outline, or skeleton of interlinked items/principles/concepts which supports a particular approach to a specific objective, and serves as a structure that provides guidance which can be modified as required. Note: The Board cannot delegate the approval of the 'Framework' but they can delegate approval of policies which fall out of this e.g. the Declarations of Interest Policy and Procedure Section moved to improve flow of Scheme of Delegation	Regulation 24 - The Public Health Wales National Health Service (Membership and Procedure) Regulations 2009 and Regulation 20 - The National Health Service Trusts (Membership and Procedure) Regulations 1990 Section B, Paragraph 8 - Values and Standards of Behaviour, Pages 40-46 of Model Standing Orders
18	11	Organisation Structure & Staffing	Require, receive and determine action in response to the declaration of Board members' interests, in accordance with advice received e.g. from Audit Committee or Board Secretary	N	Chair on behalf of Board/Vice-Chair on behalf of Board if Chair is declaring interest	Amended to reflect the wording within the SO's and moved to improve flow of Scheme of Delegation	Section B, para 8.2.7 - Dealing with Members' interests during Board meetings, page 43 of Model Standing Orders
25	12	Strategy and Planning	Determine the Trusts strategic aims, objectives and priorities	Y		Section moved to improve flow of Scheme of Delegation	Section B, para .4, Page 20 of Model Standing Orders

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
30	13	Strategy and Planning	Approve the Trusts key strategies and programmes related to: - The development and delivery of patient and population centred health and care/clinical services ~~for their population~~ - Improving quality and patient safety outcomes - Workforce and organisational development - Infrastructure, including IM&T, Estates and Capital (including major capital investment and disposal plans)	Y		Language modernised to refer to health and care and section moved to improve flow of Scheme of Delegation Note: Trusts are not required to develop a population needs assessment.	Clinical Services Strategy to be approved by Board (p 13) NHS Wales Planning Framework 2020-2023
NEW	14	Strategy and Planning	Agreement of Well-being objectives in accordance with the requirements of the Well-being and Future Generations (Wales) Act 2015	Y	TRUSTS BUT EXCLUDING WAST	Added to reflect introduction of legislation Note: Applicable to Trusts excluding Welsh Ambulance Services NHS Trust	Section 9 of the Well-being and Future Generations (Wales) Act 2015
26	15	Strategy and Planning	Approve the Trusts Integrated Medium Term Plan, including the balanced Medium Term Financial Plan	Y		Section moved to improve flow of Scheme of Delegation	Schedule 4 of the NHS (Wales) Act 2006 and NHS Finance (Wales) Act 2014 regarding requirement to produce balanced plan.
31	16	Strategy and Planning	Approve the Trusts budget and financial framework (including overall distribution of the financial allocation and unbudgeted expenditure)	Y		Section moved to improve flow of Scheme of Delegation	Approve Trust Framework - Para 5.1.1, Schedule 2, Standing Financial Instructions
6	17	Operating arrangements	Approve the Trusts framework and strategy for performance management~~, risk and assurance~~	Y		Combined Framework and Strategy for Performance and risk and assurance but have in separate sections for performance and risk and assurance Section moved to improve flow of Scheme of Delegation	Section B, para 1.4.1 - *Role* page 20 of Model Standing Orders

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
27	18	Strategy and Planning	Approve the Trusts framework and strategy for risk and assurance	Y		See above, also previously read 'risk management strategy and plans' . Reworded for consistency and section moved to improve flow of Scheme of Delegation	
11	19	Operating arrangements	~~Approve~~ Ratify policies for dealing with raising concerns, complaints and incidents in accordance with the Putting Things Right and health and safety requirements.	Y	Committee of the Board may approve policies for formal ratification by Board	Need to be clear re definition of 'policy' - A written statement of intent, describing the broad approach or course of action that the organisation is taking with a particular issue. Policies are underpinned by evidenced based procedures and guidelines and are mandatory. The formulation of policies allows the organisation to produce formal agreements, which clearly defines the commitment of the organisation and the obligations of individual staff. Reference made to the Putting Things Right requirements and to allow delegation of policies to an appropriate committee. Section also moved to improve flow within Scheme of Delegation	The NHS Redress (Wales) Measure 2008, The NHS Redress (Wales) Measure 2008 (Commencement) Order 2011
3	20	Operating arrangements	Agree the arrangements for ensuring the adoption of ~~the~~ standards of governance and performance (including the quality and safety of healthcare, and the patient experience) to be met by the Trust, including standards/ requirements determined by Welsh Government, regulators, professional bodies/others, e.g. National Institute of Health and Care Excellence (NICE) ~~Royal Colleges~~	Y		Amended to allow the Board to consider the various standards and determine delegation arrangements. Not all standards will be adopted in their entirety but it is important for decision making regarding this to be clear. Practical example = the arrangements for organisations to consider Royal College Guidance during the COVID-19 pandemic and reflect provisions where/if appropriate. Section moved to improve flow of Scheme of Delegation.	

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
28	21	Strategy and Planning	Approve the Trusts ~~citizen~~ patient, public, staff, partnership and stakeholder engagement and co-production strategies ~~, including communication~~	Y		Language modernised and merged into single area for delegation. Section moved to improve flow of Scheme of Delegation	Also refer to Regulation 27 of the Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010, Guidance for Engagement and Consultation on Changes to Health Services, and Section 183 (duty of LHBs) of the NHS (Wales) Act 2006 and Section 242 of NHS (Wales) Act 2006 (for Trusts) Well-being of Future Generations (Wales) Act 2015 Social Services and Wellbeing (Wales) Act 2014
7	22	Operating arrangements	Approve the introduction or discontinuance of any significant activity or operation. Any activity or operation shall be regarded as significant if the Board determines it so based upon its contribution/impact on the achievement of the LHB's aims, objectives and priorities	Y		No amendment required. Reference to legislation and guidance provided. Section moved to improve flow of Scheme of Delegation.	Also refer to Regulation 27 of the Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010, Guidance for Engagement and Consultation on Changes to Health Services, and Section 183 (duty of LHBs) of the NHS (Wales) Act 2006 and Section 242 of NHS (Wales) Act 2006 (for Trusts)

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
17	23	Organisation Structure & Staffing	Approve the appointment, appraisal, discipline and dismissal of any other Board level appointments and other senior employees, in accordance with Ministerial Instructions e.g. the Board Secretary	N	Remuneration and Terms of Service Committee * NOTE; Welsh Ministers approval will be required in the exceptional event that remuneration needs to be above the maximum of the salary band range	Previously part of former paragraph 17 Section moved to improve flow of Scheme of Delegation	Para 14.1.4, Pay Expenditure, page 58, Schedule 2.1, Model Standing Financial Instructions and Chapter 6, Annex 2, NHS Manual for Accounts
16/17	24	Organisation Structure & Staffing	~~Ratify~~ Appointment ~~and manage appraisal, discipline and dismissal~~ of the Chief Executive, Executive Directors and any other Board level appointments , e.g., the Board Secretary	N	Remuneration and Terms of Service Committee For Chief Executive Committee to consist of Chair and non-officer members and for executive directors Committee to also include the chief executive.	Previously part of former paragraph 16/17 Amended to reflect provisions within Regulations. Section moved to improve flow of Scheme of Delegation	Regulation 3(2), 21 & 22, The Public Health Wales National Health Service Trust (Membership and Procedure) Regulations 2009/Regulation 3(3), 17 & 18 The National Health Service Trusts (Membership and Procedure) Regulations 1990 Section B, Paragraph 1.1.6, page 18, Appointment of Executive Directors - Model Standing Orders
16/17	25	Organisation Structure & Staffing	Termination of appointment and suspension officer members in accordance with the provisions of Regulations	N	Remuneration and Terms of Service Committee	Previously part of former paragraph 16/17 Amended to reflect provisions within Regulations. Section moved to improve flow of Scheme of Delegation	Regulation 9, The Public Health Wales National Health Service Trust (Membership and Procedure) Regulations 2009/Regulation 8 The National Health Service Trusts (Membership and Procedure) Regulations 1990

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
16/17	26	Organisation Structure & Staffing	Consider appraisal of officer members of the Board (Chief Executive and Directors)	N	Remuneration and Terms of Service Committee	See above - sections split to reflect regulations and clarify arrangements. Previously part of former paragraph 16/17 Section moved to improve flow of Scheme of Delegation	
n/a	27	Organisation Structure & Staffing	Consider and approve redundancy and Early Release Applications, noting that where the settlement is £50,000 or above subsequent agreement of Welsh Government is required.	N	Remuneration and Terms of Service Committee	Inserted to ensure clarity regarding redundancy and Early Release Applications.	Chapter 6, Annex 2, NHS Manual for Accounts
19	28	Organisation Structure & Staffing	Approve, arrange the review, and revise the LHB's top level organisation structure and corporate policies	Y		Section moved to improve flow of Scheme of Delegation	
20	29	Organisation Structure & Staffing	Appoint, arrange the review, revise and dismiss Trust Committees directly accountable to the Board.	Y		Section moved to improve flow of Scheme of Delegation	Regulation 19 & 20, The Public Health Wales National Health Service Trust (Membership and Procedure) Regulations 2009/Regulation 15 & 16 The National Health Service Trusts (Membership and Procedure) Regulations 1990 Section B, Paragraph 3, pages 24 - 26 - Model Standing Orders
21	30	Organisation Structure & Staffing	Appoint, equip, review and (where appropriate) dismiss the Chair and members of any Committee or group set up by the Board	Y		Section moved to improve flow of Scheme of Delegation	As above
22	31	Organisation Structure & Staffing	Appoint, equip, review and (where appropriate) dismiss the individuals appointed to represent the Board on outside bodies and groups.	Y		Section moved to improve flow of Scheme of Delegation	As above

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
23	32	Organisation Structure & Staffing	Approve the standing orders and terms of reference and reporting arrangements of all Committees and groups established by the Board			Amended to reflect the wording within the SO's Section moved to improve the flow of the Scheme of Delegation	Regulation 19 & 20, The Public Health Wales National Health Service Trust (Membership and Procedure) Regulations 2009/Regulation 15 & 16 The National Health Service Trusts (Membership and Procedure) Regulations 1990 Section B, Paragraph 3, pages 24 - 26 - Model Standing Orders
10	33	Operating arrangements	Approve arrangements relating to the discharge of the Trusts responsibility as a Bailee for patients' property	N	Audit Committee	No specific requirement for approval by the Board. See Section 19 of SFI's regarding responsibilities of Trust, Chief Executive and Director of Finance. Section moved to improve the flow of the Scheme of Delegation	Section 19, Para 19.1.1, Patients Property, pages 75 - 76, Schedule 2.1, Standing Financial Instructions. Responsibility delegated to Director of Finance
12	34	Operating arrangements	Approve individual compensation payments in line ~~with SFI's~~ the provisions of Annex 4 to Chapter 6 of the Welsh Government Manual for Accounts	Y	Y - except where Chapter 6 specifies appropriate to delegate to a committee, Chief Executive or Officers .	Added reference to the Manual for Accounts and need to ensure delegated in accordance with provisions of Manual for Accounts. Section moved to improve the flow of the Scheme of Delegation	Annex 4, Chapter 6 of the Welsh Government Manual for Accounts
13	35	Operating arrangements	Approve individual cases for the write off of losses or making of special payments above the limits delegated to the Chief Executive and Officers	Y	Y - except where Chapter 6 specifies appropriate to delegate to a committee, Chief Executive or Officers .	Section moved to improve flow of Scheme of Delegation	Para 17, Disposal, Condemnations, Losses and Special Payments, pages 70 - 72, Schedule 2.1, Model Standing Financial Instructions and Annex 4, Chapter 6 of the Welsh Government Manual for Accounts
14	36	Operating arrangements	Approve proposals for action on litigation on behalf of the Trust	Y		Section moved to improve flow of Scheme of Delegation	

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
24	37	Organisation Structure & Staffing	Approve the arrangements relating to the discharge of the LHB's responsibilities as a corporate trustee of funds held on trust in accordance with the provision of Paragraph 20 of the Standing Financial Instructions.	Y		Crossed referenced to SFI's Section moved to improve flow of Scheme of Delegation	Paragraph 20, Funds Held on Trust (Charitable Funds), pages 77 - 78, Schedule 2.1, Model Standing Financial Instructions
~~29~~		~~Strategy and Planning~~	~~Approve the LHB's partnership and stakeholder engagement and involvement strategies~~	~~Y~~		See 21 above - merged with previous 28	
32	38	Strategy and Planning	Approve individual contracts (other than NHS contracts) above the limit delegated to the Chief Executive set out in the Standing Financial Instructions	Y		Section moved to improve flow of Scheme of Delegation	Paragraph 10, Non-Pay Expenditure, pages 35 - 38, Schedule 2.1, Model Standing Financial Instructions
33	39	Performance and Assurance	Approve the Trusts audit and assurance arrangements.	Y		Whilst Board must approve overarching arrangements some functions can be delegated to the relevant Committee Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 10, pages 47-49 - Model Standing Orders
34	40	Performance and Assurance	Receive reports from the Trusts Executive on progress and performance in the delivery of the Trusts strategic aims, objectives and priorities and approve action required, including improvement plans as appropriate.	Y		Added '*as appropriate'* as some activities, such as approval of improvement plans may be delegated to a committee. Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 11, pages 49-50, Model Standing Orders
35	41	Performance and Assurance	Receive reports from the Trusts Committees, groups and other internal sources on the Trusts performance and approve action required, including improvement plans as appropriate.	Y		Added '*as appropriate*' as some activities, such as approval of improvement plans may be delegated to a committee. Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 3.6, page 26 and Paragraph 10.2.2, pages 49 - Model Standing Orders

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
36	42	Performance and Assurance	Receive reports on the Trusts performance produced by external regulators and inspectors (including, e.g. Audit Wales, HIW, etc.) that raise significant issue or concerns impacting on the Trusts ability to achieve its aims and objectives and approve action required, including improvement plans, taking account of the advice of Board Committees (as appropriate).	Y		WAO changed to Audit Wales and added '*significant*' as it is appropriate for Committees to discharge in some instances. Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 10.3, pages 49 - Model Standing Orders
37	43	Performance and Assurance	Receive the annual opinion of the Trusts Chief Internal Auditor and approve action required, including improvement plans	Y		Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 10.1, page 48, Model Standing Orders
38	44	Performance and Assurance	Receive the annual management ~~letter~~ report from the Auditor General for Wales and approve action required, including improvement plans.	Y		Amended 'letter' to read '*report*' Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 10.3, page 49, Model Standing Orders
39	45	Performance and Assurance	Receive ~~the annual opinion~~ assurance regarding the Trusts performance against the Health and Care Standards for Wales and the arrangements for approving required action, including improvement plans.	Y		The Quality and Safety Committee will be responsible for having oversight and ensuring the standards within in the Health and Care Standards are maintained. Amended title of standards and added reference to Board requiring assurance. Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 11, pages 49-50, Model Standing Orders
40	46	Performance and Assurance	Approve the Trusts Reporting Arrangements, including reports on activity and performance locally, to citizens, partners and stakeholders and nationally to the ~~Assembly~~ Welsh Government where required.	Y		Assembly changed to *Welsh* Government and '*where required*' added Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 11, pages 49-50, Model Standing Orders

Previous Paragraph Reference	New Paragraph Reference	Area of Delegation	Delegated Matter	Retained by the Board Y/N	Delegated to	Reason for Amendment (if applicable)	Cross reference to legislation/Model SO's/Guidance
41	47	Performance and Assurance	Receive, approve and ensure the publication of Trust reports, including its Annual Report and annual financial accounts in accordance with directions and guidance issued	Y		Added 'in accordance with directions and guidance issued' Where there is not a specific requirement for the Board to receive reports can be delegated to Committees. Section moved to improve flow of Scheme of Delegation	Section B, Paragraph 11, pages 49-50, Model Standing Orders
*Note: Any decision to reserve a matter, and the manner in which that retained responsibility is carried out will be in accordance with any regulatory and/or Welsh Government requirements.							

Review of NHS Wales Trust Model Standing Financial Instructions –
Table of Amendments, Cross Reference to Legislation and Confirmation of Sections which are not for variation by NHS Body

NHS Trust

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
1.1.1	#REF!	Introduction - General	explicit cross reference to Schedule 2.1 of SOs	N/A	N/A	N/A
1.2.1	1.2.1	Overriding Standing Financial Instructions	Deleted [ ] as Audit Committee is named in SOs	N/A	N/A	N/A
2.1.1	2.1.1	The Board	Wording expanded to be more explicit about approving plans etc.	N/A	N/A	N/A
2.1.2	2.1.2	The Board	Clarifying arrangements for delegation, that is those matters not reserved to Board	N/A	N/A	N/A
3.1.1	3.1.1	Audit Committee	Deleted [ ] as Audit Committee is named in SOs. Also hyperlink to NHS Wales Audit Committee Handbook inserted	N/A	N/A	N/A
3.2.1	3.2.1	Chief Executive	Section updated to latest Public Sector Internal Audit Standards & hyperlink inserted	N/A	N/A	N/A
3.3.1	3.3.1	Internal Audit	Section updated to latest Public Sector Internal Audit Standards	N/A	N/A	N/A
3.4.4	3.4.3	External Audit	Section deleted as Audit Wales produce an annual audit plan for audited bodies, an audit strategy is not used.	N/A	N/A	N/A
	3.4.8 & 3.4.9	External Audit	New paragraphs added - from the 2018 HEIW SFI. To ensure consistency, where appropriate, across LHB, NHS Trusts and HEIW SFIs	N/A	N/A	N/A
3.4.10	3.4.11	External Audit	reference included for "Structured Assessments"	N/A	N/A	N/A
3.5.2	3.5.2	Fraud and Corruption	Section corrected to link Local Counter Fraud Specialist (LCFS) requirement to Directions to NHS bodies on Counter Fraud Measures 2005 - not Counter Fraud manual	N/A	N/A	N/A
3.5.3	3.5.3	Fraud and Corruption	Section updated to latest name for NHS Counter Fraud Authority NHSCFA	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
3.5.4	3.5.4	Fraud and Corruption	explicit reference to "proactive and reactive" counter fraud work	N/A	N/A	N/A
3.5.5	3.5.5	Fraud and Corruption	section updated to latest requirement to participate in National Fraud Initiative(NFI)	N/A	N/A	N/A
4 & 5	**4**	Allocations & Financial Duty & Integrated Planning Chapters	Major rewrite and merging of 2 chapters into 1. This has now been restructured around the 2 statutory financial duties for LHBs - this is then consistent with how this is set out in legislation, in WG circulars on Financial Duties and in the NHS Planning Framework. The last SFI update in 2014 amended existing chapters to reflect NHS Finance (Wales) Act 2014 requirements - opportunity now taken for a more comprehensive rewrite & to ensure consistency in wording and message with relevant circulars & directions issued since 2014.	NHS Finance (Wales) Act 2014	NHS Finance (Wales) Act 2014	NHS Finance (Wales) Act 2014
	4.1	Financial Duties	Cross referencing chapter to NHS Finance (Wales) Act 2014 legislation and Financial Duties circular - including hyperlink	NHS Finance (Wales) Act 2014	NHS Finance (Wales) Act 2014	NHS Finance (Wales) Act 2014
	4.2	First Financial Duty	more narrative on the First Financial Duty - aligned with wording in Financial Duties circular	N/A	N/A	N/A
	4.3	Second Financial Duty	Significantly more narrative and explicit requirements on the Second Financial Duty - aligned with NHS Planning Framework & hyperlink to the latest NHS Planning Framework. This reflects the importance of IMTPs for Boards and requirements for the organisations.	N/A	N/A	N/A
	4.3.3	Second Financial Duty	Clear for IMTPs to demonstrate meeting Well-being of Future Generations Act requirements on well-being objectives, Well-being Goals, five ways of working and prevention.	Well Being and Future Generations Act (2015)	N/A	Well Being and Future Generations Act (2015)
	4.3.6, 4.3.7 & 4.3.8	Second Financial Duty	More narrative on following NHS Planning Framework, CEO & Board responsibilities for IMTP	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
6	5	Financial Management & Budgetary Control	Chapter heading and contents updated in language to be consistent with that used in NHS financial management and reporting. "Budgetary Control" in the way wording was used and structured was more 1980s and 1990s style.	N/A	N/A	N/A
	5.1	Budget Setting	Section updated and enhanced to include specific reference to Board approved plans and business cases, Well-being of Future Generations Act etc.	Well Being and Future Generations Act (2015)	N/A	Well Being and Future Generations Act (2015)
	5.2	Budgetary Delegation	Tidy up of section to include relevant delegation requirements from Chief Executive to budget holders	N/A	N/A	N/A
	5.3	Financial Management, Reporting and Budgetary Control	Section updated and enhanced to reflect current Financial Management rather than just Budgetary Control. The section has more details on financial management reporting including NHS Finance Academy best practice guide to Board financial reporting	N/A	N/A	N/A
	5.5.	Reporting to Welsh Government - Monitoring Returns	Hyperlink to financial monitoring returns circular inserted	N/A	N/A	N/A
7	6	Annual Accounts	Minor changes to chapter - mainly cross referencing Welsh Government's Manual for Accounts requirements	N/A	N/A	N/A
8		Shared and Hosted Services Arrangements	Chapter deleted as this is fully covered in Standing Orders Chapter 4 "NHS Wales Shared Services Partnership"	N/A	N/A	N/A
9	7	Banking Arrangements	Chapter updated to reflect requirement, not option, to use Government Banking Service and also to update to reflect best banking arrangements practice	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
10	8 & 9	Income, Fees and Charges and Security of Cash, Cheques and other Negotiable Instruments	Chapter split into two for clarity - one on cash, and handling of cash, and one on income and debt recovery. Previous chapter too mixed up.	N/A	N/A	N/A
	8.1	General	Section has been updated and enhanced - specifically around use of payment cards	N/A	N/A	N/A
	9.4	Income Due and Debt Recovery	Explicit reference now included for role of budget holders to inform on income due and on any salary & expenses overpayments	N/A	N/A	N/A
14	10	Non-Pay Expenditure	Non-Pay Expenditure chapter brought forward to chapter 10 (just before the Procurement chapter). This aligns with Procure To Pay (P2P) process for non pay goods and services - that is the authority to initiate expenditure just before the requisitioning & procuring of those goods and service.	N/A	N/A	N/A
	10.2	Director of Finance's responsibilities	Elements of responsibility taken out as responsibilities for national systems & national processes now lie with NWSSP	N/A	N/A	N/A
	10.4	Departures from SFI's	New section - similar section applies in WG SFIs	N/A	N/A	N/A
11	**11 & 13**	Grant Funding, Procurement and Contracting for Goods and Services	Grant Funding section transferred to its own separate chapter 13	N/A	N/A	N/A
11.1, 11.2 & 11.3	**13.2, 13.3 & 13.4**	Grant Funding	Grant Funding paragraph transfers from Chapter 11 to 13	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
11	**11**	Procurement and Contracting for Goods and Services	Chapter rewritten to align with the arrangements in NHS Wales, including clarifying responsibilities of both Trusts and also NWSSP Procurement. Procurement chapter has been reordered so that sections are in line with Procurement Manual, specifically the Procure To Pay (P2P) process.	N/A	N/A	N/A
	11.1	Procurement Services	New section to clarify responsibilities of both Trusts and also NWSSP Procurement. Also noting that "procurement" also refers to local procurement - for example pharmacy and works who undertake procurement on a devolved basis	N/A	N/A	N/A
	11.2	Policies and procedures	Reference to Procurement Manual included. Procurement Manual now replaces Supplementary Guidance as Schedule 1 of the SFIs - thereby formally adopted and incorporated within the SFIs. Further specific clarification of responsibilities of both Trusts and also NWSSP Procurement	N/A	N/A	N/A
	11.3	Procurement Principles	Reference made to the primary regulations/guidance the updated - "The Public Contract Regulations (2015, No. 102) and Wales Procurement Policy Statement (WPPS)	The Public Contract Regulations (2015, No. 102)	The Public Contract Regulations (2015, No. 102)	The Public Contract Regulations (2015, No. 102)
	11.4	EU Directives & Other Legislation Governing Public Procurement	Reference made to latest relevant legislation & regulations - "The Public Contract Regulations (2015, No. 102), Well Being and Future Generations Act (2015) as well as other relevant legislation and regulation, e.g. Welsh lanuage (Wales) Measure 2011. Reference to EU Directives removed, focus on PCR (adopted in UK Law)	The Public Contract Regulations (2015, No. 102) and Well Being and Future Generations Act (2015)	The Public Contract Regulations (2015, No. 102)	The Public Contract Regulations (2015, No. 102) and Well Being and Future Generations Act (2015)

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
11.9	11.5	Procurement Procedures	Responsibility for setting and maintaining and making procedures available with NWSSP. Responsibility for following with Trust.	N/A	N/A	N/A
	11.6	Procurement Consent and Notification	Reference made to requirements for Trusts to provide a contract notification to Welsh Government	N/A	N/A	N/A
	11.7	Sustainable Procurement	Section inserted to emphasise requirement for Sustainable Development & Wellbeing goals. New paragraph detailing requirement to consider the Welsh Government Guidance on Ethical Procurement and the new Code of Practice on ethical employment in supply chains	N/A	N/A	N/A
11.9	11.9 & 11.10	Planning Procurements & Procurement Process	Procurement Procedures section improved, updated and enhanced into two sections Planning Procurements & Procurement Process - as recommended by NWSSP Procurement professional colleagues	N/A	N/A	N/A
	11.11	Procurement Thresholds	Additional narrative on application of thresholds now included	N/A	N/A	N/A
	11.12	Designing Competitions	New section - as recommended by NWSSP Procurement. Details on budget holder responsibilities, performance measures and criteria	N/A	N/A	N/A
	11.13	Single Quotation or Single Tender Application	New section - as recommended by NWSSP Procurement. Detailing the exceptionality, steps required ,authoristion and reporting requirements etc.	N/A	N/A	N/A
	11.14	Disposals	New small section - as recommended by NWSSP Procurement.	N/A	N/A	N/A
	11.15	Evaluation, Approval and Award	New section on Evaluation, Approval and Award which is aligned with detail contained in Procurement Manual.	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
	11.16	Contract Management	Additional bullet points added on obligations/actions	N/A	N/A	N/A
	11.17	Extending & Varying Contracts	New section - as recommended by NWSSP Procurement. Detailing when varying is applicable, limits, process and risks etc.	N/A	N/A	N/A
14.2	11.18	Transactional Processes - Requisitioning	Clarified as part of the core transactional processes and separated to provide greater emphasis i.e. supportive of No PO No Pay Policy. Also supported by Finance Academy Transactional Process Manual	N/A	N/A	N/A
	11.19	No Purchase Order, No Pay	New section to ensure compliance with 'No Purchase Order, No Pay' policy	N/A	N/A	N/A
	12.3	Reports to Board on Health Care Agreements	Links reporting to Board reports on overall quality and financial performance.	N/A	N/A	N/A
	13.1	Grant Funding - Legal Advice	New section emphasising need, under Grant Funding, to seek legal advice and to follow grants toolkit.	N/A	N/A	N/A
	14.1.5	Remuneration and Terms of Service Committee	New paragraph defining role for Committee on redundancy cases, Voluntary Early Release applications as well as any novel employment and pay cases, such as compromise agreements and non-disclosure agreements	N/A	N/A	N/A
	14.3.1	Staff Appointments	New paragraph linking staff appointment to authorisation in accordance with Scheme of Delegation	N/A	N/A	N/A
	14.4.2	Pay Rates and Terms and Conditions	New paragraph on pay for board members, and other senior employees- linking to paragraphs 14.1.2 and 14.1.3	N/A	N/A	N/A
	14.5.1	Payroll	Defining payroll service from NHS Wales Shared Services Partnership	N/A	N/A	N/A
	14.5.2	Payroll	Explicit reference to comply with HMRC, Pensions Agency and other regulations etc	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
	14.5.3	Payroll	Reference to Service Level Agreement, not contract, for payroll service from NHS Wales Shared Services Partnership	N/A	N/A	N/A
	15.1, 15.2 & 15.3	Capital Plan, Capital Investment, Fixed Asset Registers and Security of Assets	Additional sections added to the chapter on Capital Plan(15.1), Capital Investment Decisions(15.2) and Capital Projects(15.3). These comprehensive additions include aligning with IMTP, NHS Wales Infrastructure Investment Guidance and Better Business Cases (including hyperlinks to both)	N/A	N/A	N/A
	15.4	Capital Investment Procedures and Responsibilities	Explicit reference for CEO responsibility to ensure Capital Plan approved by Board, and for Directors of Planning and Finance to issue detailed procedures.	N/A	N/A	N/A
	15.4.8	Capital Procedures and Responsibilities	Reference included to application of Welsh Government Project Bank Accounts policy on capital schemes greater than £2m	N/A		
	15.5	Capital Financing with the Private Sector	Reference made to the new Mutual Investment Model within this section.	N/A	N/A	N/A
	15.6	Asset Registers	Responsibilities explicitly identified and updated in this section	N/A	N/A	N/A
	16.2.3	Control of Stores, Stocktaking, condemnations and disposal	Director of Finance responsibilites paragraph expanded	N/A	N/A	N/A
	17	Disposals and Condemnations, Losses and Special Payments	Chapter updated to reflect current names for Welsh Government, the Health & Social Services Group etc. Also emphasised that disposals and condemnation applied to assets and goods, not just assets.	N/A	N/A	N/A

Previous Paragraph Reference	New Paragraph Reference	Section Heading	Reason for Amendment (if applicable)	Cross reference to legislation - Velindre NHS Trust	Cross reference to legislation - Welsh Ambulance Service NHS Trust	Cross reference to legislation - Public Health Wales NHS Trust
	18	Informatics and Digital	Chapter updated to reflect current landscape, and naming convention, from "Information Management and Technology" to "Digital, Data and Technology". Chapter more focused on informatics, and the governance thereof, rather than IM&T (in the traditional sense of IT etc)	N/A	N/A	N/A
	18.2	Responsibilities and duties of the responsible Director	References updated to include Network and Information Systems Regulations 2018, General Data Protection Regulations and any relevant domestic law considerations via the Data Protection Act 2018.	Network and Information Systems Regulations 2018, Data Protection Act 2018	Network and Information Systems Regulations 2018, Data Protection Act 2019	Network and Information Systems Regulations 2018, Data Protection Act 2020
	20	Funds Held on Trust (Charitable Funds)	Minor wording changes - reflect they are called both Funds Held on Trust & Charitable Funds. Added reference to Annual Accounts requirement	N/A	N/A	N/A
	21	Retention of Records	References updated to Data Protection Act 2018.	Data Protection Act 2018	Data Protection Act 2019	Data Protection Act 2020

Model Standing Orders

Reservation and Delegation of Powers

Velindre University NHS Trust

Foreword

These Model Standing Orders are issued by Welsh Ministers to NHS Trusts using powers of direction provided in section 19 (1) of the National Health Service (Wales) Act 2006. National Health Service Trusts ("NHS Trusts") in Wales must agree Standing Orders (SOs) for the regulation of their proceedings and business. When agreeing SOs Trusts must ensure they are made in accordance with directions as may be issued by Welsh Ministers.

They are designed to translate the statutory requirements set out in Velindre University NHS Trust – the National Health Service Trusts (Membership and Procedure) Regulations 1990 (S.I. 1990/2024) as amended into day to day operating practice, and, together with the adoption of a Schedule of decisions reserved to the Board of directors; a Scheme of decisions to officers and others; and Standing Financial Instructions (SFIs), they provide the regulatory framework for the business conduct of the Trust.

These documents form the basis upon which the Trust's governance and accountability framework is developed and, together with the adoption of the Trust's Standards of Behaviour Framework Policy, is designed to ensure the achievement of the standards of good governance set for the NHS in Wales.

All Trust Board members and officers must be made aware of these Standing Orders and, where appropriate, should be familiar with their detailed content. The Trust's Director of Corporate Governance will be able to provide further advice and guidance on any aspect of the Standing Orders or the wider governance arrangements within the Trust.

Further information on governance in the NHS in Wales may be accessed at https://nwssp.nhs.wales/all-wales-programmes/governance-e-manual/.

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Section A – Introduction

Statutory framework

Velindre University National Health Service Trust ("the Trust") is a statutory body that came into existence on 1st December 1993 under the **Velindre National Health Service Trust (Establishment) Order 1993 (S.I. 1993/2838),** as amended, "the Establishment Order".

i) The principal place of business of the Trust is –
Velindre University NHS Trust Headquarters, 2 Charnwood Court, Parc Nantgarw, Cardiff, CF15 7QZ

ii) All business shall be conducted in the name of Velindre University National Health Service Trust, and all funds received in trust shall be held in the name of the Trust as a corporate Trustee.

iii) NHS Trusts are corporate bodies and their functions must be carried out in accordance with their statutory powers and duties. Their statutory powers and duties are mainly contained in the **NHS (Wales) Act 2006** which is the principal legislation relating to the NHS in Wales. Whilst the **NHS Act 2006** applies equivalent legislation to the NHS in England, it also contains some legislation that applies to both England and Wales. The NHS (Wales) Act 2006 and the NHS Act 2006 are a consolidation of the NHS Act 1977 and other health legislation which has now been repealed. The NHS (Wales) Act 2006 contains various powers of the Welsh Ministers to make subordinate legislation and details how NHS Trusts are governed and their functions.

iv) **For Velindre University NHS Trust** – **The National Health Service Trusts (Membership and Procedure) Regulations 1990 (S.I. 1990/2024)**, as amended ("the Membership Regulations") set out the membership and procedural arrangements of the Trust.

v) Sections 18 and 19 of and Schedule 3 to the NHS (Wales) Act 2006 provide for Welsh Ministers to confer functions on NHS Trusts and to give directions about how they exercise those functions. NHS Trusts must act in accordance with those directions. The NHS Trust's main statutory functions are set out in their Establishment Order but additional functions may also be contained in other legislation, such as the NHS (Wales) Act 2006.

vi) The Well-being of Future Generations (Wales) Act 2015 also places duties on LHBs and some Trusts in Wales. Sustainable development in the context of the Act means the process of improving economic, social,

environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals.

vii) In exercising their powers NHS Trusts must be clear about the statutory basis for exercising such powers.

viii) In addition to directions the Welsh Ministers may from time to time issue guidance which NHS Trusts must take into account when exercising any function.

ix) NHS Trusts work closely with the seven Local Health Boards (LHBs) in Wales. The chief executive of the Trust is an associate member of the following joint-committees of the LHBs:

- The Welsh Health Specialised Services Committee, and
- The Emergency Ambulance Service Committee.

x) **The Welsh Health Specialised Services Committee (Wales) Directions 2009 (2009/35)** provide that the seven LHBs in Wales will work jointly to exercise functions relating to the planning and securing of specialised and tertiary services and for the purpose of jointly exercising those functions will establish the Welsh Health Specialised Services Committee ("WHSSC"). Under powers set out in paragraph 4 of Schedule 2 to the NHS (Wales) Act 2006, the Minister has made **The Welsh Health Specialised Services Committee (Wales) Regulations 2009 (S.I. 2009/3097)** which make provision for the constitution and membership of the WHSSC including its procedures and administrative arrangements.

xi) **The Emergency Ambulance Services Committee (Wales) Directions 2014 (2014/8 (W.08))** as amended by the **Emergency Ambulance Services (Wales) Amendment Directions 2016 (2016/8 (W.8))** provide that the seven LHBs in Wales will work jointly to exercise functions relating to the planning and securing of emergency ambulance services and for the purpose of jointly exercising those functions will establish the Emergency Ambulance Services Committee ("EASC"). Under powers set out in paragraph 4 of Schedule 2 to the NHS (Wales) Act 2006, the Minister has made **The Emergency Ambulance Services Committee (Wales) Regulations 2014 (2014/566)** which make provision for the constitution and membership of the EASC including its procedures and administrative arrangements.

xii) **The Velindre National Health Service Trust Shared Services Committee (Wales) Regulations 2012** (S.I. 2012) (as amended) require the Trust to establish a Shared Services Committee and prescribe the

membership of the Shared Services Committee in order to ensure that all LHBs, Trusts and Special Health Authorities in Wales have a member on the Shared Services Committee and that the views of all the NHS organisations in Wales are taken into account when making decisions in respect of Shared Services activities.

xiii) **The National Health Service Bodies and Local Authorities Partnership Arrangements (Wales) Regulations 2000 (S.I. 2000/2993)** have effect as made under section 33 of the NHS (Wales) Act 2006 enable LHBs, NHS Trusts and Local Authorities to enter into any partnership arrangements to exercise certain NHS functions and health-related functions as specified in the Regulations. The arrangement can only be made if it is likely to lead to an improvement in the way in which NHS functions and health-related functions are exercised, and the partners have consulted jointly with all affected parties, and the arrangements fulfil the objectives set out in the Area Plan developed in accordance with the **Social Services and Well-being (Wales) Act 2014.**

xiv) Section 72 of the NHS Act 2006 places a duty on NHS bodies to co-operate with each other in exercising their functions. NHS bodies includes NHS bodies in England such as the NHS Commissioning Board, NHS Trust and NHS Foundation Trust and, for the purposes of this duty, also includes bodies such as NICE, the Health and Social Care Information Centre and Health Education England.

xv) Section 82 of the NHS Act 2006 places a duty on NHS bodies and local authorities to co-operate with one another in order to secure and advance the health and welfare of the people of England and Wales.

xvi) The Welsh Language (Wales) Measure 2011 makes provision with regard to the development of standards of conduct relating to the Welsh Language. These standards replace the requirement for a Welsh Language Scheme previously provided for Section 5 of the Welsh Language Act 1993. The Welsh Language Standards (No.7) Regulations 2018 (2018/411) came into force on the 29 June 2018 and specifies standards in relation to the conduct of NHS Trusts. The Trust will ensure that it has arrangements in place to meet those standards which the Welsh Language Commissioner has required by way of a compliance notice under section 44 of the 2011 Measure.

xvii) Paragraph 18 of Schedule 3 to the NHS (Wales) Act 2006 provides for NHS Trusts to enter into arrangements for the carrying out, on such terms as considered appropriate, of any of its functions jointly with any Strategic Health Authority, Local Health Board or other NHS Trust, or any other body or individual.

xviii) NHS Trusts are also bound by any other statutes and legal provisions which govern the way they do business. The powers of NHS Trusts established under statute shall be exercised by NHS Trusts meeting in public session, except as otherwise provided by these SOs.

NHS framework

xix) In addition to the statutory requirements set out above, NHS Trusts must carry out all business in a manner that enables them to contribute fully to the achievement of the Welsh Government's vision for the NHS in Wales and its standards for public service delivery. The governance standards set for the NHS in Wales are based upon the Welsh Government's Citizen Centred Governance principles. These principles provide the framework for good governance and embody the values and standards of behaviour that are expected at all levels of the service, locally and nationally.

xx) Adoption of the principles will better equip NHS Trusts to take a balanced, holistic view of their organisations and their capacity to deliver high quality, safe healthcare services for all its citizens within the NHS framework set nationally.

xxi) The overarching NHS governance and accountability framework incorporates these SOs; the Scheme of Reservation and Delegation of Powers; SFIs together with a range of other frameworks designed to cover specific aspects. These include the NHS Values and Standards of Behaviour Framework*; the '*Doing Well, Doing Better: Standards for Health Services in Wales'* (formally the Healthcare Standards) Framework, the NHS Risk and Assurance Framework, and the NHS planning and performance management systems.

* The NHS Wales Values and Standards of Behaviour Framework can be accessed via the following link: https://nwssp.nhs.wales/all-wales-programmes/governance-e-manual/living-public-service-values/values-and-standards-of-behaviour-framework/

xxii) The Welsh Ministers, reflecting their constitutional obligations, and legal duties under the **Well-being of Future Generations (Wales) Act 2015 (2015/2)**, have stated that sustainable development should be the central organising principle for the public sector and a core objective for the NHS in all it does.

The Trust is considered a public body under the Act.

xxiii) Full, up to date details of the other requirements that fall within the NHS framework – as well as further information on the Welsh Government's Citizen Centred Governance principles - are provided on the NHS Wales Governance e-manual, which can be accessed at https://nwssp.nhs.wales/all-wales-programmes/governance-e-manual/. Directions or guidance on specific aspects of NHS Trust business are also issued electronically, usually under cover of a Welsh Health Circular.

NHS Trust framework

xxiv) Schedule 2 provides details of the key documents that, together with these SOs, make up the NHS Trust's governance and accountability framework. These documents must be read in conjunction with these SOs and will have the same effect as if the details within them were incorporated within the SOs themselves. The Standing Financial Instructions form Schedule 2.1 of these SOs.

xxv) NHS Trusts will from time to time agree and approve policy statements which apply to the Trust's Board of directors and/or all or specific groups of staff employed by Velindre University National Health Service Trust and others. The decisions to approve these policies will be recorded and, where appropriate, will also be considered to be an integral part of the Trust's SOs and SFIs. *Details of the Trust's key policy statements are also included in Schedule 2.*

xxvi) NHS Trusts shall ensure that an official is designated to undertake the role of the Board Secretary [Director of Corporate Governance] (the role of which is set out in paragraph xxxv) below).

xxvii) For the purposes of these SOs, the Trust Board of directors shall collectively be known as "the Board" or "Board members"; the executive and non-executive directors shall be referred to as Executive Directors and Independent Members respectively; and the Chief Officer and the Chief Finance Officer shall respectively be known as the Chief Executive and the Director of Finance – SO 1.1.2 refers. The Board Secretary shall be known as the Director of Corporate Governance.

Applying Standing Orders

xxviii) The SOs of NHS Trusts (together with SFIs and the Trust Standards of Behaviour Framework Policy, will, as far as they are applicable, also apply to meetings of any formal Committees established by the Trust, including any sub-Committees and Advisory Groups. These SOs may be amended or adapted for the Committees as appropriate, with the approval of the Board. *Further details on committees may be found in Schedule 3 of these SOs.*

xxix) Full details of any non-compliance with these SOs, including an explanation of the reasons and circumstances must be reported in the first instance to the Director of Corporate Governance, who will ask the Audit Committee to formally consider the matter and make proposals to the Board on any action to be taken. All Board members and Trust officers have a duty to report any non-compliance to the Director of Corporate Governance as soon as they are aware of any circumstance that has not previously been reported.

xxx) **Ultimately, failure to comply with SOs is a disciplinary matter that could result in an individual's dismissal from employment or removal from the Board.**

Variation and amendment of Standing Orders

xxxi) Although these SOs are subject to regular, annual review by the NHS Trust, there may, exceptionally, be an occasion where it is necessary to vary or amend the SOs during the year. In these circumstances, the Director of Corporate Goverance shall advise the Board of the implications of any decision to vary or amend SOs, and such a decision may only be made if:

- The variation or amendment is in accordance with regulation 19 of the Membership Regulations and does not contravene a statutory provision or direction made by the Welsh Ministers;
- The proposed variation or amendment has been considered and approved by the Audit Committee and is the subject of a formal report to the Board; and
- A notice of motion under Standing Order 7.5.14 has been given.

Interpretation

xxxii) During any Board meeting where there is doubt as to the applicability or interpretation of the SOs, the Chair of the Trust shall have the final say, provided that his or her decision does not conflict with rights, liabilities or duties as prescribed by law. In doing so, the Chair shall take appropriate advice from the Director of Corporate Services and, where appropriate the Chief Executive or the Director of Finance (in the case of SFIs).

xxxiii) The terms and provisions contained within these SOs aim to reflect those covered within all applicable health legislation. The legislation takes precedence over these SOs when interpreting any term or provision covered by legislation.

The role of the Director of Corporate Governance

xxxiv) The role of the Director of Corporate Governance is crucial to the ongoing development and maintenance of a strong governance framework within NHS Trusts, and is a key source of advice and support to the NHS Trust Chair and other Board members. Independent of the Board, the Director of Corporate Governance acts as the guardian of good governance within NHS Trusts. The Director of Corporate Governance is responsible for:

- Providing advice to the Board as a whole and to individual Board members on all aspects of governance;
- Facilitating the effective conduct of NHS Trust business through meetings of the Board, its Advisory Groups and Committees;
- Ensuring that Board members have the right information to enable them to make informed decisions and fulfil their responsibilities in accordance with the provisions of these SOs;
- Ensuring that in all its dealings, the Board acts fairly, with integrity, and without prejudice or discrimination;
- Contributing to the development of an organisational culture that embodies NHS values and standards of behaviour; and
- Monitoring the NHS Trust compliance with the law, SOs and the governance and accountability framework set by the Welsh Ministers.

As advisor to the Board, the Director of Corporate Governance's role does not affect the specific responsibilities of Board members for governing the organisation. The Director of Corporate Governance is directly accountable for the conduct of their role to the Chair in respect of matters relating to responsibilities of the Board, its Committees and Advisory Groups, and reports on a day to day basis to the Chief Executive with regard to the wider governance of the organisation and their personal responsibilities.

Further details on the role of the Director of Corporate Goverance within Velindre University NHS Trust, including details on how to contact them, is available from the Trust by contacting the Trust on 02920 196161 or visiting the Trust's public internet site.

Section B – Standing Orders

1. THE TRUST

1.0.1 The Trust's principal role is to:

(a) to own and manage Velindre Hospital, Velindre Road, Whitchurch, Cardiff CF4 7XL and associated hospitals and premises, and there to provide and manage hospital accommodation and services;

(b) to own and manage Welsh Blood Service Headquarters, Ely Valley Road, Talbot Green, Pontyclun CF72 9WB and associated premises, and there to provide and manage services relating to the collection, screening and processing of blood and its constituents and to the preparation and supply of blood, plasma and other blood products;

(c) services relating to prescribing and dispensing;

(d) to manage and provide Shared Services to the health service in Wales;

(e) to own or lease the premises associated with the provision of the services in paragraph (d), and

(f) to manage and administer the Wales Infected Blood Support Scheme in accordance with directions issued by the Welsh Ministers.

1.0.2 The Trust was established by, and its functions are contained in, the **Velindre National Health Service Trust (Establishment) Order 1993** (S.I. 1993/2838), as amended. The Trust must ensure that all its activities are in exercise of those functions or other statutory functions that are conferred on it.

1.0.3 To fulfil this role, the Trust will work with all its partners and stakeholders in the best interests of its population.

1.1 Membership of the Trust

1.1.1 The membership of the Trust shall comprise the Chair, 6 non executive directors and 5 executive directors.

1.1.2 For the purposes of these SOs, the Trust Board of directors shall collectively to be known as “the Board” or “Board members”; the executive and non executive directors (which will include the Chair) shall be referred to as Executive Directors and Independent Members respectively. The Chief Officer and the Chief Finance Officer shall respectively be known as the Chief Executive and the Director of Finance. All such members shall have full voting rights.

1.1.3 The Minister for Health and Social Services shall appoint the Chair and non-officer members of the Trust.

1.1.4 The Trust will appoint a Committee whose members will be the Chair and Independent Members of the Trust whose function will be to appoint the Chief Executive as a director of the Trust.

1.1.5 The Trust will appoint a Committee whose members will be the Chair, the Independent Members and the Chief Executive whose function will be to appoint the executive directors other than the Chief Executive.

Executive Directors

1.1.6 A total of 5, appointed by the relevant committee, and consisting of the Chief Executive, the Director of Finance, a medical or dental practitioner (to be known as the Medical Director), a registered nurse or registered midwife (to be known as the Director of Nursing, Allied Health Professions and Health Science) and 1 other. Executive Directors may have other responsibilities as determined by the Board and set out in the scheme of delegation to officers.

Non-executive directors [to be known as Independent Members]

1.1.7 A total of 6 (excluding the Chair) appointed by the Minister for Health and Social Services, which will include:

- A person appointed from Cardiff University.

1.1.8 In addition to the eligibility, disqualification, suspension and removal provisions contained within the Membership Regulations, an individual shall not normally serve concurrently as a non-officer member on the Board of more than one NHS body in Wales.

Use of the term 'Independent Members'

1.1.9 For the purposes of these SOs, use of the term 'Independent Members' refers to the following voting members of the Board:

- Chair
- Vice-Chair
- Non-Executive Directors

unless otherwise stated.

1.2 Joint Directors

1.2.1 Where a post of Executive Director of the Trust is shared between more than one person because of their being appointed jointly to a post:

(i) Either or both persons may attend and take part in Board meetings;
(ii) If both are present at a meeting they shall cast one vote if they agree;
(iii) In the case of disagreement no vote shall be cast; and
(iv) The presence of both or one person will count as one person in relation to the quorum.

1.3 Tenure of Board members

1.3.1 The Chair and Independent Members appointed by the Minister for Health and Social Services shall be appointed as Trust members for a period specified by the Welsh Ministers, but for no longer than 4 years in any one term. These members can be reappointed. Time served need not be consecutive and will still be counted towards the total period even where there is a break in the term**.**

1.3.2 Executive Directors' tenure of office as Board members will be determined by their contract of appointment.

1.3.3 All Board members' tenure of appointment will cease in the event that they no longer meet any of the eligibility requirements, so far as they are applicable, as specified in the Membership Regulations. Any member must inform the Chair as soon as is reasonably practicable to do so in respect of any issue which may impact on their eligibility to hold office. The Chair will advise the Minister in writing of any such cases immediately.

1.3.4 The Trust will require Board members to confirm in writing their continued eligibility on an annual basis.

1.4 The Role of the Trust, its Board and responsibilities of individual members

Role

1.4.1 The principal role of the Trust is set out in SO 1.0.1. The Board's main role is to add value to the organisation through the exercise of strong leadership and control, including:

- Setting the organisation's strategic direction
- Establishing and upholding the organisation's governance and accountability framework, including its values and standards of behaviour
- Ensuring delivery of the organisation's aims and objectives through effective challenge and scrutiny of the Trust's performance across all areas of activity.

Responsibilities

1.4.2 The Board will function as a corporate decision-making body, Executive Directors and Independent Members being full and equal members and sharing corporate responsibility for all the decisions of the Board.

1.4.3 Independent Members who are appointed to bring a particular perspective, skill or area of expertise to the Board must do so in a balanced manner, ensuring that any opinion expressed is objective and based upon the best interests of the health service. Similarly, Board members must not place an over reliance on those individual members with specialist expertise to cover specific aspects of Board business, and must be prepared to scrutinise and ask questions about any contribution that may be made by that member.

1.4.4 NHS Trusts shall issue an indemnity to any Chair and Independent Member in the following terms: "A Board [or Committee] member, who has acted honestly and in good faith, will not have to meet out of their personal resources any personal liability which is incurred in the execution of their Board function. Such cover excludes the reckless or those who have acted in bad faith".

1.4.5 All Board members must comply with their terms of appointment. They must equip themselves to fulfil the breadth of their responsibilities by participating in appropriate personal and organisational development programmes, engaging fully in Board activities and promoting the Trust within the communities it serves.

1.4.6 **The Chair** – The Chair is responsible for the effective operation of the Board, chairing Board meetings when present and ensuring that all Board business is conducted in accordance with these SOs. The Chair may have certain specific powers delegated by the Board and set out in the Scheme of Delegation.

1.4.7 The Chair shall work in close harmony with the Chief Executive and, supported by the Director of Corporate Governance, shall ensure that key and appropriate issues are discussed by the Board in a timely manner with all the necessary information and advice being made available to the Board to inform the debate and ultimate resolutions.

1.4.8 **The Vice-Chair** – The Vice-Chair shall deputise for the Chair in their absence for any reason, and will do so until either the existing chair resumes their duties or a new chair is appointed.

1.4.9 **Chief Executive** – The Chief Executive is responsible for the overall performance of the executive functions of the Trust. They are the appointed Accountable Officer for the Trust and shall be responsible for meeting all the responsibilities of that role, as set out in their Accountable Officer Memorandum.

1.4.10 **Lead roles for Board members** – The Chair will ensure that individual Board members are designated as lead roles or "champions" as required by the Welsh Ministers or as set out in any statutory or other guidance. Any such role must be clearly defined and must operate in accordance with the requirements set by the Trust, the Welsh Ministers or others. In particular, no operational responsibilities will be placed upon any Independent Member fulfilling such a role. The identification of a Board member in this way shall not make them more vulnerable to individual criticism, nor does it remove the corporate responsibility of the other Board members for that particular aspect of Board business.

2. RESERVATION AND DELEGATION OF TRUST FUNCTIONS

2.0.1 Subject to any directions that may be given by the Welsh Ministers, the Board shall make arrangements for certain functions to be carried out on its behalf so that the day to day business of the Trust may be carried out effectively and in a manner that secures the achievement of its aims and objectives. In doing so, the Board must set out clearly the terms and conditions upon which any delegation is being made.

2.0.2 The Board's determination of those matters that it will retain, and those that will be delegated to others shall be set out in a:

(i) Schedule of matters reserved to the Board;
(ii) Scheme of delegation to committees and others; and
(iii) Scheme of delegation to officers.

all of which must be formally adopted by the Board in full session and form part of these SOs.

2.0.3 The Trust retains full responsibility for any functions delegated to others to carry out on its behalf. Where Trusts and Local Health Boards have a joint duty the Trust remains fully responsible for its part, and shall agree the governance and assurance arrangements for the partnership, setting out respective responsibilities, ways of working, accountabilities and sources of assurance of the partner organisations.

2.1 Chair's action on urgent matters

2.1.1 There may, occasionally, be circumstances where decisions which would normally be made by the Board need to be taken between scheduled meetings, and it is not practicable to call a meeting of the Board. In these circumstances, the Chair and the Chief Executive, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board - after first consulting with at least two other Independent Members. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Board for consideration and ratification.

2.1.2 Chair's action may not be taken where either the Chair or the Chief Executive has a personal or business interest in an urgent matter requiring decision. In this circumstance, the Vice-Chair or the Executive Director acting on behalf of the Chief Executive will take a decision on the urgent matter, as appropriate.

2.2 Delegation of Board functions

2.2.1 The Trust shall delegate its Shared Services functions (that is, the provision and management of Shared Services to the health services in Wales) to the Shared Services Partnership Committee which they are required to establish and confer such functions on in accordance with the Shared Services Regulations.

Subject to Standing Order 2.2.2 the Board may agree the delegation of any of their functions, except for those set out within the 'Schedule of Matters Reserved for the Board' within the Model Standing Orders (see paragraph 2.0.2 (i), to Committees and others, setting any conditions and restrictions it considers necessary and in accordance with any directions or regulations

given by the Welsh Ministers. These functions may be carried out:

(i) By a Committee, sub-Committee or officer of the Trust (or of another Trust); or
(ii) By another LHB; NHS Trust; Strategic Health Authority or Primary Care Trust in England; Special Health Authority; or
(iii) With one or more bodies including local authorities through a sub-Committee.]

2.2.2 The Board may agree and formally approve the delegation of specific executive powers to be exercised by Committees or sub-Committees which it has formally constituted.

2.3 Delegation to officers

2.3.1 The Board may delegate certain functions to the Chief Executive. For these aspects, the Chief Executive, when compiling the Scheme of Delegation to Officers, shall set out proposals for those functions they will perform personally and shall nominate other officers to undertake the remaining functions. The Chief Executive will still be accountable to the Board for all functions delegated to them irrespective of any further delegation to other officers.

2.3.2 This must be considered and approved by the Board (subject to any amendment agreed during the discussion). The Chief Executive may periodically propose amendments to the Scheme of Delegation to Officers and any such amendments must also be considered and approved by the Board.

2.3.3 Individual Executive Directors are in turn responsible for delegation within their own directorates/departments/localities in accordance with the framework established by the Chief Executive and agreed by the Board.

3. COMMITTEES

3.1 NHS Trust Committees

3.1.1 The Board may and, where directed by the Welsh Ministers must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees. The Board shall, wherever possible, require its Committees to hold meetings in public unless there are specific, valid reasons for not doing so.

Use of the term "Committee"

3.1.2 For the purposes of these SOs, use of the term 'Committee' incorporates the following:

- Board Committee
- sub-Committee

unless otherwise stated.

3.2 Sub-Committees

3.2.1 A Committee appointed by the Board may establish a sub-Committee to assist it in the conduct of its business provided that the Board approves such action. Where the Board has authorised a Committee to establish sub-Committees they cannot delegate any executive powers to the sub-Committee unless authorised to do so by the Board.

3.3 Committees established by the Trust

3.3.1 The Board shall establish a Committee structure that it determines best meets its own needs, taking account of any regulatory or Welsh Government requirements. As a minimum, it must establish Committees which cover the following aspects of Board business:

- Quality and Safety;
- Audit;
- Information governance;
- Charitable Funds *[as appropriate]*;
- Remuneration and Terms of Service; and
- Mental Health Act requirements *[as appropriate]*.

3.3.2 In designing its Committee structure and operating arrangements, the Board shall take full account of the need to:

- Embed corporate standards, priorities and requirements, e.g., equality and human rights across all areas of activity;
- Maximise cohesion and integration across all aspects of governance and assurance.

3.3.3 Each Committee established by or on behalf of the Board must have its own SOs or detailed terms of reference and operating arrangements, which must be formally approved by the Board. These must establish its governance and ways of working, setting out, as a minimum:

- The scope of its work (including its purpose and any delegated powers and authority);

- Membership and quorum;
- Meeting arrangements;
- Relationships and accountabilities with others (including the Board**,** its Committees and any Advisory Groups);
- Any budget and financial responsibility, where appropriate;
- Secretariat and other support;
- Training, development and performance; and
- Reporting and assurance arrangements.

3.3.4 In doing so, the Board shall specify which aspects of these SOs are not applicable to the operation of the Committee, keeping any such aspects to the minimum necessary.

3.3.5 The membership of any such Committees - including the designation of Chair; definition of member roles and powers and terms and conditions of appointment (including remuneration and reimbursement) - will usually be determined by the Board, based on the recommendation of the Trust Chair, and subject to any specific requirements, directions or regulations made by the Welsh Ministers. Depending on the Committee's defined role and remit, membership may be drawn from the Board, its staff (subject to the conditions set in Standing Order 3.4.6) or others not employed by the Trust.

3.3.6 Executive Directors or other Trust officers shall not be appointed as Committee Chairs, nor should they be appointed to serve as members on any Committee set up to review the exercise of functions delegated to officers or to review Mental Health Tribunals (in accordance with the Mental Health Act 1983). Designated Trust officers shall, however, be in attendance at such Committees, as appropriate.

Full details of the Committee structure established by the Board, including detailed terms of reference for each of these Committees are set out in Schedule 3.

3.4 Other Committees

3.4.1 The Board may also establish other Committees to help the Trust in the conduct of its business.

3.5 Confidentiality

3.5.1 Committee members and attendees must not disclose any matter dealt with by or brought before a Committee in confidence without the permission of the Committee's Chair.

3.6 Reporting activity to the Board

3.6.1 The Board must ensure that the Chairs of all Committees operating on its behalf report formally, regularly and on a timely basis to the Board on their activities. Committee Chairs' shall bring to the Boards specific attention any significant matters under consideration and report on the totality of its activities through the production of minutes or other written reports.

4. NHS WALES SHARED SERVICES PARTNERSHIP

4.0.1 From 1 June 2012 the function of managing and providing Shared Services to the health service in Wales was given to Velindre NHS Trust. The Trust's Establishment Order has been amended to reflect the fact that the Shared Services function has been conferred on it.

4.0.2 The **Velindre National Health Service Trust Shared Services Committee (Wales) Regulations 2012** (S.I. 2012/1261 (W.156)) ("the Shared Services Regulations") require the Trust to establish a Shared Services Committee which will be responsible for exercising the Trust's Shared Services functions. The Shared Services Regulations (as amended) prescribe the membership of the Shared Services Committee in order to ensure that all LHBs, Trusts and Special Health Authorities in Wales have a member on the Shared Services Committee and that the views of all the NHS organisations in Wales are taken into account when making decisions in respect of Shared Services activities.

4.0.3 The Director of Shared Services will be designated as Accountable Officer for Shared Services.

4.0.4 These arrangements necessitate putting in place a Memorandum of Co-operation Agreement and a Hosting Agreement between all LHBs and Trusts setting out the obligations of NHS bodies to participate in the Shared Services Committee and to take collective responsibility for setting the policy and delivery of the Shared Services to the health service in Wales. Responsibility for the exercise of the Shared Services functions will not rest with the Board of Velindre University NHS Trust but will be a shared responsibility of all NHS bodies in Wales.

4.0.5 The Shared Services Committee is to be known as the Shared Services Partnership Committee for operational purposes.

5. ADVISORY GROUPS

5.0.1 The Trust may and where directed by the Welsh Ministers must, appoint Advisory Groups to the Trust to provide advice to the Board in the exercise of its functions.

5.0.2 *Details of the Trust's Advisory Groups, their membership and terms of reference are set out in Schedule 4.*

5.0.3 The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out by others to advise it in the conduct of its business. The Board shall, wherever possible, require its Advisory Groups to hold meetings in public unless there are specific, valid reasons for not doing so.

5.1 Advisory Groups established by the Trust

5.1.1 The Trust has established the following Advisory Group(s):

- Local Partnership Forum

5.2 Terms of reference and operating arrangements

5.2.1 The Board must formally approve terms of reference and operating arrangements in respect of any Advisory Group it has established. These must establish its governance and ways of working, setting out, as a minimum:

- The scope of its work (including its purpose and any delegated powers and authority);
- Membership (including member appointment and removal, role, responsibilities and accountabilities, and terms and conditions of office) and quorum;
- Meeting arrangements;
- Communications;
- Relationships with others (including the Board, its Committees and Advisory Groups) as well as other relevant local and national groups;
- Any budget and financial responsibility (where appropriate);
- Secretariat and other support;
- Training, development and performance; and
- Reporting and assurance arrangements.

5.2.2 In doing so, the Board shall specify which of these SOs are not applicable to the operation of the Advisory Group, keeping any such aspects to the minimum necessary. The detailed terms of reference and operating arrangements for the Trust's Advisory Groups are set out in Schedule 4.

5.2.3 The Board may determine that any Advisory Group it has set up should be supported by sub-groups to assist it in the conduct of its work, or the Advisory Group may itself determine such arrangements, provided that the Board approves such action.

5.3 Support to Advisory Groups

5.3.1 The Trust's Director of Corporate Governance, on behalf of the Chair, will ensure that Advisory Groups are properly equipped to carry out their role by:

- Co-ordinating and facilitating appropriate induction and organisational development activity;
- Ensuring the provision of governance advice and support to the Advisory Group Chair on the conduct of its business and its relationship with the Trust Board and others;
- Ensuring the provision of secretariat support for Advisory Group meetings (for specific arrangements relating to Local Partnership Forum see 5.7 and Schedule 4);
- Ensuring that the Advisory Group receives the information it needs on a timely basis;
- Ensuring strong links to communities/groups/professionals as appropriate; and
- Facilitating effective reporting to the Board

enabling the Board to gain assurance that the conduct of business within the Advisory Group accords with the governance and operating framework it has set.

5.4 Confidentiality

5.4.1 Advisory Group members and attendees must not disclose any matter dealt with by or brought before a Group in confidence without the permission of the Advisory Group Chair.

5.5 Advice and feedback

5.5.1 The Trust may specifically request advice and feedback from the Advisory Group(s) on any aspect of its business and they may also offer advice and feedback even if not specifically requested by the Trust. The Group(s) may provide advice to the Board:

- In written advice;
- In any other form specified by the Board

5.6 Reporting activity

5.6.1 The Board shall ensure that the Chairs of all Advisory Groups report formally, regularly and on a timely basis to the Board on their activities. Advisory Group Chairs shall bring to the Board's specific attention any significant matters under consideration and report on the totality of its activities through the production of minutes or other written reports.

5.6.2 Each Advisory Group shall also submit an annual report to the Board through the Chair within 6 weeks of the end of the reporting year setting out its activities during the year and detailing the results of a review of its performance and that of any sub-groups it has established.

5.6.3 Each Advisory Group shall report regularly on its activities to those whose interests they represent.

5.7 The Local Partnership Forum (LPF)

Role

5.7.1 The LPF's role is to provide a formal mechanism where the Trust, as employer, and trade unions/professional bodies representing Trust employees (hereafter referred to as staff organisations) work together to improve health services for the citizens served by the Trust - achieved through a regular and timely process of consultation, negotiation and communication. In doing so, the LPF must effectively represent the views and interests of the Trust's workforce.

5.7.2 It is the forum where the Trust and staff organisations will engage with each other to inform, debate and seek to agree local priorities on workforce and health service issues; and inform thinking around national priorities on health matters.

5.8 Relationship with the Board and others

5.8.1 The LPF's main link with the Board is through the Executive members of the LPF.

5.8.2 The Board may determine that designated Board members or Trust staff shall be in attendance at LPF meetings. The LPF's Chair may also request the attendance of Board members or Trust staff, subject to the agreement of the Trust Chair.

5.8.3 The Board shall determine the arrangements for any joint meetings between the Board and the LPF's staff representative members.

5.8.4 The Board's Chair shall put in place arrangements to meet with the LPF's Joint Chairs on a regular basis to discuss the LPF's activities and operation.

5.8.5 The LPF shall ensure effective links and relationships with other groups/fora at a local and, where appropriate, national level.

Refer to Schedule 4 for detailed Terms of Reference and Operating Arrangements.

6. WORKING IN PARTNERSHIP

6.0.1 The Trust shall work constructively in partnership with others to plan and secure the delivery of an equitable, high quality, whole system approach to health, well-being and social care for its citizens. This will be delivered in accordance with its statutory duties and any specific requirements or directions made by the Welsh Ministers.

6.0.2 The Chair shall ensure that the Board has identified all its key partners and other stakeholders and established clear mechanisms for engaging with and involving them in the work of the Trust through:

- The Trust's own structures and operating arrangements, e.g., Advisory Groups; and
- The involvement (at very local and community wide levels) in partnerships and community groups – such as Public Service Boards – of Board members and Trust officers with delegated authority to represent the Trust and, as appropriate, take decisions on its behalf.

6.0.3 The Social Services and Well-Being (Wales) Act 2014 sets out duties for working in partnership with local authorities complementing existing duties under section 82 of the NHS Act 2006 (duty to cooperate with local authorities) and sections 10 (arrangements with other bodies) and 38 (duty to make services available to enable the discharge of local authority functions) of the NHS (Wales) Act 2006. An advice note on partnership working – implications for health boards and NHS Trusts from the Social Services and Well-being (Wales) Act 2014 and the Well-being of Future Generations (Wales) Act 2015 has been published and it can be found here: https://socialcare.wales/cms_assets/hub-downloads/Partnership-working-–-implications-for-health-boards-and-NHS-Trusts.pdf

6.0.4 The Board shall keep under review its partnership arrangements to ensure continued clarity around purpose, desired outcomes and partner responsibilities. It must ensure timely action to change, adapt or end partnerships where they no longer serve a useful purpose, in accordance with its statutory duties; any specific requirements or directions made by the

Welsh Ministers; and the agreed terms and conditions for the partnership.

6.1 Community Health Councils (CHCs)

6.1.1 The **Community Health Councils (Constitution, Membership and Procedures) (Wales) Regulations 2010** (S.I. 2010/288) and the **Community Health Councils (Establishment, Transfer of Functions and Abolition) (Wales) Order 2010** (S.I. 2010/289) place a range of duties on Trusts in relation to the engagement and involvement of CHCs in its operations.

6.1.2 In discharging these duties, and given the all-Wales nature of the Trust's functions, the Board shall work constructively with the Board of Community Health Councils in Wales, to ensure that CHCs across Wales are involved, as appropriate, in:

- The planning of the provision of its healthcare services;
- The development and consideration of proposals for changes in the way in which those services are provided; and
- The Board's decisions affecting the operation of those healthcare services that it has responsibility for;

and formally consulting with the Board of Community Health Councils and CHCs as appropriate on any proposals for substantial development of the services it is responsible for.

6.1.3 The Board shall ensure that each relevant CHC is provided with the information it needs on a timely basis to enable it to effectively discharge its functions.

Relationship with the Board

6.1.4 The Board may determine that designated CHC members shall be invited to attend Board meetings.

6.1.5 The Board may make arrangements to hold regular meetings between the Board of Community Health Councils and CHCs, as appropriate.

6.1.6 The Board's Chair shall put in place arrangements to meet with the Board of Community Health Councils Chair on a regular basis to discuss matters of common interest.

7. MEETINGS

7.1 Putting Citizens first

7.1.1 The Trust's business will be carried out openly and transparently in a manner that encourages the active engagement of its citizens, community partners and other stakeholders. The Trust, through the planning and conduct of meetings held in public, shall facilitate this in a number of ways, including:

- Active communication of forthcoming business and activities;
- The selection of accessible, suitable venues for meetings when these are not held via electronic means;
- The availability of papers in English and Welsh languages and in accessible formats, such as Braille, large print, easy read (where requested and required) and in electronic formats;
- Requesting that attendees notify the Trust of any access needs sufficiently in advance of a proposed meeting, and responding appropriately, e.g., arranging British Sign Language (BSL) interpretation at meetings; and
- Where appropriate, ensuring suitable translation arrangements are in place to enable the conduct of meetings in either English or Welsh,

in accordance with legislative requirements, e.g., Disability Discrimination Act, as well as its Communication Strategy and provisions made in response to the compliance notice issued by the Welsh Language Commissioner under section 44 of the Welsh Language (Wales) Measure 2011.

7.1.2 The Chair will ensure that, in determining the matters to be considered by the Board, full account is taken of the views and interests of the Trust's citizens and other stakeholders, including any views expressed formally to the Trust, e.g., through CHCs.

7.2 Annual Plan of Board Business

7.2.1 The Director of Corporate Services, on behalf of the Chair, shall produce an Annual Plan of Board business. This plan will include proposals on meeting dates, venues and coverage of business activity during the year, taking account that ordinary meetings of the Board will be held at regular intervals and as a minimum six times a year. The Plan shall also set out any standing items that will appear on every Board agenda.

7.2.2 The plan shall set out the arrangements in place to enable the Trust to meet its obligations to its citizens as outlined in paragraph 6.1.1 whilst also allowing Board members to contribute in either English or Welsh

languages, where appropriate.

7.2.3 The plan shall also incorporate formal Board meetings, regular Board Development sessions and, where appropriate, the planned activities of the Board's Committees and Advisory Groups.

7.2.4 The Board shall agree the plan for the forthcoming year by the end of March, and this plan will be published on the organisations website.

Annual General Meeting (AGM)

7.2.5 The Trust must hold an AGM in public no later than the 31 July each year. At least 10 calendar days prior to the meeting a public notice of the intention to hold the meeting, the time and place of the meeting, and the agenda, shall be displayed bilingually (in English and Welsh) on the Trust's website.

The notice shall state that:

- Electronic or paper copies of the Annual Report and Accounts of the Trust are available, on request, prior to the meeting; and
- State how copies can be obtained, in what language and in what format, e.g. as Braille, large print, easy read etc.

7.2.6 The AGM must include presentation of the Annual Report and audited accounts, together with (where applicable), an audited abridged version of the annual accounts and funds held on trust accounts, and may also include presentation of other reports of interest to citizens and others.

7.2.7 A record of the meeting shall be submitted to the next ordinary meeting of the Board for agreement.

7.3 Calling Meetings

7.3.1 In addition to the planned meetings agreed by the Board, the Chair may call a meeting of the Board at any time. Individual Board members may also request that the Chair call a meeting provided that at least one third of the whole number of Board members, support such a request.

7.3.2 If the Chair does not call a meeting within seven days after receiving such a request from Board members, then those Board members may themselves call a meeting.

7.4 Preparing for Meetings

Setting the agenda

7.4.1 The Chair, in consultation with the Chief Executive and Director of Corporate Governance, will set the Agenda. In doing so, they will take account of the planned activity set in the annual cycle of Board business; any standing items agreed by the Board; any applicable items received from the Board's Committees and Advisory Groups; and the priorities facing the Trust. The Chair must ensure that all relevant matters are brought before the Board on a timely basis.

7.4.2 Any Board member may request that a matter is placed on the Agenda by writing to the Chair, copied to the Director of Corporate Governance, at least 12 calendar days before the meeting. The request must set out whether the item of business is proposed to be transacted in public and shall include appropriate supporting information. The Chair may, at their discretion, include items on the agenda that have been requested after the 12 day notice period if this would be beneficial to the conduct of board business.

Notifying and equipping Board members

7.4.3 Board members shall be sent an Agenda and a complete set of supporting papers at least 10 calendar days before a formal Board meeting. This information may be provided to Board members electronically or in paper form, in an accessible format, to the address provided, and in accordance with their stated preference. Supporting papers may, exceptionally, be provided, after this time provided that the Chair is satisfied that the Board's ability to consider the issues contained within the paper would not be impaired.

7.4.4 No papers will be included for consideration and decision by the Board unless the Chair is satisfied (subject to advice from the Director of Corporate Services, as appropriate) that the information contained within it is sufficient to enable the Board to take a reasonable decision. This will include evidence that appropriate impact assessments have been undertaken and taken into consideration. Impact assessments shall be undertaken on all new or revised policies, strategies, guidance and or practice to be considered by the Board, and the outcome of that assessment shall accompany the report to the Board to enable the Board to make an informed decision.

7.4.5 In the event that at least half of the Board members do not receive the Agenda and papers for the meeting as set out above, the Chair must consider whether or not the Board would still be capable of fulfilling its role and meeting its responsibilities through the conduct of the meeting. Where the Chair determines that the meeting should go ahead, their decision, and the reason for it, shall be recorded in the minutes.

7.4.6 In the case of a meeting called by Board members, notice of that meeting must be signed by those members and the business conducted will be limited to that set out in the notice.

Notifying the public and others

7.4.7 Except for meetings called in accordance with Standing Order 6.3, at least 10 calendar days before each meeting of the Board a public notice of the time and place of the meeting, and the public part of the agenda, shall be displayed bilingually (in English and Welsh):

- On the Trust's website, together with the papers supporting the public part of the Agenda; as well as
- Through other methods of communication as set out in the Trust's communication strategy.

7.4.8 When providing notification of the forthcoming meeting, the Trust shall set out when and how the Agenda and the papers supporting the public part of the Agenda may be accessed, in what language and in what format, e.g., as Braille, large print, easy read, etc.

7.5 Conducting Board Meetings

Admission of the public, the press and other observers

7.5.1 The Trust shall encourage attendance at its formal Board meetings by the public and members of the press as well as Trust officers or representatives from organisations who have an interest in Trust business. The venue for such meetings shall be appropriate to facilitate easy access for attendees and translation services; and shall have appropriate facilities to maximise accessibility.

7.5.2 The Board and its committees shall conduct as much of its formal business in public as possible. There may be circumstances where it would not be in the public interest to discuss a matter in public, e.g., business that relates to a confidential matter. In such cases the Chair (advised by the Director of Corporate Governance where appropriate) shall schedule these issues accordingly and require that any observers withdraw from the meeting. In

doing so, the Board shall resolve:

> *That representatives of the press and other members of the public be excluded from the remainder of this meeting having regard to the confidential nature of the business to be transacted, publicity on which would be prejudicial to the public interest in accordance with Section 1(2) Public Bodies (Admission to Meetings) Act 1960 (c.67).*

7.5.3 In these circumstances, when the Board is not meeting in public session it shall operate in private session formally reporting any decisions taken to the next meeting of the Board in public session. Wherever possible, that reporting shall take place at the end of a private session, by reconvening a Board meeting held in public session.

7.5.4 The Director of Corporate Governance, on behalf of the Chair, shall keep under review the nature and volume of business conducted in private session to ensure such arrangements are adopted only when absolutely necessary.

7.5.5 In encouraging entry to formal Board Meetings from members of the public and others, the Board shall make clear that attendees are welcomed as observers. The Chair shall take all necessary steps to ensure that the Board's business is conducted without interruption and disruption. In exceptional circumstances, this may include a requirement that observers leave the meeting.

7.5.6 Unless the Board has given prior and specific agreement, members of the public or other observers will not be allowed to record proceedings in any way other than in writing.

Addressing the Board, its Committees and Advisory Groups

7.5.7 The Board will decide what arrangements and terms and conditions it feels are appropriate in extending an invitation to observers to attend and address any meetings of the Board, its Committees and Advisory Groups, and may change, alter or vary these terms and conditions as it considers appropriate. In doing so, the Board will take account of its responsibility to actively encourage the engagement and, where appropriate, involvement of citizens and stakeholders in the work of the Trust, (whether directly or through the activities of bodies such as CHC and the Trust's Advisory Groups representing citizens and other stakeholders) and to demonstrate openness and transparency in the conduct of business.

Chairing Board Meetings

7.5.8 The Chair of the Trust will preside at any meeting of the Board unless they are absent for any reason (including any temporary absence or disqualification from participation on the grounds of a conflict of interest). In these circumstances the Vice Chair shall preside. If both the Chair and vice-chair are absent or disqualified, the Independent Members present shall elect one of the Independent Members to preside.

7.5.9 The Chair must ensure that the meeting is handled in a manner that enables the Board to reach effective decisions on the matters before it. This includes ensuring that Board members' contributions are timely and relevant and move business along at an appropriate pace. In doing so, the Board must have access to appropriate advice on the conduct of the meeting through the attendance of the nominated Director of Corporate Governance. The Chair has the final say on any matter relating to the conduct of Board business.

Quorum

7.5.10 At least one-third of all Board members, at least one of whom is an Executive Director and one is an Independent Members, must be present to allow any formal business to take place at a Board meeting.

7.5.11 If the Chief Executive or an Executive Director is unable to attend a Board meeting, then a nominated deputy may attend in their absence and may participate in the meeting, provided that the Chair has agreed the nomination before the meeting. However, Board members' voting rights cannot be delegated so the nominated deputy may not vote or be counted towards the quorum. If a deputy is already a Board member in their own right, e.g., a person deputising for the Chief Executive will usually be an Executive Director, they will be able to exercise their own vote in the usual way but they will not have any additional voting rights.

7.5.12 The quorum must be maintained during a meeting to allow formal business to be conducted, i.e., any decisions to be made. Any Board member disqualified through conflict of interest from participating in the discussion on any matter and/or from voting on any resolution will no longer count towards the quorum. If this results in the quorum not being met that particular matter or resolution cannot be considered further at that meeting, and must be noted in the minutes.

Dealing with motions

7.5.13 In the normal course of Board business items included on the agenda are subject to discussion and decisions based on consensus. Considering a motion is therefore not a routine matter and may be regarded as exceptional, e.g. where an aspect of service delivery is a cause for particular concern, a Board member may put forward a motion proposing that a formal review of that service area is undertaken by a Committee of the Board. The Director of Corporate Governance will advise the Chair on the formal process for dealing with motions. No motion or amendment to a motion will be considered by the Board unless moved by a Board member and seconded by another Board member (including the Chair).

7.5.14 **Proposing a formal notice of motion –** Any Board member wishing to propose a motion must notify the Chair in writing of the proposed motion at least 12 days before a planned meeting. Exceptionally, an emergency motion may be proposed up to one hour before the fixed start of the meeting, provided that the reasons for the urgency are clearly set out. Where sufficient notice has been provided, and the Chair has determined that the proposed motion is relevant to the Board's business, the matter shall be included on the Agenda, or, where an emergency motion has been proposed, the Chair shall declare the motion at the start of the meeting as an additional item to be included on the agenda.

7.5.15 The Chair also has the discretion to accept a motion proposed during a meeting provided that the matter is considered of sufficient importance and its inclusion would not adversely affect the conduct of Board business.

7.5.16 **Amendments -** Any Board member may propose an amendment to the motion at any time before or during a meeting and this proposal must be considered by the Board alongside the motion.

7.5.17 If there are a number of proposed amendments to the motion, each amendment will be considered in turn, and if passed, the amended motion becomes the basis on which the further amendments are considered, i.e.., the substantive motion.

7.5.18 **Motions under discussion –** When a motion is under discussion, any Board member may propose that:

- The motion be amended;
- The meeting should be adjourned;
- The discussion should be adjourned and the meeting proceed to the next item of business;

- A Board member may not be heard further;
- The Board decides upon the motion before them;
- An ad hoc Committee should be appointed to deal with a specific item of business; or
- The public, including the press, should be excluded.

7.5.19 **Rights of reply to motions –** The mover of a motion (including an amendment) shall have a right of reply at the close of any debate on the motion or the amendment immediately prior to a vote on the proposal.

7.5.20 **Withdrawal of motion or amendments –** A motion or an amendment to a motion, once moved and seconded, may be withdrawn by the proposer with the agreement of the seconder and the Chair.

7.5.21 **Motion to rescind a resolution –** The Board may not consider a motion to amend or rescind any resolution (or the general substance of any resolution) which has been passed within the preceding six months unless the motion is supported by the (simple) majority of Board members.

7.5.22 A motion that has been decided upon by the Board cannot be proposed again within six months except by the Chair, unless the motion relates to the receipt of a report or the recommendations of a Committee/Chief Executive to which a matter has been referred.

Voting

7.5.23 The Chair will determine whether Board members' decisions should be expressed orally, through a show of hands, by secret ballot or by recorded vote. The Chair must require a secret ballot or recorded vote if the majority of voting Board members request it. Where voting on any question is conducted, a record of the vote shall be maintained. In the case of a secret ballot the decision shall record the number voting for, against or abstaining. Where a recorded vote has been used the Minutes shall record the name of the individual and the way in which they voted.

7.5.24 In determining every question at a meeting the Board members must take account, where relevant, of the views expressed and representations made by individuals or organisations who represent the interests of the Trust's citizens and stakeholders. Such views will usually be presented to the Board through the Chair*(s)* of the Trust's Advisory Group*(s)* and the CHC representative(s).

7.5.25 The Board will make decisions based on a simple majority view held by the Board members present. In the event of a split decision, i.e., no majority view being expressed, the Chair shall have a second and casting vote.

7.5.26 In no circumstances may an absent Board member or nominated deputy vote by proxy. Absence is defined as being absent at the time of the vote.

7.6 Record of Proceedings

7.6.1 A record of the proceedings of formal Board meetings (and any other meetings of the board where the Board members determine) shall be drawn up as 'minutes'. These minutes shall include a record of Board member attendance (including the Chair) together with apologies for absence, and shall be submitted for agreement at the next meeting of the Board, where any discussion shall be limited to matters of accuracy. Any agreed amendment to the minutes must be formally recorded.

7.6.2 Agreed minutes shall be circulated in accordance with Board members' wishes, and, where providing a record of a formal Board meeting shall be made available to the public both on the Trust's website and in hard copy or other accessible format on request, in accordance with any legislative requirements, e.g., Data Protection Act 2018, the General Data Protection Regulations 2018, and the Trust's Communication Strategy and Welsh language requirements.

7.7 Confidentiality

7.7.1 All Board members together with members of any Committee or Advisory Group established by or on behalf of the Board and Trust officials must respect the confidentiality of all matters considered by the Trust in private session or set out in documents which are not publicly available. Disclosure of any such matters may only be made with the express permission of the Chair of the Board or relevant Committee, as appropriate, and in accordance with any other requirements set out elsewhere, e.g., in contracts of employment, within the Trust's Standards of Behaviour Framework Policy or legislation such as the Freedom of Information Act 2000, etc.

8. VALUES AND STANDARDS OF BEHAVIOUR

8.0.1 The Board must adopt a set of values and standards of behaviour for the Trust that meets the requirements of the NHS Wales Values and Standards of Behaviour framework. These values and standards of behaviour will apply to all those conducting business by or on behalf of the Trust, including Board members, Trust officers and others, as appropriate. The framework adopted by the Board is the Trust's Standards of Behaviour Framework Policy and will form part of these SOs.

8.1 Declaring and recording Board members' interests

8.1.1 ***Declaration of interests –*** It is a requirement that all Board members must declare any personal or business interests they may have which may affect, or be perceived to affect the conduct of their role as a Board member. This includes any interests that may influence or be perceived to influence their judgement in the course of conducting the Board's business. Board members must be familiar with the Trust's Standards of Behaviour Framework Policy and their statutory duties under the Membership Regulations. Board members must notify the Chair and Director of Corporate Governance of any such interests at the time of their appointment, and any further interests as they arise throughout their tenure as Board members.

8.1.2 Board members must also declare any interests held by family members or persons or bodies with which they are connected. The Director of Corporate Governance will provide advice to the Chair and the Board on what should be considered as an 'interest', taking account of the regulatory requirements and any further guidance, e.g., the Trust's Standards of Behaviour Framework Policy. If individual Board members are in any doubt about what may be considered as an interest, they should seek advice from the Director of Corporate Governance. However, the onus regarding declaration will reside with the individual Board member.

8.1.3 ***Register of interests –*** The Chief Executive, through the Director of Corporate Governance will ensure that a Register of Interests is established and maintained as a formal record of interests declared by all Board members. The register will include details of all Directorships and other relevant and material interests which have been declared by Board members.

8.1.4 The register will be held by the Director of Corporate Governance, and will be updated during the year, as appropriate, to record any new interests, or changes to the interests declared by Board members. The Director of Corporate Governance will also arrange an annual review of the Register, through which Board members will be required to confirm the accuracy and completeness of the register relating to their own interests.

8.1.5 In line with the Board's commitment to openness and transparency, the Director of Corporate Governance must take reasonable steps to ensure that the citizens served by the Trust are made aware of, and have access to view the Trust's Register of Interests. This may include publication on the Trust's website.

8.1.6 ***Publication of declared interests in Annual Report –*** Board members' directorships of companies or positions in other organisations likely or possibly seeking to do business with the NHS shall be published in the Trust's Annual Report.

8.2 Dealing with Members' interests during Board meetings

8.2.1 The Chair, advised by the Director of Corporate Governance, must ensure that the Board's decisions on all matters brought before it are taken in an open, balanced, objective and unbiased manner. In turn, individual Board members must demonstrate, through their actions, that their contribution to the Board's decision making is based upon the best interests of the Trust and the NHS in Wales.

8.2.2 Where individual Board members identify an interest in relation to any aspect of Board business set out in the Board's meeting agenda, that member must declare an interest at the start of the Board meeting. Board members should seek advice from the Chair, through the Director of Corporate Governance before the start of the Board meeting if they are in any doubt as to whether they should declare an interest at the meeting. All declarations of interest made at a meeting must be recorded in the Board minutes.

8.2.3 It is the responsibility of the Chair, on behalf of the Board, to determine the action to be taken in response to a declaration of interest, taking account of any regulatory requirements or directions made by the Welsh Ministers. The range of possible actions may include determination that:

(i) The declaration is formally noted and recorded, but that the Board member should participate fully in the Board's discussion and decision, including voting. This may be appropriate, for example where the Board is considering matters of strategy relating to a particular aspect of healthcare and an Independent Member is a healthcare professional whose profession may be affected by that strategy determined by the Board;

(ii) The declaration is formally noted and recorded, and the Board member participates fully in the Board's discussion, but takes no part in the Board's decision;

(iii) The declaration is formally noted and recorded, and the Board member takes no part in the Board discussion or decision;

(iv) The declaration is formally noted and recorded, and the Board member is excluded for that part of the meeting when the matter is

being discussed. A Board member must be excluded, where that member has a direct or indirect financial interest in a matter being considered by the Board.

8.2.4 In extreme cases, it may be necessary for the member to reflect on whether their position as a Board member is compatible with an identified conflict of interest.

8.2.5 Where the Chair is the individual declaring an interest, any decision on the action to be taken shall be made by the Vice Chair, on behalf of the Board.

8.2.6 In all cases the decision of the Chair (or the Vice Chair in the case of an interest declared by the Chair) is binding on all Board members. The Chair should take advice from the Director of Corporate Governance when determining the action to take in response to declared interests; taking care to ensure their exercise of judgement is consistently applied.

8.2.7 ***Members with pecuniary (financial) interests –*** Where a Board member, or any person they are connected with[1] has any direct or indirect pecuniary interest in any matter being considered by the Board, including a contract or proposed contract, that member must not take part in the consideration or discussion of that matter or vote on any question related to it. The Board may determine that the Board member concerned shall be excluded from that part of the meeting.

8.2.8 The Membership Regulations define 'direct' and 'indirect' pecuniary interests and these definitions always apply when determining whether a member has an interest. These SOs must be interpreted in accordance with these definitions.

8.2.9 ***Members with Professional Interests -*** During the conduct of a Board meeting, an individual Board member may establish a clear conflict of interest between their role as a Trust Board member and that of their professional role outside of the Board. In any such circumstance, the Board shall take action that is proportionate to the nature of the conflict, taking account of the advice provided by the Director of Corporate Governance.

[1] In the case of persons who are married to each other or in a civil partnership with each other or who are living together as if married or civil partners, the interest of one person shall, if known to the other, be deemed for the purpose of this Standing Order to be also an interest of the other.

8.3 Dealing with officers' interests

8.3.1 The Board must ensure that the Director of Corporate Governance, on behalf of the Chief Executive, establishes and maintains a system for the declaration, recording and handling of Trust officers' interests in accordance with the Values and Standards of Behaviour Framework.

8.4 Reviewing how Interests are handled

8.4.1 The Audit Committee will review and report to the Board upon the adequacy of the arrangements for declaring, registering and handling interests at least annually.

8.5 Dealing with offers of gifts[2], hospitality and sponsorship

8.5.1 The Trust's Standards of Behaviour Framework Policy approved by the Board prohibits Board members and Trust officers from receiving gifts, hospitality or benefits in kind from a third party which may reasonably give rise to suspicion of conflict between their official duty and their private interest, or may reasonably be seen to compromise their personal integrity in any way.

8.5.2 Gifts, benefits or hospitality must never be solicited. Any Board member or Trust officer who is offered a gift, benefit or hospitality which may or may be seen to compromise their position must refuse to accept it. This may in certain circumstances also include a gift, benefit or hospitality offered to a family member of a Trust Board member or officer. Failure to observe this requirement may result in disciplinary and/or legal action.

8.5.3 In determining whether any offer of a gift or hospitality should be accepted, an individual must make an active assessment of the circumstances within which the offer is being made, seeking advice from the Director of Corporate Governance as appropriate. In assessing whether an offer should be accepted, individuals must take into account:

- **Relationship:** Contacts which are made for the purpose of information gathering are generally less likely to cause problems than those which could result in a contractual relationship, in which case accepting a gift or hospitality could cause embarrassment or be seen as giving rise to an obligation;

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[2] The term gift refers also to any reward or benefit.

- **Legitimate Interest:** Regard should be paid to the reason for the contact on both sides and whether it is a contact that is likely to benefit the Trust;

- **Value:** Gifts and benefits of a trivial or inexpensive seasonal nature, e.g., diaries/calendars, are more likely to be acceptable and can be distinguished from more substantial offers. Similarly, hospitality in the form of a working lunch would not be treated in the same way as more expensive social functions, travel or accommodation (although in some circumstances these may also be accepted);

- **Frequency:** Acceptance of frequent or regular invitations particularly from the same source would breach the required standards of conduct. Isolated acceptance of, for example, meals, tickets to public, cultural or social events would only be acceptable if attendance is justifiable in that it benefits the Trust; and

- **Reputation:** If the body concerned is known to be under investigation by or has been publicly criticised by a public body, regulators or inspectors, acceptance of a gift or hospitality might be seen as supporting the body or affecting in some way the investigation or negotiations and it should always be declined.

8.5.4 A distinction may be drawn between items offered as hospitality and items offered in substitution for fees for broadcasts, speeches, lectures or other work done. There may be circumstances where the latter may be accepted if they can be used for official purposes.

8.6 Sponsorship

8.6.1 In addition gifts and hospitality individuals and the organisation may also receive sponsorship. Sponsorship is an offer of funding to an individual, department or the organisation as a whole from an external source whether in cash, goods, services or benefits. It could include an offer to sponsor a research or operational post, training, attendance at a conference, costs associated with meetings, conferences or a working visit. The sponsorship may cover some or all of the costs.

8.6.2 All sponsorship must be approved prior to acceptance in accordance with the Trust's Standards of Behaviour Framework Policy and relevant procedures. A record of all sponsorship accepted or declined will also be maintained.

8.7 Register of Gifts, Hospitality and Sponsorship

8.7.1 The Director of Corporate Governance, on behalf of the Chair, will maintain a register of Gifts, Hospitality and Sponsorship to record offers of gifts, hospitality and sponsorship made to Board members. Executive Directors will adopt a similar mechanism in relation to Trust officers working within their Directorates.

8.7.2 Every Board member and Trust officer has a personal responsibility to volunteer information in relation to offers of gifts, hospitality and sponsorship, including those offers that have been refused. The Director of Corporate Governance, on behalf of the Chair and Chief Executive, will ensure the incidence and patterns of offers and receipt of gifts, hospitality and sponsorship are kept under active review, taking appropriate action where necessary.

8.7.3 When determining what should be included in the Register with regard to gifts and hospitality, individuals shall apply the following principles, subject to the considerations in Standing Order 8.5.3:

- **Gifts:** Generally, only gifts of material value should be recorded. Those with a nominal value, e.g., seasonal items such as diaries/calendars would not usually need to be recorded.

- **Hospitality:** Only significant hospitality offered or received should be recorded. Occasional offers of 'modest and proportionate[3]' hospitality need not be included in the Register.

8.7.4 Board members and Trust officers may accept the occasional offer of modest and proportionate hospitality but in doing so must consider whether the following conditions are met:

- acceptance would further the aims of the Trust;
- the level of hospitality is reasonable in the circumstances;
- it has been openly offered; and,
- it could not be construed as any form of inducement and will not put the individual under any obligation to those offering it.

[3] Examples of 'modest and proportionate' hospitality that need not be included in a Hospitality register include a working sandwich lunch or a buffet lunch incidental to a conference or seminar attended by a variety of participants.

8.7.5 The Director of Corporate Governance will arrange for a full report of all offers of Gifts, Hospitality and Sponsorship recorded by the Trust to be submitted to the Audit Committee (or equivalent) at least annually. The Audit Committee will then review and report to the Board upon the adequacy of the Trust's arrangements for dealing with offers of gifts, hospitality and sponsorship.

9. SIGNING AND SEALING DOCUMENTS

9.0.1 The common seal of the Trust is primarily used to seal legal documents such as transfers of land, lease agreements and other important/key contracts. The seal may only be fixed to a document if the Board has determined it shall be sealed, or if a transaction to which the document relates has been approved by the Board or Committee of the Board.

9.02. Where it is decided that a document shall be sealed it shall be fixed in the presence of the Chair or Vice Chair (or other authorised independent Member) and the Chief Executive (or another authorised individual) both of whom must witness the seal.

9.03. If this process is required to be formed remotely, there should be written authorisation of the electronic signatures from the Chair or Vice Chairs (or other authorised Independent Member) and the Chief Executive (or another authorised individual). Authorisation must be received within 48 hours of their electronic signatures being applied. This process should be overseen by the Director of Corporate Governance or nominated deputy.

9.1 Register of Sealing

9.1.1 The Director of Corporate Governance (or nominated deputy) shall keep a register that records the sealing of every document. Each entry must be signed by the persons who approved and authorised the document and who witnessed the seal. A report of all sealings shall be presented to the Board at least bi-annually.

9.2 Signature of Documents

9.2.1 Where a signature is required for any document connected with legal proceedings involving the Trust, it shall be signed by the Chief Executive, except where the Board has authorised another person or has been otherwise directed to allow or require another person to provide a signature.

9.2.2 The Chief Executive or nominated officers may be authorised by the Board to sign on behalf of the Trust any agreement or other document (not required to be executed as a deed) where the subject matter has been

approved either by the Board or a Committee to which the Board has delegated appropriate authority. If this process is required to be formed remotely, there should be written authorisation of the electronic signatures required received within 48 hours of their electronic signatures being applied.

9.3 Custody of Seal

9.3.1 The Common Seal of the Trust shall be kept securely by the Director of Corporate Governance.

10. GAINING ASSURANCE ON THE CONDUCT OF TRUST BUSINESS

10.0.1 The Board shall set out explicitly, within a Risk and Assurance Framework, how it will be assured on the conduct of Trust business, its governance and the effective management of the organisation's risks in pursuance of its aims and objectives. It shall set out clearly the various sources of assurance, and where and when that assurance will be provided, in accordance with any requirements determined by the Welsh Ministers.

10.0.2 The Board shall ensure that its assurance arrangements are operating effectively, advised by its Audit Committee (or equivalent).

10.0.3 Assurances in respect of services provided by the NHS Wales Shared Services Partnership shall primarily be achieved by the reports of the Director of Shared Services to the Shared Services Partnership Committee, and reported back by the Chief Executive (or their nominated representative). Where appropriate, and by exception, the Board may seek assurances direct from the Director of Shared Services. The Director of Shared Services and the Shared Services Partnership Committee shall be under an obligation to comply with any internal or external audit functions being undertaken by or on behalf of the Trust.

10.0.4 Whilst the Trust is not a member of WHSSC or EASC the Chief Executive does attend the Committees as an Associate Member. Assurances in respect of the functions discharged by WHSSC and EASC shall achieved by the reports of the respective Joint Committee Chair, and reported back by the Chief Executive.

10.0.5 Arrangements for seeking and providing assurance is respect of any other services provided on behalf of or in association with the Trust shall be clearly identified and reflected within the practice of the organisation and within the relevant agreements.

10.1 The role of Internal Audit in providing independent internal assurance

10.1.1 The Board shall ensure the effective provision of an independent internal audit function as a key source of its internal assurance arrangements, in accordance with NHS Wales Internal Auditing Standards and any other requirements determined by the Welsh Ministers.

10.1.2 The Board shall set out the relationship between the Head of Internal Audit (HIA), the Audit Committee (or equivalent) and the Board. It shall:

- Approve the Internal Audit Charter (incorporating the definition of internal audit) and adopt the Internal Auditing Standards (incorporating the code of ethics);
- Ensure the HIA communicates and interacts directly with the Board, facilitating direct and unrestricted access;
- Require Internal Audit to confirm its independence annually; and
- Ensure that the Head of Internal Audit reports periodically to the Board on its activities, including its purpose, authority, responsibility and performance. Such reporting will include governance issues and significant risk exposures.

10.2 Reviewing the performance of the Board, its Committees and Advisory Groups

10.2.1 The Board shall introduce a process of regular and rigorous self-assessment and evaluation of its own operations and performance and that of its Committees and Advisory Groups. Where appropriate, the Board may determine that such evaluation may be independently facilitated.

10.2.2 Each Committee and, where appropriate, Advisory Group must also submit an annual report to the Board through the Chair within 6 weeks of the end of the reporting year setting out its activities during the year and including the review of its performance and that of any sub-Committees it has established.

10.2.3 The Board shall use the information from this evaluation activity to inform:

- the ongoing development of its governance arrangements, including its structures and processes;
- its Board Development Programme, as part of an overall Organisation Development framework; and
- the Board's report of its alignment with the Welsh Government's Citizen Centred Governance Principles.

10.3 External Assurance

10.3.1 The Board shall ensure it develops effective working arrangements and relationships with those bodies that have a role in providing independent, external assurance to the public and others on the Trust's operations, e.g., the Auditor General for Wales and Healthcare Inspectorate Wales.

10.3.2 The Board may be assured, from the work carried out by external audit and others, on the adequacy of its own assurance framework, but that external assurance activity shall not form part of, or replace its own internal assurance arrangements, except in relation to any additional work that the Board itself may commission specifically for that purpose.

10.3.3 The Board shall keep under review and ensure that, where appropriate, the Trust implements any recommendations relevant to its business made by the Welsh Government's Audit Committee, the Senedd Cymru/Welsh Parliament's Public Accounts Committee or other appropriate bodies.

10.3.4 The Trust shall provide the Auditor General for Wales with any assistance, information and explanation which the Auditor General thinks necessary for the discharge of their statutory powers and responsibilities.

11. DEMONSTRATING ACCOUNTABILITY

11.0.1 Taking account of the arrangements set out within these SOs, the Board shall demonstrate to the communities it serves and to the Welsh Ministers a clear framework of accountability within which it:

- Conducts its business internally;
- Works collaboratively with NHS colleagues, partners, service providers and others; and
- Responds to the views and representations made by those who represent the interests of citizens and other stakeholders, including its officers and healthcare professionals.

11.0.2 The Board shall, in publishing its strategic and operational level plans, set out how those plans have been developed taking account of the views of others, and how they will be delivered by working with their partners.

11.0.3 The Board shall also facilitate effective scrutiny of the Trust's operations through the publication of regular reports on activity and performance, including publication of an Annual Report.

11.0.4 The Board shall ensure that within the Trust, individuals at all levels are supported in their roles, and held to account for their personal performance through effective performance management arrangements.

12. REVIEW OF STANDING ORDERS

12.0.1 The Director of Corporate Governance shall arrange for appropriate impact assessments to be carried out on a draft of these SOs prior to their formal adoption by the Board, the results of which shall be presented to the Board for consideration and action, as appropriate. The fact that an assessment has been carried out shall be noted in the SOs.

12.0.2 These SOs shall be reviewed annually by the Audit Committee [or equivalent], which shall report any proposed amendments to the Board for consideration. The requirement for review extends to all documents having the effect as if incorporated in SOs, including the appropriate impact assessments.

Schedule 2

KEY GUIDANCE, INSTRUCTIONS AND OTHER RELATED DOCUMENTS

This Schedule forms part of, and shall have effect as if incorporated in the Velindre University NHS Trust Standing Orders

Trust framework

The Trust's governance and accountability framework comprises these SOs, incorporating schedules of Powers reserved for the Board and Delegation to others, together with the following documents:

- ***SFIs*** *(see Schedule 2.1 below)*
- ***Standards of Behaviour Framework Policy***
- ***Trust Assurance Framework***
- ***Key policy documents***

agreed by the Board. These documents must be read in conjunction with the SOs and will have the same effect as if the details within them were incorporated within the SOs themselves.

These documents may be accessed by the Trust intranet site or from the Director of Corporate Governance.

NHS Wales framework

Full, up to date details of the guidance, instructions and other documents that together make up the framework of governance, accountability and assurance for the NHS in Wales are published on the NHS Wales Governance e-Manual, which can be accessed at https://nwssp.nhs.wales/all-wales-programmes/governance-e-manual/. Directions or guidance on specific aspects of Trust business are also issued electronically, usually under cover of a Welsh Health Circular.

Schedule 2.1

MODEL STANDING FINANCIAL INSTRUCTIONS FOR VELINDRE UNIVERSITY NHS TRUST

This Schedule forms part of, and shall have effect as if incorporated in the NHS Trust Standing Orders (incorporated as Schedule 2.1 of SOs)

Foreword

These Model Standing Financial Instructions are issued by Welsh Ministers to NHS Trusts using powers of direction provided in section 19 (1) of the National Health Service (Wales) Act 2006. NHS Trusts in Wales must agree Standing Financial Instructions (SFIs) for the regulation of their financial proceedings and business. Designed to achieve probity, accuracy, economy, efficiency, effectiveness and sustainability in the conduct of business, they translate statutory and Welsh Government financial requirements for the NHS in Wales into day to day operating practice. Together with the adoption of Standing Orders (SOs), a Schedule of decisions reserved to the Board and a Scheme of delegations to officers and others, they provide the regulatory framework for the business conduct of the Trust.

These documents form the basis upon which the Trust's governance and accountability framework is developed and, together with the adoption of the Trust's Values and Standards of Behaviour framework, is designed to ensure the achievement of the standards of good governance set for the NHS in Wales.

All Trust Board members and officers must be made aware of these Standing Financial Instructions and, where appropriate, should be familiar with their detailed content. The Director of Finance will be able to provide further advice and guidance on any aspect of the Standing Financial Instructions. The Board Secretary will be able to provide further advice and guidance on the wider governance arrangements within the Trust. Further information on governance in the NHS in Wales may be accessed at https://nwssp.nhs.wales/all-wales-programmes/governance-e-manual/

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Schedule 1

Velindre University NHS Trust

1. INTRODUCTION

1.1 General

1.1.1 These Model Standing Financial Instructions are issued by Welsh Ministers to NHS Trusts using powers of direction provided in section 19 (1) of the National Health Service (Wales) Act 2006. NHS Trusts in Wales must agree Standing Financial Instructions (SFIs) for the regulation of their financial proceedings and business. They shall have effect as if incorporated in the Standing Orders (SOs) (incorporated as Schedule 2.1of SOs).

1.1.2 These SFIs detail the financial responsibilities, policies and procedures adopted by **Velindre University National Health Service Trust** "the Trust". They are designed to ensure that the Trust's financial transactions are carried out in accordance with the law and with Welsh Government policy in order to achieve probity, accuracy, economy, efficiency, effectiveness and sustainability. They should be used in conjunction with the Schedule of decisions reserved to the Board and the Scheme of delegation adopted by the Trust.

1.1.3 These SFIs identify the financial responsibilities which apply to everyone working for the Trust and its constituent organisations. They do not provide detailed procedural advice and should be read in conjunction with the detailed departmental and financial control procedure notes. All financial procedures must be approved by the Director of Finance and Audit Committee.

1.1.4 Should any difficulties arise regarding the interpretation or application of any of the SFIs then the advice of the Director of Corporate Governance or Director of Finance must be sought before acting. The user of these SFIs should also be familiar with and comply with the provisions of the Trust's SOs.

1.2 Overriding Standing Financial Instructions

1.2.1 Full details of any non compliance with these SFIs, including an explanation of the reasons and circumstances must be reported in the first instance to the Director of Finance and the Director of Corporate Governance, who will ask the Audit Committee to formally consider the matter and make proposals to the Board on any action to be taken. All Board members and Trust officers have a duty to report any non

compliance to the Director of Finance and Director of Corporate Governance as soon as they are aware of any circumstances that has not previously been reported.

1.2.2 **Ultimately, the failure to comply with SFIs and SOs is a disciplinary matter that could result in an individual's dismissal from employment or removal from the Board.**

1.3 Financial provisions and obligations of NHS Trusts

1.3.1 The financial provisions and obligations for NHS Trusts are set out under Schedule 4 to the National Health Service (Wales) Act 2006 (c. 42). The Board as a whole and the Chief Executive in particular, in their role as the Accountable Officer for the organisation, must ensure the Trust meets its statutory obligation to perform its functions within the available financial resources.

1.3.2 The financial obligation as set out in paragraph 2 of Schedule 4 is as follows:

(1) Each NHS trust must ensure that its revenue is not less than sufficient, taking one financial year with another, to meet outgoings properly chargeable to revenue account.

(2) Each NHS trust must achieve such financial objectives as may from time to time be set by the Welsh Ministers with the consent of the Treasury and as are applicable to it.

(3) Any such objectives may be made applicable to NHS trusts generally, or to a particular NHS trust or to NHS trusts of a particular description.

2. RESPONSIBILITIES AND DELEGATION

2.1 The Board

2.1.1 The Board exercises financial supervision and control by:

a) Formulating and approving the Medium Term Financial Plan (MTFP) as part of developing and approving the Integrated Medium Term Plan (IMTP);

b) Requiring the submission and approval of balanced budgets within approved allocations/overall income;

c) Defining and approving essential features in respect of important financial policies, systems and financial controls (including the need to obtain value for money and sustainability); and

d) Defining specific responsibilities placed on Board members and Trust officers, and Trust committees and Advisory Groups as indicated in the 'Scheme of delegation' document.

2.1.2 The Board has resolved that certain powers and decisions may only be exercised by the Board in formal session. These are set out in the 'Schedule of matters reserved to the Board' document. The Board, subject to any directions that may be made by Welsh Ministers, shall make appropriate arrangements for certain functions to be carried out on its behalf so that the day to day business of the Health Board may be carried out effectively, and in a manner that secures the achievement of the organisations aims and objectives. This will be via powers and authority delegated to committees or sub-committees that the Trust has established or to an officer of the Trust in accordance with the 'Scheme of delegation' document adopted by the Trust.

2.2 The Chief Executive and Director of Finance

2.2.1 The Chief Executive and Director of Finance will, as far as possible, delegate their detailed responsibilities, but they remain accountable for financial control.

2.2.2 Within the SFIs, it is acknowledged that the Chief Executive is ultimately accountable to the Board, and as Accountable Officer, to the Welsh Government, for ensuring that the Board meets its obligation to perform its functions within the available financial resources. The Chief Executive has overall executive responsibility for the Trust's activities; is responsible to the Chair and the Board for ensuring that financial provisions, obligations and targets are met; and has overall

responsibility for the Trust's system of internal control.

2.2.3 It is a duty of the Chief Executive to ensure that Board members and Trust officers, and all new appointees are notified of, and put in a position to understand their responsibilities within these SFIs.

2.3 The Director of Finance

2.3.1 The Director of Finance is responsible for:

a) Implementing the Trust's financial policies and for co-coordinating any corrective action necessary to further these policies;

b) Maintaining an effective system of internal financial control including ensuring that detailed financial control procedures and systems incorporating the principles of separation of duties and internal checks are prepared, documented and maintained to supplement these instructions;

c) Ensuring that sufficient records are maintained to show and explain the Trust's transactions, in order to disclose, with reasonable accuracy, the financial position of the Trust at any time; and

d) Without prejudice to any other functions of the Trust, and Board members and Trust officers, the duties of the Director of Finance include:

(i) the provision of financial advice to other Board members and Trust officers, and to Trust committees and Advisory Groups,

(ii) the design, implementation and supervision of systems of internal financial control, and

(iii) the preparation and maintenance of such accounts, certificates, estimates, records and reports as the Trust may require for the purpose of carrying out its statutory duties.

2.3.2 The Director of Finance is responsible for ensuring an ongoing training and communication programme is in place to affect these SFIs.

2.4 Board members and Trust officers, and Trust Committees

2.4.1 All Board members and Trust officers, and Trust committees, severally and collectively, are responsible for:

a) The security of the property of the Trust;

b) Avoiding loss;

c) Exercising economy, efficiency and sustainability in the use of resources; and

d) Conforming to the requirements of SOs, SFIs, Financial Control Procedures and the Scheme of delegation.

2.4.2 For all Board members and Trust officers, and Trust committees who carry out a financial function, the form in which financial records are kept and the manner in which Trust Board members and officers, and Trust committees, Advisory Groups and employees discharge their duties must be to the satisfaction of the Director of Finance.

2.5 Contractors and their employees

2.5.1 Any contractor or employee of a contractor who is empowered by the Trust to commit the Trust to expenditure or who is authorised to obtain income shall be covered by these instructions. It is the responsibility of the Chief Executive to ensure that such persons are made aware of this.

3. AUDIT, FRAUD AND CORRUPTION, AND SECURITY MANAGEMENT

3.1 Audit Committee

3.1.1 An independent Audit Committee is a central means by which a Board ensures effective internal control arrangements are in place. In addition, the Audit Committee provides a form of independent check upon the executive arm of the Board. In accordance with SOs the Board shall formally establish an Audit Committee with clearly defined terms of reference. Detailed terms of reference and operating arrangements for the Audit Committee are set out in Schedule 3 to the SOs. This committee will follow the guidance set out in the NHS Wales Audit Committee Handbook.

http://www.wales.nhs.uk/sitesplus/documents/1064/NHS%20Wales%20Audit%20Committee%20Handbook%20%28June%202012%29.pdf

3.2 Chief Executive

3.2.1 The Chief Executive is responsible for:

a) Ensuring there are arrangements in place to review, evaluate and report on the effectiveness of internal financial control including the establishment of an effective Internal Audit function;

b) Ensuring that the Internal Audit function meets the Public Sector Internal Audit Standards and provides sufficient independent and objective assurance to the Audit Committee and the Accountable Officer;

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/641252/PSAIS_1_April_2017.pdf

c) Deciding at what stage to involve the police in cases of misappropriation and other irregularities not involving fraud or corruption;

d) Ensuring that an annual Internal Audit report is prepared for the consideration of the Audit Committee and the Board. The report must cover:

- a clear opinion on the effectiveness of internal control in accordance with the requirements of the Public Sector Internal Audit Standards.

- major internal financial control weaknesses discovered,
- progress on the implementation of Internal Audit recommendations,
- progress against plan over the previous year,
- a strategic audit plan covering the coming three years, and
- a detailed plan for the coming year.

3.2.2 The designated internal and external audit representatives are entitled (subject to provisions in the Data Protection Act 2018 and the UK General Data Protection Legislation) without necessarily giving prior notice to require and receive:

a) Access to all records, documents and correspondence relating to any financial or other relevant transactions, including documents of a confidential nature;

b) Access at all reasonable times to any land or property owned or leased by the Trust;

c) Access at all reasonable times to Board members and officers;

d) The production of any cash, stores or other property of the Trust under a Board member or a Trust official's control; and

e) Explanations concerning any matter under investigation.

3.3 Internal Audit

3.3.1 The Accountable Officer Memorandum requires the Chief Executive to have an internal audit function that operates in accordance with the standards and framework set for the provision of Internal Audit in the NHS in Wales. This framework is defined within an Internal Audit Charter that incorporates a definition of internal audit, a code of ethics and Public Sector Internal Audit Standards. Standing Order 10.1 details the relationship between the Head of Internal Audit and the Board. The role of the Audit Committee in relation to Internal Audit is set out within its Terms of Reference, incorporated in Schedule 3 of the SOs, and the NHS Wales Audit Committee Handbook.

3.4 External Audit

3.4.1 Pursuant to the Public Audit (Wales) Act 2004 (c. 23), the Auditor General for Wales (Auditor General) is the external auditor of the Trust. The Auditor General may nominate his representative to represent him within the Trust and to undertake the required audit work. The cost of the audit is paid for by the Trust. The Trust's Audit Committee must ensure that a cost-efficient external audit service is delivered. If there are any problems relating to the service provided, this should be raised with the Auditor General's representative and referred on to the Auditor General if the issue cannot be resolved.

3.4.2 The objectives of the external audit fall under three broad headings, to review and report on:

a) Whether the expenditure to which the financial statements relate has been incurred lawfully and in accordance with the authority that governs it;

b) The audited body's financial statements, and on its Annual Governance Statement and remuneration report [1];

c) Whether the audited body has made proper arrangements for securing economy, efficiency and effectiveness in its use of resources.

3.4.3 The Auditor General's representatives will prepare a risk-based annual audit plan, designed to deliver the Auditor General's objectives, for consideration by the Audit Committee. The annual plan will set out details of the work to be carried out, providing sufficient detail for the Audit Committee and other recipients to understand the purpose and scope of the defined work and their level of priority. The Audit Committee should review the annual plan and the associated fees, although in so doing it needs to recognise the statutory duties of the Auditor General. The annual audit plan should be kept under review to identify any amendment needed to reflect changing priorities and emerging audit needs. The Audit Committee should consider material changes to the annual audit plan.

3.4.4 The Auditor General's representative should be invited to attend every Audit Committee meeting. The cycle of approving and monitoring the progress of external audit plans and reports, culminating in the opinion on the annual report and accounts, is central to the core work of the

[1] The Healthcare Inspectorate Wales will review and report on the Annual Quality Statement.

Audit Committee.

3.4.5 The Auditor General's representatives will liaise with Internal Audit when developing the external audit plan. The Auditor General's representative will ensure that planned external audit work takes into account the work of Internal Audit to avoid duplication wherever possible and considers where Internal Audit work can be relied upon for opinion purposes.

3.4.6 The Auditor General and his representatives shall have a right of access to the Chair of the Audit Committee at any time.

3.4.7 The Government of Wales Act 2006 (GOWA) provides that the Auditor General has statutory rights of access to all documents and information, as set out in paragraph 3.2.2a of these SFIs, that relate to the exercise of many of his core functions, including his statutory audits of accounts, value for money examinations and improvement studies. The rights of access include access to confidential information; personal information as defined by the Data Protection Act 2018 and the UK General Data Protection Legislation; information subject to legal privilege; personal information and sensitive personal information that may otherwise be subject to protection under the European Convention of Human Rights; information held by third parties; and electronic files and IT systems. Paragraph 17 of Schedule 8 to GOWA operates to provide the Auditor General with a right of access to every document relating to the Trust that appears to him to be necessary for the discharge of any of these functions. Paragraph 17(3) of Schedule 8 also requires any person that the Auditor General thinks has information related to the discharge of his functions to give any assistance, information and explanation that he thinks necessary. It also requires such persons to attend before the Auditor General and to provide any facility that he and his representatives may reasonably require, such as audit accommodation and access to IT facilities. The rights apply not just to the Trust and its officers and staff, but also to, among others, suppliers to the Trust.

3.4.8 The Auditor General's independence in the exercise of his audit functions is protected by statute (section 8 of the Public Audit (Wales) Act 2013), and audit independence is required by professional and ethical standards. Accordingly, the Trust (including its Audit Committee) must be careful not to seek to fetter the Auditor General's discretion in the exercise of his functions. While the Trust may offer comments on the plans and outputs of the Auditor General, it must not seek to direct the Auditor General.

3.4.9 The Auditor General will issue a number of reports over the year, some

of which are specified in the Auditor General's Code of Audit and Inspection Practice and International Standards on Auditing. Other reports will depend on the contents of the audit plan.

The main mandatory reports are:

- Report to those charged with governance (incorporating the report required under ISA 260) that sets out the main issues arising from the audit of the financial statements and use of resources work
- Statutory report and opinion on the financial statements
- Annual audit report.

In addition to these reports, the Auditor General may prepare a report on a matter the Auditor General considers would be in the public interest to bring to the public's attention; or make a referral to the Welsh Ministers if significant breaches occur.

3.4.10 The Auditor General also has statutory powers to undertake Value for Money Examinations and Improvement Studies within the Trust and other public sector bodies. At the Trust he also undertakes a Structured Assessment to help him assess whether there are proper arrangements for securing economy, efficiency and effectiveness in the use of resources. The Auditor General will take account of audit work when planning and undertaking such examinations and studies. The Auditor General and his representatives have the same access rights in relation to these examinations and studies as they do in relation to annual audit work.

3.5 Fraud and Corruption

3.5.1 In line with their responsibilities, the Chief Executive and Director of Finance shall monitor and ensure compliance with Directions issued by the Welsh Ministers on fraud and corruption.

3.5.2 The Trust shall nominate a suitable person to carry out the duties of the Local Counter Fraud Specialist (LCFS) as specified by Directions to NHS bodies on Counter Fraud Measures 2005.

http://www.wales.nhs.uk/sitesplus/documents/1064/WHC%282005%2995%20%28Revised%29%20Directions%20to%20National%20Health%20Service%20bodies%20on%20Counter%20Fraud%20Measures%202005.pdf

3.5.3 The LCFS shall report to the Trust Director of Finance and the LCFS

must work with NHS Counter Fraud Authority (NHSCFA) and the NHS Counter Fraud Service Wales (CFSW) Team in accordance with the Directions to NHS bodies on Counter Fraud Measures 2005.

3.5.4 The LCFS will provide a written report to the Director of Finance and Audit Committee, at least annually, on proactive and reactive counter fraud work within the Trust.

3.5.5 The Trust must participate in the annual National Fraud Initiative (NFI) led by Audit Wales and must provide the necessary data for the mandatory element of the NFI by the due dates. The Trust should participate in appropriate risk measurement or additional dataset matching exercise in order to support the detection of fraud across the whole public sector.

3.6 Security Management

3.6.1 In line with their responsibilities, the Chief Executive will monitor and ensure compliance with Directions issued by the Welsh Ministers on NHS security management.

3.6.2 The Chief Executive has overall responsibility for controlling and coordinating security.

4. FINANCIAL DUTIES

4.1 Legislation and Directions

4.1.1 The Trust has two statutory financial duties, to:

- First Duty - A breakeven duty, to ensure that its revenue is not less than sufficient to meet outgoings properly chargeable to revenue account in respect of each rolling three-year accounting period
- Second Duty - A duty to prepare a plan to secure compliance with the first duty and for that plan to be submitted to and approved by the Welsh Ministers

4.1.2 The first duty is provided for under paragraph 2(1) of Schedule 4 of the National Health Service (Wales) Act 2006, although this should be read in conjunction with 'Welsh Health Circular 2016/054 – Statutory Financial Duties of Local Health Boards and NHS Trusts' which sets out the duty to break even over a three-year period. The second duty arises as a result of the Welsh Ministers' powers to set financial objectives for the Trust under paragraph 2(2) of Schedule 4 of the National Health Service (Wales) 2006 Act. The planning requirement, which by virtue of being set as a financial objective becomes a statutory financial duty, was previously set by the Welsh Ministers and has been retained by Welsh Health Circular 2016/054 – Statutory Financial Duties of Local Health Boards and NHS Trusts. A link to the relevant Welsh Health Circular is below.

http://www.wales.nhs.uk/sitesplus/documents/863/12b%29%20Statutory%20Duties%20of%20Welsh%20Health%20Boards.pdf

4.2 First Financial Duty – The Breakeven Duty

4.2.1 The Trust has a statutory duty to ensure that its revenue is not less than sufficient to meet outgoings properly chargeable to revenue account in respect of each rolling three-year accounting period, that is to breakeven over a 3-year rolling period.

4.2.2 Trusts must ensure their boards approve balanced revenue and capital plans before the start of each financial year.

4.2.3 The Director of Finance of the Trust will:

a) Prior to the start of each financial year submit to the Board for approval a report showing the total funding received, assumed in-year funding and other adjustments and their proposed distribution to delegated budgets, including any sums to be held in reserve;

b) Ensure that any ring-fenced or non-discretionary funding are disbursed in accordance with Welsh Ministers' requirements;

c) Periodically review any assumed in-year funding to ensure that these are reasonable and realistic; and

d) Regularly update the Board on significant changes to the initial funding and the application of such funds.

4.2.4 The Chief Executive has overall executive responsibility for the Trust's activities and is responsible to the Board for ensuring that it meets its First Financial Duty.

4.3. Second Financial Duty – The Planning Duty

4.3.1 The Trust has a statutory duty to prepare a plan, the Integrated Medium Term Plan (IMTP), to secure compliance with the first duty, and for that plan to be submitted to and approved by the Welsh Ministers.

4.3.2 The Integrated Medium Term Plan must reflect longer-term planning and delivery objectives and should be continually reviewed based on latest Welsh Government policy and local priority requirements. The Integrated Medium Term Plan, produced and approved annually, will be 3 year rolling plans. In particular the Integrated Medium Term Plan must reflect the Welsh Ministers' priorities and commitments as detailed in the NHS Planning Framework published annually by Welsh Government.

https://gov.wales/sites/default/files/publications/2019-09/nhs-wales-planning-framework-2020-23%20.pdf

4.3.3 The NHS Planning Framework directs Trusts to develop, approve and submit an Integrated Medium Term Plan (IMTP) for approval by Welsh Ministers. The plan must

- describe the context within which the Trust will deliver key policy directives from Welsh Government.
- demonstrate how the Health Board are
  - delivering their well-being objectives, including how the five ways of working have been applied
  - contributing to the seven Well-being Goals,
  - establishing preventative approaches across all care and services
- demonstrate how the Trust will utilise its existing services and resources, and planned service changes, to deliver improvements in population health and clinical services, and at the same time

demonstrate improvements to efficiency of services.

- demonstrate how the three-year rolling financial breakeven duty is to be achieved.

4.3.4 An Integrated Medium Term Plans should be based on a reasonable expectation of future income, service changes, performance improvements, workforce changes, demographic changes, capital, quality, funding, income, expenditure, cost pressures and savings plans to ensure that the Integrated Medium Term Plan (including a balanced Medium Term Financial Plan) is balanced and sustainable and supports the safe and sustainable delivery of patient centred quality services.

4.3.5 The Integrated Medium Term Plan will be the overarching planning document enveloping component plans and service delivery plans. The Integrated Medium Term Plan will incorporate the balanced Medium Term Financial Plan and will incorporate the Trusts response to delivering the

- NHS Planning Framework,
- Quality, governance and risk frameworks and plans, and
- Outcomes Framework

4.3.6 The Integrated Medium Term Plan will be developed in line with the NHS Planning Framework and include:

- A statement of significant strategies and assumptions on which the plans are based;
- Details of major changes in activity, service delivery, service and performance improvements, workforce, revenue and capital resources required to achieve the plans; and
- Profiled activity, service, quality, workforce and financial schedules.
- Detailed plans to deliver the NHS Planning Framework and quality, governance and risk requirements and outcome measures;

4.3.7 The Chief Executive has overall executive responsibility to develop and submit to the Board, on an annual basis, the rolling 3 year Integrated Medium Term Plan (IMTP).

4.3.8 The Board will:

a) Approve the Integrated Medium Term Plan prior to the beginning of the financial year of implementation and in accordance with the guidance issued annually by Welsh Government. Following Board approval the Plan will be submitted to Welsh Government prior to the beginning of the financial year of implementation.

b) Approve a balanced Medium Term Financial Plan as part of the

Integrated Medium Term Plan, which meets all financial duties, probity and value for money requirements; and

c) Prepare and agree with the Welsh Government a robust and sustainable recovery plan in accordance with Welsh Ministers' guidance where the Trust plan is not in place or in balance.

4.3.9 The Board approved Integrated Medium Term Plan will be submitted to Welsh Government, for approval by the Minister, in line with the requirements set out in the NHS Planning Framework.

4.3.10 The finalised approved Integrated Medium Term Plan will form the basis of the Performance Agreement between the Trust and Welsh Government.

5. FINANCIAL MANAGEMENT AND BUDGETARY CONTROL

5.1 Budget Setting

5.1.1 Prior to the start of the financial year the Director of Finance will, on behalf of the Chief Executive, prepare and submit budgets for approval and delegation by the Board. Such budgets will:

a) Be in accordance with the aims and objectives set out in the Board approved Integrated Medium Term Plan, and Medium Term Financial Plan, and focussed on delivery of safe patient centred quality services;

b) Be in line with Revenue, Capital, Commissioner, Activity, Service, Quality, Performance, and Workforce plans contained within the Board approved balanced IMTP;

c) Take account of approved business cases and associated revenue costs and funding;

d) Be produced following discussion with appropriate Directors and budget holders;

e) Be prepared within the limits of available funds;

f) Take account of ring-fenced or specified funding;

g) Include both financial budgets (£) and workforce establishment budgets (budgeted whole time equivalents);

h) Be within the scope of activities and authority defined by the National Health Service (Wales) Act 2006, including pooled budget arrangements;

i) Take account of the principles of Well-being of Future Generations (Wales) Act 2015 including the seven Well-being Goals and the five ways of working; and

j) Identify potential risks and opportunities.

5.2 Budgetary Delegation

5.2.1 The Chief Executive may delegate, via the Director of Finance, the management of a budget to permit the performance of a defined range

of activities, including pooled budget arrangements under Regulations made in accordance with section 33 of the National Health Service (Wales) Act 2006 (c. 42). This delegation must be in writing, in the form of a letter of accountability, and be accompanied by a clear definition of:

a) The amount of the budget;
b) The purpose(s) of each budget heading;
c) Individual or committee responsibilities;
d) Arrangements during periods of absence;
e) Authority to exercise virement;
f) Achievement of planned levels of service; and
g) The provision of regular reports.

The budget holder must sign the accountability letter formally delegating the budget.

5.2.2 The Chief Executive, Director of Finance and delegated budget holders must not exceed the budgetary total or virement limits set by the Board.

5.2.3 Budgets must only be used for the purposes designated, and any budgeted funds not required for their designated purpose(s) revert to the immediate control of the Chief Executive, subject to any authorised use of virement.

5.2.4 Non-recurring budgets should not be used to finance recurring expenditure without the authority in writing of the Chief Executive, as advised by the Director of Finance.

5.2.5 All budget holders must provide information as required by the Director of Finance to enable budgets to be compiled and managed appropriately.

5.2.6 All budget holders will sign up to their allocated budgets at the commencement of the financial year.

5.2.7 The Director of Finance has a responsibility to ensure that appropriate and timely financial information is provided to budget holders and that adequate training is delivered on an on-going basis to assist budget holders managing their budgets successfully.

5.3 Financial Management, Reporting and Budgetary Control

5.3.1 The Director of Finance shall monitor financial performance against budget and plans and report the current and forecast position, and

financial risks, on a monthly basis and at every Board meeting. Any significant variances should be reported to Trust Board as soon as they come to light and the Board shall be advised on any recommendations and action to be taken in respect of such variances.

5.3.2 The Director of Finance will devise and maintain systems of financial management performance reporting and budgetary control. These will include:

a) Regular financial reports, for revenue and capital, to the Board in a form approved by the Board containing sufficient information for the Board to:
- Understand the current and forecast financial position
- Evaluate risks and opportunities
- Use insight to make informed decisions
- Be consistent with other Board reports

As a minimum the reports will cover:
- Current and forecast year end position on statutory financial duties
- Actual income and expenditure to date compared to budget and showing trends and run rates
- Forecast year end positions
- A statement of assets and liabilities, including analysis of cash flow and movements in working capital.
- Explanations of material variances from plan
- Capital expenditure and projected outturn against plan
- Investigations and reporting of variances from financial, activity and workforce budgets.
- Details of corrective actions being taken, as advised by the relevant budget holder and the Chief Executive's and/or Director of Finance's view of whether such actions are sufficient to correct the situation;
- Statement of performance against savings targets
- Key workforce and other cost drivers
- Income and expenditure run rates, historic trends, extrapolation and explanations
- Clear assessment of risks and opportunities
- Provide a rounded and holistic view of financial and wider organisational performance.

b) The issue of regular, timely, accurate and comprehensible advice and financial reports to each delegated budget holder, covering the areas for which they are responsible;

c) An accountability and escalation framework to be established for

the organisation to formally address material budget variances

d) Investigation and reporting of variances from financial, activity and workforce budgets;

e) Monitoring of management action to correct variances;

f) Arrangements for the authorisation of budget transfers and virements.

5.3.3 Each Budget Holder will

- be held to account for managing services within the delegated budget
- investigate causes of expenditure and budget variances using information from activity, workforce and other relevant sources
- develop plans to address adverse budget variances.

5.3.4 Each Budget Holder is responsible for ensuring that:

a) Any likely overspending or reduction of income that cannot be met by virement is not incurred without the prior consent of the Chief Executive subject to the Board's scheme of delegation;

b) The amount provided in the approved budget is not used in whole or in part for any purpose other than that specifically authorised, subject to the rules of virement;

c) No permanent employees are appointed without the approval of the Chief Executive other than those provided for within the available resources and workforce establishment as approved by the Board.

5.3.5 The Chief Executive is responsible for identifying and implementing cost and efficiency improvements and income generation initiatives in accordance with the requirements of the Medium Term Financial Plans and SFI 9.1.

5.4 Capital Financial Management, Reporting and Budgetary Control

5.4.1 The general rules applying to revenue Financial Management, Reporting and Budgetary Control delegation and reporting shall also apply to capital plans, budgets and expenditure subject to any specific reporting requirements required by the Welsh Ministers.

5.5 Reporting to Welsh Government - Monitoring Returns

5.5.1 The Chief Executive is responsible for ensuring that the appropriate

monitoring returns are submitted to the Welsh Ministers in accordance with published guidance and timescales.

https://gov.wales/health-boards-and-trusts-financial-monitoring-guidance-2019-2020-whc-2019013

5.5.2 All monitoring returns must be supported by a detailed commentary signed by the Director of Finance and Chief Executive. This commentary should also highlight and quantify any significant risks with an assessment of the impact and likelihood of these risks maturing.

5.5.3 All information made available to the Welsh Ministers should also be made available to the Board. There must be consistency between the Medium Term Financial Plan, budgets, expenditure, forecast position and risks as reported in the monitoring returns and monthly Board reports.

6. ANNUAL ACCOUNTS AND REPORTS

6.1 The Board must approve the Trust's annual accounts prior to submission to the Welsh Ministers and the Auditor General for Wales in accordance with the annual timetable.

6.2 The Chair and Chief Executive have responsibility for signing the accounts on behalf of the Trust. The Chief Executive has responsibility for signing the Annual Governance Statement and the Annual Quality Statement.

6.3 The Director of Finance, on behalf of the Trust, is responsible for ensuring that financial reports and returns are prepared in accordance with the accounting policies, guidance and timetable determined by the Welsh Ministers, as per Welsh Government's Manual for Accounts, and consistent with Financial Reporting Manual (FReM) and International Financial Reporting Standards.

6.4 The Trust's annual accounts must be audited by the Auditor General for Wales. The Trust's audited annual accounts must be adopted by the Board at a public meeting and made available to the public.

6.5 The Trust will publish an annual report, in accordance with guidelines on local accountability, and present it at its Annual General Meeting. The annual report must also be sent to the Welsh Ministers. The Board Secretary will ensure that the Annual Report is prepared in line with the Welsh Government's Manual for Accounts. The Annual Report will include

- The Accountability Report containing:
  - Corporate Governance Report
  - Remuneration Report and Staff Report
  - Accountability and Audit Report

- The Performance Report, which must include:
  - An overview
  - A performance Analysis

7. BANKING ARRANGEMENTS

7.1 General

7.1.1 The Director of Finance is responsible for managing the Trust's banking arrangements and for advising the Board on the provision of banking services and operation of accounts. This advice will take into account guidance/ Directions issued from time to time by the Welsh Ministers. NHS Trusts are required to use the Government Banking Service (GBS) for its banking services.

7.1.2 The Board shall approve the banking arrangements.

7.2 Bank Accounts

7.2.1 The Director of Finance is responsible for:

a) Establishing bank accounts and ensuring that the Government Banking Service is utilised for main Trust business transactions;

b) Establishing additional commercial accounts only exceptionally and where there is a clear rationale for not utilising the Government Banking Service;

c) Establishing separate bank accounts for the Trust's non-exchequer funds;

d) Ensuring payments made from bank accounts do not exceed the amount credited to the account except where arrangements have been made;

e) Ensuring accounts are not overdrawn except in exceptional and planned situations.

f) Reporting to the Board all arrangements made with the Trust's bankers for accounts to be overdrawn;

g) Monitoring compliance with Welsh Ministers' guidance on the level of cleared funds.

7.2.2 With the exception of Project Bank Accounts, all bank accounts should be held in the name of the Trust. No officer other than the Director of Finance shall open any account in the name of the Trust or for the purposes of furthering Trust activities.

7.2.3 Any Project Bank Account that is required may be held jointly in the name of the Trust and the relevant third party contractor.

7.3 Banking Procedures

7.3.1 The Director of Finance will prepare detailed instructions on the operation of bank accounts, that ensure there are sound controls over the day-to-day operation of bank accounts, which must include:

a) The conditions under which each bank account is to be operated;

b) Those authorised to sign cheques or other orders drawn on the Trust's accounts.

c) Effective divisions of duty for employees working within the banking and treasury management function to minimise the risk of fraud and error.

d) Authorised signatories are identified with sufficient seniority, and in the case of e banking approvers, together with an appropriate payment approval hierarchy.

e) Procedures are in place for prompt banking of money received.

f) Ensure there are physical security arrangements in place for cheque stationery, e banking access devices and payment cards.

g) Cheques and payable orders are treated as controlled stationery with management responsibility given to a duly designated employee.

h) Frequent reconciliations are undertaken between cash books, bank statements and the general ledger so that all differences are fully understood and accounted appropriately.

i) Commercial bank accounts should only be used exceptionally where there is a sound rationale and demonstrates value for money. Commercial accounts should be procured through a tendering exercise and the outcome reported to the Audit Committee on behalf of the Board.

7.3.2 The Director of Finance must advise the Trust's bankers in writing of the conditions under which each account will be operated.

7.3.3 The Director of Finance shall approve security procedures for any

payable orders issued without a hand-written signature e.g. automatically printed. All Payable Orders shall be treated as controlled stationery, in the charge of a duly designated officer controlling their issue.

7.4 Review

7.4.1 The Director of Finance will review banking arrangements of the Trust at regular intervals to ensure they reflect best practice, that they are efficient and effective and represent best value for money. The results of the review should be reported to the Audit Committee.

8. CASH, CHEQUES, PAYMENT CARDS AND OTHER NEGOTIABLE INSTRUMENTS

8.1 General

8.1.1 The Director of Finance is responsible for:

a) Approving the form of all receipt books, agreement forms, or other means of officially acknowledging or recording monies received or receivable;

b) Ordering and securely controlling any such stationery, ensuring all cash related stationery treated as controlled stationery with management responsibility given to a duly designated employee;

c) The provision of adequate physical facilities and systems for officers whose duties include collecting and holding cash, including the provision of safes or lockable cash boxes, the procedures for keys, and for coin operated machines; and

d) Establishing systems and procedures for handling cash and negotiable securities on behalf of the Trust.

e) Ensuring effective control systems are in place for the use of payment cards,

f) Ensuring that there are adequate control systems in place to minimise the risk of cash/card misappropriation.

8.1.2 Official money shall not under any circumstances be used for the encashment of private cheques or IOUs (informal documents acknowledging debt).

8.1.3 All cheques, postal orders, cash etc., shall be banked intact. Disbursements shall not be made from cash received, except under arrangements approved by the Director of Finance.

8.1.4 The holders of safe/cash box combinations/keys shall not accept unofficial funds for depositing in their safe/cash box unless such deposits are in special sealed envelopes or locked containers. It shall be made clear to the depositors that the Trust is not to be held liable for any loss, and written indemnities must be obtained from the organisation or individuals absolving the Trust from responsibility for any loss.

8.1.5 The opening of coin operated machines (including telephone, if

applicable) and the counting and recording of takings shall be undertaken by two officers together, except as may be authorised in writing by the Director of Finance and the coin box keys shall be held by a nominated officer.

8.1.6 During the absence (for example, on holiday) of the holder of a safe/cash box combination/key, the officer who acts in their place shall be subject to the same controls as the normal holder of the combination/key. There shall be written discharge for the safe and/or cash box contents on the transfer of responsibilities and the discharge document must be retained for inspection.

8.2 Petty Cash

8.2.1 The Director of Finance will issue instructions restricting the use and value of petty cash purchases.

8.2.3 Petty cash use should be minimised and be subject to regular cash balance reviews in order to minimise cash levels held.

8.2.3 Petty cash should be operated under an imprest system and be subject to regular checks to ensure physical and book cash levels are consistent.

9. INCOME, FEES AND CHARGES

9.1 Income Generation and Participation in/Formation of Companies

9.1.1 The Trust shall only generate income for those goods and services that are approved by the Welsh Ministers. Any income generating activities must be complementary to the provision of NHS services and must be in accordance with the Welsh Ministers' policy and powers to raise money as set out in section 169 of the National Health Service (Wales) Act 2006 (c. 42).

9.1.2 The Trust can only form or participate in a company for income generation, improving health, healthcare care and health services, purposes with the consent and/or direction of Welsh Ministers. The Trust should obtain advice from Welsh Government officials prior to undertaking substantive work on formation or participation in any company.

9.2 Income Systems

9.2.1 The Director of Finance is responsible for designing and maintaining procedures to ensure compliance with systems for the proper recording, invoicing, and collection and coding of all monies due.

9.2.2 The Director of Finance is also responsible for ensuring that systems are in place for the prompt banking of all monies received.

9.3 Fees and Charges

9.3.1 The Director of Finance is responsible for approving and regularly reviewing the level of all fees and charges other than those determined by the Welsh Ministers or by Statute. Independent professional advice on matters of valuation shall be taken as necessary.

9.3.2 All officers must inform the Director of Finance promptly of money due arising from transactions which they initiate/deal with, including all contracts, leases, tenancy agreements, private patient undertakings and other transactions.

9.4 Income Due and Debt Recovery

9.4.1 Delegated budget holders and managers are responsible for informing the Director of Finance of any income due that arises from any contracts, service levels agreements, leases, activities such as private patients or other transactions.

9.4.2 Delegated budget holders and managers must inform the Director of Finance when overpayment of salary or expenses have been made, in order that recovery can be made.

9.4.3 The Director of Finance is responsible for recovering income due and for ensuring debt recovery procedures are in place to secure early payment and minimise bad debt risk on all outstanding debts.

9.4.4 Income not received should be dealt with in accordance with losses procedures.

9.4.5 Overpayments should be detected (or preferably prevented) and recovery initiated.

9.4.6 The Chief Executive and the Director of Finance are responsible for ensuring the Welsh Ministers' guidance on disputed debt arbitration is strictly adhered to.

10. NON PAY EXPENDITURE

10.1 Scheme of Delegation, Non Pay Expenditure Limits and Accountability

10.1.1. The Board must agree a Scheme of Delegation in line with that set out in its Standing Orders Scheme of Reservation and Delegation of Powers.

10.1.2. The Chief Executive will approve the level of non-pay expenditure and the operational scheme of delegation and authorisation to budget holders and managers within the parameters set out in the Trust's scheme of delegation.

10.1.3. The Chief Executive will set out in the operational scheme of delegation and authorisation:

- The list of managers who are authorised to place requisitions for the supply of goods, services and works and for the awarding of contracts; and
- The maximum level of each requisition and the system for authorisation above that level.

10.2 The Director of Finance's responsibilities

10.2.1 The Director of Finance will:

a) Advise the Board regarding the NHS Wales national procurement and payment systems thresholds above which quotations (competitive or otherwise) or formal tenders must be obtained; and, once approved, the thresholds should be incorporated in SOs and SFIs;

b) Prepare procedural instructions or guidance within the Scheme of Delegation on non-pay expenditure;

c) Ensure systems are in place for the authorisation of all accounts and claims;

d) Ensure Directors and officers strictly follow NHS Wales system and procedures of verification, recording and payment of all amounts payable.

e) Maintain a list of Executive Directors and officers (including specimens of their signatures) authorised to certify invoices.

f) Be responsible for ensuring compliance with the Public Sector Payment policy ensuring that a minimum of 95 percent of creditors are paid within 30 days of receipt of goods or a valid invoice (whichever is later) unless other payment terms have been agreed.

g) Ensure that where consultancy advice is being obtained, the procurement of such advice must be in accordance with applicable procurement legislation, guidance issued by the Welsh Ministers and SFIs;

h) Be responsible for Petty Cash system, procedures, authorisation and record keeping, and ensure purchases from petty cash are restricted in value and by type of purchase in accordance with procedures

10.3 Duties of Budget Holders and Managers

10.3.1 Budget holders and managers must ensure that they comply fully with the Scheme of Delegation, guidance and limits specified by the Chief Executive and Director of Finance, and that:

a) All contracts (except as otherwise provided for in the Scheme of Delegation), leases, tenancy agreements and other commitments which may result in a liability are notified to the Director of Finance in advance of both any commitment being made and NWSSP Procurement Services being engaged;

b) Contracts above specified thresholds are advertised and awarded, through NWSSP Procurement Services, in accordance with EU and HM Treasury rules on public procurement;

c) Contracts above specified thresholds are approved by the Welsh Ministers prior to any commitment being made;

d) goods have been duly received, examined and are in accordance with specification and order,

e) work done or services rendered have been satisfactorily carried out in accordance with the order, and, where applicable, the materials used are of the requisite standard and the charges are correct,

f) No requisition/order shall be issued for any item or items to any firm which has made an offer of gifts, reward or benefit to Board members or Trust officers, other than:

(i) Isolated gifts of a trivial character or inexpensive seasonal

gifts, such as calendars,

(ii) Conventional hospitality, such as lunches in the course of working visits;

This provision needs to be read in conjunction with Standing Order 8.5, 8.6 and 8.7.

g) No requisition/order is placed for any item or items for which there is no budget provision unless authorised by the Director of Finance on behalf of the Chief Executive;

h) All goods, services, or works are ordered on official orders

i) Requisitions/orders are not split or otherwise placed in a manner devised so as to avoid the financial thresholds;

j) Goods are not taken on trial or loan in circumstances that could commit the Trust to a future uncompetitive purchase;

10.3.2 The Chief Executive and Director of Finance shall ensure that the arrangements for financial control and financial audit of building and engineering contracts and property transactions comply with the guidance issued by the Welsh Ministers. The technical audit of these contracts shall be the responsibility of the relevant Director as set out in the Trust's scheme of delegation.

10.4 Departures from SFI's

10.4.1 Departing from the application of Chapters 10 and 11 of these SFI's is only possible in very exceptional circumstances. Trusts must consult with NWSSP Procurement Services, Director of Finance and Board Secretary prior to any such action undertaken. Any expenditure committed under these departures must receive prior approval in accordance with the Trust's Scheme of Delegation.

10.5 Accounts Payable

10.5.1 NWSSP Finance, shall on behalf of the Trust, maintain and deliver detailed policies, procedures systems and processes for all aspects of accounts payable

10.6 Prepayments

10.6.1 Prepayment should be exceptional, and should only be considered if a good value for money case can be made for them (i.e. that "need" can

be demonstrated). Prepayments are only permitted where either:

- The financial advantages outweigh the disadvantages (i.e. cash flows must be discounted to Net Present Value (NPV) using the National Loans Fund (NLF) rate plus 2%);
- It is the industry norm e.g. courses and conferences;
- In line with requirements of Managing Welsh Public Money
- There is specific Welsh Ministers' approval to do so e.g. voluntary services compact.

10.6.2 In **exceptional** circumstances prepayments can be made subject to:

a) The appropriate Executive Director providing, in the form of a written report, a case setting out all relevant circumstances of the purchase. The report must set out the effects on the Trust if the supplier is at some time during the course of the prepayment agreement unable to meet their commitments;

b) The Director of Finance will need to be satisfied with the proposed arrangements before contractual arrangements proceed (taking into account the Public Contracts Regulations 2015 where the contract is above a stipulated financial threshold); and

c) The budget holder is responsible for ensuring that all items due under a prepayment contract are received and they must immediately inform the appropriate Director or Chief Executive if problems are encountered.

11. PROCUREMENT AND CONTRACTING FOR GOODS AND SERVICES

General Information

11.1 Procurement Services

11.1.1 While the Chief Executive is ultimately responsible for procurement the service is delivered by NWSSP Procurement Services.

11.1.2 Procurement staff are employed by NHS Wales Shared Services Partnership (NWSSP) and provide a procurement support function to all health organisations in NHS Wales. Although NWSSP is responsible for the provision of a Procure to Pay service and provision of appropriate professional procurement and commercial advice, ultimate responsibility for compliance with legislation and policy guidelines remains with the Trust. Where the term Procurement staff or department is used in this chapter it should be read as equally applying to those departments where the procurement function is undertaken locally and outside of NWSSP Procurement Department, for example pharmacy and works who undertake procurement on a devolved basis.

11.2 Policies and procedures

11.2.1 NWSSP Procurement Services shall, on behalf of the Trust, maintain detailed policies and procedures for all aspects of procurement including tendering and contracting processes. The policies and procedures shall comply with these SFIs, Procurement Manual, and the Contract Notification Arrangements, included as **Schedule 1** of these SFIs.

11.2.2 The Chief Executive is ultimately responsible for ensuring that the Trust's Executive Directors, Independent Members and officers within the organisation strictly follow procurement, tendering and contracting procedures.

11.2.3 NWSSP Director of Procurement Services is responsible for ensuring that procurement, tendering and contracting policies and procedures

- Are kept up to date;
- Conform to statutory requirements and regulations;
- Adhere to guidance issued by the Welsh Ministers;
- Are consistent with the principles of sustainable development.

11.2.4 All procurement guidance issued by the Welsh Ministers should have the

effect as if incorporated in these SFIs.

11.3 Procurement Principles

11.3.1 The term "procurement" embraces the complete process from planning, sourcing to taking delivery of all works, goods and services required by the Trust to perform its functions, and furthermore embrace all building, equipment, consumables and services including health services. Procurement further embraces contract and/or supplier management, including market engagement and industry monitoring.

11.3.2 The main legal and governing principles guiding public procurement and which are incorporated into these SFIs are:

- Transparency: public bodies should ensure that there is openness and clarity on procurement processes and how they are implemented;
- Non-discrimination: public bodies may not discriminate between suppliers or products on grounds of their origin;
- Equal treatment: suppliers should be treated fairly and without discrimination, including in particular equality of opportunity and access to information;
- Proportionality: requirements and conditions in the procurement should be reasonable in proportion to the object of procurement and measures taken should not go beyond what is necessary;
- Legality: public bodies must conform to European Community and other legal requirements;
- Integrity: there should be no corruption or collusion with suppliers or others;
- Effectiveness and efficiency: public bodies should meet the commercial, regulatory and socio-economic goals of government in a balanced manner appropriate to the procurement requirement;
- Efficiency: procurement processes should be carried out as cost effectively as possible and secure value for money.

11.4 Legislation Governing Public Procurement

11.4.1 There are a range of EU Directives which set out the EU legal framework for public procurement. These EU Directives have been implemented into UK law by statutory regulations which govern public sector procurement, the primary statutory regulations in Wales being ‘The Public Contracts Regulations 2015 No. 102.’ From 1 January 2021, all aspects of EU law in respect of the EU Directives relating to public procurement, except where expressly stated otherwise by domestic legislation, will continue to govern public sector procurement,

although further amendments or developments of EU related procurement law following this will not be incorporated into domestic law. The Welsh Government policy framework and the Wales Procurement Policy Statement (WPPS) also govern this area. One of the key objectives of governing legislation is to ensure public procurement markets are open and that there is free movement of supplies, services and works. Legislation, policy and guidance setting out procedures for awarding all forms of regulated contracts shall have effect as if incorporated in the Trust's SFIs.

11.4.2 The main Regulations (the Public Contracts Regulations 2015 No. 102) cover the whole field of procurement, including thresholds above which special and demanding procurement protocols and legal requirements apply. All Directors and their staff are responsible for seeing that those Regulations are understood and fully implemented. The protocols set out in the Regulations, and any Procurement Policy Notices, are the model upon which all formal procurement shall be based.

11.4.3 Procurement advice should be sought in the first instance from Procurement Services. The commissioning of further specialist advice shall be jointly agreed between the Trust and Procurement Services e.g. Engagement of NWSSP Legal and Risk Services prior to 3rd party Legal Service providers.

11.4.4 Other relevant legislation and policy include:

- The Well-being of Future Generations (Wales) Act 2015
- Welsh Language (Wales) Measure 2011
- Modern Slavery Act 2015
- Bribery Act 2010
- Equality Act 2010
- Welsh Government's Code of Practice for Ethical Employment in Supply Chains.
- The Producer Responsibility Obligations (Packaging Waste) Regulations 2007
- Welsh Government 'Towards zero waste: our waste strategy'
- The Welsh Government Policy Framework
- The Wales Procurement Policy Statement (WPPS)

11.5 Procurement Procedures

11.5.1 To ensure that the Trust is fully compliant with UK Procurement Regulations, EU Procurement Directives and Welsh Ministers' guidance and policy, the Trust shall, through NWSSP Procurement Services, ensure that it shall have procedures that set out:

a) Requirements and exceptions to formal competitive tendering

requirements;
b) Tendering processes including post tender discussions;
c) Requirements and exceptions to obtaining quotations;
d) Evaluation and scoring methodologies
e) Approval of firms for providing goods and services.

11.5.2 All procurement procedures shall reflect the Welsh Ministers' guidance and the Trust's delegation arrangements and approval processes.

11.6 Procurement Consent and Notification

11.6.1 Paragraph 14(2) of Schedule 3 to the National Health Service (Wales) Act 2006 allows the Trust to:

- Acquire and dispose of property;
- Enter into contracts; and
- Accept gifts of property (including property to be held on trust, either for the general or any specific purposes of the NHS trust or for any purpose relating to the health service).

11.6.2 **Schedule 1** details the requirement process for contract notification for Trusts.

Planning

11.7 Sustainable Procurement

11.7.4 To further nurture the Welsh economy, in support of social, environmental and economic regeneration, Trusts must also be mindful to structure requirements ensuring Welsh companies have the opportunity to transparently and fairly compete to deliver services regionally or across Wales where possible. The principles of the Well-being of Future Generations (Wales) Act 2015 (WBFGA 2015) should be adopted at the earliest stage of planning. Procurement solutions must be developed embracing the five ways of working described within the Act and capture how they will deliver against the seven goals set out in the Act.

11.7.2 The WBFGA 2015 requires that bodies listed under the Act must operate in a manner that embraces sustainability. The Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.

11.7.3 The 7 Wellbeing goals are:

- a prosperous Wales;
- a resilient Wales;
- a healthier Wales;
- a more equal Wales;
- a Wales of cohesive communities;
- a Wales of vibrant culture and thriving Welsh language; and
- a globally responsible Wales.

These goals have been put in place to improve the social, economic, environmental, and cultural well-being of Wales.

11.7.4 Public bodies need to make sure that when making their decisions they take into account the impact they could have on people living their lives in Wales in the future. The Act expects them to:

- work together better
- involve people reflecting the diversity of our communities
- look to the long term as well as focusing on now
- take action to try and stop problems getting worse - or even stop them happening in the first place.

11.7.5 The Trust is required to consider the Welsh Government Guidance on Ethical Procurement and the new Code of Practice on Ethical Employment in supply chains which commit public, private and third sector organisations to a set of actions that tackle illegal and unfair employment practices including blacklisting, modern slavery and living wage.

11.7.6 The Trust shall make use of the tools developed by Value Wales in implementing the principles of the WBFGA 2015. The Trust shall benchmark its performance against the WBFGA 2015. For all contracts over £25,000, the Trust shall take account of social, economic and environmental issues when making procurement decisions using the Sustainable Risk Assessment Template (SRA).

11.8 Small and Medium Sized Enterprises (SMEs), Third Sector Organisations (TSOs) and Supported Factories and Businesses (SFBs)

11.8.1 In accordance with Welsh Government commitments policy set out in the current WPPS and subsequent versions of this statement, the Trust shall ensure that it provides opportunities for these organisations to quote or tender for its business.

11.9 Planning Procurements

11.9.1 Trust must ensure that all staff with delegated budgetary responsibility or who are part of the procurement process for goods, services and works are aware of the legislative and policy frameworks governing public procurement and the requirement of open competition.

11.9.2 Depending on the value of the procurement, a process of planning the procurement must be undertaken with the Procurement Services and appropriate representative from the service and other appropriate stakeholders. The purpose of a planning phase is to determine:

- the likely financial value of the procurement, , including whole life cost
- the likely 'route to market' which will consider the legislative and policy framework set out above.
- The availability of funding to be able to award a contract following a successful procurement process.
- That the procurement follows current legislative and policy frameworks including Value Based Procurement.

11.9.3 The procurement specification should factor in the 4 principles of prudent healthcare:

- Equal partners through co-production;
- Care for those with the greatest health need first;
- Do only what is needed; and
- Reduce inappropriate variation.

Value based outcome/experience/delivery principles must also be included where appropriate ensuring best value for money, sustainability of services and the future financial position. Value for money is defined as the optimum combination of whole-life cost and quality to meet the requirement**.**

11.9.4 Where free of charge services are made available to the Trust, NWSSP Procurement Services must be consulted to ensure that any competition requirements are not breached, particularly in the case of pilot activity to ensure that the Trust does not unintentionally commit itself to a single provider or longer term commitment. Regular reports on free of charge services provided to the Trust should be submitted by Board Secretary to Audit Committee.

11.9.5 Trusts are required to participate in all-Wales collaborative planning activity where the potential to do so is identified by the procurement professional involved in the planning process. Cross sector

collaboration may also be required.

Joint or Collaborative Initiatives

11.9.6 Specialist advice should be obtained from Welsh Government and the opinions of NWSSP Procurement Services and NWSSP Legal and Risk prior to external opinion being sought where there is an undertaking to commence joint or collaborative initiatives which may be deemed as novel or contentious.

11.10 Procurement Process

11.10.1 Where there is a requirement for goods or services, the manager must source those goods or services from the Trust's approved catalogue. Where a required item is not included within the catalogue, advice must be sought from the Procurement Services on opportunities to source those goods or services through public sector contract framework, such as National Procurement Service, NHS Supply Chain or Crown Commercial Services. The use of suitable Welsh frameworks where access is permissible shall take precedence over frameworks led by Public Sector Bodies outside of Wales.

11.10.2 In the absence of an existing suitable procurement framework to source the required item, a competition must be run in accordance with the table below. Trust's must ensure the value of their requirement considers cumulative spend across the Trust for like requirements and opportunity for collaboration with other Trusts and Health Boards:

11.10.3 Agreements awarded are required to deliver best value for money over the whole life of the agreement. Value for money is defined as the optimum combination of whole-life cost and quality to meet the requirement.

Competition Requirements

11.11 Procurement Thresholds

11.11.1 The following table summarises the minimum thresholds for quotes and competitive tendering arrangements. The total value of the contract, whole life cost, over its entire period is the qualifying sum that should be applied (except in specific circumstances relating to aggregation and contracts of an indeterminate duration) as set out below, and in EU Procurement Directives and UK Procurement

Regulations.

Goods/Services/Works Whole Life Cost Contract value (excl. VAT)	Minimum competition[1]	Form of Contract
<£5,000	Evidence of value for money has been achieved	Purchase Order
>£5,000 - <£25,000	Evidence of 3 written quotations	Simple Form of Contract/Purchase Order
>£25,000 – Prevailing OJEU threshold	Advertised open call for competition. Minimum of 4 tenders received if available.	Formal contract and Purchase Order
>OJEU threshold	Advertised open call for competition. Minimum of 5 tenders received if available or appropriate to the procurement route.	Formal contract and Purchase Order
Contracts above £1 million	Welsh Government approval required[2]	Formal contract and Purchase Order

[1] subject to the existence of suitable suppliers
[2] in accordance with the requirements set out in SO 11.6.

11.11.2 Advice from the Procurement Services must be sought for all requirements in excess of £5,000.

11.11.3 The deliberate sub-dividing of contracts to fall below a specific threshold is strictly prohibited. Any attempt to avoid these limits may expose the Board to risk of legal challenge and could result in disciplinary action against an individual[s].

11.11.4 Deliberate re-engagement of a supplier, where the value of the individual engagement is less than £5,000, must not be undertaken where the total value of engagements taken as a whole would exceed £5,000 and require competition.

11.12 Designing Competitions

11.12.1 The budget holder or manager responsible for the procurement is

required to engage with the Procurement team to ensure:

- Required timescales are achievable
- Specifications are drafted which:
  - are fit for inclusion in competition documents;
  - are drafted in a manner encouraging innovation by the market;
  - are capable of being responded to and do not narrow competition;
  - deliver in line with legislative and policy frameworks;
  - include robust performance measures to effectively measure and manage supplier performance; and
  - consider the ability of the market to deliver.

11.12.2 Appropriate performance measures are included in agreements awarded, thus ensuring best value for money decisions taken that return maximum benefit for the organisation and ultimately the improvement of patient outcomes and wider health and social care communities.

11.12.3 Criteria for selecting suppliers and achieving an award recommendation must:

- be appropriately weighted in consideration of quality/price;
- consider cost of change where relevant;
- be transparent and proportionate;
- deliver value for money outcomes;
- fully explore complexity/risk; and
- consider whole life cost.

11.13 Single Quotation Application or Single Tender Application

11.13.1 In exceptional circumstances, there may be a need to secure goods/services/works from a single supplier. This may concern securing requirements from a single supplier, due to a special character of the firm, or a proprietary item or service of a special character. Such circumstances may include:

- Follow-up work where a provider has already undertaken initial work in the same area (and where the initial work was awarded from open competition);
- A technical compatibility issue which needs to be met e.g. specific equipment required, or compliance with a warranty cover clause;
- a need to retain a particular contractor for genuine business continuity issues (not just preferences); or
- When joining collaborative agreements where there is no formal

agreement in place. Request for such a departure must be supported by written evidence from the Procurement Service confirming local agreements will be replaced by an all Wales competition/National strategy.

11.13.2 Procurement Services must be consulted prior to any such application being submitted for approval. The Director of Finance must approve such applications up to £25,000, the Chief Executive or designated deputy, and Director of Finance, are required to approve applications exceeding £25,000. A register must be kept for monitoring purposes and all single tender actions must be reported to the Audit Committee.

11.13.3 In all applications, through Single Quotation Application or Single Tender Application (SQA or STA) forms, the applicant must demonstrate adequate consideration to the Chief Executive and Director of Finance, as advised by the Head of Procurement, that securing best value for money is a priority. The Head of Procurement will scrutinise and endorse each request to ensure:

- Robust justification is provided;
- A value for money test has been undertaken;
- No bias towards a particular supplier;
- Future competitive processes are not adversely affected;
- No distortion of the market is intended;
- An acceptable level of assurance is available before presentation for approval in line with the Trust Scheme of Delegation; and
- An “or equivalent” test has been considered proving the request is justified.

11.13.4 Under no circumstances will Procurement Services endorse a retrospective SQA/STA, where the Trust has already entered into an arrangement directly.

11.13.5 As SQA/ STAs are only used in exceptional circumstances, the Trust, through the Chief Executive, must report each, including the specifics of the exceptional circumstances and the total financial commitment, in sufficient detail to its Audit Committee. The report will include any corrective action/advice provided by the Chief Executive, Director of Finance or NWSSP Director of Procurement Services to prevent recurrence by the Trust.

11.13.6 The Audit Committee may consider further steps to be appropriate,

such as:

- Instruct a representative of the Trust to attend Audit Committee;
- Escalate to the Board;
- Request an internal Audit Review;
- Request further training; or
- Take internal disciplinary action.

11.13.7 No SQA/STA is required where the seeking of competition is not possible, nor would the application of the SQA/STA procedure add value to the process/aid the delivery of a value for money outcome. Procurement Manual details schedule of departures from SQA/STA where competition not possible.

11.13.8 For performance monitoring purposes, the NWSSP Procurement Service will retain a central register of all such activity including SQA/STA's not endorsed by Procurement or any exceptional matters.

11.14 Disposals

11.14.1 Disposal of surplus, obsolete equipment/consumables is also subject to the competition rules.

11.14.2 Obsolete or condemned articles and stores, which may be disposed of in accordance with applicable regulations and law at the prevailing time (e.g. Waste Electrical and Electronic Equipment (WEEE)) and the procedures of the Trust making use of any agreements covering the disposal of such items.

11.14.3 The Trust must obtain the best possible market price.

Approval & Award

11.15 Evaluation, Approval and Award

11.15.1 The evaluation of competitions via quotation or tender, must be undertaken by a minimum of 2 evaluators from within the operational service of the Trust. Evaluation Teams for competitions of greater complexity and value must be multi-disciplinary and reach a consensus recommendation for internal approval.

11.15.2 The internal approval of any recommendation to award a competition must follow the Board's Scheme of Delegation.

11.15.3 The communication of the external notification to the market to award

the contract must be managed by the Procurement Service.

11.15.4 Information throughout the process must be handled and retained as 'commercial in confidence' and not shared outside of staff directly involved in the competition process.

11.15.5 All associated communication throughout the competition process must also be managed by the Procurement Service.

Implementation & Contract Management

11.16 Contract Management

11.16.1 Contract Management is the process which ensures that both parties to a contract fully meet their respective obligations as effectively and efficiently as possible, in order to deliver the business and operational objectives required by the contract and in particular, to achieve value for money. The relevant budget holder shall oversee and manage each contract on behalf of the Trust so as to ensure that these implicit obligations are met. This contract management will include:

- Retaining accurate records;
- Monitoring contract performance measures;
- Engaging suppliers to ensure performance delivery;
- Implementing contractual sanctions in the event of poor performance in conjunction with advice from Procurement Services; and
- Permitting stage payments as part of a formally agreed implementation/delivery plan which must be supported by written evidence issued by the budget holder.

11.16.2 Contract management on All Wales contracts will be provided by NWSSP Procurement Services.

11.16.3 Advice on best practice on Contract Management is available from NWSSP Procurement Services.

11.17 Extending and Varying Contracts

11.17.1 Extending, modifying or varying the scope of an existing contract is possible, if the provision to do so was included as an option in the original awarded contract, e.g. scope of requirement, further expenditure due to unforeseen circumstances, change in regulatory requirements, etc.

11.17.2 If there is no such provision, the Public Contracts Regulations 2015 define such limitations.

11.17.3 The Public Contracts Regulations 2015 provide further constraints on this matter, under which modifications/variations/extensions are capped at 50% of the original award value.

11.17.4 Further approval is not required to extend an agreement beyond the original term/scope where prior approval was granted as part of the procurement process.

11.17.5 If there was no provision to extend, further approvals are required from the Trust budget holder and the local Head of Procurement. Budget holders must also be mindful of the threshold under which the original contract was awarded. Any increase in the contract value may require a more senior level of approval in line with the Scheme of Delegation.

11.17.6 This ensures an appropriate identification and assessment of potential risks to the Trusts compliance of approvals being granted within the Scheme of Delegation and assurance that value for money continues to be delivered from public funds.

11.17.7 The budget holder must seek advice from NWSSP Procurement Services in advance of committing further expenditure to ensure the contract is reflective of requirements. The budget holder must assess whether there is sufficient evidence to support the justification and whether the budget is available to support the additional requirements.

Transactional Processes

11.18 Requisitioning

11.18.1 The budget manager in choosing the item to be supplied (or the service to be performed) shall always obtain the best value for money for the Trust. The budget holder will source those goods or services from the approved catalogue. Where a required item is not included within the catalogue, advice must be sought from the Procurement Services on opportunities to source those goods or services through public sector contract framework, such as National Procurement Service, NHS Supply Chain or Crown Commercial Services.

11.18.2 Where a required item is not on catalogue or on framework contract, the budget manager shall request the NWSSP Procurement Services

to undertake quotation / tendering exercises on their behalf in line with SFI 11.11 thresholds.

11.18.3 All orders for goods and services must be accompanied by an official order number, available from the Procurement Department. In no circumstances must a requisition number be used as an order number.

11.19 No Purchase Order, No Pay

11.19.1 The Trust will ensure compliance with the 'No Purchase Order, No Pay' policy, the All Wales policy introduced to ensure that Procure to Pay continues to provide world-class services on a 'Once for Wales' basis.

11.19.2 The policy ensures that a purchase order is raised at the beginning of a purchase in circumstances where a purchase order is required under the policy. This follows industry standard best practice as it provides a commitment as to what is likely to be spent. The supplier must obtain a purchase order number for their invoice in order for it to be processed for payment.

11.20 Official Orders

11.20.1 Official Orders, issued following approved requisition and sourcing, must:

a) Be consecutively numbered;
b) State the Trust's terms and conditions of trade.

11.20.2 Official Orders will be issued on behalf of the Trust by NWSSP Procurement Services.

12. HEALTH CARE AGREEMENTS AND CONTRACTS FOR HEALTH CARE SERVICES

12.1 Health Care Agreements

12.1.1 The Chief Executive is responsible for ensuring the Trust enters into suitable Health Care Agreements (or Individual Patient Commissioning Agreements, where appropriate) for its provision of health care services.

12.1.2 All Health Care Agreements should aim to implement the agreed priorities contained within the Integrated Medium Term Plan and wherever possible, be based upon integrated care pathways to reflect expected patient experience. In discharging this responsibility, the Chief Executive should take into account:

- The standards of service quality expected;
- The relevant quality, governance and risk frameworks and plans;
- The relevant national service framework (if any);
- The provision of reliable information on quality, volume and cost of service; and
- That the agreements are based on integrated care pathways.

12.1.3 All agreements must be in accordance with the functions conferred on the Trust by the Welsh Ministers.

12.2 Statutory provisions

The National Health Service (Wales) Act 2006 (c. 42) enables NHS Trusts to commission certain healthcare services. Section 7 sets out the definition of an NHS contract, being an arrangement under which one health service body arranges for the provision to it by another of goods or services which it reasonably requires for the purposes of its functions. It also provides a definition of a health service body.

12.3 Reports to Board on Health Care Agreements (HCAs)

12.3.1 The Chief Executive will need to ensure that regular reports are provided to the Board detailing performance, quality and associated financial implications of all health care agreements. These reports will be linked to, and consistent with, other Board reports on quality and financial performance.

13. GRANT FUNDING

It is a matter for Trusts to determine whether individual activities should be procured, or be eligible to receive grant funding, seeking legal advice as necessary. (Grants are defined as all non-procured payments to external bodies or individuals for activities which are linked to delivering policy objectives and statutory obligations. Payments are made to fund or reimburse expenditure on agreed items or functions in accordance with legally binding conditions.)

13.1 Legal Advice

13.1.1 Before the award of funding is made, legal advice where necessary must be sought to ensure that:

- The award does not breach the Trust's functions or its regularity of expenditure duty (that is, the activities for which the grant is made are within the scope of activities that the Trust has a legal remit to undertake);
- The activities would not be deemed to be normally subject to procurement legislation and policy; and
- A legally binding agreement is made with all delivery organisations.

See attached toolkit for grants v procurement:

Grant v Procurement.doc

13.2 Policies and procedures

13.2.1 The Trust shall maintain detailed policies and procedures for all aspects of grant funding. The policies and procedures shall comply with these SFIs, and where appropriate the Minister's Code of Practice to funding the third sector:

https://gov.wales/sites/default/files/publications/2019-01/third-sector-scheme-2014.pdf

13.2.2 The Chief Executive is ultimately responsible for ensuring that the Trust's grant procedures:

- Are kept up to date;
- Conform to statutory requirements;
- Adhere to guidance issued by the Welsh Ministers;
- Are consistent with the principles of sustainable

development; and
- Are strictly followed by all Executive Directors, Independent Members and staff within the organisation.

13.2.3 The award of grant funding must comply with the policy and principles set out in the Procurement section of these SFIs and ensure that the award meets the requirements of regularity, propriety and value for money.

13.2.4 All grant guidance issued by the Welsh Ministers should have the effect as if incorporated in these SFIs.

13.3 Corporate Principles underpinning Grants Management

13.3.1 While there is a need to make the financial arrangements for awarding funding as simple and streamlined as possible, Trusts should also ensure that taxpayers' money is spent appropriately and that it provides good value for money.

13.3.2 The overarching principles for managing public resources in Wales are set out in Managing Welsh Public Money. The document states that the award of funding should be made in accordance with the law and the requirements of propriety, regularity and value for money.

13.3.3 Regularity requires compliance with appropriate authorities, regulations and legislation. Propriety requires both public authorities and funded bodies to deliver appropriate standards of conduct, behaviour and corporate governance. In addition, the public expects official decisions to be made fairly and impartially with public money spent wisely and appropriately, delivering value for money and ensuring that best use is made of resources.

13.3.4 The **corporate principles** of grants management are:

- The development of grant management processes and procedures that are transparent, accountable, proportionate and consistent;
- The delivery of a high quality regulatory framework that responds to demands but does not place unnecessary administrative burdens on Trusts or funded bodies;
- A regulatory framework that will take into consideration the need for proportionality, balancing the need for governance with the burden of administration, thus striking an appropriate balance between accountability and simplicity;
- An effective grant management process to ensure funded bodies spend the funding efficiently, transparently and for the purpose intended, with a view to maximising the impact and outcome from budgets;

- An appropriate evidence-based approach to underpin the design and development of all new funding programmes to ensure efficient and effective use of public funds, ensuring that the funding programme is the optimal solution and that funding is targeted where it is most needed and where it can have most impact;
- A consistent framework that will reinforce respect and effectiveness of the rules for both administrators and funded bodies; and
- Compliance of the grant funding with State aid requirements in accordance with the State aid rules.

13.4 Grant Procedures

13.4.1 It is vital that money is put to use in a way that delivers the maximum benefit to the people of Wales. Grants funding programmes need to be managed as efficiently and cost effectively as possible to make sure that every penny is spent appropriately and in an accountable manner. When establishing grant funding programmes, Trusts should ensure principles of good practice, available from a number of external sources, are considered and reflected in grant programmes. Information on grants management is available on the Audit Wales website at:

https://www.audit.wales/good-practice/grants-management-miniguides

13.4.2 Trusts must agree a clear purpose for each grant and how it will measure the delivery organisation's success in delivering those purposes. It should also agree appropriate targets with the delivery organisation.

13.4.3 For grant programmes that span a number of financial years, the Trust is responsible for evaluating the programmes to ensure they are fit for purpose, are achieving required outcomes and continue to provide value for money.

13.4.4 Trusts are responsible for ensuring that appropriate procedures exist in relation to all the grants and funding for which they are accountable. **They are also responsible for ensuring that any grant provided to an entity that engages in economic activity complies with the State aid rules.**

13.4.5 Trusts are required to undertake due diligence checks on all potential delivery organisations to determine the economic and financial viability of any organisation(s) to administer public funds, and the reliability of the organisation(s). These checks are important in order to identify any risks or issues that could expose the Trust to potential financial loss, fraud or reputational damage. A proportionate level of due diligence

should be carried out, both prior to the award of any grant funding and throughout the life of the award.

13.4.6 The Trust must enter into legally binding funding agreements with all delivery organisations. When developing funding agreements, the Trust should ensure principles of good practice, available from a number of external sources, are considered and reflected.

13.4.7 The Trust is responsible for ensuring that all third party delivery organisations comply with and adhere to the terms and conditions of the Funding Agreement.

14. PAY EXPENDITURE

14.1 Remuneration and Terms of Service Committee

14.1.1 In accordance with SOs, the Board shall establish a Remuneration and Terms of Service Committee, with clearly defined terms of reference and operating arrangements that specify which posts fall within its area of responsibility. This Standing Financial Instruction should be read in conjunction with Standing Order 3.4.

14.1.2 The Committee shall report in writing to the Board the basis for its recommendations. The Board shall use the report as the basis for their decisions, but remain accountable for taking decisions on the remuneration and terms of service of Directors and other senior employees, in accordance with the framework set by the Welsh Ministers. Minutes of the Board's meetings should record such decisions.

14.1.3 The Board will, after due consideration and amendment, if appropriate, approve proposals presented by the Chief Executive for the setting of remuneration and terms of service for those employees and officers not covered by the Committee.

14.1.4 The Trust will remunerate the Chair, Chief Executive, Executive Directors and Independent Members of the Board in accordance with instructions issued by the Welsh Ministers. Welsh Ministers approval will be required in the exceptional event that remuneration needs to be above the maximum of the salary band range, administratively this approval will be exercised by the Director General HSSG.

14.1.5 The Remuneration and Terms of Service Committee will consider cases of redundancy and Voluntary Early Release applications. The Remuneration and Terms of Service Committee will consider any novel employment and pay cases, such as compromise agreements and non-disclosure agreements, ensuring Welsh Government advice has been sought and considered.

14.2 Funded Establishment

14.2.1 The workforce plans incorporated within the approved Integrated Medium Term Plan will form the funded establishment, i.e, the budget for all approved posts. (The financial budgets (£) and workforce establishment budgets (budgeted whole time equivalents) as per SFI 5.1.1 g)

14.2.2 The funded establishment of any department may not be varied without

the approval of the Chief Executive or an officer with delegated authority.

14.3 Staff Appointments

14.3.1 Staff must only be engaged by authorised managers, in accordance with the Board's Scheme of Delegation. The engagement must be within the approved budget and funded establishment.

14.3.2 No Board member or Trust official may engage, re-engage, or re-grade employees, either on a permanent or temporary nature, or hire agency staff, or agree to changes in any aspect of remuneration outside the limit of their approved budget and funded establishment unless authorised to do so by the Chief Executive.

14.4 Pay Rates and Terms and Conditions

14.4.1 The Board will approve procedures presented by the Chief Executive for the determination of commencing pay rates, condition of service, etc, for employees in accordance with pay, terms and conditions set out in Ministerial directions on Agenda for Change and Medical and Dental pay, and any staff with pre-existing terms and conditions of service, following a TUPE transfer into employment or ad hoc salaried staff.

14.4.2 The Remuneration Committee will determine pay rates and conditions of services for board members, and other senior employees, in accordance with ministerial instructions.

14.5 Payroll

14.5.1 The Director of Organisational Development and Workforce has responsibility for securing an efficient, well-controlled payroll service from NHS Wales Shared Services Partnership that:

- pays the correct staff with the correct amount,
- all payments are supported by properly authorised documentation.

14.5.2 The Director of Organisational Development and Workforce has responsibility for:

a) The control framework and detailed procedures which are in place to:
   - To ensure all payments comply with HMRC, Pensions Agency and other regulation in relation to the deduction and payment of tax, national insurance, pension or other payments,

- reduce the risk of fraud and error within the payroll function.

b) Specifying timetables for submission of properly authorised time records and other notifications;

c) The final determination of pay and allowances including verification that the rate of pay and relevant conditions of service are in accordance with current agreements;

d) Agreeing the timing and method of payment with the payroll service;

e) Authorising the release of payroll data where in accordance with the provisions of the applicable Data Protection Legislation (the Data Protection Act 2018 and the UK General Data Protection Legislation);

f) Verification and documentation of data;

g) The timetable for receipt and preparation of payroll data and the payment of employees and allowances;

h) Maintenance of subsidiary records for superannuation, income tax, social security and other authorised deductions from pay;

i) Security and confidentiality of payroll information;

j) Checks to be applied to completed payroll before and after payment; and

k) A system to ensure the recovery from those leaving the employment of the Trust of sums of money and property due by them to the Trust.

14.5.3 The Chief Executive is responsible for:

a) Ensuring that arrangements for a payroll service from NHS Wales Shared Services Partnership (NWSSP) is supported by appropriate Service Level Agreements, terms and conditions, adequate internal controls and internal audit review procedures;

b) Ensuring a sound system of internal control and audit review of any internally provided payroll service; and

c) Maintenance and/or the authorisation of regular and independent reconciliation of pay control accounts.

14.5.4 Appropriately nominated managers have delegated responsibility for:

a) Submitting time records and other notifications in accordance with agreed timetables;

b) Completing time records and other notifications in accordance with the Service Level Agreements; and

c) Submitting termination forms in the prescribed form immediately upon knowing the effective date of an employee's or officer's resignation, termination or retirement. Where an employee fails to report for duty or to fulfil obligations in circumstances that suggest they have left without notice, the Director of Organisational Development and Workforce and/or Chief Executive must be informed immediately. In circumstances where fraud is suspected, this must be reported to the Director of Finance.

14.6 Contracts of Employment

14.6.1 The Director of Organisation Development and Workforce must:

a) Ensure that all employees are issued with a Contract of Employment in a form approved by the Board and which complies with employment legislation; and

b) Deal with variations to, or termination of, contracts of employment.

15. CAPITAL PLAN, CAPITAL INVESTMENT, FIXED ASSET REGISTERS AND SECURITY OF ASSETS

15.1 Capital Plan

15.1.1 Capital plans, and annual capital programmes, must be approved by the Board before the commencement of a financial year and should be in line with the objectives set out in the approved Integrated Medium Term Plan (IMTP) for the organisation. The capital plan and programmes must be delivered within Welsh Government capital external financing limit.

15.1.2 The Director of Planning (or nominated responsible director) will develop a capital plan, and detailed capital programme, for the organisation that sets out a detailed capital investment plan to support the objectives set out in the IMTP. The capital programme must be affordable and within the external financing limit, as set out by Welsh Government (WG) for the year, and the Trust must not exceed the external financing limit. There must be an approved revenue funding plan in place to support any revenue costs associated with the capital plan. Regular updates must be provided to the Board, and relevant Board Committees, during the financial year.

15.1.3 The Board must approve a three year Capital Plan, and an annual Capital Programme, as set out in the Integrated Medium Term Plan and Budgetary Control chapters of these SFI.

15.2 Capital Investment Decisions

15.2.1 Robust business case and capital investment appraisal must be undertaken prior to formal submission to Welsh Government, the level of detail within the appraisal commensurate with the value and risk of the investment. Capital investment decisions should be undertaken in line with Welsh Government requirements and guidance for the development of business cases as set out in:

- NHS Wales Infrastructure Investment Guidance (Welsh Health Circular WHC (2018) 043) https://gov.wales/nhs-wales-infrastructure-investment-guidance
- Better business cases: investment decision-making framework https://gov.wales/better-business-cases-investment-decision-making-framework

15.2.2 The Director of Finance must provide a professional opinion on the financial elements of the business case. Capital investment decisions will be taken by the organisation in line with the financial thresholds

specified by Welsh Government and in the Trust's Scheme of Delegation.

15.3 Capital Projects

15.3.1 The Chief Executive shall ensure that any capital investment above the Welsh Ministers' delegated limit is not undertaken without approval of the Welsh Ministers and that confirmation of capital resources has been received.

15.3.2 When capital investment decisions are taken and a Capital Programme is approved the project cannot be initiated until the authority to commit expenditure is formally delegated to a manager, in line with the organisation's Scheme of Delegation. The capital project must then be procured in line with normal procurement procedures or the Designed for Life or other approved procurement framework and in line with Welsh Government requirements and guidance and the applicable procurement legislation. Management control and financial reporting systems must be established to ensure that the project is:

- delivered on time;
- on budget; and
- within contractual obligations.

15.3.3 Project management controls and financial reporting systems must be established to ensure these objectives are met. Reporting requirements to Welsh Government will be set out in the approval letter provided post Ministerial approval.

15.3.4 Regular updates must be provided to the Board, and relevant Board Committees, during the financial year.

15.4 Capital Procedures and Responsibilities

15.4.1 The Chief Executive:

a) Shall ensure that there is an adequate appraisal and approval process in place for determining capital expenditure priorities and the effect of each proposal upon plans;

b) Is responsible for the management of all stages of capital schemes and for ensuring that schemes are delivered on time and to cost;

c) Shall ensure that any capital investment above the Welsh Ministers' delegated limit is not undertaken without approval of the Welsh Ministers and that confirmation of capital resources has been received;

d) Shall ensure that the three year Capital Plan, and detailed annual Capital Programme is adopted by the Board, as part of the IMTP, prior to the commencement of the financial year;

e) Shall ensure the availability of resources to finance all revenue consequences of the investment, including capital charges; and

f) Shall ensure that any 3rd party use of NHS estate is properly controlled, reimbursed and reported. This will include ensuring that appropriate security, insurance and indemnity arrangements are in place and that there is a written agreement as to each party's responsibilities and liabilities.

15.4.2 For every capital expenditure proposal the Chief Executive shall ensure:

a) That a business case is produced in line with Welsh Ministers' guidance and where appropriate the 5-case Model;

b) That the Director of Finance has certified professionally to the costs and revenue consequences detailed in the business case and involved appropriate Trust personnel and external agencies in the process.

15.4.3 For capital schemes where the contracts stipulate stage payments, the Chief Executive will issue procedures for their management in accordance with the Welsh Ministers' guidance.

15.4.4 The approval of a capital programme shall not constitute approval for the initiation of expenditure on any scheme.

15.4.5 The Chief Executive shall issue to the manager responsible for any scheme:

a) Specific authority to commit expenditure;

b) Authority to proceed to tender; and

c) Approval to accept a successful tender.

15.4.6 The Chief Executive will issue a scheme of delegation for capital investment management in accordance with the Welsh Ministers' guidance and the Trust's SOs.

15.4.7 The Director of Planning and Director of Finance shall issue detailed

procedures governing the project, financial and contractual management, including variations to contract, of capital investment projects and valuation for accounting purposes. These procedures shall fully take into account the requirements and delegated limits for capital schemes set out in Welsh Ministers' guidance and approval letters. The procedures will also cover post project benefits realisation to ensure benefits set out in the business case supporting the investment are delivered. The Director of Finance shall issue procedures for the regular reporting of expenditure and commitment against authorised expenditure.

15.4.8 The Director of Finance shall ensure, for each capital project over £2m, that the Welsh Government Project Bank Accounts policy is applied unless there are compelling reasons not to do so. The Director of Finance should apply to Welsh Government officials for exemption from use of Project Bank Accounts, setting out the compelling reasons.

15.5 Capital Financing with the Private Sector

15.5.1 The Trust must not enter into any new capital financing arrangements with the private sector, including Private Financing Initiatives, Mutual Investment Model and 3rd Party Developments, without the consent of the Welsh Ministers.

15.6 Asset Registers

15.6.1 The Chief Executive is responsible for the maintenance of registers of assets, taking account of the advice of the Director of Planning and Director of Finance, concerning the form of any register and the method of updating, and arranging for a physical check of assets against the asset register to be conducted periodically.

15.6.2 The Trust shall maintain an asset register recording fixed assets. The minimum data set to be held within these registers shall be in accordance with the Welsh Ministers' guidance and to satisfy the financial disclosure requirements for the Annual Accounts.

15.6.3 Additions to the fixed asset register must be clearly identified to the operational or departmental manager or delegated budget holder and be validated by reference to appropriate documentation to provide evidence of the financial value recorded, including:

a) Properly authorised and approved agreements, architect's certificates, supplier's invoices and other documentary evidence in respect of purchases from third parties;

b) Stores, requisitions and wages records for own materials and labour including appropriate overheads; and

c) Lease agreements in respect of assets held under a finance lease and included on the Trust's balance sheet.

15.6.4 Where capital assets are sold, scrapped, lost or otherwise disposed of, their value must be removed from the accounting records and each disposal must be validated by reference to authorisation documents and invoices (where appropriate). Disposal receipts are to be treated in accordance with the Welsh Ministers' guidance and clearly set out in the over-arching business case.

15.6.5 The Director of Finance shall apply accounting policies for fixed assets in line with Welsh Government guidance and accounting standards and values recorded in the asset register, including depreciation and revaluations. The Director of Finance shall approve procedures for reconciling balances on fixed assets accounts in general ledgers against balances on fixed asset registers.

15.6.6 The value of each asset, and depreciation, shall be considered annually in accordance with valuation guidance and methods specified by the Welsh Ministers. Assets should be considered for early revaluation where there is the likelihood of impairment as a result in a change of valuation or asset life.

15.7 Security of Assets

15.7.1 The overall control of fixed assets is the responsibility of the Chief Executive.

15.7.2 Asset control procedures (including fixed assets, cash, cheques and negotiable instruments, and also including donated assets) must be approved by the Director of Finance. This procedure shall make provision for:

a) Recording managerial responsibility for each asset;

b) Identification of additions and disposals;

c) Identification of all repairs and maintenance expenses;

d) Physical security of assets;

e) Regular verification of the existence of, condition of, and title to, assets recorded;

f) Identification and reporting of all costs associated with the retention of an asset; and

g) Reporting, recording and safekeeping of cash, cheques, and negotiable instruments.

15.7.3 All discrepancies revealed by verification of physical assets to fixed asset register shall be notified to the Director of Planning and Director of Finance.

15.7.4 Whilst individual officers have a responsibility for the security of property of the Trust, it is the responsibility of Board members and senior Trust officers in all disciplines to apply such appropriate routine security practices in relation to NHS property as may be determined by the Board. Any breach of agreed security practices must be reported in accordance with agreed procedures.

15.7.5 Any damage to the Trust's premises, vehicles and equipment, or any loss of equipment, stores or supplies must be reported by Board members and Trust officers in accordance with the procedure for reporting losses.

15.7.6 Where practical, assets should be marked as Trust property.

16. STORES AND RECEIPT OF GOODS

16.1 General position

16.1.1 Stores, defined in terms of controlled stores and departmental stores (for immediate use) should be:

a) Kept to a minimum;
b) Subjected to annual stock take; and
c) Valued at the lower of cost and net realisable value.

16.2 Control of Stores, Stocktaking, condemnations and disposal

16.2.1 Subject to the responsibility of the Director of Finance for the systems of financial control, overall responsibility for the control of stores shall be delegated to a senior officer by the Chief Executive. The day-to-day responsibility may be delegated by them to departmental officers/managers and stores managers/keepers, subject to such delegation being entered in a record available to the Director of Finance. The control of any Pharmaceutical stocks shall be the responsibility of a designated Pharmaceutical Manager; the control of any fuel oil and coal of a designated estates manager.

16.2.2 The responsibility for security arrangements and the custody of keys for any stores and locations shall be clearly defined in writing by the designated manager/Pharmaceutical Manager. Wherever practicable, stocks should be marked as health service property.

16.2.3 The Director of Finance is responsible for developing financial control systems and procedures for the regulation and operation of the stores, to include the accounting arrangements including records for receipt, issues, and returns of goods to stores and losses.

16.2.4 Stocktaking arrangements shall be agreed with the Director of Finance and there shall be a physical check covering all items in store at least once a year.

16.2.5 Where a complete system of controlled stores is not justified, alternative stores arrangements shall require the approval of the Director of Finance.

16.2.6 The designated officer/manager shall be responsible for a system approved by the Director of Finance for a review of slow moving and obsolete items and for condemnation, disposal, and replacement of all unserviceable articles. The designated officer/manager shall report to

the Director of Finance any evidence of significant overstocking and of any negligence or malpractice (see also overlap with SFI 17, Disposals and Condemnations, Losses and Special Payments). Procedures for the disposal of obsolete stock shall follow the procedures set out for disposal of all surplus and obsolete goods.

16.3 Goods supplied by an NHS supplies agency

16.3.1 For goods supplied via NHS Wales Shared Services Partnership – Procurement Services (NWSSP-PS) or any other NHS purchasing and supplies agency central warehouses, the Chief Executive shall identify those authorised to requisition and accept goods from the store. The authorised person shall check receipt against the delivery note before forwarding this to the Director of Finance or authorised officer who shall satisfy himself that the goods have been received before accepting the recharge.

17. DISPOSALS AND CONDEMNATIONS, LOSSES AND SPECIAL PAYMENTS

17.1 Disposals and Condemnations

17.1.1 The Director of Finance must prepare detailed procedures for the disposal of assets and goods, including condemnations, and ensure that these are notified to managers.

17.1.2 When it is decided to dispose of a Trust asset and goods, the head of department or authorised deputy will determine and advise the Director of Finance of the estimated market value of the item, taking account of professional advice where appropriate.

17.1.3 All unserviceable assets and goods shall be:

a) Condemned or otherwise disposed of by an officer, the Condemning Officer, authorised for that purpose by the Director of Finance;

b) Recorded by the Condemning Officer in a form approved by the Director of Finance which will indicate whether the assets and good are to be converted, destroyed or otherwise disposed of. All entries shall be confirmed by the countersignature of a second officer authorised for the purpose by the Director of Finance.

17.1.4 The Condemning Officer shall satisfy themselves as to whether or not there is evidence of negligence in use and shall report any such evidence to the Director of Finance who will take the appropriate action.

17.2 Losses and Special Payments

17.2.1 Losses and special payments are items that the Welsh Government would not have contemplated when it agreed funds for NHS Wales or passed legislation. By their nature they are items that ideally should not arise. They are therefore subject to special control procedures compared with the generality of payments, and special notation in the accounts to draw them to the attention of the Welsh Government.

17.2.2 The Director of Finance is responsible for ensuring procedural instructions on the recording of and accounting for losses and special payments are in place; and that all losses or special payments cases are properly managed in accordance with the guidance set out in the Welsh Government's Manual for Accounts.

17.2.3 Any officer discovering or suspecting a loss of any kind must either immediately inform their head of department, who must immediately inform the Chief Executive and/or the Director of Finance or inform an officer charged with responsibility for responding to concerns involving loss. This officer will then appropriately inform the Director of Finance and/or the Chief Executive.

17.2.4 Where a criminal offence is suspected, the Director of Finance must immediately inform the police if theft or arson is involved. In cases of fraud and corruption or of anomalies which may indicate fraud or corruption, the Director of Finance must inform the Local Counter Fraud Specialist (LCFS) and the CFS Wales Team in accordance with Directions issued by the Welsh Ministers on fraud and corruption.

17.2.5 The Director of Finance or the LCFS must notify the Audit Committee, the Auditor General's representative and the fraud liaison officer within the Welsh Government's Health and Social Services Group Finance Directorate of all frauds.

17.2.6 For losses apparently caused by theft, arson, neglect of duty or gross carelessness, except if trivial, the Director of Finance must notify:

a) The Audit Committee on behalf of the Board, and

b) An Auditor General's representative.

17.2.7 The Director of Finance shall be authorised to take any necessary steps to safeguard the Trust's interests in bankruptcies and company liquidations.

17.2.8 The Director of Finance shall ensure all financial aspects of losses and special payments cases are properly registered and maintained on the centralised Losses and Special Payments Register and that 'case write-off' action is recorded on the system (i.e. case closure date, case status, etc.).

17.2.9 The Audit Committee shall approve the writing-off of losses or the making of special payments within delegated limits determined by the Welsh Ministers and as set out by Welsh Government in its Losses and Special Payments guidance as detailed in Schedule 3 of the SOs.

17.2.10 For any loss or special payments, the Director of Finance should consider whether any insurance claim could be made from the Welsh Risk Pool or from other commercial insurance arrangements.

17.2.11 No losses or special payments exceeding delegated limits shall be authorised or made without the prior approval of the Health and Social Services Group Director of Finance.

17.2.12 All novel, contentious and repercussive cases must be referred to the Welsh Government's Health and Social Services Group Finance Directorate, irrespective of the delegated limit.

17.2.13 The Director of Finance shall ensure all losses and special payments are reported to the Audit Committee at every meeting.

17.2.14 The Trust must obtain the Health and Social Services Group Director General's approval for special severance payments.

18. DIGITAL, DATA and TECHNOLOGY

18.1 Digital Data and Technology Strategy

18.1.1 The Board shall approve a Digital Data and Technology Strategy which sets out the development needs of the Trust for the medium term based on an appropriate assessment of risk. The Integrated Medium Term Plan shall include costed implementation plans of the strategy. The Board shall also ensure that a Director has responsibility for Digital Data and Technology.

18.1.2 The Trust shall publish and maintain a Freedom of Information (FOI) Publication Scheme, or adopt a model Publication Scheme approved by the Information Commissioner. A Publication Scheme is a complete guide to the information routinely published by a public authority. It describes the classes or types of information about the Trust that are made publicly available.

18.2 Responsibilities and duties of the responsible Director

18.2.1 The responsible Director for Digital Data and Technology has responsibility for the accuracy, availability and security of the Trust digital systems and data and shall:

a) Devise and implement any necessary procedures to ensure adequate (reasonable) protection and availability of the Trust's digital systems and data for which they are responsible from accidental or intentional disclosure to unauthorised persons, deletion or modification, theft or damage, having due regard for the Network and Information Systems Regulations 2018, the UK General Data Protection Legislation and any relevant domestic law considerations via the Data Protection Act 2018;

b) Ensure that, following risk assessment of threats, adequate (reasonable) controls exist over access to systems, data entry, processing, storage, transmission and output to ensure security, privacy, accuracy, completeness, and timeliness of the data, as well as the efficient and effective operation of the system;

c) Ensure that an adequate management (audit) trail is maintained of access to digital systems and data and that such audit reviews as the Director may consider necessary to meet the organisational requirements under the Network and Information Systems Regulations 2018 are being carried out;

d) Shall ensure that policies, procedures and training arrangements are in place to ensure compliance with information governance law and the Network and Information Systems Regulations 2018; and

e) Shall ensure comprehensive incident reporting.

18.3 Responsibilities and duties of the Director of Finance

18.3.1 The Director of Finance shall need to ensure that new financial data and systems and amendments to current financial data and systems are developed in a controlled manner and thoroughly tested prior to implementation and business as usual phases. Where this is undertaken by another organisation, assurances of adequacy must be obtained from them prior to implementation and business as usual phases.

18.4 Contracts for data and digital services with other health bodies or outside agencies

18.4.1 The responsible Director for Digital Data and Technology shall ensure that contracts for data and digital services for clinical, management and financial applications with another health organisation or any other agency shall clearly define the responsibility of all parties for:

- the security, privacy, accuracy, completeness, and timeliness of data during processing, transmission and storage, and
- the availability of the service including the resilience required to maintain continuity of the service.

The contract should also ensure rights of access for audit purposes.

18.4.2 Where another health organisation or any other agency provides a data or digital service for clinical, management and financial applications, the responsible Director for Informatics and Digital shall, to maintain the confidentiality, integrity and availability of the service provided, periodically seek assurances that adequate controls, based on risk assessment, are in operation.

18.5 Risk assurance

18.5.1 The responsible Director for Digital Data and Technology shall ensure that the risks to the Trust arising from the use of data, information and IT are effectively identified and considered and that appropriate action is taken to mitigate or control risk. This shall include the preparation and testing of appropriate resilience plans, including both a business continuity and disaster recovery plan.

19. PATIENTS' PROPERTY

19.1 NHS Trust Responsibility

19.1.1 The Trust has a responsibility to provide safe custody for money and other personal property (hereafter referred to as "property") handed in by patients, in the possession of patients that lack capacity, or found in the possession of patients dead on arrival.

19.1.2 Where the Welsh Ministers' instructions require the opening of separate accounts for patient monies, these shall be opened and operated under arrangements agreed by the Director of Finance.

19.1.3 In all cases where property, including cash and valuables, of a deceased patient is of a total value in excess of £5,000 (or such other amount as may be prescribed by any amendment to the Administration of Estates (Small Payments) Act 1965 (c. 32)), the production of Probate or Letters of Administration shall be required before any of the property is released. Where the total value of property is £5,000 or less, forms of indemnity shall be obtained.

19.1.4 Staff should be informed, on appointment, by the appropriate departmental or senior manager of their responsibilities and duties for the administration of the property of patients.

19.1.5 Where patient property or income is received for specific purposes and held for safekeeping the property or income shall be used only for that purpose, unless any variation is approved by the donor or patient in writing.

19.2 Responsibilities of the Chief Executive

19.2.1 The Chief Executive is responsible for ensuring that patients or their guardians, as appropriate, are informed before or at admission, that the Trust will not accept responsibility or liability for patient property brought onto health service premises, unless it is handed in for safe custody and a copy of an official patient property record is retained as a receipt, by:

a) Notices and information booklets;

b) Hospital admission documentation and property records; and

c) The oral advice of administrative and nursing staff responsible for admissions.

19.3 Responsibilities of the Director of Finance

19.3.1 The Director of Finance must provide detailed written instructions on the collection, custody, investment, recording, safekeeping, and disposal of patient property (including instructions on the disposal of the property of deceased patients and of patients transferred to other premises) for all staff whose duty is to administer, in any way, the property of patients. Due care should be exercised in the management of a patient's money in order to maximise the benefits to the patient.

20. FUNDS HELD ON TRUST (CHARITABLE FUNDS)

20.1 Corporate Trustee

20.1.1 All business shall be conducted in the name of Velindre University National Health Service Trust, and all funds received in trust shall be held in the name of the Trust as a corporate Trustee. SFI 20.2 defines the need for compliance with Charities Commission latest guidance and best practice.

20.1.2 The discharge of the Trust's corporate trustee responsibilities for funds held on trust are distinct from its responsibilities for exchequer funds and may not necessarily be discharged in the same manner, but there must still be adherence to the overriding general principles of financial regularity, prudence and propriety. Trustee responsibilities cover both charitable and non-charitable purposes.

20.1.3 The Trust shall establish a Charitable Funds Committee as set out in Standing Order 3.4 to ensure that each fund held on trust which the Trust is responsible for managing is managed appropriately with regard to its purpose and to its requirements.

20.2 Accountability to Charity Commission and the Welsh Ministers

20.2.1 The trustee responsibilities must be discharged separately and full recognition given to the Trust's dual accountabilities to the Charity Commission for charitable funds and to the Welsh Ministers for exchequer funds.

20.2.2 The Schedule of Matters Reserved to the Board and the Scheme of Delegation make clear where decisions regarding the exercise of discretion regarding the disposal and use of the funds are to be taken and by whom. All Board members and Trust officers must take account of that guidance before taking action.

20.2.3 The Trust shall make appropriate arrangements for the Annual Accounts and audit of Funds held on Trust in accordance with Charity Commission requirements.

20.3 Applicability of Standing Financial Instructions to funds held on Trust

20.3.1 In so far as it is possible to do so, most of the sections of these SFIs will apply to the management of funds held on trust.

20.3.2 The over-riding principle is that the integrity of each Trust must be maintained and statutory and Trust obligations met. Materiality must be assessed separately from Exchequer activities and funds.

21. RETENTION OF RECORDS

21.1 Responsibilities of the Chief Executive

21.1.1 The Chief Executive shall be responsible for maintaining archives for all records required to be retained in accordance with the Welsh Ministers' guidance, the UK General Data Protection Legislation and any relevant domestic law considerations via the Data Protection Act 2018 and the Freedom of Information Act 2000 (c. 36).

21.1.2 The records held in archives shall be capable of retrieval by authorised persons.

21.1.3 Records held shall only be destroyed in accordance with the applicable data protection laws and at the express instigation of the Chief Executive. Details shall be maintained of records so destroyed.

Schedule 1

CONTRACT NOTIFICATION ARRANGEMENTS

Y Grŵp Iechyd a Gwasanaethau Cymdeithasol
Health & Social Services Group

Llywodraeth Cymru
Welsh Government

Directors of Finance
Deputy Directors of Finance
Local Health Boards, NHS Trusts Wales & HEIW

Our Ref: SE&IG/

Date: 30 November, 2020

Dear All

RE: PROCESSES FOR LOCAL HEALTH BOARDS AND NHS TRUSTS CONTRACTS, AND INTERESTS IN PROPERTY EXCEEDING £0.5M

Paragraph 13(3) of Schedule 2 to the National Health Service (Wales) Act 2006 places a requirement on Local Health Boards (LHBs) to obtain the consent of Welsh Ministers before:
- Acquiring and disposing of property;
- Entering into contracts; and
- Accepting gifts of property (including property to be held on trust).

Acquiring and disposing of property

WHC (2018) 043 NHS Wales Infrastructure Investment Guidance issued 22 October 2018 sets out at section 10.1:

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www.wales.gov.uk

LHBs and HEIW
Contract approvals over £1m for individual schemes will be sought as part of the normal business case submission process where funding from the NHS Capital Programme is required. For schemes funded via discretionary allocations, a request for approval will need to be submitted to Chief Executive NHS Wales, copying in the Deputy Director of Capital, Estates & Facilities Division.

Detailed arrangements in respect of approval process linked to the acquisition and disposal of leases, where consent does not form part of the business case process will be included in a Welsh Health Circular WHC(2015)031. Organisations should ensure that the monitoring arrangements and the requisite forms and returns are included as part of their own assurance arrangements.

NHS Trusts
Whilst formal Ministerial consent is not required for Trusts as detailed above, general consent arrangements are still applicable in terms of relevant transactions. Detailed requirements in terms of appropriate notifications were sent in the Welsh Health Circular referenced above.

Guidance on disposals is contained in Section 11

WHC (2015) 031 issued 22 June 2015 clarified the approval process linked to the acquisition or disposal of a lease, where approval does not form part of a business case process. A lease being a property right requires the consent of the Welsh Ministers in accordance with paragraph 13(2) (a). The WHC set out for NHS Trusts and LHBs a notification and consent process mirroring the contract processes noted below.

Entering into contracts
Guidance was issued to NHS Wales bodies on 27th January 2017 in a letter to Directors of Finance issued jointly by the Deputy Directors of Finance and Capital Estates and Facilities. This letter now updates that guidance to reconfirm to all NHS Wales bodies that the authorisation and consideration of notified contracts and applications for the acquisitions or disposals of a lease or any interest in property are delegated to the Director General, Health and Social Services Group.

The Director General may, as with any other matter relating to the operation of the NHS in Wales, brief the Minister for Health and Social Services on any arrangement of particular policy note, or with a novel, contentious or innovative nature.

Accordingly any issues relevant to the exercise of the Minister for Health and Social Service's consent will, as a matter of course, be drawn to his attention.

The process which NHS Wales bodies entering into contracts must follow is:

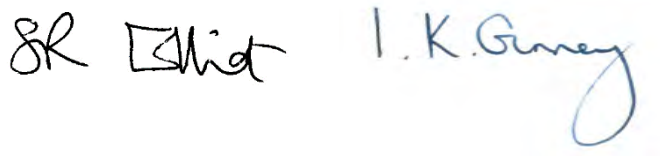
- All NHS contracts (unless exempt) >£1m in total to be notified to the Director General HSSG prior to tendering for the contract;
- All eligible LHB and HEIW contracts >£1m in total to be submitted to the Director General HSSG for consent prior to award;
- All eligible NHS Trust contracts >£1m in total to be submitted to the Director General HSSG for notification prior to award; and
- All eligible NHS contracts >£0.5m in total to be submitted to the Director General HSSG for notification prior to award.

The requirement for consent does not apply to any contracts entered into pursuant to a specific statutory power, and therefore does not apply to:

(i) Contracts of employment between LHBs and their staff;
(ii) Transfers of land or contracts effected by Statutory Instrument following the creation of LHBs;
(iii) Out of Hours contracts; and
(iv) All NHS contracts; that is where one health services body contracts with another health service body.

For non- capital contracts requiring DG approval, the request for approval or notification should be sent to Rob Eveleigh in the Financial Control and Governance team : Robert.Eveleigh@gov.wales

Kind regards,



Steve Elliot & Ian Gunney
Diprwy Cyfarwyddwr Cyllid - Deputy Director of Finance
Dirprwy Gyfarwyddwr, Cyfalaf Ystadau a Cyfleusterau - Deputy Director Capital Estates & Facilities
Finance Directorate / Cyfarwyddiaeth Cyllid
Y Grwp Iechyd a Gwasanaethau/Health and Social Services Group

Schedule 3

BOARD COMMITTEE ARRANGEMENTS

This Schedule forms part of, and shall have effect as if incorporated in the Velindre University NHS Trust Standing Orders

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Quality, Safety and Performance Committee

Terms of Reference & Operating Arrangements

Developed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 The Trust's standing orders provide that "The Board may and, where directed by the Assembly Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees".

1.2 In line with standing orders and the Trust's scheme of delegation, the Board shall nominate annually a Committee to be known as the **Quality, Safety and Performance Committee.** The detailed Terms of Reference and operating arrangements set by the Board in respect of this Committee are set out below.

2. PURPOSE

2.1 The purpose of the Quality, Safety and Performance Committee "the Committee" is to provide:

- Evidence based and timely **advice** to the Board to assist it in discharging its functions and meeting its responsibilities with regard to the:
  - quality, safety and performance of healthcare;
  - all aspects of workforce;
  - digital delivery and information governance; and

- **Assurance** to the Board in relation to the Trust's arrangements for safeguarding and improving the quality, safety and performance of patient and service user centred healthcare, workforce matters, digital delivery and information governance in accordance with its stated objectives, legislative responsibilities and the requirements and standards determined for the NHS in Wales.

3. DELEGATED POWERS AND AUTHORITY

3.1 The Committee will, in respect of its provision of **advice** to the Board:

- Consider the implications for quality, safety, performance, workforce, digital and information governance arising from the development of the Trust's corporate strategies and plans or those of its stakeholders and partners, including those arising from any Joint (Sub) Committees of the Board.

- Consider the implications for the Trust's quality, safety, performance, workforce, digital and information governance arrangements from review/investigation reports and actions arising from the work of external regulators.

- Monitor progress against the Trust's Integrated Medium Term Plan (IMTP) ensuring that areas of weakness or risk and areas of best practice are reported to the Board.

- Advise the Board on aligning Service, workforce and financial performance matters into an integrated approach in keeping with the Trust's commitment to the Sustainable Development Principle defined by the Well-being of Future Generations (Wales) Act 2015.

- Monitor the Trust's sustainability activities and responsibilities.

- Monitor progress against cost improvement programmes.

- Ensure that appropriate systems are in place to develop and approve all Business Cases above Chief Executive's authorised limits in line with agreed policy.

- Provide initial scrutiny of all business cases above Chief Executive's authorised limits.

- Monitor & review the Trust's Capital Programme Expenditure.

- Ensure a system is in place and running effectively to prioritise schemes from the Trust Capital Programme.

- Monitor and review performance against the Trust's Assurance Framework.

- Ensure areas of significant service / performance improvement are highlighted to the Board and other relevant Board Committees as necessary to ensure best practice is shared across the organisation.

- Monitor outcomes/outputs from service improvement programmes to provide assurance on sustainable improvements in the quality and efficiency of service delivery.

3.2 The Committee will, in respect of its assurance role, seek assurances that governance, including risk management arrangements, are appropriately designed and operating effectively to ensure the provision of high quality, safe healthcare and services across the whole of the Trust's activities.

3.3 To achieve this, the **Committee's programme of work** has been designed to ensure that, in relation to all aspects of quality, safety, performance, workforce, digital and information governance:

- Ensure that the Trust Policies, Procedures and Strategies consistent with internal and external requirements are implemented as appropriate.

- The organisation, at all levels (divisional/team) has a citizen centred approach, putting patients, patient / donor safety and safeguarding above all other considerations;

- The care and services planned or provided across the breadth of the organisation's functions (including divisional/team and those provided by the independent or third sector) is consistently applied, based on sound evidence, clinically effective and meeting agreed standards;

- The organisation, at all levels (divisional/team) has the right systems and processes in place to deliver, from a patient or donor perspective - efficient, effective, timely and safe services;

- The workforce is appropriately selected, trained, supported and responsive to the needs of the Service, ensuring recruitment practices safeguard adults and children at risk, that professional standards and registration/revalidation requirements are maintained, and there is compliance with the requirements of the Nurse Staffing Levels (Wales) Act 2016;

- There is effective collaboration with partner organisations and other stakeholders in relation to the sharing of information in a controlled manner, to provide the best possible

outcomes for its citizens (in accordance with the Wales Accord for the Sharing of Personal Information and Caldicott requirements);

- The integrity of data and information is protected, ensuring valid, accurate, complete and timely data and information is available to support decision making across the organisation;

- There is an ethos of continual quality improvement and a safety culture that supports safe high quality care prevails;

- There is good team working, collaboration and partnership working to provide the best possible outcomes for citizens;

- Risks are actively identified and robustly managed at all levels of the organisation;

- Decisions are based upon valid, accurate, complete and timely data and information;

- The Standards for Health Services in Wales are used to monitor and improve standards across the whole organisation;

- All reasonable steps are taken to prevent, detect and rectify irregularities or deficiencies in the quality, safety and performance of care provided, and in particular that:

  - sources of internal assurance are reliable
  - recommendations made by internal and external reviewers are considered and acted upon on a timely basis; and
  - lessons are learned from concerns, incidents, complaints and claims.

- There is an effective clinical audit and quality improvement function that meets the standards set for the NHS in Wales and provides appropriate assurance to the Board.

3.4 The Committee will advise the Board about key indicators of quality, safety and performance, which will be reflected in the organisations performance framework, against which the Trust's performance will be regularly assessed and reported on through Annual Reports.

Authority

3.5 The Committee is authorised by the Board to investigate or commission investigation of any activity within its terms of reference. In doing so, the Committee shall have the right to inspect any books, records or documents of the Trust relevant to the Committee's remit, ensuring patient, and donor and staff confidentiality, as appropriate. The Committee may seek relevant information from:

- Employees (and all employees are directed to cooperate with any reasonable request made by the Committee); and

- Any other Committee, Sub Committee or Group set up by the Board to assist it in the delivery of its functions.

- Obtain legal or other providers of independent professional advice, and to secure the attendance of individuals external to the organisation who have relevant experience and expertise if necessary, and in accordance with the Board's procurement, budgetary and other requirements.

- By giving reasonable notice, require the attendance of any of the officers or employees and auditors of the Organisation at any meeting of the Committee.

3.6 Approve policies relevant to the business of the Committee as delegated by the Board.

Access

3.7 The Chair of the Quality, Safety & Performance Committee shall have reasonable access to Executive Directors and other relevant senior staff.

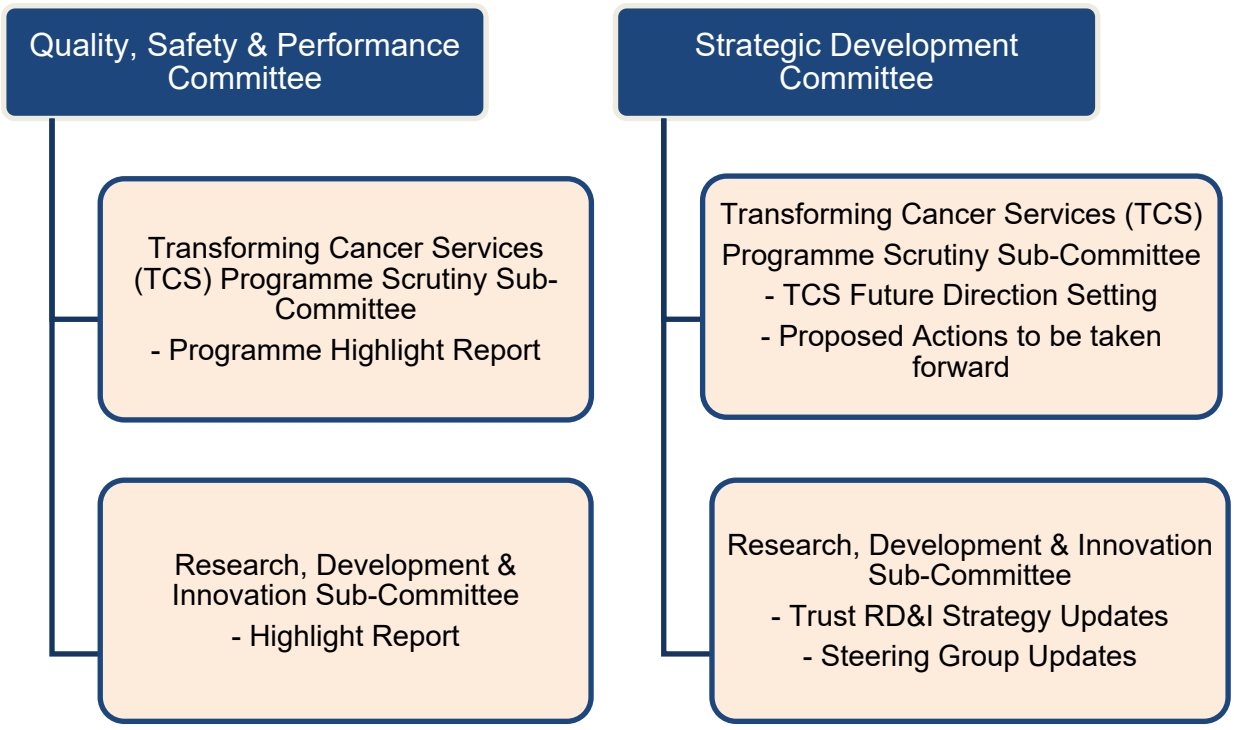
Sub Committees

3.8 The Committee has, with approval of the Trust Board, established the:

- Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee; and the
- Research, Development & Innovation Sub-Committee.

Note: an overarching summary of the Trust's Governance & Accountability Framework is provided at Annex 1.

The two sub-committees will have a dual reporting line to both the Quality, Safety and Performance Committee and the Strategic Development Committee as illustrated below:



Although the Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee and Research, Development & Innovation Sub-Committee, are sub-committees with dual reporting lines, they will both retain the delegated authority for decision making granted by the Trust Board. Further details regarding delegated powers and authority are set out in each of the Sub-Committee Terms of Reference.

The Research, Development & Innovation Sub-Committee will also feed into the Trust Charitable Funds Committee for alignment with strategy and funding. Further details are set out in each of the respective Terms of Reference.

4. MEMBERSHIP

Members

4.1 A minimum of two (2) members, comprising:

Chair	Independent member of the Board (Non-Executive Director) One independent member of the Board (Non-Executive Directors) The Committee may also co-opt additional independent 'external' members from outside the organisation to provide specialist skills, knowledge and expertise.

4.2 **Attendees:**

- Chief Executive Officer
- Executive Director of Nursing, Allied Health Professionals and Health Scientists
- Executive Medical Director *(also Caldicott Guardian)*
- Chief Operating Officer
- Divisional Directors from WBS and VCC
- Directors of Hosted Organisations or representatives
- Director of Corporate Governance
- Executive Director of Finance *(also Information Governance)*
- Executive Director of Organisational Development and Workforce
- Director of Strategic, Transformation, Estates, Planning & Digital
- Deputy Director of Nursing Quality & Patient Experience
- Associate Director of Digital (*also cyber/data outtages/performance)*
- Quality & Safety Manager
- Claims Manager
- Head of Corporate Governance

4.3 **By invitation**

The Committee Chair may extend invitations to individuals from within or outside the organisation, taking account of the matters under consideration at each meeting.
The Committee welcomes attendance at Committee meetings by staff from within the Organisation, representatives of independent and partnership organisations and our regulators including:

- Healthcare Inspectorate Wales
- Wales Audit Office
- Trade Unions
- Community Health Council

Secretariat

4.4 Secretary - as determined by the Director of Corporate Governance

Member Appointments

4.5 The membership of the Committee shall be determined by the Board, based on the recommendation of the Trust Chair - taking account of the balance of skills and expertise necessary to deliver the Committee's remit and subject to any specific requirements or directions made by the Welsh Government.

4.6 Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

Support to Committee Members

4.7 The Director of Corporate Governance, on behalf of the Committee Chair, shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role; and

- Ensure the provision of a programme of organisational development for Committee members as part of the Trust's overall OD programme developed by the Executive Director of Organisational Development & Workforce

5. COMMITTEE MEETINGS

Quorum

5.1 At least two independent members must be present to ensure the quorum of the Committee. If the Chair is not present an agreement as to who will chair from the independent members in their absence.

Frequency of Meetings

5.2 Meetings shall be held no less than bi-monthly and otherwise, as the Chair of the Committee deems necessary.

Withdrawal of individuals in attendance

5.3 The Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIPS & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES / GROUPS

6.1 Although the Board has delegated authority to the Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability for ensuring the quality, safety and performance of healthcare for its citizens through the effective governance of the organisation.

6.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.3 The Committee, through its Chair and members, shall work closely with the Board's other Committees, including Joint (Sub) Committees and Groups to provide advice and assurance to the Board through the:

- joint planning and co-ordination of Board and Committee business; and
- sharing of information

in doing so, contributing to the integration of good governance across the organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance framework.

6.4 The Committee will consider the assurance provided through the work of the Board's other Committees and Sub Groups to meet its responsibilities for advising the Board on the adequacy of the Trust's overall framework of assurance.

6.5 The Committee shall embed the Trust's corporate objectives, priorities and requirements, e.g., equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- Provide a formal report to the Board of the Committee's activities. This includes verbal updates on activity, the submission of Committee Highlight Reports and other written reports, as well as the presentation of an annual Quality, Safety & Performance Committee report;

- Bring to the Board's specific attention any significant matters under consideration by the Committee;

- Ensure appropriate escalation arrangements are in place to alert the Trust Chair, Chief Executive or Chairs of other relevant Committees of any urgent/critical matters that may compromise patient care and affect the operation and/or reputation of the Trust.

7.2 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Committee's performance and operation including that of any Sub Committees established.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee.

9. REVIEW

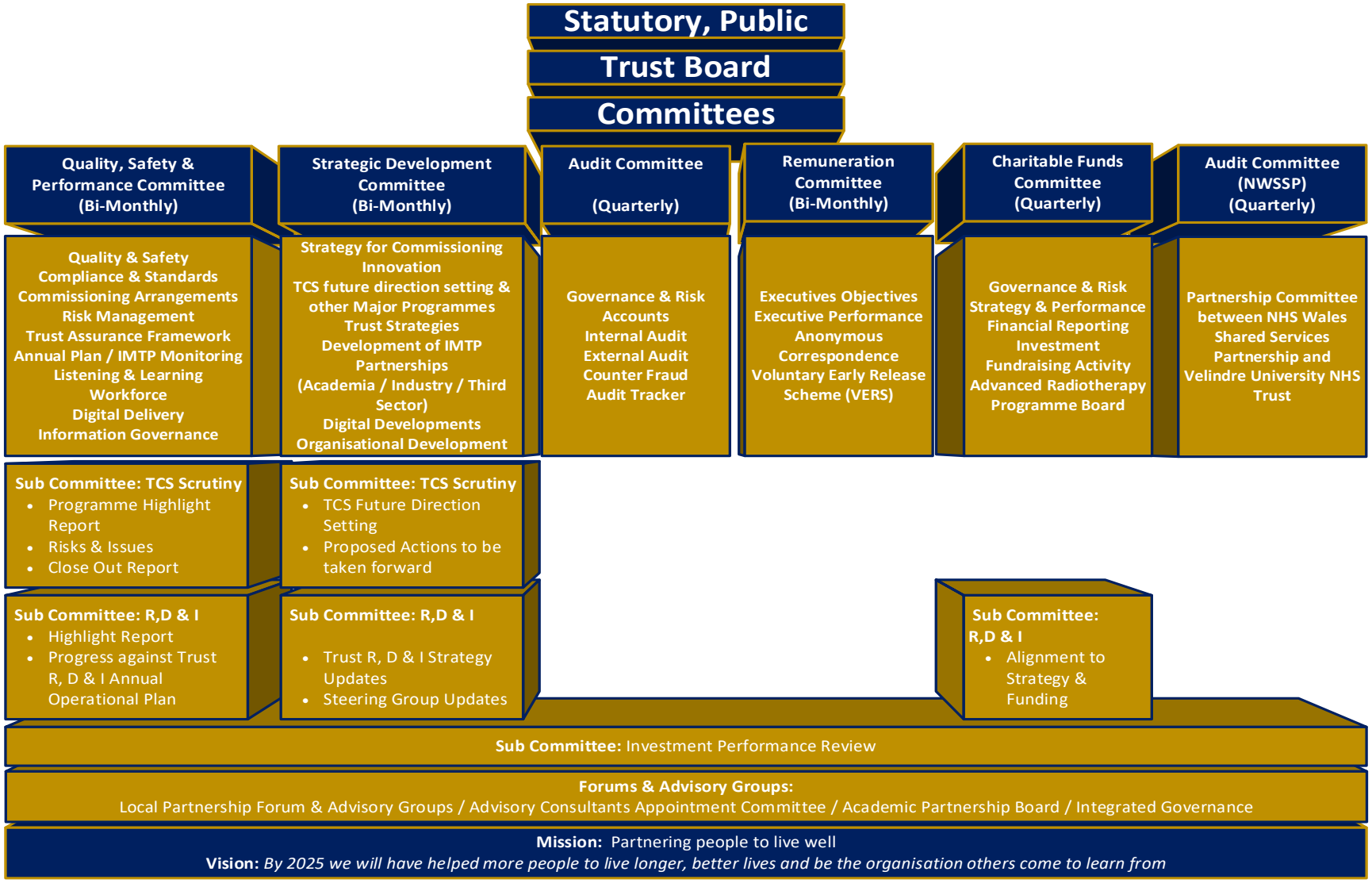
9.1 Terms of reference and operating arrangements, and the Committees Programme of Work will be reviewed annually by the Committee, with reference to the Board.

10. CHAIR'S ACTION ON URGENT MATTERS

10.1 There may, occasionally, be circumstances where decisions normally made by the Committee need to be taken between scheduled meetings. In these circumstances, the Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board, after first consulting with one other Independent Members of the Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Committee for consideration and ratification.

10.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

ANNEX 1 – GOVERNANCE & ACCOUNTABILITY FRAMEWORK



Strategic Development Committee

Terms of Reference & Operating Arrangements

Developed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 The Trust's standing orders provide that "The Board may and, where directed by the Assembly Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees".

1.2 In line with standing orders and the Trust's scheme of delegation, the Board shall nominate annually a Committee to be known as the **Strategic Development Committee.** The detailed Terms of Reference and operating arrangements set by the Board in respect of this Committee are set out below.

2. PURPOSE

2.1 The purpose of the Strategic Development Committee "the Committee" is to provide:

- Evidence based and timely **advice** to the Board to assist it in discharging its functions and responsibilities with regard to the:

  - strategic direction
  - strategic planning and related matters
  - organisational development
  - digital services, estates and other enabler services
  - sustainable development and the implementation of strategy through the spirit and intention of the Well Being of Future Generations Act
  - investment in accordance with Value-based healthcare

- **Assurance** to the Board in relation to strategic decision-making, ensuring it is supported with a robust understanding of risks in relation to the achievement of organisational goals and strategic objectives.

2.2 Where appropriate, the Committee will advise the Board and the Accountable Officer on where, and how, its system of assurance may be strengthened and developed further.

3. DELEGATED POWERS AND AUTHORITY

3.1 With regard to its role in providing advice to the Board on strategic direction and organisational development, the Committee will:

- Oversee the development of the Trust's strategies and plans which set out how plans the delivery of high quality and safe services, consistent with the Board's overall strategic direction and any requirements and standards set for NHS bodies in Wales.

- Regularly review whether the Trust is developing a strategic approach, which provides it with the greatest opportunity to fulfil its duties under the Well-being of Future Generations (Wales) Act 2015 by means of the application of the Act's Sustainable Development Principle.

- Review the arrangements and contents of key plans to ensure alignment with the Trusts strategic goals and objectives, including the Trust's Integrated Medium Term Plan (IMTP) in accordance with above.

- Review the Trust's Capital Plan to ensure alignment with key Trust strategies, plans (IMTP) and sustainable development principles.

- Review Trust developments involving significant investment or modernisation.

- Consider the strategic implications for the Trust from the findings arising from national developments, review, audit and/or inspection, and monitor the successful implementation of any actions required resulting from these findings.

3.2 To achieve this, the Committee's programme of work will be designed to provide assurance that:

- There is clear, consistent strategic direction, strong leadership and transparent lines of accountability.

Authority

3.2 The Committee is authorised by the Board to investigate or have investigated any activity within its terms of reference. In doing so, the Committee shall have the right to inspect any books, records or documents of the Trust relevant to the Committees remit and ensuring patient/service user, client and staff confidentiality, as appropriate. It may seek any relevant information from any:

- Employee (and all employees and directed to cooperate with any reasonable request made by the Committee); and

- Any other Committee, sub Committee, or group set up by the Board to assist it in the delivery of its functions.

- By giving reasonable notice, require the attendance of any of the officers or employees and auditors of the Board at any meeting of the Committee.

- The Committee is authorised by the Board to obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers it necessary, in accordance with the Board's procurement, budgetary and other requirements.

- To approve policies relevant to the business of the Committee as delegated by the Board.

Access

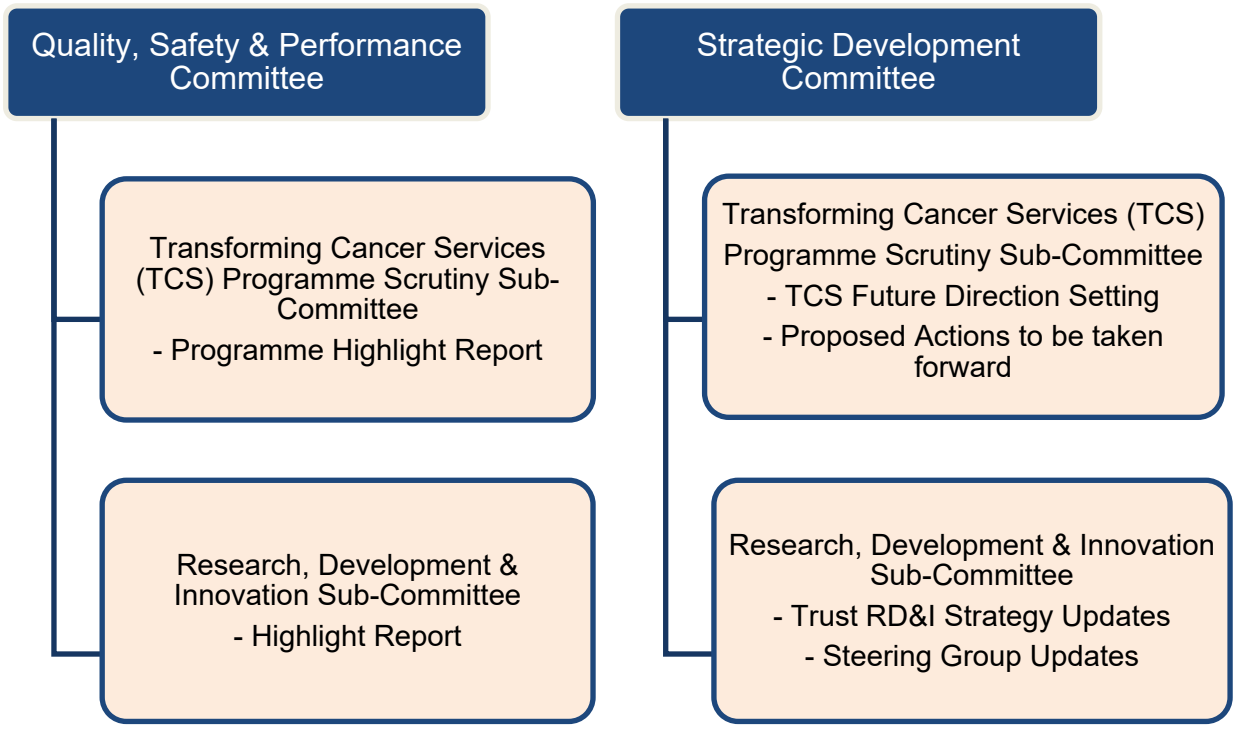
3.3 The Chair of the Strategic Development Committee shall have reasonable access to Executive Directors and other relevant senior staff.

Sub Committees

3.4 The Committee has, with approval of the Trust Board, established the:

- Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee; and the
- Research, Development & Innovation Sub-Committee.

The two sub-committees will have a dual reporting line to both the Quality, Safety and Performance Committee and the Strategic Development Committee as illustrated below:



Although the Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee and Research, Development & Innovation Sub-Committee, are sub-committees with dual reporting lines, they will both retain the delegated authority for decision making granted to the current committee by Trust Board. Further details regarding delegated powers and authority are set out in each of the Sub-Committee Terms of Reference.

The Research, Development & Innovation Sub-Committee will also feed into the Trust Charitable Funds Committee for alignment with strategy and funding. Further details are set out in each of the respective Terms of Reference.

4. MEMBERSHIP

Members

4.1 A minimum of two (2) members comprising:

Chair Independent member of the Board (Non-Executive Director)

One independent member of the Board (Non-Executive Directors)

The Committee may also co-opt additional independent 'external' members from outside the organisation to provide specialist skills, knowledge and expertise.

4.2 **Attendees:**

- Chief Executive Officer
- Director of Strategic, Transformation, Estates, Planning & Digital
- Executive Director of Nursing, Allied Health Professionals and Health Scientists
- Executive Medical Director

- Chief Operating Officer
- Divisional Directors
- Director of Corporate Governance
- Executive Director of Finance
- Executive Director of Organisational Development and Workforce
- Assistant Director of Planning
- Associate Director of Organisational Development and Workforce
- Associate Director of Digital
- Assistant Director of Communications & Engagement
- Director of Commercial and Strategic Partnerships

The Committee welcomes attendance at Committee meetings by staff from within the organisation, representatives of independent and partnership organisations and our regulators including:

- Healthcare Inspectorate Wales
- Audit Wales
- Trade Unions
- Community Health Council

The Committee may also co-opt additional independent 'external' members from outside the organisation to provide specialist skills, knowledge and expertise.

4.3 **Secretariat**

As determined by the Director of Corporate Governance.

4.4 **Member Appointments**

The membership of the Committee shall be determined by the Board based on the recommendation of the Trust Chair – taking account of the balance of skills and expertise necessary to deliver the Committee's remit and subject to any specific requirements or directions made by the Welsh Government.

Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

4.5 **Support to Committee Members**

The Director of Corporate Governance on behalf of the Committee Chair shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role: and

- Ensure the provision of a programme of Organisational development for Committee members as part of the Trust's overall OD programme developed by the Director of Workforce and Organisational Development.

5. COMMITTEE MEETINGS

5.1 Quorum

At least two independent members must be present to ensure the quorum of the Committee. If the Chair is not present an agreement as to who will chair from the Independent Members in their absence.

5.2 Frequency of Meetings

Meetings shall be held bi-monthly, consistent with the Trust's annual plan of Board Business.

5.3 Withdrawal of individuals in attendance

The Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIPS & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

6.1 Although the Board has delegated authority to the Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability for the safety, security and use of information to support the quality and safety of healthcare for its citizens through the effective governance of the Organisation.

6.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.3 The Committee, through its Chair and members, shall work closely with the Board's other Committees and Groups to provide advice and assurance to the Board through the:

- Joint planning and co-ordination of Board and Committee business: and
- Sharing of information

In doing so, contributing to the integration of good governance across the Organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance framework.

6.4 The Committee will consider the assurance provided through the work of the Board's other Committees and Sub Groups to meet its responsibilities for advising the Board on the adequacy of the Trust's overall framework of assurance.

6.4 The Committee shall embed the Trust's corporate objectives, priorities, and requirements, e.g., equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- Report formally, regularly and on a timely basis to the Board on the Committee's activities. This includes verbal updates on activity and the submission of written Highlight Reports.

- Bring to the Board's and the Accountable Officer's specific attention any significant matters under consideration by the Committee; and

- Ensure appropriate escalation arrangements are in place to alert the Trust Chair, Chief Executive or Chairs of other relevant Committees of any urgent/critical matters that may compromise patient care and affect the operation and/or the reputation of the Trust.

7.2 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self assessment and evaluation of the Committee's performance and operation including that of any Sub Committees established.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee.

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Committee with reference to the Board.

10. CHAIR'S ACTION ON URGENT MATTERS

10.1 There may, occasionally, be circumstances where decisions which normally be made by the Committee need to be taken between scheduled meetings. In these circumstances, the Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board, after first consulting with two other Members of the Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Committee for consideration and ratification.

10.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

Audit Committee

Terms of Reference & Operating Arrangements

Reviewed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 The Trust's standing orders provide that "*The Board may and, where directed by the Welsh Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees*".

1.2 In line with standing orders and the Trust's scheme of delegation, the Board shall nominate annually a Committee to be known as the **Audit Committee**. The detailed terms of reference and operating arrangements set by the Board in respect of this Committee are set out below.

1.3 These Terms of Reference and Operating Arrangements are based on the model Terms of Reference as detailed in the NHS Wales Audit Committee Handbook June 2012.

2. PURPOSE

2.1 The purpose of the Audit Committee ("the Committee") is to:

- ***Advise*** and ***assure*** the Board and the Accountable Officer on whether effective arrangements are in place - through the design and operation of the Trust's **system of assurance** - to support them in their decision taking and in discharging their accountabilities for securing the achievement of the Trust's objectives, in accordance with the standards of good governance determined for the NHS in Wales.

2.2 Where appropriate, the Committee will advise the Board and the Accountable Officer on where, and how, its system of assurance may be strengthened and developed further.

3. DELEGATED POWERS AND AUTHORITY

3.1 With regard to its role in providing advice to the Board, the Committee will comment specifically upon:

- The adequacy of the Trust's strategic governance and assurance arrangements and processes for the maintenance of an effective system of good governance, risk management and internal control across the whole of the organisation's activities (both clinical and non-clinical) designed to support the public disclosure statements that flow from the assurance processes, including the Annual Governance Statement, providing reasonable assurance on:

  - the organisation's ability to achieve its objectives,

  - compliance with relevant regulatory requirements, standards, quality and service delivery requirements and other directions and requirements set by the Welsh Government and others,

  - the reliability, integrity, safety and security of the information collected and used by the organisation,

  - the efficiency, effectiveness and economic use of resources, and

- the extent to which the organisation safeguards and protects all its assets, including its people to ensure the provision of high quality, safe healthcare for its citizens;

- The Board's Standing Orders, and Standing Financial Instructions (including associated framework documents, as appropriate);

- The accounting policies, the accounts, and the annual report of the organisation, including the process for review of the accounts prior to submission for audit, levels of error identified, the ISA 260 Report 'Communication with those charged with Governance' and managements' letter of representation to the external auditors;

- The Schedule of Losses and Compensation;

- The planned activity and results of internal audit, external audit, clinical audit and the Local Counter Fraud Specialist (including strategies, annual work plans and annual reports);

- The adequacy of executive and managements' response to issues identified by audit, inspection and other assurance activity via monitoring of the Trust's audit action plan;

- Anti-fraud policies, whistle-blowing processes and arrangements for special investigations as appropriate; and

- Any particular matter or issue upon which the Board or the Accountable Officer may seek advice from the Committee.

3.2 The Committee will support the Board with regard to its responsibilities for governance (including risk and control) by reviewing:

- All risk and control related disclosure statements (in particular the Annual Governance Statement together with any accompanying Head of Internal Audit statement, external audit opinion or other appropriate independent assurances), prior to endorsement by the Board;

- The underlying assurance processes that indicate the degree of the achievement of corporate objectives, the effectiveness of the management of principal risks and the appropriateness of the above disclosure statements;

- The policies for ensuring compliance with relevant regulatory, legal and code of conduct and accountability requirements; and

- The policies and procedures for all work related to fraud and corruption as set out in Welsh Government Directions and as required by the NHS Counter Fraud Authority.

3.3 In carrying out this work the Committee will primarily utilise the work of Internal Audit, External Audit and other assurance functions, but will not be limited to these audit functions. It will also seek reports and assurances from other assurance providers, regulators, directors and managers as appropriate, concentrating on the overarching systems of good governance, risk management and internal control, together with indicators of their effectiveness.

3.4 This will be evidenced through the Committee's use of effective governance and assurance arrangements to guide its work and that of the audit and assurance functions that report to it, and enable the Committee to review and form an opinion on:

- The comprehensiveness of assurances in meeting the Board and the Accountable Officer's assurance needs across the whole of the Trust's activities, both clinical and non clinical; and

- The reliability and integrity of these assurances.

3.5 To achieve this, the Committee's programme of work will be designed to provide assurance that:

- There is an effective internal audit function that meets the standards set for the provision of internal audit in the NHS in Wales and provides appropriate independent assurance to the Board and the Accountable Officer through the Committee;

- There is an effective counter fraud service that meets the standards set for the provision of counter fraud in the NHS in Wales and provides appropriate assurance to the Board and the Accountable Officer through the Committee;

- There is an effective clinical audit function that meets the standards set for the NHS in Wales and provides appropriate assurance to the Board and the Accountable Officer through the Committee;

- There are effective arrangements in place to secure active, ongoing assurance from management with regard to their responsibilities and accountabilities, whether directly to the Board and the Accountable Officer or through the work of the Board's Committees through the effective completion of Audit Recommendations and the Committee's review of the development and drafting of the Trust's Annual Governance;

- The work carried out by key sources of external assurance, in particular, but not limited to the Trust's external auditors, is appropriately planned and co-ordinated and that the results of external assurance activity complements and informs (but does not replace) internal assurance activity;

- The work carried out by the whole range of external review bodies is brought to the attention of the Board, and that the organisation is aware of the need to comply with related standards and recommendations of these review bodies, and the risks of failing to comply;

- The systems for financial reporting to the Board, including those of budgetary control, are effective; and that

- The results of audit and assurance work specific to the Trust, and the implications of the findings of wider audit and assurance activity relevant to the Trust's operations are appropriately considered and acted upon to secure the ongoing development and improvement of the organisation's governance arrangements.

In carrying out this work, the Committee will follow and implement the Audit Committee's Annual Work plan and will be evidenced through meeting papers, formal minutes, and highlight reports to Board and annually via the Annual Governance Statement and Annual Report to the Board.

Authority

3.6 The Committee is authorised by the Board to investigate or have investigated any activity (clinical and non clinical) within its terms of reference. In doing so, the Committee shall have the right to inspect any books, records or documents of the Trust relevant to the Committee's remit, and ensuring patient/client and staff confidentiality, as appropriate. It may seek relevant information from any:

- Employee (and all employees are directed to cooperate with any reasonable request made by the Committee); and
- Any other Committee, sub Committee or group set up by the Board to assist it in the delivery of its functions.

3.7 The Committee is authorised by the Board to obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers it necessary, in accordance with the Board's procurement, budgetary and other requirements.

3.8 The Committee is authorised by the Board to approve policies relevant to the business of the Committee as delegated by the Board.

Access

3.9 The Head of Internal Audit and the Auditor General for Wales and his representatives shall have unrestricted and confidential access to the Chair of the Audit Committee at any time, and the Chair of the Audit Committee will seek to gain reciprocal access as necessary.

3.10 The Committee will meet with Internal and External Auditors and the nominated Local Counter Fraud Specialist without the presence of officials on at least one occasion each year.

3.11 The Chair of Audit Committee shall have reasonable access to Executive Directors and other relevant senior staff.

Sub Committees

3.12 The Committee may, subject to the approval of the Trust Board, establish sub Committees or task and finish groups to carry out on its behalf specific aspects of Committee business. At this stage, no sub Committees/task and finish groups have been established.

4. MEMBERSHIP

Members

4.1 A minimum of three (3) members, comprising:

Chair	Independent member of the Board (Non-Executive Director)
	Two independent members of the Board (Non-Executive Directors)
	[one member should be a member of the Quality, Safety & Performance Committee]

The Committee may also co-opt additional independent 'external' members from outside the organisation to provide specialist skills, knowledge and expertise.

The Chair of the organisation shall not be a member of the Audit Committee.

Attendees

4.2 In attendance:

Chief Executive (*who should attend once a year as a minimum to discuss with the Committee the process for assurance that supports the Annual Governance Statement.)*
Executive Director of Finance
Director of Corporate Governance
Chief Operating Officer
Head of Internal Audit
Local Counter Fraud Specialist
Representative of the Auditor General for Wales

By invitation — The Committee Chair may invite:

- the Chair of the organisation
- any other Trust officials; and/or
- any others from within or outside the organisation

to attend all or part of a meeting to assist it with its discussions on any particular matter.

Secretariat

4.1 Secretary — As determined by the Director of Corporate Governance

Member Appointments

4.2 The membership of the Committee shall be determined by the Board, based on the recommendation of the Trust Chair - taking account of the balance of skills and expertise necessary to deliver the Committee's remit and subject to any specific requirements or directions made by the Welsh Government.

4.3 Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

Support to Committee Members

4.4 The Director of Corporate Governance, on behalf of the Committee Chair, shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role; and

- Ensure the provision of a programme of organisational development for Committee members as part of the Trust's overall OD programme developed by the Executive Director of Workforce & Organisational Development.

5. COMMITTEE MEETINGS

Quorum

5.1 At least two members must be present to ensure the quorum of the Committee.

Frequency of Meetings

5.2 Meetings shall be held no less than 4 times per year, and otherwise as the Chair of the Committee deems necessary – consistent with the Trust's annual plan of Board Business. The External Auditor or Head of Internal Audit may request a meeting with the Chair if they consider that one is necessary.

Withdrawal of individuals in attendance

5.3 The Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES / GROUPS

6.1 Although the Board has delegated authority to the Committee for the exercise of certain functions as set out within these terms of reference, the Board retains overall responsibility and accountability for ensuring the quality and safety of healthcare for its citizens through the effective governance of the organisation.

6.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.3 The Committee, through its Chair and members, shall work closely with the Board's other Committees to provide advice and assurance to the Board by taking into account:

- Joint planning and co-ordination of Board and Committee business; and
- Sharing of information

in doing so, contributing to the integration of good governance across the organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance arrangements.

6.4 The Committee will consider the assurance provided through the work of the Board's other Committees and sub Committees to meet its responsibilities for advising the Board on the adequacy of the Trust's overall system of assurance by receipt of their annual work plans.

6.5 The Committee shall embed the Trust's corporate standards, priorities and requirements, e.g., equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- Report formally, regularly and on a timely basis to the Board and the Accountable Officer on the Committee's activities. This includes verbal updates on activity and the submission of written highlight reports throughout the year;

- Bring to the Board and the Accountable Officer's specific attention any significant matters under consideration by the Committee;

- Ensure appropriate escalation arrangements are in place to alert the Trust Chair, Chief Executive (and Accountable Officer) or Chairs of other relevant Committees of any urgent/critical matters that may affect the operation and/or reputation of the Trust.

7.2 The Committee shall provide a written, annual report to the Board and the Accountable Officer on its work in support of the Annual Governance Statement, specifically commenting on the adequacy of the assurance arrangements, the extent to which risk management is comprehensively embedded throughout the organisation, the integration of governance arrangements and the appropriateness of self-assessment activity against relevant standards. The report will also record the results of the Committee's self-assessment and evaluation.

7.3 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Committee's performance and operation including that of any sub Committees established. In doing so, account will be taken of the requirements set out in the NHS Wales Audit Committee Handbook.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee, except in the following areas:

- Quorum *[as per section on Committee meetings]*
- Notice of meetings
- Notifying the public of Meetings
- Admission of the public, the press and other observers

Cross reference with the Trust Standing Orders.

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Committee with reference to the Board.

10. CHAIR'S ACTION ON URGENT MATTERS

10.1 There may, occasionally, be circumstances where decisions which normally be made by the Committee need to be taken between scheduled meetings. In these circumstances, the Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Committee, after first consulting with two other Independent Members of the Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Committee for consideration and ratification.

10.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

Charitable Funds Committee

Terms of Reference & Operating Arrangements

Reviewed:	November 2020
Approved	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 The Trust's standing orders provide that "*The Board may and, where directed by the Assembly Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by committees*".

1.2 In accordance with standing orders (and the Trust's scheme of delegation), the Board shall nominate annually a Committee to be known as the **Charitable Funds Committee** "the Committee". The detailed terms of reference and operating arrangements set by the Board in respect of this Committee are set out below.

2. CONSTITUTION

2.1 The Velindre University NHS Trust Board was appointed as corporate trustee of the charitable funds by virtue of the Velindre National Health Service Trust (Establishment) Order No. 2838 that came into existence on 1st December 1993, and that its Board serves as its agent in the administration of the charitable funds held by the Trust.

2.2 The purpose of the Committee" is to make and monitor arrangements for the control and management of the Trust's Charitable Funds.

3. SCOPE AND DUTIES

3.1 Within the budget, priorities and spending criteria determined by the Trust as trustee and consistent with the requirements of the Charities Act 1993, Charities Act 2006 (or any modification of these acts) to apply the charitable funds in accordance with their respective governing documents.

3.2 To ensure that the Trust policies and procedures for charitable funds investments are followed. To make decisions involving the sound investment of charitable funds in a way that both preserves their value and produces a proper return consistent with prudent investment and ensuring compliance with:

- Trustee Act 2000
- The terms outlined in the Velindre NHS Trust Charity's Governing Documents

3.3 At least twice a year, receive highlight reports from the Executive Director of Finance in respect of investment decisions, performance and action taken through delegated powers upon the advice of the Trust's Investment adviser.

3.4 To oversee and monitor the functions performed by the Executive Director of Finance as defined in Standing Financial Instructions.

3.5 To respond to, and monitor the level of donations and legacies received, including the progress of any Charitable Appeal Funds where these are in place and considered to be material.

3.6 To monitor and review the Trust's scheme of delegation for Charitable Funds expenditure and to set and reflect in Financial Procedures the approved delegated limits for expenditure from Charitable Funds.

3.7 To ensure that funds are being utilised appropriately in accordance with both the instructions and wishes of the donor, and to ensure that fund balances are maintained in accordance with the Reserves Policy.

4. DELEGATED POWERS AND DUTIES OF THE EXECUTIVE DIRECTOR OF FINANCE

4.1 The Executive Director of Finance has prime responsibility for the Trust's Charitable Funds as defined in the Trust's Standing Financial Instructions. The specific powers, duties and responsibilities delegated to the Executive Director of Finance are:

- Administration of all existing charitable funds.
- To identify any new charity that may be created (of which the Trust would also be Trustee). Ensuring that all legal requirements are followed in the creation of any new charity in order to formalise the governing arrangements.
- Provide guidelines with response to donations, legacies and bequests, fundraising and trading income.
- Responsibility for the management of investment of funds held on trust.
- Ensure appropriate banking services are available to the Trust.
- Prepare reports to the Trust Board including the Annual Accounts and Annual Report.

5. AUTHORITY

5.1 The Committee is empowered with the responsibility for:

- Overseeing the day to day management of the investments of the charitable funds in accordance with the investment strategy set down from time to time by the Trustee and the requirements of the Trust's Standing Financial Instructions.
- The appointment of an Investment Manager (where appropriate) to advise it on investment matters. Delegating, where applicable, the day-to-day management of some or all of the investments to that Investment Manager. In exercising this power the Committee must ensure that:

  a) The scope of the power delegated is clearly set out in writing and communicated with the person or persons who will exercise it.
  b) There are in place adequate internal controls and procedures which will ensure that the power is being exercised properly and prudently.
  c) The performance of the person or persons exercising the delegated power is regularly reviewed.
  d) Where an investment manager is appointed, that the person is regulated under the Financial Services Act 2012.
  e) Acquisitions or disposal of a material nature must always have written authority of the Committee or the Chair of the Committee in conjunction with the Executive Director of Finance & Informatics.

- Ensuring that the banking arrangements for the charitable funds are kept entirely distinct from the Trust's NHS funds.

- Ensuring that arrangements are in place to maintain current account balances at minimum operational levels consistent with meeting expenditure obligations, the balance of funds being invested in interest bearing deposit accounts.

- The amount to be invested or redeemed from the sale of investments shall have regard to the requirements for immediate and future expenditure commitments.

- The operation of an investment pool when this is considered appropriate to the charity in accordance with charity law and the directions and guidance of the Charity Commission. The Committee shall propose the basis to the Trust Board for applying accrued income to individual funds in line with charity law and Charity Commission guidance.

- Obtaining appropriate professional advice to support its investment activities.

- Regularly reviewing investments to see if other opportunities or investment services offer a better return.

5.2 The Committee is authorised by the Board to:

- Investigate or have investigated any activity within its Terms of Reference and in performing these duties shall have the right, at all reasonable times, to inspect any books, records or documents of the Trust relevant to the Committee's remit. It can seek any relevant information it requires from any employee and all employees are directed to co-operate with any reasonable request made by the Committee;

- Obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers this necessary, subject to the Board's budgetary and other requirements; and

- By giving reasonable notice, require the attendance of any of the officers or employees and auditors of the Board at any meeting of the Committee.

5.3 Approve policies relevant to the business of the Committee as delegated by the Board.

5.4 **Sub Committees**

As part of its function, the Charitable Funds Committee has determined to establish a Sub Committee, the *'Charitable Funds Investment Performance Review Sub Committee'*, to specifically monitor the performance of the Investment portfolio on its behalf whilst recognising that the Trust Board as Corporate Trustee is ultimately accountable.

In addition, the Trust Research, Development & Innovation Sub-Committee has been established to act as the 'front door' for all RD&I business at Board level. The RD&I Sub Committee will feed into the Charitable Funds Committee for alignment with strategy and funding.

6. MEMBERSHIP

Members

6.1 A minimum of four members, comprising:

Chair	Independent member of the Board (Non-Executive Director) Independent Member of the Board (Non-Executive Director) The Trust's Chief Executive and Executive Director of Finance (one of which at any one meeting may be represented by a Nominated Representative in their absence)

Attendees

6.2 In attendance — The Committee may require the attendance for advice, support and information routinely at meetings from:

- Charity Director
- Chief Operating Officer
- Director Velindre Cancer Centre (or their deputy)
- Director of Welsh Blood Service (or their deputy)
- Investment Manager/Advisor
- Patient Representative
- Charitable Funds Accountant
- Deputy Director of Finance
- Head of Fundraising
- Head of Corporate Governance (Charity Governance Lead)
- Head of Communications

By invitation, The Committee Chair may invite:

- any other Trust officials; and/or
- any others from within or outside the organisation

to attend all or part of a meeting to assist it with its discussions on any particular matter.

Secretariat

6.3 Secretary — As determined by the Director of Corporate Governance

Member Appointments

6.4 The membership of the Committee shall be determined by the Board, based on the recommendation of the Trust Chair - taking account of the balance of skills and expertise necessary to deliver the Committee's remit and subject to any specific requirements or directions made by the Welsh Government.

6.5 Applicable to Independent Members only. Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

6.6 In order to demonstrate that there is a visible independence in the consideration of decisions and management of charitable funds from the Trust's core functions, the Board should consider extending invitations to the Charitable Funds Committee to individuals outside of the Board. One option might be to seek representation from the Patient Liaison Group.

Support to Committee Members

6.7 The Director of Corporate Governance, on behalf of the Committee Chair, shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role; and
- Ensure and co-ordinate the provision of a programme of organisational development for Committee members as part of the Trust's overall Organisational Development programme developed by the Executive Director of Organisational Development & Workforce.

7. COMMITTEE MEETINGS

Quorum

7.1 At least two members must be present to ensure the quorum of the Committee. Of the two, one must be an Independent Member and one must be the Executive Director of Finance or Nominated Representative.

Frequency of meetings

7.2 Meetings shall be held every three months and otherwise as the Committee Chairs deems necessary - consistent with the Trust's annual plan of Board Business.

Withdrawal of individuals in attendance

7.3 The Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

8. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

8.1 The Committee will only consider Research and/or Innovation proposals seeking charitable funding that have been scrutinised and endorsed by the Research, Development & Innovation Sub-Committee. This will ensure that the quality and safety of RD&I activity has been considered and is consistent with the RD&I Strategy.

8.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

8.3 The Committee, through its Chair and members, shall work closely with the Board and, [*where appropriate, its Committees and Groups]*, through the:

- joint planning and co-ordination of Board and Committee business; and
- appropriate sharing of information

in doing so, contributing to the integration of good governance across the organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance arrangements.

8.4 The Committee shall embed the Trust's corporate standards, priorities and requirements, e.g. equality and human rights through the conduct of its business.

9. REPORTING AND ASSURANCE ARRANGEMENTS

9.1 The Committee Chair shall agree arrangements with the Trust's Chair to report to the Board in their capacity as Trustees. This may include, where appropriate, a separate meeting with the Board.

9.2 The Committee Chair shall report formally, regularly and on a timely basis to the Board and the Accountable Officer on the Committee's activities. This includes verbal updates on activity and the submission of written highlight reports throughout the year.

9.3 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Committee's performance and operation.

10. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

10.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee, except in the following areas:

- Quorum

Cross reference with the Trust Standing Orders.

11. REVIEW

11.1 These terms of reference and operating arrangements shall be reviewed annually by the Committee with reference to the Board.

12. CHAIR'S ACTION ON URGENT MATTERS

12.1 There may, occasionally, be circumstances where decisions which normally be made by the Committee need to be taken between scheduled meetings. In these circumstances, the Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board, after first consulting with two other Independent Members of the Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Committee for consideration and ratification.

12.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

Charitable Funds Investment Performance Review Sub Committee

Terms of Reference & Operating Arrangements

Reviewed:	April 2018
Next Review Due:	April 2019

1. INTRODUCTION

1.1 The Trust's standing orders provide that "The Board may and, where directed by the Welsh Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees".

1.2 The Charitable Funds Committee was established by the Board to make and monitor arrangements for the control and management of the Trust's Charitable Funds.

1.3 As part of its function, the Charitable Funds Committee has determined to establish a Sub Committee to specifically monitor the performance of the Investment portfolio on its behalf whilst recognising that the Trust Board as Corporate Trustee is ultimately accountable.

2. PURPOSE

2.1 The purpose of the Investment Performance Review Sub Committee ("the Committee") is to undertake the following tasks on behalf of the Committee:

- Ensure that when investing charitable funds Trustees achieve an appropriate balance for the Charity between the two objectives of:

  a) Providing an income to help the Charity carry out its purposes effectively in the short term; and
  b) Maintaining and, if possible, enhancing the value of the invested funds, so as to enable the Charity to carry out its purpose in the longer term.

- Ensure that the following standards as defined in **the Trustee Act are followed**, whether they are using the investment powers in that Act or not:
-

  a) That the Charity is discharging its general duty of care (as described in section 1 of the Trustee Act), which is the duty to exercise such care and skill as is reasonable in the circumstances. This applies both to the use of any power of investment and to the discharge of the specific duties which the Act attaches to the use of investment powers.

  b) Secondly, that the Charity is complying with the following **specific duties**:

  - Trustees must consider the **suitability** for the Charity of any investment. This duty exists at two levels. The Trustees must be satisfied that the type of any proposed investment (e.g. a common investment fund or a deposit account) is right for the Charity They also have a duty to consider whether a particular investment of that type is a suitable one for the Charity to make, based on the overall investment policy set by the Charitable Funds Committee Trustees should, at both levels, try to consider the whole range of investment options which are open to them; how far they should go here will, of course, depend on the amount of funds available for investment.

    - Trustees must consider the need for **diversification**, i.e. having different types of investment, and different investments within each type. This will reduce the risk of losses resulting from concentrating on a particular investment or type of investment.

- Trustees must periodically review the investments of the Charity. The nature and frequency of these reviews is up to the Trustees to decide, but the reviews should be proportionate to the nature and size of the Charity's investment portfolio. To review too infrequently may result in losses or missed opportunities; chopping and changing investments too frequently may incur unnecessarily high levels of transaction charges. A review of the investments should be carried out at least once a year.
- Trustees must monitor the overall performance of the portfolio and, in so far as it is possible, compare the rate of return with returns achieved by other similar organisations. The rate of return will need to be reported annually to the Charitable Funds Committee as part of its annual report.
- Before exercising any power of investment, and when reviewing the Charity's investments, Trustees must obtain and consider proper **advice** from a suitably qualified adviser.

3. DELEGATED POWERS AND AUTHORITY

3.1 The Committee has delegated its responsibility to review the performance and strategy for the Investment Portfolio in the context of the general and specific duties set out above and has delegated the authority to investigate all relevant aspects relating to this function.

4. MEMBERSHIP

Members:

4.1 The membership of the Charitable Funds' Investments Performance Sub Committee is as follows:

- Two Independent Members of the Board (Non Executive Director)
- Chief Executive
- Executive Director of Finance

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One of the independent members will be Chair of the Sub-Committee.

An invitation to attend these Sub Committee meetings has been given to representatives of the Trust's Investment Management Service Provider.

Attendees:

4.2 In attendance

The Committee may require the attendance for advice, support and information routinely at meetings from:

- Deputy Director of Finance
- Investment Advisors

Secretariat

4.3 The Sub Committee shall be serviced by a Secretary who shall not be a member of the Sub Committee with agendas and papers circulated at least 10 working days before meetings.

5. COMMITTEE MEETINGS

Quorum

5.1 At least two members must be present to ensure the quorum of the Committee. Of the two, one must be an Independent Member.

5.2 The Sub Committee should meet every six months or as required.

5.3 The Sub Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

6.1 Although the Board has delegated authority to the Charitable Funds Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability for ensuring the quality and safety of healthcare for its citizens through the effective governance of the organisation.

6.2 The Sub Committee is directly accountable to the Charitable Funds Committee for its performance in exercising the functions set out in these terms of reference.

6.3 The Sub Committee shall embed the Trust's corporate standards, priorities and requirements, e.g., equality and human rights throughout the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Sub-Committee Chair shall arrange for a report formally, regularly and on a timely basis to the Charitable Funds Committee on the Committee's activities. This includes verbal updates on activity and the submission of written highlight reports following each meeting.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Sub Committee, other than in relation to the quorum requirements as specified in 5.1 above.

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Sub Committee and the Charitable Funds Committee with reference to the Board.

Approved – Charitable Funds Committee (5th June 2018)

Remuneration & Terms of Service Committee

Terms of Reference & Operating Arrangements

Reviewed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 The Trust's standing orders provide that "*The Board may and, where directed by the Assembly Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees*".

1.2 In line with standing orders (and the Trust's scheme of delegation), the Board shall nominate annually a Committee to be known as the **Remuneration & Terms of Service Committee**. The detailed terms of reference and operating arrangements set by the Board in respect of this Committee are set out below.

2. PURPOSE

2.1 The purpose of the Remuneration & Terms of Service Committee "the Committee" is to provide:

- ***advice*** to the Board on remuneration and terms of service for the Chief Executive, Executive Directors and other senior staff within the framework set by the Welsh Assembly Government; and

- ***assurance*** to the Board in relation to the Trust's arrangements for the remuneration and terms of Service, including contractual arrangements, for ***all staff***, in accordance with the requirements and standards determined for the NHS in Wales.

and to perform certain, specific functions on behalf of the Board.

3. DELEGATED POWERS AND AUTHORITY

3.1 The Board had delegated the following specific powers to the Committee;

- To consider and ratify Voluntary Early Release scheme applications and severance payments

  in line with Standing Orders and extant Welsh Assembly Government guidance.

3.2 With regard to its role in providing advice and assurance to the Board, the Committee will comment specifically upon the:

- remuneration and terms of service for the Chief Executive, Executive Directors and other Very Senior Managers (VSMs) not covered by Agenda for Change; ensuring that the policies on remuneration and terms of service as determined from time to time by the Assembly Government are applied consistently;

- objectives for Executive Directors and other VSMs and their performance assessment;

- performance management system in place for those in the positions mentioned above and its application;

- proposals to make additional payments to consultants to include any additional

sessions or allowances payable to Senior Medical Staff for managerial duties; and

- proposals regarding termination arrangements, ensuring the proper calculation and scrutiny of termination payments in accordance with the relevant Assembly Government guidance.

Authority

3.3 The Committee is authorised by the Board to investigate or have investigated any activity within its terms of reference. In doing so, the Committee shall have the right to inspect any books, records or documents of the Trust, relevant to the Committee's remit and ensuring patient/client and staff confidentiality, as appropriate. It may seek relevant information from any:

- employee (and all employees are directed to cooperate with any reasonable request made by the Committee); and

- any other Committee, Sub Committee or Group set up by the Board to assist it in the delivery of its functions.

3.4 The Committee is authorised by the Board to obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers it necessary, in accordance with the Board's procurement, budgetary and other requirements.

3.5 Approve policies relevant to the business of the Committee as delegated by the Board

Sub Committees

3.6 The Committee may, subject to the approval of the Trust Board, establish Sub Committees or task and finish Groups to carry out on its behalf specific aspects of Committee business. The following Sub Committees/task and finish Groups have been established:
None currently.

4. MEMBERSHIP

Members

4.1 A minimum of two (2) members, comprising:

Chair or	Vice Chair of the Board (Non-Executive Director) At least one other independent member of the Board (Non-Executive Director) The Chair of the Audit Committee (or equivalent) will be appointed to this Committee as a member The Trust Chair may decide the business of the Remuneration & Terms of Service Committee requires the attendance of all Independent Members and as such extend an invite to all Independent Members

In attendance

4.2 By invitation — The Committee Chair may invite:

- the Chief Executive
- the Executive Director of Organisational Development & Workforce
- any other Trust officials; including a Trade Union Representative from the Trust Board and/or
- any others from within or outside the organisation
- to attend all or part of a meeting to assist it with its discussions on any particular matter (except when issues relating to their personal remuneration and terms and conditions are being discussed).

Secretariat

4.3 Secretary as determined by the Director of Corporate Governance

Member Appointments

4.4 The membership of the Committee shall be determined by the Board, based on the recommendation of the Trust Chair, and subject to any specific requirements or directions made by the Assembly Government.

4.5 Members shall be appointed to hold office for any period during their appointment as Board Member of the Trust. Continued membership is subject to being a full Member of the Board.

Support to Committee Members

4.6 The Director of Corporate Governance, on behalf of the Committee Chair, shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role; and

- ensure the provision of a programme of organisational development for Committee members as part of the Trust's overall OD programme developed by the Executive Director of Organisational Development & Workforce.

5. COMMITTEE MEETINGS

Quorum

5.1 At least two members must be present to ensure the quorum of the Committee, one of whom should be the Committee Chair or Vice Chair of the Board.

Frequency of Meetings

5.2 The Chair of the Committee, in agreement with Committee Members, shall determine the timing and frequency of meetings, as deemed necessary. It is expected that the Committee shall meet at least once a year, consistent with the Trust's annual plan of Board Business.

Withdrawal of individuals in attendance

5.3 The Committee may ask any member or individual who is normally in attendance but who is not a member to withdraw to facilitate open and frank discussion of any particular matter.

6. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS

COMMITTEES/GROUPS

6.1 Although the Board has delegated authority to the Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability in relation to its role as Corporate Trustee.

6.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.3 The Committee, through its Chair and members, shall work closely with the Board's other Committees and Groups to provide advice and assurance to the Board through the:

- joint planning and co-ordination of Board and Committee business; and
- sharing of appropriate information

in doing so, contributing to the integration of good governance across the organisation, ensuring that all sources of assurance are incorporated into the Board's overall assurance framework. *This will be achieved primarily through the Independent Members Group who will include 'Integrated Governance' on their agenda at least twice a year.*

6.4 The Committee shall embed the Trust's corporate standards, priorities and requirements, e.g., equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- report formally and on a timely basis to the Board on the Committee's activities, in a manner agreed by the Board;
- bring to the Board's specific attention any significant matter under consideration by the Committee;
- ensure appropriate escalation arrangements are in place to alert the Trust Chair, Chief Executive (and Accountable Officer) or Chairs of other relevant Committees of any urgent/critical matters that may affect the operation and/or reputation of the Trust.

7.2 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Committee's performance and operation including that of any Sub Committees established.

7.3 The Committee shall provide a written, annual report to the board on its activities. The report will also record the results of the Committee's self-assessment and evaluation.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee, except in the following areas:

- Quorum *[cross reference with the Standing Orders]*

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Committee with reference to the Board.

Transforming Cancer Services Programme Scrutiny Sub-Committee

Terms of Reference & Operating Arrangements

Reviewed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 Within 3.1.1 of the Trust's standing orders it provides that *"The Board may and, where directed by the Welsh Ministers must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees".*

1.2 The Quality, Safety & Performance Committee and Strategic Development Committee have been established by the Board to assist in discharging its functions and meeting its responsibilities with regards to the quality, safety and performance of healthcare and the strategic and organisational development of the Trust.

1.3 As part of their functions, the Quality Safety and Performance Committee and the Strategic Development Committee are supported by the Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee to scrutinise the programme governance arrangements for the TCS Programme, which extends to its constituent projects. At a project level the Sub-Committee will examine, Project arrangements, the application and project management methodologies, monitor project performance, risk management, progress and provide assurance to the Quality, Safety and Performance Committee. Assurance on development or proposed changes to the programme scope will be provided to the Strategic Development Committee.

1.4 The detailed terms of reference and operating arrangements set by the Quality, Safety and Performance Committee and Strategic Development Committee in respect of this Sub-Committee are set out below.

2. PURPOSE

2.1 The purpose of the Transforming Cancer Services (TCS) Programme Scrutiny Sub-Committee is to:

- Provide assurance that the leadership, management and governance arrangements are sufficiently robust to deliver the outcomes and benefits of the programme.
- Scrutinise the progress of the programme and provide the Trust Board with assurance that implementation is effective, efficient and within the budget available.
- Undertake any other scrutiny activity relating to the TCS Programme as directed by the Trust Board or Senior Responsible Owner (SRO).
- Seek advice and guidance from appropriate Technical Advisors as well as the MIM Transactor (if relating to the nVCC Project) to assist the Committee with their scrutiny of the TCS Programme.
- Provide assurance to the Trust Board on all aspects of the TCS Programme in relation to approvals sought on all decisions reserved for the full Board.
- Receive all audit, gateway and assurance reviews pertaining to the programme or its constituent projects and provide assurance (or otherwise) to the Trust that the programme is being delivered in accordance with all professional, financial and Trust standards.

- Provide assurance to the Trust Board and support to the Senior Responsible Officer in signalling the TCS closure activities once it has met its objectives.

2.2 Where appropriate, the Committee will advise the Trust Board and the Accountable Officer on where, and how, its system of assurance in relation to the TCS Programme may be strengthened and developed further.

3. DELEGATED POWERS AND AUTHORITY

With regards to its role in providing advice to the Trust Board, the Sub-Committee will fulfil the following functions:

3.1 Strategy and Policy Development

- Scrutinise programme and project documentation to ensure the direction of the TCS Programme remains within the scope and parameters set by the Trust Board and its alignment with the external commissioner and political environment.

- Scrutinise and provide assurance that the Programme and its constituent projects are conducted in line with the Trust's requirements on policy and legislative compliance, best practice and within the Trust's governance framework.

3.2 Governance, Monitoring and Review

The Sub-Committee will, in respect of its assurance role:

- Provide assurance that the Programme has a clear and consistent strategic direction of travel aligned with the Trust Boards requirements; strong and effective leadership; clear and transparent lines of accountability and responsibility; and effective reporting to key stakeholders and decision-makers.

- Provide assurance that Programme and Project governance arrangements are appropriately designed, proportionately applied and implemented and are operating appropriately to ensure the provision of a high quality programme and project management delivery.

- Undertake scrutiny and assurance of the Programme progress against the master programme plan, seeking explanations and remedies for any deviation from Programme timelines. It will report any concerns to the Trust Board as and when appropriate and necessary.

- Undertake scrutiny and assurance of Programme risks, issues and mitigating actions to satisfy itself that they can be placed back under the required levels of control.

- Scrutinise all sources of independent assurance in relation to the delivery of the Programme (e.g. Internal/External Audit, Independent Reviews, Gateway Reviews, CAP etc.) and scrutinise and monitor the organisation's response to independent reviews.

- Provide assurance that there are robust monitoring and management arrangements in place to identify important enablers and dependencies between the programmes projects, as failure to do so could impact on the programmes critical path.

- Scrutinise and assure that the Programme and Project expenditure against the budget allocated is appropriate and managed effectively.

3.3 **Authority**

The Sub-Committee is authorised by the Board to investigate or have investigated any activity within its terms of reference. In doing so, the Sub-Committee shall have the right to inspect any books, records or documents of the Trust relevant to the Sub-Committees remit and ensuring patient/service user, client and staff confidentiality, as appropriate. It may seek any relevant information from any:

- Employee (and all employees and directed to cooperate with any reasonable request made by the Committee); and
- Other Committee, sub Committee, or group set up by the Board (including the Project Board) to assist it in the delivery of its functions.

- Obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers this necessary, subject to the Board's budgetary and other requirements; and
- By giving reasonable notice, require the attendance of any of the officers or employees and auditors of the Board at any meeting of the Committee.

- Provide assurance that any proposals /actual amendments to delegated limits as necessary in relation to the all TCS Projects are in accordance with the Trust Boards direction and it's Standing Orders and Statutory Financial Instructions.

- The Sub-Committee is authorised by the Board to obtain outside legal or other independent professional advice and to secure the attendance of outsiders with relevant experience and expertise if it considers it necessary, in accordance with the Board's procurement, budgetary and other requirements.

3.4 **Access**

The Chair of the TCS Programme Scrutiny Sub-Committee shall have reasonable access to Executive Directors, Directors and other relevant staff.

4. MEMBERSHIP

Members

4.1 A minimum of three (3) members to include:

Chair	Independent member of the Board (Non-Executive Director)
	Two (2) other Independent members of the Board (Non-Executive Director)
	Other Trust Board members are extended an open invitation to attend all/any meeting

Attendees

4.2 **Core Attendance**;

- Chief Executive Officer/ Senior Responsible Owner
- TCS Programme Director
- Executive Medical Director
- Executive Director of Nursing, Therapies and Clinical Scientists
- Director of Corporate Governance
- Executive Director of Organisational Development and Workforce
- Executive Director of Finance
- Director of Commercial and Strategic Partnerships
- Director Velindre Cancer Centre
- Chief Operating Officer

4.3 **As Requested: Project Executives and other Programme / Project Staff**

- Project Executive Project 1
- Project Executive Project 2
- Project Executive Project 3
- Project Executive: Project 4
- Project Executive: Project 5
- Project Executive: Project 6

The Committee Chair may extend invitations to others from within or outside the organisation who the Committee consider should attend, taking account of the matters under consideration of each meeting.

Secretariat

4.4 As determined by the Director of Corporate Governance.

Member Appointments

4.5 The membership of the Committee shall be determined by the Board based on the recommendation of the Trust Chair – taking account of the balance of skills and expertise necessary to deliver the Committee's remit and subject to any specific requirements or directions made by the Welsh Government

Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

Support to Committee Members

4.6 The Director of Corporate Governance on behalf of the Committee Chair shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role: and
- Ensure the provision of a programme of Organisational development for Committee members as part of the Trust's overall OD programme developed by the Director of Workforce and Organisational Development.

5. COMMITTEE MEETINGS

Quorum

5.1 At least two (2) members must be present to ensure the quorum of the Committee, one of whom should be the Committee Chair or - if the Chair is not present an agreement as to who will chair from the Independent Members in their absence.

Frequency of Meetings

5.2 Meetings shall be held no less than four times a year and otherwise as the Chair of the Committee deems necessary – consistent with the Trust's annual plan of Board Business.

Withdrawal of individuals in attendance

5.3 The Committee Chair may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIPS & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/ GROUPS

6.1 Although the Board has delegated authority to the Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability for the safety, security and use of information to support the quality and safety of healthcare for its citizens through the effective governance of the Organisation.

6.2 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.3 The Committee, through its Chair and members, shall work closely with the Board's other Committees and Groups to provide advice and assurance to the Board through the:

- Joint planning and co-ordination of Board and Committee business: and
- Sharing of information

In doing so, contributing to the integration of good governance across the Organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance framework.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- Report formally, regularly and on a timely basis to the Quality, Safety and Performance Committee, the Strategic Development Committee Board and the Accountable Officer on the Sub-Committee's activities. This includes verbal updates on activity and the submission of written highlight reports by exception throughout the year and an annual Committee report.

- Bring to the Board's specific attention any significant matters under consideration by the Committee;

- Ensure appropriate escalation arrangements are in place to alert the Trust Chair, Chief Executive or Chairs of other relevant Committees/Groups of any urgent/critical matters that may affect the operation and/or reputation of the Trust.

7.2 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Sub-Committee's performance and operation.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee, except in the following areas:

- Quorum – as per section 5.1 above.

Cross reference with the Trust Standing Orders.

9. REVIEW

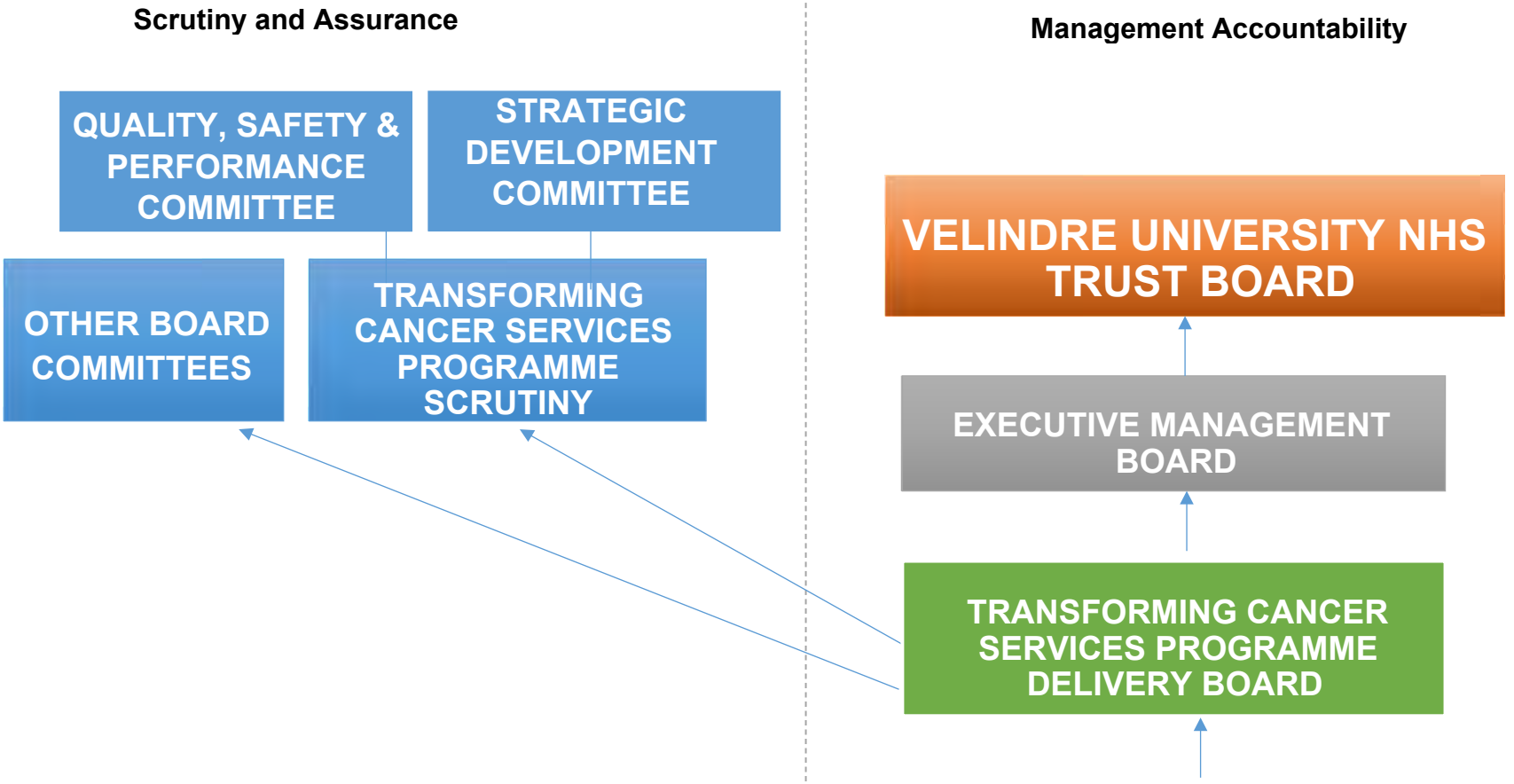
9.1 These Terms of Reference shall be reviewed annually by the Sub-Committee with reference to the Trust Board.

10. CHAIR'S ACTION ON URGENT MATTERS

10.1 There may, occasionally, be circumstances where decisions which normally be made by the Committee need to be taken between scheduled meetings. In these circumstances, the Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board, after first consulting with one other Independent Members of the Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Committee for consideration and ratification.

10.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

Structure and governance arrangements



Research, Development & Innovation Sub-Committee (RD&I)

Terms of Reference & Operating Arrangements

Reviewed:	November 2020
Approved:	November 2020
Next Review Due:	October 2021

1. INTRODUCTION

1.1 Within 3.1.1 of the Trust's standing orders it provides that *"The Board may and, where directed by the Welsh Ministers must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by Committees".*

1.2 The Quality, Safety & Performance Committee, Strategic Development Committee and Charitable Funds Committee have been established by the Board to assist in discharging its functions and meeting its responsibilities with regards to the quality, safety and performance of healthcare, strategic and organisational development and to make and monitor arrangements for the control and management of the Trust's charitable funds.

1.3 As part of the aforementioned Committee functions, the Research, Development & Innovation (RD&I) Sub-Committee has been established to act as the "front door" for all RD&I business at Board level and will perform the following functions on their behalf:

- monitor the performance and delivery of RD&I on behalf of the Quality, Safety & Performance Committee;
- develop the RD&I Strategy on behalf of the Strategic Development Committee; and
- review and approve business cases for alignment with strategy and funding on behalf of the Charitable Funds Committee.

1.4 Innovation and Research are defined as follows:

- ***Innovation*** *- is the exploration of emerging technologies and / or processes that positively impact healthcare by improving the care experience, individual and population health, and reducing costs.*

- ***Research*** *- is designed and conducted to generate new knowledge.*

2. PURPOSE

2.1 The purpose of the RD&I Sub-Committee is to provide:

- Strategy and policy oversight for Research, Development & Innovation activities at the Trust and for any Strategy that requires Board approval this to then be taken to the Trust Strategic Development Committee.

- Receive assurance on the monitoring of performance – [through Quality lens]

- [Exception reporting] and as defined by the Quality, Safety and Performance Committee, elements of this performance monitoring assurance may need to also be taken there – according to performance, quality, assurance frameworks and exception reporting criteria for that Committee.

- Promotion and encouragement of a Research & Innovation ethos and culture which is integral to the Trusts vision, mission and values.

- Assurance to the Board in relation to the Trust's arrangements for ensuring compliance with the UK Policy Frameworks for Health & Social Care Research as amended from time to time.

- Consideration of relevant matters with reference to the parameters identified for risk appetite in relation to research, development and innovation as set by the Board.

3. DELEGATED POWERS AND AUTHORITY

With regards to its role in providing advice to the Board, the Committee will fulfil the following functions:

3.1 Strategy & Policy Development

- Promote and encourage a Research & Innovation ethos and culture within the Trust.

- Oversee the development of all Research & Innovation strategies and implementation plans ensuring the conduct of good quality projects within the Trust's portfolio of Innovation and Research activity.

- Consider the strategic implications for the Trust from the findings arising from national developments, review, audit and/or inspection, and monitor the successful implementation of any actions required resulting from these findings.

- Matters of Strategic development for the assurance and approval of the Trust Board to be escalated to the Trust Strategic Development Committee and, as appropriate, on to Trust Board.

3.2 Strategy & Policy Approval

- Approve policies relevant to the business of the Committee as delegated by the Board.

- Scrutinise Research and Innovation Business cases which exceed the delegated limits of the Chief Executive to consider prior to formal Trust Board approval.

3.3 Monitoring and Review

- The Sub-Committee will, in respect of its assurance role, seek assurance that research governance and innovation arrangements are appropriately designed, implemented and are operating appropriately to ensure the provision of a high quality Innovation and Research service.

- To achieve this, the Sub-Committee will need assurance that the following aspects of Research & Innovation development are being effectively managed.

- The safety, rights, dignity and wellbeing of participants in Innovation and Research development projects is above all other considerations.

- There is clear, consistent strategic direction, strong leadership and transparent lines of accountability

- The diversity of the organisation's patients, service users, donors and staff is valued and that their active participation in the development, undertaking and use of Innovation and Research is promoted.

- There is close collaboration with partner Organisations in higher education to improve quality, promote joint working and avoid unnecessary duplication of functions. In this respect, the work of RD&I Sub-Committee will be reflected in the agenda and priorities of the Trust's Academic Partnership Board.

- The organisation ensures compliance with appropriate legislation and regulation such as the, UK Policy Framework for Health and Social Care Research 2017 the EU Clinical Trials Directive 2004 as amended, Good Laboratory Practice, Good Manufacturing Practice in manufacturing products for clinical trials and Good Clinical Practice in the conduct of all clinical Innovation and Research activities as appropriate.

- Systems are in place to monitor compliance with standards and to investigate complaints and deal with irregular or inappropriate behaviour in the conduct of Innovation and Research activity.

- Research, and Innovation expenditure is accounted for and complies with audit requirements and requirements of external funders or sponsors as appropriate.

- The Committee will scrutinise research and/or innovation proposals and/or business cases that are seeking charitable funding PRIOR to submission to the Charitable Funds Committee, in order to provide assurance on the quality and safety of RD&I related activity.

- When research or innovation findings have commercial potential the Trust takes action to protect and exploit them in collaboration with its Innovation and Research partners and where appropriate commercial Organisations.

3.4 **Access**

The Chair of the Research, Development & Innovation Sub-Committee shall have reasonable access to Executive Directors and other relevant senior staff.

4. MEMBERSHIP

Members

4.1 A minimum of two (2) members to include:

Chair — Independent member of the Board (Non-Executive Director) or delegated Independent Board member

One Independent Member of the Board (Non-Executive Director)

Attendees

4.2 In attendance

- Executive Director with responsibility for RD&I currently Medical Director
- Executive Director of Finance or nominated officer with RD&I funding responsibilities
- Associate Medical Director with responsibility for R&D
- Clinical Director (or Nominated Deputy) – Velindre Cancer Centre
- Executive Director of Nursing AHP and Health Sciences
- Director of Corporate Governance
- Head of RD&I Strategy
- Representative - Velindre Cancer Centre Strategic Management Team
- Representative – Welsh Blood Service Strategic Management Team
- WBS RD&I Lead
- Trust Head of Research & Development
- Service User/Lay representatives
- Staff Side Representative

4.3 **By invitation**

The Sub-Committee Chair may extend invitations as required to the following:

- Information Governance Manager (in advisory capacity)
- Divisional Directors
- Representatives of stakeholder organisations

As well as others from within or outside the organisation who the Sub-Committee consider should attend, taking account of the matters under consideration of each meeting.

Secretariat

4.4 As determined by the Director of Corporate Governance.

Member Appointments

4.5 Members shall be appointed for a maximum of 3 consecutive years before formally reviewing their role on the Committee. During this time a member may resign or be removed by the Board.

Support to Committee Members

4.6 The Director of Corporate Governance on behalf of the Committee Chair shall:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role: and

- Ensure the provision of a programme of Organisational development for Committee members as part of the Trust's overall OD programme developed by the Director of Workforce and Organisational Development.

5. SUB-COMMITTEE MEETINGS

Quorum

5.1 At least two members must be present to ensure the quorum of the Committee, one of whom should be the Committee Chair. If the Chair is not present an agreement as to who will Chair form the Independent Members in their absence.

Frequency of Meetings

5.2 Meetings shall be held no less than four times a year and otherwise as the Chair of the Committee deems necessary – consistent with the Trust's annual plan of Board Business.

Withdrawal of individuals in attendance

5.3 The Committee may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

6. RELATIONSHIPS & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

6.1 Although the Board has delegated authority to the Sub-Committee for the exercise of certain functions as set out within these terms of reference, it retains overall responsibility and accountability for the safety, security and use of information to support the quality and safety of healthcare for its citizens through the effective governance of the Organisation.

6.2 The Sub-Committee is directly accountable to the Quality, Safety and Performance Committee, Strategic Development Committee and Charitable Funds Committee for its performance in exercising the functions set out in these terms of

6.3 The Sub-Committee shall embed the Trust's corporate objectives, priorities, and requirements, e.g., equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 The Committee Chair shall:

- Report formally, to the:
  i. Quality, Safety & Performance Committee on the performance and delivery of RD&I;
  ii. Strategic Development Committee Board on strategic development and updates to the RD&I Strategy; and
  iii. Charitable Funds Committee to recommend for approval business cases aligned with the RD&I Strategy and Trust's overarching strategic objectives.

7.2 The Director of Corporate Governance, on behalf of the Board, shall oversee a process of regular and rigorous self assessment and evaluation of the Committee's performance and operation including that of any Sub Committees established.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Sub-Committee.

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Sub-Committee with reference to the Board.

10. CHAIR'S ACTION ON URGENT MATTERS

10.1 There may, occasionally, be circumstances where decisions which normally be made by the Sub-Committee need to be taken between scheduled meetings. In these circumstances, the Sub-Committee Chair, supported by the Director of Corporate Governance as appropriate, may deal with the matter on behalf of the Board, after first consulting with two other Members of the Sub-Committee. The Director of Corporate Governance must ensure that any such action is formally recorded and reported to the next meeting of the Sub-Committee for consideration and ratification.

10.2 Chair's urgent action may not be taken where the Chair has a personal or business interest in the urgent matter requiring decision.

Schedule 4

ADVISORY GROUPS

Terms of Reference and Operating Arrangements

This Schedule forms part of, and shall have effect as if incorporated in the Velindre University NHS Trust Standing Orders

Terms of Reference and Operating Arrangements for;

- Local Partnership Forum
- Advisory Consultants Appointment Committee
- Academic Partnership Board

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Local Partnership Forum Advisory Group

Terms of Reference and Operating Arrangements

1. Role and Purpose

The Velindre University NHS Trust Local Partnership Forum (LPF) is the formal mechanism where NHS Wales's employers and trade unions/professional bodies (hereafter referred to as staff organisations) work together to improve health services for the people of Wales. It is the forum where key stakeholders will engage with each other to inform, debate and seek to agree local priorities on workforce and health service issues.

At the earliest opportunity, Trust members will engage with staff organisations in the key discussions within the Trust at the Board, LPF and Locality/Divisional levels.

All LPF members are full and equal members of the forum and collectively share responsibility for the decisions made.

The LPF will provide the formal mechanism for consultation, negotiation and communication between the staff organisations and management. The TUC principles of partnership will apply. These principles are attached at Appendix 1.

The purpose of the LPF will be to:

- Establish a regular and formal dialogue between the Trust's Executive Directors and staff organisations on matters relating to workforce and health service issues.
- Enable employers and staff organisations to put forward issues affecting the workforce.
- Provide opportunities for staff organisations and managers to input into organisation service development plans at an early stage.
- Consider the implications on staff of service reviews and identify and seek to agree new ways of working.

- Consider the implications for staff of NHS reorganisations at a national or local level and to work in partnership to achieve mutually successful implementation.

- Appraise and discuss in partnership the financial performance of the organisation on a regular basis.

- Appraise and discuss in partnership the Trust services and activity and its implications.

- Provide opportunities to identify and seek to agree quality issues, including clinical governance, particularly where such issues have implications for staff.

- Communicate to the partners the key decisions taken by the Board and senior management.

- Consider national developments in NHS Wales Workforce and Organisational Strategy and the implications for the Trust including matters of service re-profiling.

- Negotiate on matters subject to local determination.

- Ensure staff organisation representatives are afforded reasonable paid time off to undertake trade union duties

- To develop in partnership appropriate facilities arrangements using A4C Facilities Agreement as a minimum standard.

In addition the LPF can establish LPF sub groups to establish ongoing dialogue, communication and consultation on service and operational management issues specific to Divisions/Directorates/Service areas. Where these sub groups are developed they must report to the Trust LPF.

2. General Principles

The Trust and LPF accepts that partnerships help the workforce and management work through challenges and to grow and strengthen their organisations. Relationships are built on trust and confidence and demonstrate a real commitment to work together.

The principles of true partnership working between staff organisations and Management are as follows:

- Staff organisations and management show joint commitment to the success of the organisation with a positive and constructive approach

- They recognise the legitimacy of other partners and their interests and treat all parties with trust and mutual respect
- They demonstrate commitment to employment security for workers and flexible ways of working
- They share success – rewards must be felt to be fair
- They practice open and transparent communication – sharing information widely with openness, honesty and transparency
- They must bring effective representation of the views and interests of the workforce
- They must demonstrate a commitment to work with and learn from each other

All LPF members must:

- be prepared to engage with and contribute fully to the LPF's activities and in a manner that upholds the standards of good governance set for the NHS in Wales;
- comply with their terms and conditions of appointment;
- equip themselves to fulfil the breadth of their responsibilities by participating in appropriate personal and organisational development programmes; and
- promote the work of the LPF within the professional discipline they represent.

A Code of Conduct is attached as Appendix 2.

3. Membership

All members of the LPF are full and equal members and share responsibility for the decisions of the LPF. The NHS organisation shall agree the overall size and composition of the LPF in consultation with those staff organisations the Trust recognises for collective bargaining. The Trade Union member of the Board will be expected to attend the LPF in an ex-officio capacity. As a minimum, the membership of the LPF shall comprise:

Management Representatives

Management will normally consist of the following members of management representatives.

- Chief Executive
- Finance Director
- General Managers/Divisional Managers
- Director of Organisational Development & Workforce
- OD and Workforce staff

Other Executive Directors and others may also be members or may be co-opted

dependent upon the agenda.

Staff Representatives

The Board recognises those staff organisations listed in Appendix 3 for the representation of members who are employed by the Trust.

Staff representatives must be employed by the Trust and accredited by their respective staff organisations for the purposes of bargaining. If a representative ceases to be employed by the Trust or ceases to be a member of a nominating staff organisation then they will automatically cease to be a member of the LPF. Full time officers of the staff organisations may attend meetings subject to prior notification and agreement.

Members of the LPF who are unable to attend a meeting may send a deputy, providing such deputies are eligible for appointment to the LPF.

Quorum

Every effort will be made by all parties to maintain a stable membership. There should be 50% attendance of both parties for the meeting to be quorate.

If the meeting is not quorate no decisions can be made but information may be exchanged. Where joint chairs agree extraordinary meeting may be scheduled within 7 calendar days' notice.

Consistent attendance and commitment to participate in discussions is essential. Where a member of the LPF does not attend on 3 consecutive occasions, the Joint Secretaries will write to the LPF member and bring the response to the next meeting for further consideration and possible removal.

4. Officers

The Staff Organisation Chair, Vice Chair and Secretary will be elected from the LPF annually. Best practice requires these three officers to come from different staff organisations.

Chairs

The Management and Staff Organisation Chairs will chair the LPF. This will be done on a rotational basis. In the absence of the Chair(s) the Vice Chair(s) will act as Chair. The Chairs shall work in partnership with each other and, as appropriate, with the Chairs of the Trust's other advisory groups. Supported by the Director of Corporate Governance, Chairs shall ensure that key and appropriate issues are discussed by the LPF in a timely manner with all the necessary information and advice being made available to LPF members to inform the debate and ultimate resolutions

Joint Secretaries

Each side of the LPF should appoint/elect its own Joint Secretary. The Management and Staff Organisation Secretary will be responsible for the preparation of the agendas and minutes of the meetings held, and for obtaining the agreement of the Management and Staff Organisation Chairs.

The Director of Workforce and OD will act as Management Secretary and will be responsible for the maintenance of the constitution of the LPF membership, the circulation of agenda and minutes and notification of meetings.

5. Sub Committees

When is considered appropriate, the LPF can decide to appoint a subcommittee, to hold detailed discussion on a particular issue(s). Nominated representatives to sub committees will communicate and report regularly to the LPF.

6. Management of Meetings

Meetings will be held bi-monthly but this may be changed to reflect the need of either staff organisations or management.

The business of the meeting shall be restricted to matters pertaining to LPF issues and should include local operational issues. Trust wide strategic issues and issues that have LHB/Trust wide implications shall be referred to the Welsh Partnership Forum via the Board.

The minutes shall normally be distributed 10 days after the meeting and no later than 7 days prior to meeting. Items for the agenda and supporting papers should be notified to the Management Secretary as early as possible, and in the event at least two weeks in advance of the meeting.

The LPF has the capacity to co-opt others onto the LPF or its sub groups as deemed necessary by agreement.

Appendix 1

Six Principles of Partnership Working

- a shared commitment to the success of the organisation
- a focus on the quality of working life
- recognition of the legitimate roles of the employer and the trade union
- a commitment by the employer to employment security
- openness on both sides and a willingness by the employer to share information and discuss the future plans for the organisation
- adding value – a shared understanding that the partnership is delivering measurable improvements for the employer, the union and employees

Appendix 2

Code of Conduct

A code of conduct for meetings sets ground rules for all participants:

- Respect the meeting start time and arrive punctually
- Attend the meeting well-prepared, willing to contribute and with a positive attitude
- Listen actively. Allow others to explain or clarify when necessary
- Observe the requirement that only one person speaks at a time
- Avoid ‘put downs’ of views or points made by colleagues
- Respect a colleague’s point of view
- Avoid using negative behaviours e.g. sarcasm, point-scoring, personalisation
- Try not to react negatively to criticism or take as a personal slight
- Put forward criticism in a positive way
- Be mindful that decisions have to be made and it is not possible to accommodate all individual views
- No ‘side-meetings’ to take place
- Respect the Chair
- Failure to adhere to the Code of Conduct may result in the suspension or removal of the LPF member.

Appendix 3

List of Recognised Trade Unions/Professional Bodies referred to as 'staff organisations' within these Standing Orders

- British Medical Association (BMA)
- Royal College of Nursing (RCN)
- Royal College of Midwives (RCN)
- UNISON
- UNITE
- GMB
- British Orthoptic Society
- Society of Radiographers
- British Dental Association
- Society of Chiropodists and Podiatrists
- Federation of Clinical Scientists
- Chartered Society of Physiotherapy (CSP)
- British Dietetic Association
- British Association of Occupational Therapists (BAOT)

Advisory Consultant Appointment Committee

Terms of Reference and Operating Arrangements

1. INTRODUCTION

1.1 The Trust's standing orders provide that "*The Board may and, where directed by the Assembly Government must, appoint Committees of the Trust either to undertake specific functions on the Board's behalf or to provide advice and assurance to the Board in the exercise of its functions. The Board's commitment to openness and transparency in the conduct of all its business extends equally to the work carried out on its behalf by committees*".

1.2 In accordance with standing orders (and the Trust's scheme of delegation), the Board shall nominate annually a Committee to be known as the **Advisory Appointment Committees (AACs)** "the Committee". The detailed terms of reference and operating arrangements set by the Board in respect of this Committee are set out below.

1.3 These Terms of Reference and Operating Arrangements are based on and compliant with the National Health Service *(Appointment of Consultants Regulations)*, Good Practice Guidance – January 2005.

1.4 Due to the nature of the business considered by the Committee, all relevant paperwork will be kept confidential and not routinely published.

2. PURPOSE

2.1 The arrangements for appointments to NHS Consultant posts are stipulated in statutory regulations: "The NHS (Appointment of Consultants) Regulations 1996", as amended. These are supported by "The National Health Service (Appointment of Consultants) Regulations Good Practice Guidance", published by the Department of Health in January 2005.

2.2 The regulations provide for appointments to be made via Advisory Appointments Committees (AACs).

3. DELEGATED POWERS AND AUTHORITY

3.1 The Trust Board has delegated to the Committee the authority to make

decisions on all appointments and for appointments to be reported to the Trust Board at a subsequent meeting where the decision to appoint is unanimous. Cross reference section 5.5 and Annex B of the National Health Service *(Appointment of Consultants Regulations)*, Good Practice Guidance – January 2005

3.2 If the Committee cannot make a unanimous decision, the majority recommendation will be referred to the Trust Board for ratification, before an offer of appointment is made.

4. MEMBERSHIP

4.1 The NHS (Appointment of Consultants) Regulations 1996 set out the governing membership for the AAC. In meeting these provisions the Trust should seek to secure a balanced Committee.

4.2 An outgoing consultant should not be a member of the Committee set up to select his/her successor.

4.3 Particular care needs to be taken in relation to Committee membership when appointing to posts across two or more Trusts, or to appointments made in conjunction with universities. For example, it is possible to contract an employee jointly between two Trusts. When constituting the AAC in such cases, the requirements in the Regulations for joint appointments will need to be met.

4.4 Trusts must ensure that no close relative of any candidate or candidate's partner serves on the Committee. If it becomes apparent during the short-listing of candidates that any member of the Committee is a close relative or partner of a candidate, that member should be invited to stand down and a replacement nomination sought.

4.5 Occasionally, one of the candidates will be well known to the ‘local’ members of the Committee. Such prior experience must not be allowed to interfere with an objective assessment of the candidates. A member may also have provided a reference for a candidate. On such occasions, the member must declare an interest and be careful not to show a bias.

4.6 The core membership of the Committee, as specified in Regulations, is set out below:

Chair	Chairman of the Board (Independent Member)
Members	Chief Executive Officer
	Medical Director (Clinical Director to deputise in their absence)
	Clinical Director or Consultant from relevant specialty as their deputy.

External Professional Assessor from the College or University.

4.7 The Trust is free to add additional members, but the balance of the Committee must continue to have local and a medical majority. The Trust must seek to ensure that the size of the Committee is, in all cases, kept to a minimum.

Attendees

4.8 The Committee may require the attendance for advice, support and information routinely at meetings from:

- Faculty Consultant Lead
- Executive Director of Workforce & Organisational Development
- Trust Secretary
- Assistant Director of Research & Development

Secretariat

4.9 Secretary as determined by the Medical Director or the Executive Director of Workforce & Organisational Development who is involved in the recruitment procedure. Cross-reference section 4.9 of the National Health Service *(Appointment of Consultants Regulations)*, Good Practice Guidance – January 2005.

Member Appointments

4.10 Appointed Independent Members shall hold office for a period that corresponds with their appointment to the Trust Board.

Support to Committee Members

4.11 The Executive Director of Workforce & Organisational Development, on behalf of the Committee Chair, shall:

- Ensure all Committee members receive the NHS Appointment of Consultants Regulations outlining their individual and collective role on the Committee.

- Retain all records and documents in connection with the short-listing and interviewing, including formal records of the decision and informal notes taken by members of the Committee, for a minimum of five years, confidentiality being secured in case an applicant were to bring a claim against the Trust (e.g. alleging discrimination), as an employment tribunal may require these papers.

- Ensure all members of the Committee will have received appropriate training. It is the responsibility of the Trust to ensure that training has been

provided. This should cover all aspects of the appointments process and concentrate on those areas where difficulties may arise:

- Equal opportunities (refer to Annex E of the guidance)
- Matters which should not be discussed at the interview other than in exceptional circumstances.

4.12 The role of the Board Secretary shall be to:

- Arrange the provision of advice and support to Committee members on any aspect related to the conduct of their role; and

- Ensure and co-ordinate the provision of a programme of organisational development for Committee members as part of the Trust's overall Organisational Development programme developed by the Executive Director of Organisational Development & Workforce.

5. COMMITTEE MEETINGS

Quorum

5.1 The Committee may not proceed if any core member (or their appointed deputy) is not present.

5.2 Prospective members of the Committee should notify the Trust immediately they become aware they are no longer able to attend the Committee on the set date. The Trust should then find an appropriate replacement.

Frequency of meetings

5.3 Meetings shall be held as required to ensure support to the timely recruitment of consultants and otherwise as the Committee Chairs deems necessary.

6. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

6.1 The Committee is directly accountable to the Board for its performance in exercising the functions set out in these terms of reference.

6.2 The Committee, through its Chair and members, shall work closely with the Board and, [*where appropriate, its Committees and Groups]*, through the:

- joint planning and co-ordination of Board and Committee business; and

- appropriate sharing of information

in doing so, contributing to the integration of good governance across the organisation, ensuring that all sources of assurance are incorporated into the Board's overall risk and assurance framework.

6.3 The Committee shall embed the Trust's corporate standards, priorities and requirements, e.g. equality and human rights through the conduct of its business.

7. REPORTING AND ASSURANCE ARRANGEMENTS

7.1 A brief report of the Committee should be prepared and signed by the Chair.

7.2 The Committee Chair shall report formally, regularly and on a timely basis to the Board via the Workforce & Organisational Development Committee and the Accountable Officer on the Committee's activities. This includes verbal updates on activity and the submission of Committee minutes and written reports as necessary throughout the year.

7.2 The Trust Secretary, on behalf of the Board, shall oversee a process of regular and rigorous self-assessment and evaluation of the Committee's performance and operation.

7.4 Formal records of the decision made by the Committee should be retained for a minimum of five years, confidentiality being secured.

7.5 Due to the nature of the business considered by the Committee, all relevant paperwork will be kept confidential and not routinely published.

8. APPLICABILITY OF STANDING ORDERS TO COMMITTEE BUSINESS

8.1 The requirements for the conduct of business as set out in the Trust's Standing Orders are equally applicable to the operation of the Committee, except in the following areas:

- Quorum
- Chairs Action on Urgent Matters

Cross reference with the Trust Standing Orders.

9. REVIEW

9.1 These terms of reference and operating arrangements shall be reviewed annually by the Committee with reference to the NHS (Appointment of Consultants) Regulations and the Board.

Academic Partnership Board

Terms of Reference and Operating Arrangements

1. INTRODUCTION

1.1 The Trust's Establishment (Amendment) Order, 2018 no.887 (W.176) established Velindre NHS Trust as Velindre University NHS Trust. This development acknowledges the Trust as *'…having a significant teaching commitment by virtue of paragraph 5(3)(b) of Schedule 3 to the National Health Service (Wales) Act 2006'.*

1.2 The Trust is committed, by way of holding University Status, to ensure one of the Non-Executive Directors (Independent Members) is appointed from Cardiff University.

1.3 The Trust has made a commitment to recognise the importance of partnership working across all academic partners and has established an **Academic Partnership Board (APB)** to support these partnerships and hereby sets out the formal terms of reference and operating arrangements.

1.4 The APB will provide a formal mechanism whereby a strategic approach will be taken to steer future operational collaboration with academic partners. The collaboration, overseen by the APB should be of mutual benefit and support in order to promote the health, wellbeing, education and economic regeneration to the benefit of the Trust's service users and the wider population of Wales.

1.5 The collaboration will be driven by a shared commitment to ensure excellent health, medical care, research, innovation, wellbeing and health care education. The parties recognise that there are synergies between them that will allow the development and promotion of the Trust's University status and provide positive opportunities for collaboration which potentially exceed the traditional University Hospital model.

1.6 The APB will operate in accordance with the following principles;

- Commitment to facilitate discussion
- Create an environment to identify, support and allow collaboration to flourish
- Realise opportunities in partnership working to enhance;
    - education, research and development across all disciplines (including engineering, maths, business, medicine, health sciences and biosciences);
    - translating research and learning into practice;
    - continuing professional development (CPD);
    - audit;
    - innovation and commercialisation;

- o modernisation and service improvement including technological developments;
- o international bench-marking;
- o wealth creation;
- o funding and grant capture; and
- o workforce modernisation/reconfiguration and training/education for newly emergent roles

2. PURPOSE

2.1 The Partnership Board is responsible for strategic collaboration between Velindre University NHS Trust and academic partners to provide and strengthen safety and quality and gain an international reputation for excellence and innovation.

2.2 The purpose of the APB is to:-

2.2.1 Ensure that the Memorandum of Understanding between the parties to which these Terms of Reference form an Annex, is fully enacted to support the services provided by the Trust achieve the highest standards of health, clinical care, research, innovation and health care education and training.

2.2.2 Promote collaborative efforts to improve the health, wellbeing, education and wealth of patients, service users and the population.

2.2.3 Review the strategic aims and objectives of each of the partners and where those aims and objectives appear to be usefully aligned, to optimise the benefits to patient care and health care service delivery through an inclusive and supportive approach.

2.2.4 Accelerate the translation of discoveries to drive improvements in quality and productivity.

2.2.5 Become a national and international exemplar for effective strategic and operational collaboration between the local health service and its partner universities.

2.2.6 Provide a broad horizon-scanning function in those areas of activity for which the APB has responsibility.

2.2.7 Foster a forward-looking organisational culture across all partners which: -

a) promotes quality improvement across all activities;
b) is rich in educational activities and staff development opportunities;
c) helps attract and retain the very best staff, including internationally leading clinical academics;
d) facilitates research grant capture by clinicians and academics and the translation of research findings into practice;
e) encourages innovation and modernisation;

f) encourages multi-disciplinary work and access to new and emergent fields of research and evidence based practice;
g) builds capacity for translational research that allows all parties to compete at an international level;
h) integrates education, research and practice that looks beyond targets and entrenched ways of working, fostering a culture of learning and innovation;
i) facilitates wealth and economic growth in the region and beyond;
j) Supports the capture and analysis of the service user experience;
k) Develops health informatics opportunities to achieve their potential;
l) Supports strategic planned lines of enquiry enabling knowledge creation.

2.2.8 Receive assurance that projects in which the parties are currently collaborating have appropriate agreements which detail the projects and clearly reflect the responsibilities of the parties. Depending on the nature of the projects the risk to the parties should be understood and the appropriate mitigated action taken.

2.2.9 The work of the Board will focus on healthcare professional education and training, continuing professional development, scholarly enquiry and research, audit and evaluation.

3. ROLE

3.1 The Partnership Board will;

3.1.1. Explore opportunities for the further development of collaborative activities between the members of the partnership - especially in relation to clinical services, research, teaching, innovation and improvement, providing advice thereon to appropriate decision- making bodies;

3.1.2. Advise on matters relating to resources for existing or potential collaborative activity;

3.1.3. Build on existing work in developing opportunities for widening access and increasing participation in health and social care education amongst local communities;

3.1.4. Explore opportunities for the development of collaborative activities in relation to research and to promote and plan for synergy in research;

3.1.5. Maximise the benefits of shared resources and expertise;

3.1.6. Monitor and facilitate the delivery of all aspects of undergraduate teaching and postgraduate training as delivered by the members of the partnership;

3.1.7. Promote excellence in education and training to develop a workforce with the capability and commitment to transform healthcare;

3.1.8. Build capacity for translational research across the integrated patient pathway that allows the University Trust to compete at an international level;

3.1.9. Promote an outward-facing culture eager to build external links nationally and internationally with other clinical, academic and industrial partners;

3.1.10. Establish systems to recognise and reward innovation in education, research and practice, sharing best practice for stakeholders to learn from each other and facilitating the promotion of NHS clinicians to academic titles and academics to honorary clinical titles;

3.1.11. Establish specific task and finish groups, as necessary, to take forward any relevant initiatives;

3.1.12. Agree a forward work programme annually.

4. MEMBERSHIP

4.1. Membership of the APB will include;

- Chair, Velindre University NHS Trust (**CHAIR**)
- Executive Medical Director
- Executive Director Of Nursing, Allied Health Professions & Health Sciences
- Chief Operating Officer
- Executive Director of OD & Workforce (or their deputy)
- Clinical Director lead for Education
- Clinical Director lead for Research and Innovation
- Independent Board Member (in addition to the Chair)
- Cardiff University Nominated Representative
- Cardiff Metropolitan University Nominated Representative
- Swansea University Nominated Representative
- University of South Wales Nominated Representative

- Plus other University Representatives as the Chair of the Partnership Board and Trust Chief Executive determines.

4.2. The APB may require the attendance for advice, support and information routinely at meetings from other colleagues/bodies as appropriate, to be determined by the Partnership Board Chair.

4.3. The Partnership Board may extend invitations to staff of any partner organisation to attend meetings as required and establish any of the following in support of their business;

4.3.1. Task and Finish Groups

Secretariat

4.4. As determined by the Director of Corporate Governance

Member Appointments

4.5. The membership of the Partnership Board shall be determined by the Velindre University NHS Trust Board, based on the recommendation of the Trust Chair - taking account of the balance of skills and expertise necessary to deliver the Partnership Board's remit.

4.6. Withdrawal of individuals in attendance

4.7. The Chair of the Partnership Board may ask any or all of those who normally attend but who are not members to withdraw to facilitate open and frank discussion of particular matters.

5. MEETINGS

Support to APB Members

The Director of Corporate Governance will;

5.1 ensure the provision of secretariat support for meetings, including that the appropriate notice of a meeting of the Board is given, accompanied by an agenda and copies of any papers to be discussed at the meeting;

5.2 ensure that the Academic Partnership Board receives the information it needs on a timely basis;

5.3 facilitate effective reporting to the respective organisation(s);

5.4 oversee a process of regular and rigorous self assessment and evaluation of the Academic Partnership Board's performance and operation.

5.5 The Chair of the Academic Partnership Board will be required to report upon the activities at public meetings of the University Trust or to community partners and other stakeholders, where this is considered appropriate.

5.6 Members of the Academic Partnership Board may nominate a suitably briefed senior officer on rare occasions to attend meetings in their absence.

Frequency of meetings

5.7 Meetings shall be held as required as the APB Chair deems necessary, aiming to meet 3 times a year as a minimum.

Quorum

5.8 A quorum shall be 2 Independent Members and 1 Executive Director of Velindre University NHS Trust, and at least 2 of the academic partner organisations listed in section 4 above (membership).

Frequency of Meetings

5.9 Meetings shall be held as required as the APB Chair deems necessary, aiming to meet 3 times a year as a minimum.

6. RELATIONSHIP & ACCOUNTABILITIES WITH THE BOARD AND ITS COMMITTEES/GROUPS

6.1 The APB, through its Chair and members, shall work closely with the Velindre Trust Board and academic partners through the:

- joint planning and co-ordination of Trust business; and
- appropriate sharing of information

in doing so, contributing to the integration of good governance across and between the partner organisations, ensuring that all sources of assurance are incorporated into the University Trust Board's overall risk and assurance framework.

6.2 The APB will consider the assurance provided through the work of the Board's other Committees and sub Committees to meet its responsibilities for advising the Trust Board on the adequacy of the Trust's overall system of assurance by receipt of their annual work plans.

6.3 The APB shall embed the Trust's corporate standards, priorities and requirements, e.g. equality and human rights through the conduct of its business.

7. REPORTING ARRANGEMENTS

7.1 A highlight report will be produced and presented to the University Trust Board at subsequent meetings, presented by the APB Chair.

7.2 All parties will ensure that reporting arrangements are in place to report through the appropriate structures within their respective organisations.

8. REVIEW

8.1 These terms of reference and operating arrangements shall be reviewed annually by the APB with reference to the Velindre University NHS Trust Board.

WELSH HEALTH SPECIALISED SERVICES COMMITTEE (WHSSC)
JOINT COMMITTEE MEETING BRIEFING – JULY 2021

The Welsh Health Specialised Services Committee held its latest public meeting on 13 July 2021. This briefing sets out the key areas of consideration and aims to ensure everyone is kept up to date with what is happening within Welsh Health Specialised Services.

The papers for the meeting can be accessed at: https://whssc.nhs.wales/joint-committee/committee-meetings-and-papers/2021-2022-meeting-papers/

1. Minutes of Previous Meetings

The minutes of the meeting held on the 11 May 2021 were **approved** as a true and accurate record of the meeting.

2. Action log & matters arising

Members **noted** the progress on the actions outlined on the action log.

3. Chair's Report

Members received the Chair's Report and **noted**:

- Chairs actions taken in relation to:
  - the appointment of Professor Ceri Phillips, Vice Chair of Cardiff and Vale UHB (CVUHB), as an Independent Member of the Joint Committee, with effect from 1 June 2021 for an initial term of two years, in accordance with the Welsh Health Specialised Services Committee (Wales) Regulations 2009 and the WHSSC Standing Orders (SO's),
  - variation of the Governance and Accountability Framework and that the amended WHSSC SOs and Standing Financial Instructions (SFIs) be taken forward for approval by the seven Health Boards (HBs),
- an update regarding Dr Chris Jones, Vice Chair of the All Wales Independent Patient Funding Panel (IPFR) stepping down,
- an update on attendance at the Welsh Renal Clinical Network (WRCN) meeting 9 June 2021,
- an update on the Integrated Governance Committee (IGC) meeting 8 June 2021,
- Attendance at the Cwm Taf Morgannwg UHB (CTMUHB) Board meeting 9 June 2021 during which the WHSCC Annual Governance

Statement 2020-2021 and financial statements were formally approved.

4. Managing Director's Report

Members received the Managing Director's Report and **noted** updates on:

- Children and Adolescent Mental Health Services (CAMHS),
- All Wales Positron Emission Tomography (PET) Programme Business Case,
- Ty Llidiard Escalation Review,
- Status Report on Annual Audit of Accounts 2020-2021

5. Appointment of Vice Chair

Members received a report proposing that a Vice Chair be appointed to WHSSC. Members noted that Ian Phillips, Independent Member, WHSSC, had been an Independent Member with WHSSC for 2 years, and was reappointed for a further two years from 1 April 2021 and has extensive knowledge and experience of the breadth of the work undertaken by WHSSC and the Joint Committee.

Members **approved** the appointment of Ian Phillips as Vice Chair of WHSSC.

6. Appointment of Interim Chair to the Welsh Renal Clinical Network (WRCN)

Members received a report proposing that an Interim Chair is appointed to the Welsh Renal Clinical Network (WRCN) for a 6 month period to support business continuity and to allow sufficient time to prepare for and undertake an open and transparent recruitment process to appoint a substantive Chair.

Members **noted** the important work of the WRCN and that traditionally, the WRCN Chair role had been undertaken by a senior renal clinician, however given the remit of the WRCN working closely with the charitable sector, third party providers and Welsh Government, consideration had been given to developing a person specification to incorporate experience of working with a variety of diverse stakeholders as an essential/desirable requirement and recognising that the role should no longer be reserved to a senior renal clinician.

Members **approved** the appointment of Ian Phillips as the Interim Chair of the Welsh Renal Clinical Network (WRCN) for a period of 6 months.

7. Commissioning of Mesothelioma MDT

Members received a report outlining the case for establishing an all Wales specialist mesothelioma Multi-Disciplinary Team (MDT) commissioned by WHSSC; and proposing that a scheme for an all Wales mesothelioma MDT is included within the Clinical Impact Assessment Group (CIAG) process for the Integrated Commissioning Plan (ICP) for 2022-2023.

Members **noted** the information provided in the report regarding mesothelioma incidence and outcomes for people in Wales, and the potential benefits of an all Wales specialist mesothelioma MDT; **approved** the proposal to transfer the commissioning of specialised mesothelioma services from Health Boards (HBs) to WHSSC; and **supported** the inclusion of a scheme for an all Wales mesothelioma MDT within the CIAG process for the ICP 2022-2023.

8. Audit Wales Report – Committee Governance Arrangements at WHSSC

Members received the Audit Wales report concerning the review into Committee Governance arrangements at WHSSC undertaken between March and June 2020. Members **noted** that as a result of the COVID-19 pandemic, aspects of the review had been paused, and re-commenced in July 2020. Members **noted** that:

- A survey was issued to all HBs and the fieldwork was concluded in October 2020,
- the scope of the work included interviews with officers and independent members at WHSSC, observations from attending Joint Committee and sub-committee meetings, feedback from questionnaires issued to HB Chief Executive and Chairs and a review of corporate documents.
- The findings were published in May 2021 in the Audit Wales Committee Governance Arrangements at WHSSC report,
- The report outlined 4 recommendations for WHSSC and the 3 recommendations for Welsh Government

Members **noted** the report and the Lead Auditor thanked the Joint Committee and the Executive team for their involvement in the production of the report.

9. Audit Wales WHSCC Governance Arrangements – Management Response

Members received the Management Response to the Audit Wales report concerning the review into Committee Governance arrangements at WHSSC.

Members **noted** that the report outlined 4 recommendations for WHSSC and the draft management response has been circulated to HB CEO's, Welsh Government and Audit Wales for comment and feedback. Progress against the actions outlined within the management response will be monitored through the Integrated Governance Committee (IGC) on a quarterly basis, and a full progress report will be presented to the Joint Committee 18 January 2022, once the actions related to the Integrated Commissioning Plan (ICP) process and engagement events have been completed.

Members **noted** that the report outlined 3 recommendations for Welsh Government (WG) and the WG management response had been outlined

in a letter from Dr Andrew Goodall, Director General Health & Social Services/ NHS Wales Chief executive to Mr Adrian Crompton, Auditor General for Wales. Progress against the WG management response will be monitored through discussions between the Chair, the WHSSC Managing Director and the Director General Health & Social Services/ NHS Wales Chief Executive.

Members **noted** the report and the proposed WHSSC management response to the Audit Wales recommendations outlined in the WHSSC Committee Governance Arrangements report, **noted** the Welsh Government response to the Audit Wales recommendations, and noted the proposed arrangements for monitoring progress against the actions outlined in the management responses.

10. Governance & Accountability Framework

Members received a report which provided an update on the WHSSC Governance and Accountability Framework and **noted**:

- the Minister for Health & Social Services had issued updated model standing orders for NHS Bodies in Wales in April 2021, including WHSSC,
- at the last Joint Committee meeting on the 11 May, it was proposed that the revised Governance and Accountability Framework documents, including the Standing Orders (SOs) and Standing Financial Instructions (SFIs), would be approved via Chair's Action outside of the meeting to facilitate expediency,
- on the 21 June, the Chair acting in conjunction with Dr Sian Lewis and Professor Ceri Phillips, Independent Member, took Chair's Action to update the documents and to recommend that the amended SOs and SFIs be taken forward for approval by the seven LHBs for inclusion within their own respective HB SOs,
- Once the updated documents have been approved Chief Executives are required to sign the Memorandum of Agreement (MOA) and the Hosting agreement,
- A report on the updated Governance and Accountability Framework for WHSSC will be presented to the CTMUHB Audit and Risk Committee on the 17 August 2021 to provide assurance in accordance with the hosting agreement.

Members **noted** the report, **noted** the Chair's Action taken on 21 June 2021 to recommend variation to elements of the Governance and Accountability Framework for onward approval by the seven HBs; and **approved** the updated versions of the MOA and Hosting Agreement.

11. Annual Governance Statement 2020-2021

Members received the WHSSC Annual Governance Statement (AGS) 2020-2021 for assurance.

Members **noted** the report.

12. Activity Reports for Months 1 and 2 2021-2022 COVID-19 Period

Members received a report that highlighted the scale of decrease in specialised services activity delivered for the Welsh population by providers in England, together with the two major supra-regional providers in South Wales. The report illustrated the decrease during the peak COVID-19 periods, the level of potential harms to specialised services patients and the loss of financial value from the necessary national block contracting arrangements introduced to provide overall system stability.

Members **noted** the information presented in the reports.

13. Financial Performance Report – Month 2 2021-2022

Members received a paper the purpose of which was to provide the final outturn for the financial year. The financial position reported at Month 2 for WHSSC was a year-end outturn under spend of £3,364k.

The majority of this under spend relates to the English SLA forecast underspend which reflects the difference between the plan baseline and the agreed blocks for Q1 & Q2, 2020-2021 reserve releases and development slippage. There is a partial offset with the over spend in Mental Health at month 1 that includes high Children and Adolescent Mental Health Services (CAMHS) CAMHS out of area (OOA) activity and an exceptional high cost medium secure patient with the forecast to plan.

Members **noted** the report.

14. Other reports

Members also **noted** update reports from the following joint Sub-committees and Advisory Groups:

- Management Group;
- Quality & Patient Safety Committee; and
- Integrated Governance Committee
- All Wales Individual Patient Funding Request Panel

TRUST BOARD

INFECTED BLOOD INQUIRY

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not applicable – Public Paper

PREPARED BY	Suzanne Jones, Business Support Officer
PRESENTED BY	Cath O'Brien, Interim Chief Operating Officer
EXECUTIVE SPONSOR APPROVED	Cath O'Brien, Interim Chief Operating Officer

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Quality, Safety and Performance Committee	15.07.2021	Noted

ACRONYMS	
IBI	Infected Blood Inquiry
LPP	Legal Professional Privilege
NHSBT	National Health Service Blood and Transplant (England)

NIBTS	Northern Ireland Blood Transfusion Service
NWSSP	NHS Wales Shared Services Partnership
SNBTS	Scottish National Blood Transfusion Service
WIBSS	Wales Infected Blood Support Scheme
WBS	Welsh Blood Service
JPAC	Joint United Kingdom (UK) Blood Transfusion and Tissue Transplantation Services Professional Advisory Committee

1. SITUATION/BACKGROUND

1.1 The Infected Blood Inquiry is the independent public statutory inquiry into the use of infected blood.

1.2 The Inquiry has been established to examine why men, women and children in the United Kingdom were given infected blood and / or infected blood products; the impact on their families; how the authorities (including government) responded; the nature of any support provided following infection; question of consent; and whether there was a cover-up.

1.3 The Inquiry has been in operation for over 3 years and has been taking evidence from those affected and infected together with a number of individuals representing relevant organisations.

1.4 The Welsh Blood Service (WBS), VUNHST has core participant status in the Inquiry.

1.5 The activity of the IBI has continued during the COVID 19 pandemic, but ways of working have been adapted.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 VUNHST Engagement with the IBI team

The Trust continues to engage with the IBI team via monthly update meetings. The current indication from the IBI Team is the hearings will begin to take evidence from the UK Blood Services from November 2021, however this is could be pushed back depending on the amount of evidence submitted.

The IBI Team have submitted a series of questions to the Trust to help the Inquiry understand a number of issues and these are being worked through. They relate to how the current WBS operates, together with historical ways of working and policy decisions from the 1970s. The deadline for the return of this information is mid-July.

2.2 WIBSS

The Inquiry Hearings recently received evidence from the UK devolved health ministers and the infected blood support schemes. Vaughn Gething gave evidence on behalf of the Welsh Government and Alison Ramsey of NWSSP on behalf of WIBSS. The additional services provided by WIBSS on top of the financial payments were recognised as being over and above those provided by the other schemes, particularly in relation to the psychological and support services.

The UK Government announced prior to the hearings that all beneficiaries supported by the UK schemes would all receive the same amount of financial support. This had not been the case for all the services. For Welsh beneficiaries this will be backdated to April 2019 when the English schemes increased their payments. This funding is provided by the UK government and they gave a commitment that payments would continue to be provided for all beneficiaries for the duration of their lives, with support continuing for their spouse and independents beyond this, however the current UK government is not able to commit a future government to agree to the same, should a different party come into power.

2.3 Hearings

We are continuing to keep abreast of the Hearings. Some witnesses are now giving evidence in person, whist others are providing their evidence virtually. There is reduced capacity in the hearing room for those who wish to follow the Inquiry in person. The Hearings are broadcast live via Zoom for core participants and on YouTube.

In June they will be taking evidence from haemophilia campaigners; Counsel will be making presentations in relation to the smaller haemophilia centres and evidence relating to Treloar's (a boarding school which catered for haemophiliac children via a specialist NHS centre on site) will be heard. In July evidence will be heard from Government witnesses.

2.4 Inquiry Related Expenditure

Funding for this specific activity is provided by Welsh Government. We are currently in discussion with them to continue to fund the work of the Trust to enable them to engage fully with the Inquiry until its estimated completion in 2022/23.

2.5 UK Forum

We continue to work with the UK Forum, including NIBTS – Northern Ireland Blood Transfusion Service, SNBTS – Scottish National Blood Transfusion Service and NHSBT – NHS Blood and Transplant on the disclosure of documents for UK wide entities such as JPAC. Meetings have taken place with the other services to discuss a response to the Inquiry on how the UK Blood Services work together.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
	The Inquiry relates to historic timelines.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	Standard 2.8 Blood Management
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
	The Inquiry relates to historic timelines.
LEGAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	The Inquiry will identify in relation to its' Terms of Reference, any individual responsibilities as well as organisational and systematic failures.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Funding for this work was confirmed until March 2021 and work is continuing with Welsh Government to provide funding for the duration of the Inquiry.

4. RECOMMENDATION

4.1 The Trust Board members are asked to note the content of the report.

VELINDRE NHS TRUST

UPDATE OF ACTION POINTS FROM PUBLIC TRUST BOARD MEETINGS UPDATED 8th June 2021

MINUTE NUMBER	ACTION	STATUS	LEAD	DUE DATE/ STATUS
26.11.2020 Public Trust Board				
2.2.2	Mrs Nicola Williams to request the Quality, Safety & Performance Committee provide an update on activities for the improvement and maintaining staff wellbeing including a trend analysis on anxiety/stress absence to the January 2021 Trust Board.	**CLOSED**	**SFM**	**Update 12/07/21:** It was confirmed this would covered off in a presentation Susan Thomas is presenting to the July 2021 Quality, Safety & Performance Committee meeting
08.06.2021 PUBLIC TRUST BOARD				
2.1.4	**Policies for Approval Report** The All Wales Respect and Resolution Policy will be published on the Trust Intranet site and circulated to the policy distribution list.	**CLOSED**	**CC**	Policy on website and circulation email sent
5.7.0	**Velindre Cancer Service Performance Report** 1. The repatriation of phlebotomy patients to be a standing section in the performance report, as this was a priority for the Trust	**CLOSED**	**COB**	**Update 09/07/21:** This is included in the May PMF paper as a regular update
	2. Mrs Cath O'Brien agreed information how many patients were impacted and how long they had been waiting would be included in future Performance Report.	**CLOSED**	**COB**	**Update 09/07/21:** More information is included around outpatients and phlebotomy including a narrative in the May PMF
	3. Mrs Cath O'Brien agreed to provide information to the July Trust Board on how patients are being supported when patients are waiting for significant time i.e. fragility assessment, access to refreshments etc.	**CLOSED**	**COB**	**Update 09/07/21** Detail on how patients are being supported is included in the May PMF with attachments showing

MINUTE NUMBER	ACTION	STATUS	LEAD	DUE DATE/ STATUS
				the process for Patient Triage
5.9.0	**Nurse Staffing Act** The embedded documents in Appendix 2 to be reloaded to iBabs as appendices.	**CLOSED**	**COB**	Embedded documents uploaded as individual documents and republished.
7.1.0	**Audit Committee Highlight Report** A highlight report of the Extraordinary Audit Committee held on the 8th June 2021 is to be provided to the July Trust Board.	**CLOSED**	**MO**	Highlight Report received and included on Agenda for July Trust Board meeting

TRUST BOARD

CHAIR'S REPORT

DATE OF MEETING	29/07/21

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Catherine Currier, Business Support Officer & Lauren Fear, Director of Corporate Governance
PRESENTED BY	Professor Donna Mead, Chair
EXECUTIVE SPONSOR APPROVED	Lauren Fear, Director of Corporate Governance

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
N/A		

ACRONYMS	

1. SITUATION/BACKGROUND

1.1 This report provides information to the Board from the Chair.

1.2 Issues addressed in this report cover the following:

- Board Briefing Session
- Review of the Trust's University Status
- Minister for Health & Social Services Letter
- George Cross Mark for the NHS
- Patient Support Unit
- Wear Red for Velindre/Wales
- Welsh Blood Service Partnership with Welsh Athletics and Run 4 Wales
- Mile a Day in May
- Queen's Honours Birthday List 2022

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Board Briefing Sessions

2.1.1 The Chair would like to summarise matters discussed at the recent Board Briefing sessions.

2.1.2 During the session on 29th June 2021 the Board received an update on the application for Judicial Review of the Welsh Governement decision to approve the Outline Business Case for the new Velindre Cancer Centre, in which the Trust are identified as an Interested Party.

2.2 Review of the Trust's University Status

2.2.1 The Chair is pleased to announce the Trust has been successful in maintaining its University Status, following a review by Welsh Government of all Health Boards and Trusts. The Trust presented to an Expert Panel information on the Trust's achievements and future plans for Research & Development, Training & Education and innovation. The Welsh Government's response stated it was encouraging to see significant progress across all organisations during the past three years.

2.3 Minister of Health and Social Services Letter

2.3.1 The Chair is pleased to note that the NHS has received a letter of introduction and thanks from Eluned Morgan, MS and new Minister of Health and Social Services received on the day the NHS celebrates its 73rd birthday. In her letter the Minister pays tribute to the professionalism, innovation and sheer determination that the NHS has shown.

2.4 George Cross Mark to NHS

2.4.1 The Trust is delighted to note that the Queen has awarded the George Cross, the UK's highest award for gallantry and heroism, to the NHS to mark its public service over seven decades. This is particularly appreciated during the difficult time faced by all staff during the pandemic and this is recognition of the dedication of all staff, regardless of role or grade.

2.5 Patient Support Unit

2.5.1 The Chair would like to bring to the Trust Boards' attention that the Patient Support Unit has celebrated its second birthday. The unit has seen 1,244 attendances from 465 patients and the Chair, on behalf of the Board, would like to send our compliments to all the staff involved in this unit.

2.6 Wear Red for Velindre/Wales

2.6.1 The Chair was pleased to be part of the Annual Wear Red for Velindre/Wales from 12th – 20th June 2021. This included the Trust Board wearing red for our Public Trust Board Meeting on the 8th June 2021 and was supported by many of the Trust's patrons and ambassadors. The theme of the event was to give a pound or donate a pint. As part of celebrating the event the Chair spent a day in the Velindre Cancer Services on 16th June 20201.

2.6.2 As the 14th June 2021 was World Blood Donor day, the Chair took the opportunity of vising the Welsh Blood Service, as this was a landmark day in changes to the Blood Donations. All donors, regardless of gender, will now be asked a new set of questions about sexual behaviours, focused mainly on the last three months, meaning that more people from LGBTQ+ communities will be eligible to donate.

2.6.3 The change has been introduced following recommendations made by the FAIR (For the Assessment of Individualised Risk) steering group, which is a UK wide collaboration including representatives from all UK blood services, medical and scientific experts, LGBTQ+ groups, as well as a selection of patients and donors.

2.7 **Welsh Blood Service Partnership with Welsh Athletics and Run 4 Wales**

2.7.1 The Trust was pleased to announce a new 'Giving Runs in Your Blood' Campaign with Welsh Athletics and Run 4 Wales. Runners will be asked to support blood donation, as part of their training programme and to make a lifesaving different to patients in need. The new partnership will see blood, platelets and bone marrow donation promoted at a host of iconic events including Run 4 Wales' road running races and Welsh Athletics' upcoming national championships.

2.7.2 **Mile a Day in May**

2.7.3 Both the Chair and Stephen Harries (Vice Chair) attended the final day of the 'Mile a Day in May' Challenge. We were pleased to be witness to the last day of the challenge and to watch the participants walking their last mile and to give out the much deserved medals.

2.8 Queen's Honours Birthday List 2022

2.8.1 The Chair is delighted to announce that the Trust has been contacted by the Welsh Government for any nominations for the Queens Honours Birthday List 2022. Should any Board Member wish to nominate someone, please let Catherine Currier know by 6th August 2021.

2.8.2 The Chair was also delighted to attend the investiture of Tracey Davies with the British Empire Medal. Tracey is a Velindre volunteer/fundraiser. The Lord Lieutenant of Mid Glamorgan, Peter Vaughn presided and presented the medal. Several Velindre staff were able to celebrate with Tracey.

3.0 Impact Assessment

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.

4.0 RECOMMENDATION

4.1 The Board is asked to **NOTE** the content of this update report from the Trust Chair.

TRUST BOARD

CHIEF EXECUTIVE'S REPORT

DATE OF MEETING	29/07/21

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Catherine Currier, Business Support Officer & Lauren Fear, Director of Corporate Governance
PRESENTED BY	Steve Ham, Chief Executive
EXECUTIVE SPONSOR APPROVED	Steve Ham, Chief Executive

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
N/A		Choose an item.

1. SITUATION/BACKGROUND

This reports provides information to the Board from the Chief Executive.

Issues addressed in this report cover the following;

- Recent Medical and Healthcare Products Regulatory Agency (MHRA) Audit of the Welsh Blood Service
- Application for Judicial Review of Welsh Government's approval of the new Velindre Cancer Centre
- Datix Digital System
- Digital Directors Peer Group
- Trust Staff Engagement/Communication Sessions
- Green Health Wales Launch
- Patient Liaison Group
- Appointment of Deputy Director of Nursing, Quality and Patient Experience
- Recruitment of Executive Director of Finance and Chief Operating Officer

2. ASSESSMENT/SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Recent Medical and Healthcare Products Regulatory Agency (MHRA) Audit of the Welsh Blood Service

The Chief Executive provided a verbal update at the last Trust Board meeting but would also like to formally acknowledge again the excellent recent audit of the Welsh Blood Service by the MHRA.

There were no critical or major issues identified and only six minor issues. The inspectors commented on the attitude and professionalism of the team and how collaborative their visit was. The Chief Executive would like to pass his thanks onto all staff who run the service so excellently on behalf of our donors and the patients they go on to help.

2.2 Application for Judicial Review

An application has been made to pursue a judicial review of the Welsh Government decision to approve the outline business case for the new Velindre Cancer. Judicial Reviews are a type of court proceeding in which a judge reviews the lawfulness of a decision made by a public body. The claim is being made against the Welsh Government and the Trust have been identified as an 'Interested Party'.

The next step will be a decision by the Administration Court, which deals with all Judicial Reviews, on whether the claim will proceed to the next stage.

2.3 Datix Digital System

On 17th May 2021 the Trust adopted the new cloud-based version of Datix. The implementation of the new version of Datix is a significant step forward to improve the way we report and manage incidents, concerns and compliments. Initial feedback on the look and feel of the new system has been positive and staff are encouraged to continue reporting via this new portal.

2.4 Digital Directors Peer Group

The Chief Executive is pleased to inform the Trust Board that the Trust has been contacted by the Welsh Ambulance Services NHS Trust to nominate a representative to their Digital Directors' Peer Group. Mr Stuart Morris, who has recently been designated, as the Trust's Chief Digital Officer has been nominated as the Trust's representative.

2.5 Trust Staff Engagement/Communications Sessions

Over recent months the Trust has undertaken a number of communication and engagement sessions with staff. These have included:

2.5.1 An All Staff Live Teams Event on 23rd June 2021, which took the opportunity to provide an update staff across the Trust on notable development across the Welsh Blood Service.

2.5.2 Velindre Futures Staff Sharing Event on 30th June 2021, which provided an opportunity for staff to hear about service improvements being delivered across the Cancer Centre. Each month a different department will talk about their recent developments and provide a glimpse of their plans. At the first session Unscheduled Care provided an update.

2.5.3 Velindre Developments Showcase on 7th July 2021. The showcase was a drop in session, where staff were able to learn about the developments in Acute Oncology Services, Unscheduled Care Services etc and across the Trust and to talk to a Senior Trust Manager or Executive, who staffed the events at different times over the day.

2.6 Green Health Wales Launch

The Green Health Wales was launched on 29th June 2021 with the aiming of creating a network of healthcare professionals in clinical, non-clinical, administrative, support and managerial roles across Wales who recognise that the climate and ecological emergency is a health emergency. As Chief Executive, I have pledged:

At Velindre Trust, we pledge to reduce our carbon emissions. At the Trust we already purchase 100% green electricity, however, we strive to reduce our emissions even more. This will include taking steps to decarbonise our fleets, introducing electric vehicle chargers on all sites and upgrading our infrastructure.

2.7 Patient Liaison Group

The Chief Executive has been informed there will be a new Chair and Deputy Chair for the Patient Liaison Group. On behalf of the Trust Board, I would like to thank Barbara Burridge and Sue Youngman for their support, hard work and are pleased you have agreed to remain part of the group. I look forward to working with David Cogan and Sian Phipps to continue the work of this group.

2.8 Appointment of Deputy Director of Nursing, Quality and Patient Experience

The Chief Executive would like to advise the Board on the appointment of the substantive Deputy Director of Nursing, Quality and Patient Experience, following the planned retirement of Jayne Elias. The Chief Executive is pleased to inform the Board that the current interim Deputy, Annie Evans was successful in being appointed to the substantive post. As Board Members may be aware, Annie has also been successful in obtaining an 18-month secondment as the Clinical Transformation Lead for Velindre Cancer Services and will be due to start this in early autumn. Therefore we are very pleased to be welcoming Ceri Matthews to the role on secondment for 18 months. Ceri is currently working at Swansea Bay Health Board and is an extremely experienced senior nurse. We are hoping Ceri will join us in October 2021.

2.8 Recruitment of Executive Director of Finance and Chief Operating Officer

The Chief Executive would also like to highlight to the Board the recruitment process underway for the Executive Director of Finance, which will include interviews and a stakeholder event, to take place in August 2021. Also, following

the inclusion of the Chief Operating Officer as a permanent role to the Trust, the recruitment to the post will take place in September.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.

4. RECOMMENDATION

4.1 The Board is asked to **NOTE** the content of this update report from the Chief Executive.

TRUST BOARD

QUALITY, SAFETY & PERFORMANCE COMMITTEE HIGHLIGHT REPORT

DATE OF MEETING	29th July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Kyle Page, Business Support Officer
PRESENTED BY	Janet Pickles, Independent Member
EXECUTIVE SPONSOR APPROVED	Nicola Williams, Executive Director Nursing, Allied Health Professionals & Health Science

REPORT PURPOSE	FOR NOTING

ACRONYMS	
VCC	Velindre Cancer Centre
WBS	Welsh Blood Service

1. PURPOSE

This paper has been prepared to provide the Trust Board with details of the key issues and items considered by the Quality, Safety & Performance Committee at its meeting held on the 15th July 2021.

The Board is requested to **NOTE** the contents of the report and actions being taken.

2. BACKGROUND

This was the fifth meeting of the Quality, Safety and Performance Committee following the establishment of a new Board Committee structure in November 2020. The Quality, Safety and Performance Committee meets on a bi-monthly basis. This was the second meeting with the revised cycle of business as we have moved into COVID recovery phase where the Divisions provide their comprehensive triangulated quality, safety and performance reports every other meeting.

3. HIGHLIGHT REPORT

The following areas were highlighted for reporting to the Trust Board from the Public meeting of the Quality, Safety & Performance Committee held on the 15th July 2021. The main theme emerging from the meeting was relating to our workforce in particular how we can adequately support our workforce to create positive wellbeing, and exploration of different way to deliver training to achieve the required compliance levels. Members also noted the enhanced assurance they were receiving through improved reports and additional assurance mechanisms being introduced such as the 15 step challenge.

ALERT / ESCALATE	There were no items to alert or escalate to the Board.
ADVISE	• **Trust Estates Assurance Highlight Report** The Committee received a comprehensive Trust Estates Assurance Highlight report, providing details of key issues considered by the Trust Estates Assurance Meeting. There were two areas within the report that were for alert / escalate to the Committee. The Committee were assured that appropriate action was being taken to address these areas: o Mandatory training levels remained below target levels across the Trust. Work is underway by the Education and Development team to deliver a programme of engagement and training. In addition, proactive action has also been undertaken by the Health & Safety Manager, facilitating a rollout of relevant courses. o Electrical infrastructural items had been stolen from Velindre Cancer Centre. As well as causing service disruption there were financial costs to remedy the situation. Repairs are underway to restore the systems and additional security measures have been

implemented based on the guidance received from the local police following the event.

In addition, the Committee noted that Legionella assessments remained ongoing and all Estates related actions had been completed.

- **Highlight Report from the Medical Gas Committee**

The Committee received a Medical Gas Committee highlight report that contained one item to alert / escalate relating to Entonox (medical gas) provision, for pain relief within the Radiotherapy department at VCC. There had been two Datix incident reports raised following incidents where there were no staff available in radiotherapy who were competent to administer Entonox to patients who required it. The use of Entonox within radiotherapy is required infrequently. It is therefore a challenge for radiotherapy staff to effectively maintain their competency levels, resulting in ad-hoc assistance from palliative care colleagues being requested. This is placing unplanned pressure on the palliative care team, who cannot always attend when this is required.

The Committee were assured that action is underway to provide a long term solution to this via a designated task and finish group. The group are reviewing current guidelines together with the issues raised through the incident reports, to consider the most effective solution and any additional training required to facilitate the safe administration of Entonox.

- **Highlight Report from the Trust-wide Safeguarding & Public Protection Management Group**

The Committee received the highlight report from the Safeguarding & Public Protection Management Group that was held on the 2nd June 2021. The report contained two areas to alert / escalate to the Committee. The Committee were assured by the actions being taken to address both:

  - Ongoing low compliance with Safeguarding training within Velindre Cancer Centre. Partly due to the challenges of the COVID-19 pandemic. A work plan has been developed to increase compliance with actions monitored by the group. Work is also underway by Workforce colleagues to ensure the accuracy of ESR compliance figures in relation to safeguarding.

- There is not currently an agreed Chaperone policy / procedure in place. This has been prioritised and progress will be monitored by the Trust Safety Alerts Group.

The Committee also received assurance in respect with how agile Welsh Blood Service have been to taken actions taken to address donor concerns and safeguarding implications associated with children accompanying donors to donation clinics.

In addition, it was noted that work is now well underway to complete the review of all staff requiring DBS checks and to progress with any such checks that have not been completed.

- **Welsh Blood Service – Donor Story**

Committee members had received and viewed in advance of the meeting a video donor story. The donor described a difficult situation in respect of her experience when trying to arrange to give blood via the on-line booking process after having a miscarriage.

The donor had contacted the Welsh Blood Service to advise that during completion of the eligibility questionnaire, she had duly answered yes to having been pregnant during the last 6 months and assumed further questions surrounding her individual circumstances would follow. The next page displayed a statement indicating that she would be welcome to donate 6 months after the birth of her baby and contained upsetting images of a dummy. As she had sadly suffered a miscarriage, she was unclear as to her eligibility as no options were available to her.

The donor received a phone call the following day from the Welsh Blood Service with an apology the following day, along with assurance that the matter was being investigated as a matter of urgency. A telephone call was also made to the donor to discuss her donation options. Following a prompt review of the online questionnaire and all web pages referencing childbirth, new wording was drafted and the donor was invited to review this before refreshing the web pages.

The donor expressed gratitude and acknowledged the swift response and sensitive handling of the matter and the incident was received as a positive outcome for both the donor and Welsh Blood Service. The Committee noted that regular reviews of the website will be undertaken by the clinical team going forward.

The Committee commended the Welsh Blood Service for their swift resolution, noted that this change was being shared with other UK blood services. The Trust Chair will provide a letter of thanks to the donor.

- **NHS Wales Shared Services Partnership (NWSSP) Quality & Safety Governance Report**

The Committee received a report provided by NHS Wales Shared Services Partnership, providing an update on the status of the MHRA Licensed Temporary Manufacturing Unit (now operating under the name CIVAS@IP5), which continues to prepare and supply intravenous infusions to each of the Health Boards to support critical care during COVID-19. It was advised that as COVID-19 driven demand for products continues to reduce, work is being undertaken to expand the portfolio beyond critical care medicines which may have positive quality, financial or patient outcomes. Current efforts are focusing on Rituximab (a monoclonal antibody therapy).

The Committee was advised of the processes around governance, decision making regarding approval and how regulatory issues are met. It was agreed that the Committee would receive sight of the Standard Operating Procedure. It was also advised that a Key Performance Indicator (KPI) review is undertaken on a monthly basis and will be submitted to subsequent Quality Safety & Performance Committee meetings.

- **Financial Report (June 2021)**

The Committee received the Trusts Finance Report, outlining the financial position and performance for the period to the end of June 2021 and noted that there were no issues to report at this point in the year. The Committee were advised of the following:

  - o A financial plan will be submitted to Welsh Government, forecasting a year end breakeven position, based on current assumptions that all additional COVID-19 costs are fully reimbursed by Welsh Government, all planned additional income is received and saving targets are achieved.

  - o The overall gross funding requirement related to COVID-19 response and recovery is £6.7m, the majority of required funding to meet this has been confirmed by Welsh Government.

- In terms of Capital, the Trust has a received a formal budget allocation of £7.3m for the All Wales Capital Programme schemes at this stage. The allocation of the Trust Discretionary funding is currently being finalised and is expected to be signed off by the Executive Management Board during July 2021.

- **Putting Things Right 2020-2021 Annual Report**

The Committee received the Trust Putting Things Right 2020/21 Annual Report. The Committee agreed some changes to be made to the report prior to final publication and that the report will be subsequently approved by Chairs action.

- **Risks in Datix**

The Committee received a report that detailed the work being undertaken to improve the Trusts risk management systems and processes. (The report also provided an overview of all current open risks on the previous version of Datix version 12).

The Committee recognised the considerable work needed and requested that this is focussed initially on the highest risk areas. The Committee noted the work that has progressed to date in terms of a framework and policy and that the focus now on the next three key stages of development which are:

i. Reviewing all open risks to ensure all data and risk information is accurate and up to date in particular ensuring that a consistent scoring matrix was in use across the Trust and that there was accuracy with target risk ratings.
ii. Developing the new Datix module of risk from version 12 to version 14 together with
iii. Migrating the existing risks recorded in the system from version 12 to version 14.

The Committee noted that a project plan with agreed timescales to complete this programme of work is currently under development in conjunction with both divisions. The Committee requested an update report at the next meeting with completion timescales for all areas of work and that the review work is completed for all risks scoring a 20 or 25.

ASSURE	• **Professional Registration (NMC & HCPC)** The Committee received two professional registration reports covering 2020-2021: NMC and HCPC. The reports provided assurance in relation to the systems and processes were robustly in place to ensure that all nurses, AHPs and Health / Clinical Scientists were registered and that no registration lapses had occurred during the previous year. • **Health & Care Standards Internal Audit Report** The Committee received the Internal Audit Health & Care Standards 2020-21 report that provided substantial assurance in relation to the 2020-21 Trusts Health & Care Standards self-assessment processes. • **Quarter 4 Concerns Report** The Committee received the Trust 2020-21 Quarter 4 Concerns report. The following areas of the report were discussed: o 33 concerns had been received during the quarter. 20% lower than the number of concerns reported during the same Quarter of 2019 / 2020. This may be as a result of COVID-19 pandemic, with fewer patients attending services. Trends will be monitored going foward. o 71% (25) of all concerns closed during Quarter 4 were closed as Early Resolution, indicating commitment from staff to resolve concerns in real time. o The Trust has continued to exceed the Welsh Government 30 working day response timescale of 75% with 78% compliance for Quarter 4, and year to date compliance of 88%. o The percentage of re-opened cases also remains low at 4%. The Committee was also assured that learning has been identified from complaints and that service improvements are being implemented. • **Trust 2020-21 Clinical Audit Annual Report** The Committee received the Trust 2020-2021 Clinical Audit Annual Report that provided an overview of the Velindre Cancer Centre and

Welsh Blood Service Clinical Audit activity and programmes of work. The following was highlighted:

- Two clinical leads had been appointed which has helped to provide clinical leadership for the divisional clinical audit systems and processes.
- A survey in quality improvement has been undertaken and areas for addressing have been identified.
- There have been exciting initiatives around research and audit of local communities during COVID, involving Registrars contributing to a UK database audit of the impact of COVID on cancer patients. This was subsequently published in high profile journals.
- It was noted that activity and knowledge sharing across the divisions would be beneficial going forward, linking Risk, Quality Assurance work and Audit.

Divisional Performance Reports

- **Welsh Blood Service Performance Report**

The Committee received the Welsh Blood Service Performance report for the period February 2021 to May 2021. Assurance was provided that the Welsh Blood Service continues to meet demand for supply of all blood components and that the service had provided mutual aid support to NHSBT (NHS Blood & Transplant) under the mutual aid agreement as England had seen a surge in demand. In addition the following was discussed:

- The Committee were advised that the Welsh Blood Service had been taken actions to plan for the predicted surge within NHS Wales which included enhanced forward planning arrangements undertaken via a monthly demand planning group. Due to long term sickness and shielding staff, there are ongoing collection staff capacity challenges. A 4th South Wales collection team has been recruited to support the service with an enhanced supply chain.
- The stem cell collection service has temporarily been relocated to the Nuffield Health Centre while work is moving forward to ready the transition of the service to Velindre Cancer Centre.

- Donor satisfaction continues to be high, with the average donor satisfaction score from February to May exceeding 95% (of 1,000 responses per month).

- The Welsh Blood Service successfully implemented FAIR (For the Assessment of Individualised Risk) on World Blood Donor Day. This was a complex change to the donor assessment and acceptance process, implemented on time and using existing in-house staff and resources only. The change was the subject of extensive media coverage which resulted in a surge in new blood donor registrations. No adverse feedback to date had been received from donors in respect of these changes.

The first 15 step challenge within Welsh Blood Service had been undertaken by an Independent Board Member and the Executive Director of Nursing, AHP and Health Science, on the 17th June within a donation clinic. This was very well received and overwhelmingly positive, with immediate feedback provided to the team as a whole and to members of the Welsh Blood Service Senior Management Team. The process has been developed with a view to improve systems and processes within clinical and outpatient settings and will report regularly to the Quality Safety & Performance Committee going forward. Positive feedback on the visit was provided by the Independent member and the Committee noted the visit report and recommendations for improvements. Feedback from staff and donors had been sought during the visit that was extremely positive. The only areas identified to improve donor experience related to enhanced pathways for donors with a Learning Disability. Enhancements for staff included: revised systems for accessing mandatory and statutory training; access to lap tops to particulate in relevant meetings; and clarity in relation to uniform policy in transit to and from work.

Performance against the 30 day incident closure remains inconsistent. The Committee was assured that data reporting has shown improvement following the migration to Datix version 14 and Q-Pulse, focusing on prioritising urgent issues and bringing others forward.

A positive MHRA (Medicines and Healthcare Products Regulatory Agency) inspection had been undertaken. The report indicated no major or critical deficiencies. 6 ‘other’ findings were raised and the Committee was assured that inspectors have confirmed that proposed actions to resolve these are satisfactory.

- **Velindre Cancer Centre Performance Report**

The Committee received the Velindre Cancer Centre Performance Report, to provide an update on performance against key metrics through to the end of May 2020. The following was discussed:

  - Radiotherapy waiting times are just below target levels, however still reporting amber. A significant increase in the number of patients in the scheduled care category has presented a noteable challenge in terms of delivering the COSC (Clinical Oncology Sub-Committee stretch targets) measures. The Committee was assured that an improvement plan will be provided by the COSC improvement group and will be presented to the July Performance SLT meeting followed by the September Quality, Performance & Safety Committee.

  - The Committee noted that SACT waiting time targets were met again despite a 26% increase in referrals in comparison to pre-COVID.

  - Patient Experience monitoring has been re-established, with the Senior Leadership Team agreeing an interim resource solution which will allow reporting while the substantive member of staff remains off work.

The Committee were advised that a trust-wide review of the Performance Framework is currently underway in relation to developing and improving the presentation of information going forward.

- **Workforce and Organisational Development Performance Report**

The Workforce and Organisational Development Performance Report was noted by the Committee. The report provided a 12 monthly trend report of Sickness, PADR, Statutory and Mandatory training. Monthly hotspots were identified and initiatives and actions highlighted to explain improvement trajectory work.

- **Digital Services Operational Report**

	The Committee received the Digital Services Operational Report, providing programmes of work underway and any significant incidents during the period May to June 2021. It was noted that In June 2021, the Digital Services team deployed a new automated messaging service – Gov Notify – into the Welsh Blood Service. The service, developed by the Government Digital Service (GDS), provides a technology platform to enable organisations to deliver automated communications (SMS / text messaging, email, letters etc.) to their customers. One continued challenge is around the planned implementation of Prometheus application in the Welsh Transplantation & Immunogenetics Laboratory (WTAIL) in WBS, resulting in its deferral. The Committee received assurance that further work is being undertaken by the supplier to resolve the issues preventing the service from going live, which will be followed by a new target go-live date. The Trust completed work to fully move over to electronic test requesting for blood results on the 1st June 2021. It was noted that the service at Velindre Cancer Centre had experienced a digital system outage during April as a result of an electrical supply failure. The failure was identified and the Committee was assured that this had since been repaired and full resilience restored. In terms of Cyber security, the Committee will receive an update on the conducting of simulated 'phishing' campaigns on staff. The data gathered from these campaigns is utilised to inform targeted communication to staff, raising awareness and protecting Trust systems and services from the threat of cyber security attack.
INFORM	• **Audit Wales Quality and Governance Review** The Committee received the audit brief for the Audit Wales Quality and Governance Review that is currently underway and is due to conclude by early Autumn. • **Health & Wellbeing Presentation** The Committee received a detailed presentation that outlined the steps the Trust is taking to implement its Peoples Charter. It was identified that

	a key area of focus for the Trust is compassionate leadership. It was agreed that this would be covered in more detail in a future Board Development Session.

4. RECOMMENDATION

The Trust Board is asked to **NOTE** the contents of this report and areas of assurance received by the Quality, Safety & Performance Committee.

TRUST BOARD

REMUNERATION COMMITTEE HIGHLIGHT REPORT

DATE OF MEETING	24th June 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Mel Findlay, Business Support Officer
PRESENTED BY	Donna Mead, Chair
EXECUTIVE SPONSOR APPROVED	Sarah Morley, Director of Organisational Development and Workforce

REPORT PURPOSE	FOR NOTING

ACRONYMS	
JESP	Job Evaluation for Senior Posts
NWSSP	National Wales Shared Services Partnership

1. PURPOSE

1.1 This paper had been prepared to provide the Trust Board with details of the key issues considered by the Remuneration Committee on 24.06.2020.

1.2 Key highlights from the meeting are reported in section 2.

1.3 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	Nothing of note to report
ADVISE	**JESP Salary Changes** The Remuneration Committee received a paper regarding re-evaluation of 2 job roles in NWSSP via JESP. Following discussion this item was **NOTED** by the Committee.
ASSURE	Nothing of note to report.
INFORM	**Recruitment of Executive Director of Finance** The Remuneration Committee **NOTED** the recruitment process underway for the Executive Director of Finance, which will include interviews and a stakeholder event, to take place in August 2021. **Recruitment of Chief Operating Officer** The Remuneration Committee **NOTED** the inclusion of the Chief Operating Officer as a permanent role to the Trust. Further **NOTED** was the recruitment for the post which will take place in September. The Remuneration Committee **NOTED a** communication as per the Anonymous Communications Policy.
APPENDICES	**NOT APPLICABLE**

TRUST BOARD

HIGHLIGHT REPORT FROM THE CHAIR OF THE LOCAL PARTNERSHIP FORUM

DATE OF MEETING	29/07/021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Sarah Morley, Executive Director of OD & Workforce
PRESENTED BY	Sarah Morley, Executive Director of OD & Workforce
EXECUTIVE SPONSOR APPROVED	Sarah Morley, Executive Director of Organisational Development & Workforce

REPORT PURPOSE	FOR NOTING

ACRONYMS	

1. PURPOSE

1.1 This paper had been prepared to provide the Trust Board with details of the key issues considered by the Local Partnership Forum at its meeting on the 6th June 2021.

1.2 Key highlights from the meeting are reported in section 2.

1.3 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	• Nothing to note
ADVISE	• Approved the Local Partnership Annual Report • Noted the Respect and Resolution Policy • The Local Partnership Forum was informed of the decision of the Trust, regarding third party contracts moving forward • A staff side representative was identified to sit in the Agile Working Task and Finish Group • A staff side representative was identified to be part of the Trust Infection Prevention & Control Management Board, as well as work in a joint communication to all staff.
ASSURE	• The Local Partnership Forum discussed the Terms of Reference and Cycle of Business for the meeting, this will be discussed at the next meeting for approval.
INFORM	• Received an update on the Health and Wellbeing work undertaken and discussed the content, as well as the next steps. • Local partnership received updates from the Welsh Blood Service, Velindre Cancer Centre and the Unison Regional Representative
APPENDICES	**NOT APPLICABLE**

TRUST BOARD

MAY PERFORMANCE MANAGEMENT FRAMEWORK COVER PAPER

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Anna-Marie Jones, Business Support Manager
PRESENTED BY	Cath O'Brien, Interim Chief Operating Officer
EXECUTIVE SPONSOR APPROVED	Cath O'Brien, Interim Chief Operating Officer

REPORT PURPOSE	FOR DISCUSSION / REVIEW

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
EMB RUN	5.7.21	Noted
QUALITY, SAEFTY & PERFORMACE COMMITTEE	15.7.21	Noted

ACRONYMS	
VUNHST	Velindre University NHS Trust

UHB	University Health Board
VCC SLT	Velindre Cancer Centre Senior Leadership Team
WBS SMT	Welsh Blood Service Senior Management Team
PADR	Performance Appraisal and Development Review
KPIs	Key Performance Indicators
SACT	Systemic Anti-Cancer Therapy
WTE	Whole Time Equivalent (staff)
EMB	Executive Management Board
COSC	Clinical Oncology Sub-Committee stretch targets
SPC	Statistical Process Control
PMF	Performance management framework

1. SITUATION/BACKGROUND

1.1 The attached Trust performance reports provide an update to the Trust Board with respect to Trust-wide performance against key performance metrics through to the end of May 2020 for the Velindre Cancer Centre, the Welsh Blood Service and for VUNHST Corporate Services respectively.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 The reports set-out performance at Velindre Cancer Centre **(*appendix 1*),** the Welsh Blood Service **(*appendix 3*)** and in relation to Trust-wide staff absence, PADR compliance and staff sickness **(*appendix 4*).** Each report is prefaced by an '*at a glance*' section which is intended to draw attention to key areas of performance across the Trust. A number of areas from VCC and WBS reports are highlighted below.

2.2 The divisional performance reports were initially presented to the WBS Senior Management Team (SMT) and VCC Senior Leadership team (SLT) and have been reviewed by the Director of Nursing, AHP's & Medical Scientists, Nicola Williams (VCC)

and the Director of Finance, Mark Osland (WBS) at the performance review meetings on the 17th and 22nd of June 2021.

2.3 Velindre Cancer Centre:

We are reporting using the new style PMF again this month which has been tweaked following feedback at various meetings. We have included a new slide for Inpatients so we can look at any trends over the previous months. There will be no further reiterations now until the PMF development work carried out by Phil Hodson and Peter Gorin has concluded. We will continue to dual report on both target measures for radiotherapy for a period of six months so you will see the new COSC targets being reported alongside the usual targets. One thing to consider is the challenge we face now is we may end up doing more evaluations as more patients have not met the COSC targets. These COSC figures aren't being reported nationally yet and we are waiting for the Welsh Government to inform us when that will be.

Radiotherapy Waiting Times

COSC targets are red for scheduled and urgent scheduled patients with the target for emergency patients beginning radiotherapy, amber. The original target measures show that we are close to compliance but they are not being achieved and reporting amber. We have requested that the COSC improvement group provide their plan for improvement and present this to the July Performance SLT meeting. The plan will inform the actions included in the June PMF.

SACT Waiting Times

The targets were met again this month for SACT even though the number of patients scheduled to begin non-emergency SACT treatment in May 2021 (375) was above the monthly average observed in 2020-21 (298) - a 26% increase. It also exceeded the number scheduled to begin treatment in May 2020 (241). The delivery of the plan developed in conjunction with Aneurin Bevan UHB focused on reopening Neville Hall SACT delivery capacity has been delayed and is expected to happen in July 2021.

Outpatient waiting times

We are still not hitting the 30 minute target, it has gone up to 79% which it's the best it's been for a period of months. This information though is a snapshot of the data and is collected manually. At SLT we have been discussing whether the target is achievable due to the geographical spread of patients. To prevent them doing a separate visit for bloods, they come in on one day and they have to wait for blood results before seeing their consultant.

Due to the recent hot weather we have made sure we are assessing frail patients. All patients are triaged before entering the Outpatients department. If a patient presents as unwell or triggers a response e.g. due to a high temperature the nursing staff are alerted. The response to unwell patients has been enhanced by developing standard operating procedures see ***Appendix 2*** which are now fully operational. If there are protracted waits then drinks are provided especially when it's hot.

Other areas

Falls - 3 falls were deemed unavoidable following an investigation. We are investigating the possibility of whether the number of falls need to be benchmarked against National figures.
Pressure Ulcers – There were no pressure ulcers
Healthcare Associated Infections – No healthcare infections
Patient Experience – We have agreed an interim resource solution at our SLT which will allow recommencement of patient experience reporting, whilst the substantive member of staff is off work.

Further detailed performance data is provided in ***Appendix 1*****.**

2.4 Welsh Blood Service

All demand for red cells were met despite WBS continuing to experience pressure on specific blood groups and platelets during May as demand returns to pre Covid levels.

But due to low stock levels of Group O+ a request for mutual aid from NHSBT was made, (200 O+ red cells on 30/04/2021 and a further 150 O+ red cells on 04/05/2021). This occurred ahead of the first May Bank Holiday weekend.

The service undertook a detailed lessons learnt exercise and concluded that a lack of forward planning, a surge in demand and an inability to recover the O+ stock position over several weeks had led to this request of support.

To address these issues we will be introducing a monthly demand planning group to support horizon scanning and planning activities.

It is important to note though that WBS do not currently have capacity to meet surges in demand when operating the current blood collection model and have agreed with the executive team to recruit to a 4th collection team in south Wales to support NHS Wales recovery plans.

Recruitment of new bone marrow volunteers

The target for recruiting new bone marrow volunteers continues to be hampered by the inability to hold whole blood donation clinics in schools and Universities, There were 228 new bone marrow volunteers added to the Welsh Bone Marrow Donor Registry (WBMDR) in May. A new donor recruitment and retention strategy for the WBMDR aligned to WBS strategic intent is being prepared.

2.4.1 Quality

Incidents closed within 30 days

Performance in May has failed to meet the target position, with 83% of quality incidents closed within the required 30 days (target is 90%). This is a decline in performance from the previous month. The number of incidents not closed has increased from 9 in the previous three month rolling period to 12 in this reporting period**.** In order to mitigate this, the revised process for managing low-impact incidents went live earlier this month on 1st June 2021.

Part Bag

The overall Part Bag rate has now improved and is under tolerance now at 2.92% for May 2021. This is an improvement on April's performance of 3.26%.

Donor Satisfaction

Overall donor satisfaction continued to exceed target at 96.3% (target is 71%).

Venepuncture failure rates

The overall Failed Venepuncture (FVP) rate in May 2021 remained within the tolerance threshold at 1.90% of donors where a donation was attempted (tolerance is set at 2%). FVP rates remain higher on the North Team (Bangor 2.4% - 11 events, Wrexham 4.0% - 29 events). The 4% failure in venepuncture in Wrexham is being looked at and is due to new recruits. Interventions have already been put in place to improve training and support for staff.

Further detailed performance data is provided in ***Appendix 3***

3.0 Workforce & Wellbeing

Highlights for May 2021

PADRs - overall, a slight increase on last month. WBS' compliance was 82% (compared to 79% in April 2021). VCC's compliance was 79% in May (compared to 81% in April). Hotspot areas are being worked on, in conjunction with Managers.

Sickness Absence - overall, a very slight decrease in sickness this month. Sickness within WBS was 4.36% in May 2021 (compared to 4.21% in April). In VCC, sickness absence was 5.31% (compared to 5.35% in April). Sickness absence cases related to COVID are still very small and reducing month on month.

Statutory and Mandatory training - compliance increased in May. WBS saw an increase in compliance from 90% in April to 92% in May – please note this exceeds the 85% target. VCC also saw a slight increase from 81% in April to 82% in May.

Job Planning – these sessions continue to be scheduled in the diary, but the pressures associated with COVID have significantly impacted on the ability for these meetings to take place

Detailed performance data is provided in ***Appendix 4.***

4.0 IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below)
	The current performance reporting and monitoring system is predicated upon identifying performance issues and supporting effective decision making at service and operational levels to drive forward continuous improvement in quality, safety and the overall experience of patients and donors.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below: • Staff and Resources • Safe Care • Timely Care • Effective Care.
EQUALITY IMPACT ASSESSMENT COMPLETED	Yes
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.

FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Delivery against the performance metrics presented in the attached reports and the work associated with delivering improved performance supports sound financial governance across the Trust.

5.0 RECOMMENDATION

5.1 The Trust Board is asked to **NOTE** the contents of the attached performance reports.

Appendices

1. VCC May PMF Report
2. Outpatients Standard Operating Procedures
3. WBS May PMF Report
4. Workforce May PMF

Velindre Cancer Centre Monthly Performance Report Summary Dashboard (May 2021)

			Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Radiotherapy	Patients Beginning Radical Radiotherapy Within 28-Days (page 5) ***(JCCO Measure)***	Actual	94%	88%	91%	94%	94%	91%	92%	95%	97%	92%	89%	95%
		Target	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
	Patients Beginning Palliative Radiotherapy Within 14-Days (page 7) ***(JCCO Measure)***	Actual	92%	93%	92%	94%	82%	91%	93%	90%	97%	90%	85%	95%
		Target	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
	Patients Beginning Emergency Radiotherapy Within 2-Days (page 9) ***(JCCO Measure)***	Actual	100%	96%	97%	96%	97%	94%	93%	95%	97%	100%	97%	100%
		Target	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
	Scheduled Patients Beginning Radiotherapy Within 21-Days (page 11) ***(COSC Measure)***	Actual											35%	28%
		Target	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Urgent Scheduled Patients Beginning Radiotherapy Within 7-Days (page 11) ***(COSC Measure)***	Actual											41%	48%
		Target	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Emergency Patients Beginning Radiotherapy Within 1-Day (page 11) ***(COSC Measure)***	Actual											83%	88%
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
SACT	Patients Beginning Non-Emergency SACT Within 21-Days (page 14)	Actual	100%	94%	51%	58%	68%	79%	86%	79%	77%	88%	98%	98%
		Target	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
	Patients Beginning Emergency SACT Within 2-Days (page 16)	Actual	100%	78%	50%	50%	100%	80%	100%	100%	100%	100%	100%	100%
		Target	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%

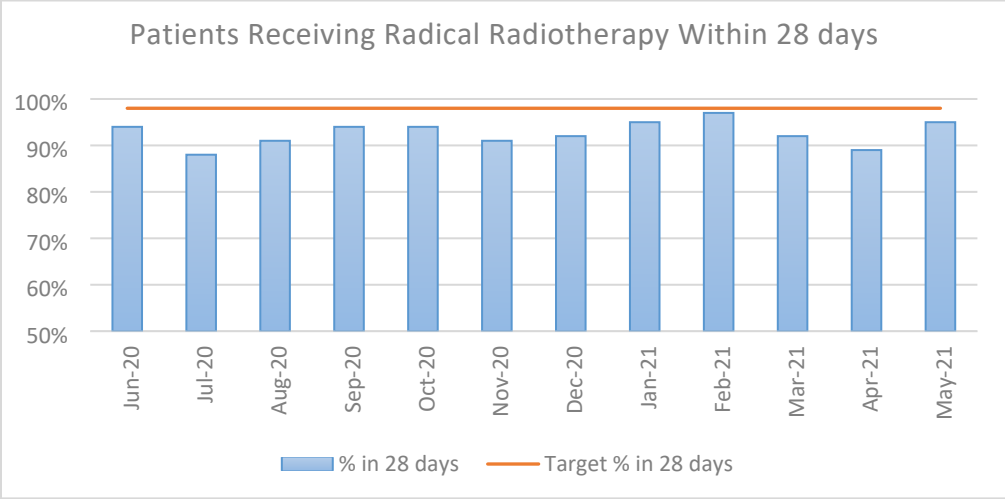
			Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Outpatients	New Patient, other Outpatient and Chemotherapy Assessment Appointments Where Patients Were Seen Within 30 minutes of the Scheduled Appointment Times (National Target) (page 19)	Actual	Data Not Collected During Initial Pandemic Response				72%	93%	67%	66%	65%	57%	66%	79%
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Did Not Attend (DNA) Rates	Actual	3%	2%	3%	2%	2%	2%	2%	3%	2%	3%	3%	4%
		Target	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Therapies	Therapies Inpatients Seen Within 2 Working Days (page 27)	Actual												
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Therapies Outpatient Referrals Seen Within 2 Weeks (page 27)	Actual												
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Routine Therapies Outpatients Seen Within 6 Weeks (page 27)	Actual												
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Safe and Reliable Care	Number of VCC Acquired, Avoidable Pressure Ulcers (page 28)	Actual	1	0	0	0	3	2	2	0	0	0	1	0
		Target	0	0	0	0	0	0	0	0	0	0	0	0

			Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
	Number of Pressure Ulcers Reported to Welsh Government as Serious Incidents	Actual	0	0	0	0	0	0	0	0	0	0	1	0
		Target	0	0	0	0	0	0	0	0	0	0	0	0
	Number of VCC Inpatient Falls (page 30)	Actual	3	3	3	0	4	0	2	1	1	1	2	3
		Target	0	0	0	0	0	0	0	0	0	0	0	0
	Number of Delayed Transfers of Care (DToCs)	Actual	0	0	0	0	1	0	0	0	0	0	0	0
		Target	0	0	0	0	0	0	0	0	0	0	0	0
	Number of Potentially Avoidable Hospital Acquired Thromboses (HAT)	Actual	0	0	0	0	0	0	0	0	0	0	0	0
		Target	0	0	0	0	0	0	0	0	0	0	0	0
	Patients with a NEWS Score Greater to or Equal to Three Who Receive all 6 Elements in Required Timeframe (page 32)	Actual	89%	100%	77%	75%	100%	75%	100%	100%	100%	100%	100%	89%
		Target	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Healthcare Acquired Infections (page 33)	Actual												
		Target	0	0	0	0	0	0	0	0	0	0	0	0
Percentage of Patients Who Rate Experience at Velindre at 9 or Above		Actual	80%	88%	72%	68%	78%	85%	Routine Reporting Currently Interrupted					
		Target	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%

		Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Percentage of Episodes Clinically Coded Within 1 Month Post Episode End Date	Actual	99%	99%	98%	98%	98%	98%	99%	98%	98%	98%	98%	98%
	Target	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%

RAG rating above indicates: Green - Target was achieved. Amber - 85% Compliance or above. Red - Target Not achieved.

Patients Receiving Radical Radiotherapy Within 28-Days	
Target: 98%	**SLT Lead: Radiotherapy Services Manager**
Trend	Current Performance



The number of patients scheduled to begin radical radiotherapy treatment in May 2021 (192) exceeded the monthly average observed in 2020-21 (177) and the number scheduled to begin treatment in May 2020 (183).

Intent	Monthly Average (2019-20)	Monthly Average (2020-21)	Patients Scheduled to Begin Treatment (May 2021)
Radical	223	177	192
	Patients Scheduled to Begin Treatment (May. 2019)	Patients Scheduled to Begin Treatment (May. 2020)	
	213	183	

192 patients referred for radiotherapy treatment with radical intent were scheduled to begin treatment in May. Of this total, 10 patients did not begin treatment within the 28-day target constituting an overall performance rate of **95%.** The 10 patients who did not begin treatment within 28-days, commenced their treatment as follows:

Treatment Intent	≤ 30 days	≤ 35 days	≥ 40 days
Radical (28-day target)	3	5	2

Summary of delays: plan not completed in time (3), delay to delineation (2), rescan (1), complex replan (1), change to SACT appointment (1), transport booking error (1), clinician request (1).

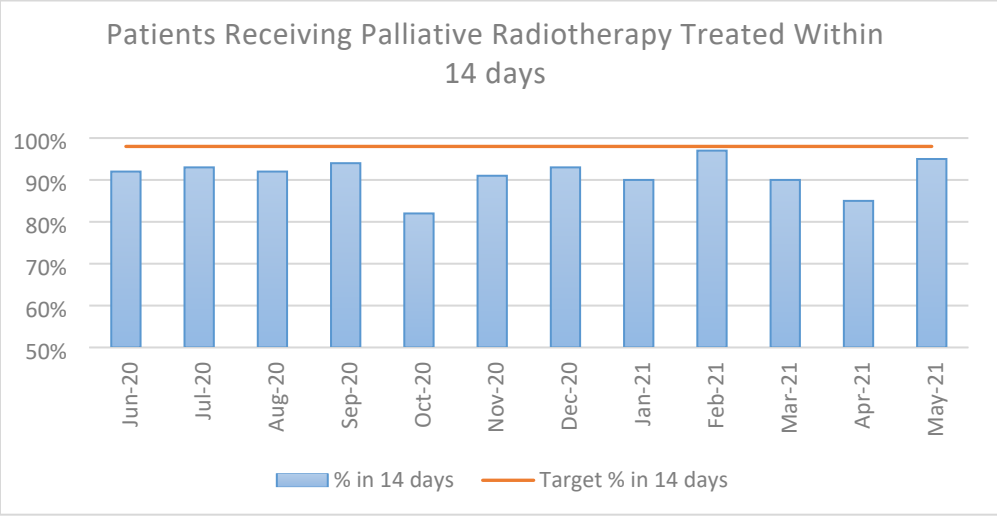
	Actions
	• Number of posts in radiotherapy and radiotherapy physics to be advertised (July 2021) • Radiotherapy patient pathway project initiated with multi-disciplinary membership. Project will identify efficiencies for implementation and areas for overall improvement. Pilot in Head and Neck first. Work to be expanded to include other sites (July 2021). • Radiotherapy Performance Group established overseeing all patient pathway work resulting in Radiotherapy treatment (Now operational). • Booking team capacity greatly reduced due to long term sick. Appointments made to posts to rectify booking delays (June 2021). • Plan to improve performance against time to radiotherapy performance targets (particularly new COSC targets) to be developed and presented to VCC Senior Leadership team (July 2021). • Escalation process to be implemented to ensure better management of individual patient flow along pathway (July 2021). • Education/communication session with respect to time to radiotherapy targets and effect of delays to be held with consultant group (July 2021).

Patients Receiving Palliative Radiotherapy Within 14-Days

Target: 98%

SLT Lead: Radiotherapy Services Manager

Trend



The number of patients scheduled to begin palliative radiotherapy treatment in May 2021 (82) was below the monthly average observed in 2020-21 (99) and is fewer than the number scheduled to begin treatment in May 2020 (94).

Intent	Monthly Average (2019-20)	Monthly Average (2020-21)	Patients Scheduled to Begin Treatment (May 2021)
Palliative	113	99	82
	Patients Scheduled to Begin Treatment (May 2019)	Patients Scheduled to Begin Treatment (May 2020)	
	104	94	

Current Performance

82 patients referred for radiotherapy treatment with palliative intent were scheduled to begin treatment in May. Of this total, 4 patients did not begin treatment within the 14-day target constituting an overall performance rate of **95%.** The 4 patients who did not begin treatment within 14-days, commenced their treatment as follows:

Treatment Intent	≤ 20 days	≤ 25 days
Palliative (14-day target)	3	1

Summary of delays: timeliness of 3D plan (3), rescan (1).

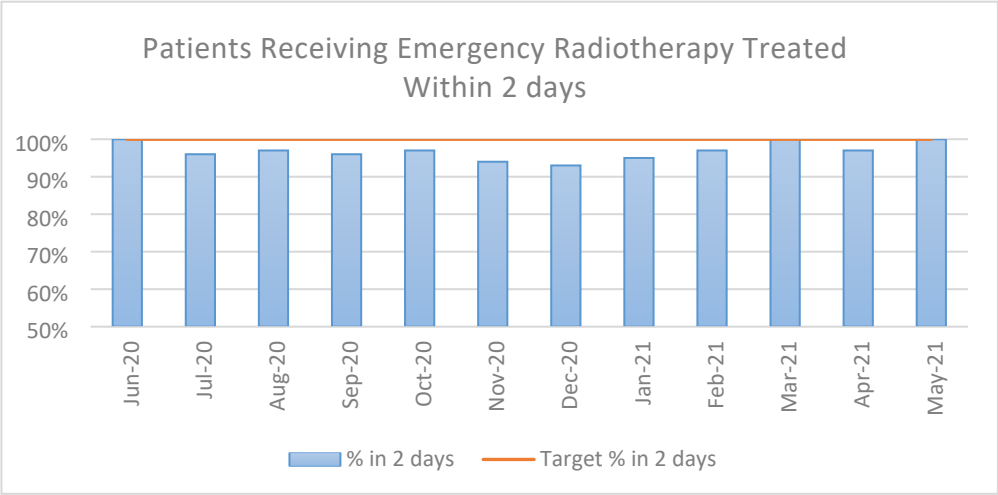
Actions

- Number of posts in radiotherapy and radiotherapy physics to be advertised (July 2021)
- Radiotherapy patient pathway project initiated with multi-disciplinary membership. Project will identify efficiencies for implementation and areas for overall improvement. Pilot in Head and Neck first. Work to be expanded to include other sites (July 2021).
- Radiotherapy Performance Group established overseeing all patient pathway work resulting in Radiotherapy treatment (Now operational).

	• Booking team capacity greatly reduced due to long term sick. Appointments made to posts to rectify booking delays (June 2021). • Plan to improve performance against time to radiotherapy performance targets (particularly new COSC targets) to be developed and presented to VCC Senior Leadership team (July 2021). • Escalation process to be implemented to ensure better management of individual patient flow along pathway (July 2021). • Education/communication session with respect to time to radiotherapy targets and effect of delays to be held with consultant group (July 2021).

Patients Receiving Emergency Radiotherapy Within 2-Days

Target: 98%	**SLT Lead: Radiotherapy Services Manager**
Trend	Current Performance



The number of patients scheduled to begin emergency radiotherapy treatment in May 2021 (19) exceeded the monthly average observed in 2020-21 (29), but was marginally lower than the number scheduled to begin treatment in May 2020 (22).

Intent	Monthly Average (2019-20)	Monthly Average (2020-21)	Patients Scheduled to Begin Treatment (May 2021)
Emergency	26	29	19
	Patients Scheduled to Begin Treatment (May 2019)	Patients Scheduled to Begin Treatment (May 2020)	
	29	22	

19 patients referred for emergency radiotherapy treatment were scheduled to begin treatment in May. All patients began treatment within the 2-day target.

	Actions
	• Number of posts in radiotherapy and radiotherapy physics to be advertised (July 2021) • Radiotherapy patient pathway project initiated with multi-disciplinary membership. Project will identify efficiencies for implementation and areas for overall improvement. Pilot in Head and Neck first. Work to be expanded to include other sites (July 2021). • Radiotherapy Performance Group established overseeing all patient pathway work resulting in Radiotherapy treatment (Now operational). • Booking team capacity greatly reduced due to long term sick. Appointments made to posts to rectify booking delays (June 2021). • Plan to improve performance against time to radiotherapy performance targets (particularly new COSC targets) to be developed and presented to VCC Senior Leadership team (July 2021). • Escalation process to be implemented to ensure better management of individual patient flow along pathway (July 2021). • Education/communication session with respect to time to radiotherapy targets and effect of delays to be held with consultant group (July 2021).

Radiotherapy – Operational Context

Current Performance Consolidated

Measure	Target	May-21
Radical (28-day target)	98%	**95%**
Scheduled (21-day target)	80%	**28%**
Palliative (14-day target)	98%	**95%**
Urgent (7-day target)	80%	**48%**
Emergency (within 2-days)	100%	**100%**
Emergency (within 1-day)	100%	**88%**

The table shown here sets-out performance relative to the extant time to radiotherapy targets based on Royal College of Radiologists best practice guidance and the novel Clinical Oncology Sub-Committee (COSC) stretch targets.

Social distancing and other infection control measures present particular challenges in the delivery of radiotherapy. Capacity has been reduced by 25% due to this.

Clinical Oncology Sub-Committee (COSC) Time to Radiotherapy Targets

The new suite of time to radiotherapy measures developed by COSC, informed by consideration for best practice, for use by centres in Wales which deliver radiotherapy treatments have been adopted with effect from April 2021.

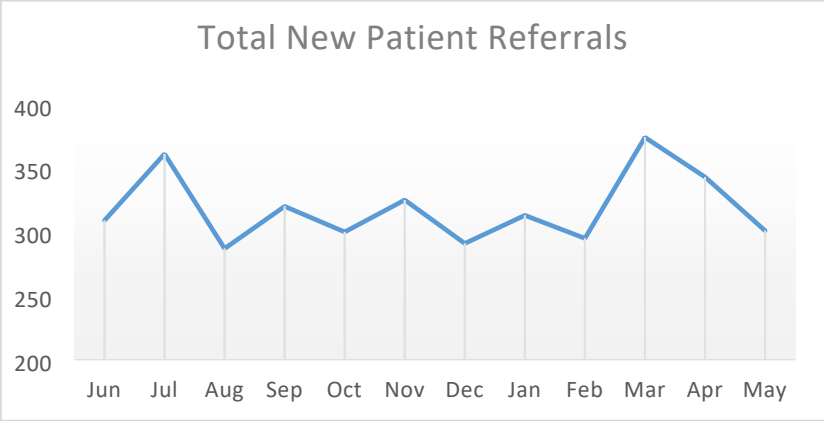
COSC have described a multi-year plan for the implementation of the measures at Welsh centres. Compliance with the new measures will ensure that patients are able to access radiotherapy treatment more quickly. The adoption of these measures is broadly supportive of the implementation of the Single Cancer Pathway (SCP) in Wales.

The new measures also acknowledge that radiotherapy treatment plans previously described as ‘palliative’ in nature now typically require extensive planning input. Such treatment plans will now, typically, be included within the ‘scheduled’ group.

Improving performance relative to the new measures will present significant challenges. The table below describes the allocation of individual patient referrals in terms of the new COSC definitions for May 2021:

Scheduled (21-day target)	Urgent (7-day target)	Emergency (within 1-day)
152	66	17

Referral Trends - Overall



Monthly Average (2019-20)	Monthly Average (2020-21)	Total New Patient Referrals (May 2021)
357	315	301

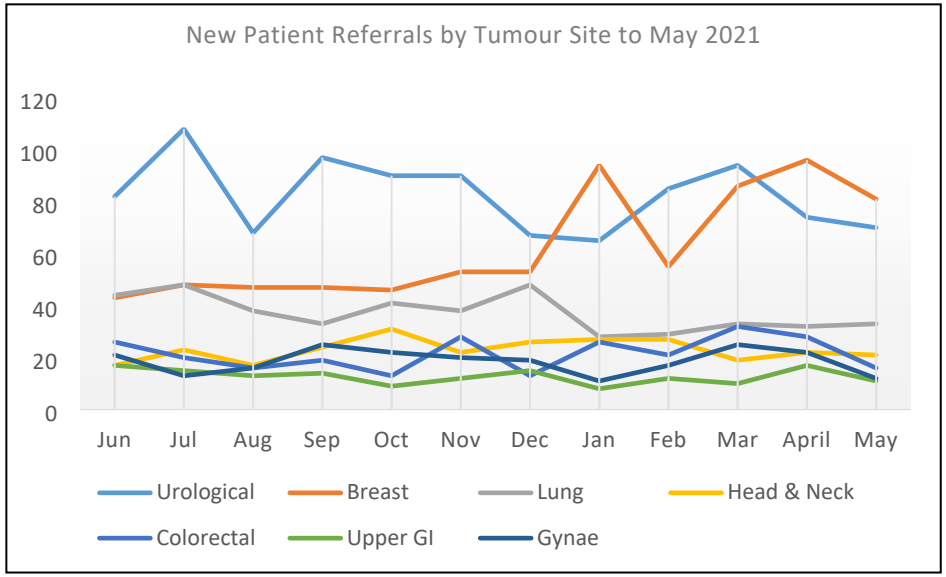
The total number of referrals received in May 2021 was fewer than the average number received in any given month in 2020/21 (315). Both figures are lower than the average number received per month in 2019-20 (357). This is reflective of the suppressed demand observed since the advent of the COVID-19 pandemic.

The 301 referrals received in May 2021 represents a marginal fall relative to the 331 received in the previous month. The 374 referrals received in March 2021 represents the largest number received in any given month since March 2020 (386) observed immediately prior to the imposition of the first nation –wide lockdown.

The next greatest number of referrals were received in July 2020 (361). This was driven by an elevated number of referrals for the treatment of prostate cancers. A significant number of these patients had previously had radiotherapy treatment deferred (subject to risk assessment and on-going clinical management) during the earliest stages of the pandemic.

Radiotherapy – Operational Context

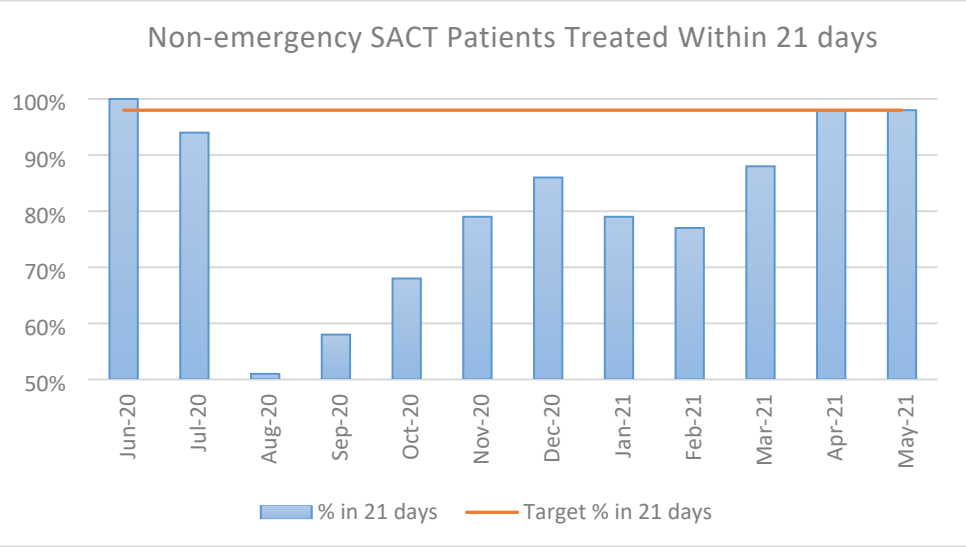
Referral Trends - Tumour Site



Site	Monthly Average (2019-20)	Monthly Average (2020-21)	2020-21 Average Relative to 2019-20 Average	New Patient Referrals (May. 2021)
Breast	**88**	**60**	**-32%**	81
Urology	**82**	**82**	**0%**	70
Lung	**47**	**38**	**-19%**	33
Colorectal	**20**	**22**	**+10%**	16
Head and Neck	**23**	**23**	**0%**	13
Gynaecological	**18**	**18**	**0%**	12
Upper Gastrointestinal	**16**	**13**	**- 19%**	11
Top 7 Tumour Sites by Number of Referrals as Percentage of Total Referrals	**82%**	**81%**		81%

The graph and table show referrals for the tumour sites most commonly referred for radiotherapy treatment. Referrals for the treatment of breast and prostate (constituting the majority of urology referrals) cancers continue to be the principle drivers of demand.

Non-Emergency SACT Patients Treated Within 21-Days	
Target: 98%	**SLT Lead: Chief Pharmacist**
Current Performance	Trend



The number of patients scheduled to begin non-emergency SACT treatment in May 2021 (375) was above the monthly average observed in 2020-21 (298) and exceeded the number scheduled to begin treatment in May 2020 (241).

Intent	Monthly Average (2019-20)	Monthly Average (2020-21)	Patients Scheduled to Begin Treatment (May 2021)
Non - emergency	328	298	375
	Patients Scheduled to Begin Treatment (May 2019)	Patients Scheduled to Begin Treatment (May 2020)	
		241	

375 patients were referred for non-emergency SACT treatment were scheduled to begin treatment in May. Of this total, 4 patients did not begin treatment within the 21-day target, due to capacity challenges, constituting an overall performance rate of 98%.

The 4 patients who did not begin treatment within 21-days, commenced their treatment as follows:

Treatment Intent	22 - 28 days
Non-emergency (21-day target)	4

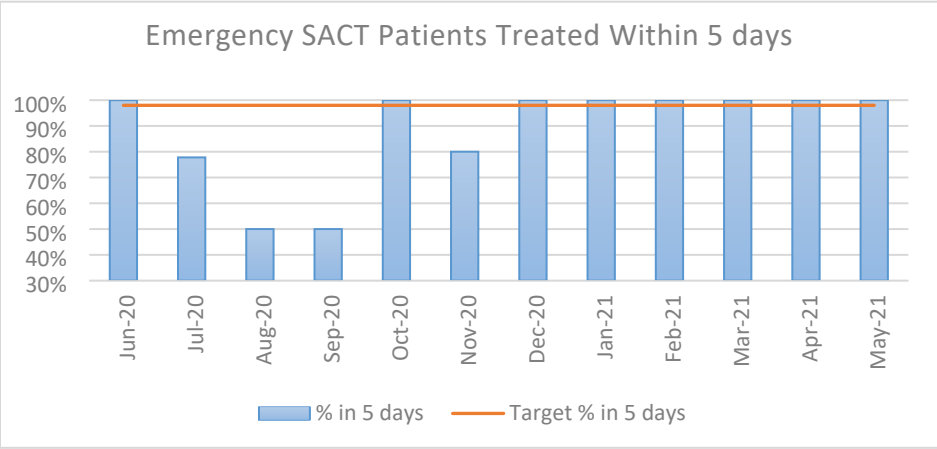
	Actions
	• Process for escalating non-adherence to the 36-hour prescribing rule to be implemented (June 2021). • Delivery of plan developed in conjunction with Aneurin Bevan UHB focused on reopening Neville Hall SACT delivery capacity (Delayed from May 2021. Anticipated delivery in July 2021).

Emergency SACT Patients Treated Within 5-Days

Target: 98%

SLT Lead: Chief Pharmacist

Current Performance



The number of patients scheduled to begin emergency SACT treatment in May 2021 (14) was above the monthly average observed in 2020-21 (4) and was higher than the number scheduled to begin treatment in May 2020 (1).

Intent	Monthly Average (2019-20)	Monthly Average (2020-21)	Patients Scheduled to Begin Treatment (May 2021)
Emergency	4	4	14
	Patients Scheduled to Begin Treatment (May 2019)	Patients Scheduled to Begin Treatment (May 2020)	
		4	

Trend

14 patients referred for emergency SACT treatment were scheduled to begin treatment in May. All patients began treatment within target.

Actions

- Process for escalating non-adherence to the 36-hour prescribing rule to be implemented (June 2021).
- Delivery of plan developed in conjunction with Aneurin Bevan UHB focused on reopening Neville Hall SACT delivery capacity (Delayed from May 2021. Anticipated delivery in July 2021).

SACT – Operational Context

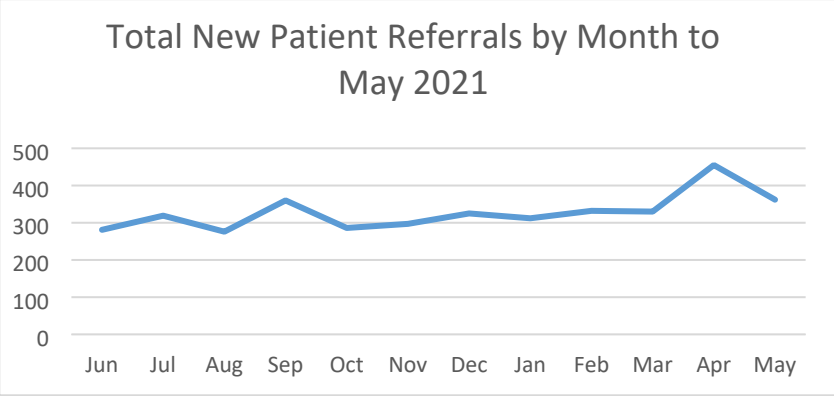
Current Performance Consolidated

Measure	Target	May-21
Non-emergency (21-day target)	98%	**98%**
Emergency (5-day target)	98%	**100%**

The table shown here sets-out performance relative to the extant time to SACT targets.

Social distancing and other infection control measures present particular challenges in the delivery of SACT. Additionally, overall delivery capacity remains restricted. All services, previously delivered in outreach contexts, were repatriated to VCC in response to the pandemic. With the exception of a limited service at the Macmillan Unit at the Prince Charles Hospital in Merthyr Tydfil, this remains the case.

Referral Trends - Overall



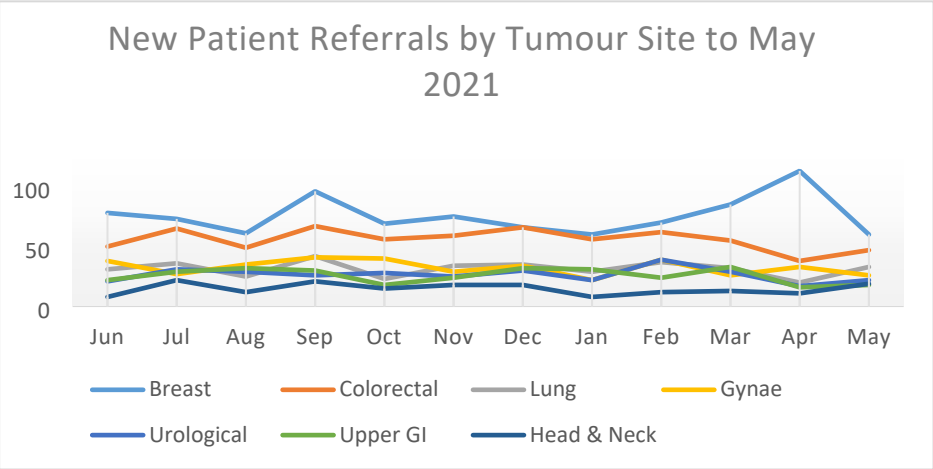
Monthly Average (2019-20)	Monthly Average (2020-21)	Total New Patient Referrals (May 2021)
325	301	362

The total number of referrals received in May 2021 (362) was above the average number received in any given month during 2020-21 (301). The number of referrals received in May also exceeds the average number received per month in 2019-20.

Referrals fell dramatically following the first national lock-down in March 2020. Subsequently, referrals have returned to pre-pandemic levels.

SACT – Operational Context

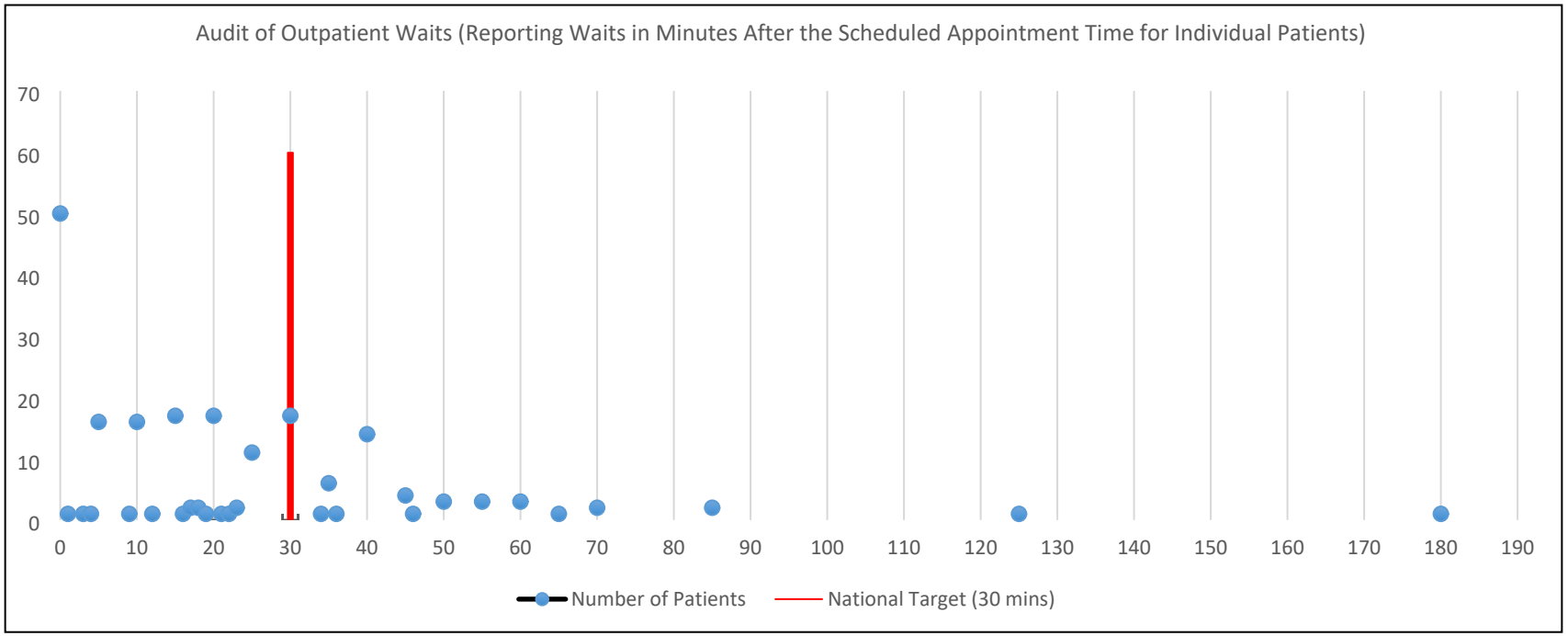
Referral Trends - Tumour Site



Site	Monthly Average (2019-20)	Monthly Average (2020-21)	2020-21 Average Relative to 2019-20 Average	New Patient Referrals (May 2021)
Breast	**92**	**76**	**-17%**	60
Colorectal	**54**	**55**	**+2%**	47
Lung	**33**	**32**	**-3%**	33
Gynaecological	**31**	**31**	**0**	26
Urological	**36**	**26**	**-28%**	22
Upper Gastrointestinal	**18**	**26**	**+44%**	18
Head and Neck	**16**	**14**	**-12%**	19
Top 7 Tumour Sites by Number of Referrals as Percentage of Total Referrals	**86%**	**87%**		62%

The graph and table show referrals for the tumour sites most commonly referred for SACT treatment. Referrals for the treatment of breast and colorectal cancers continue to be the principle drivers of demand.

New Patient, other Outpatient and Chemotherapy Assessment Appointments Where Patients Were Seen Within 30 minutes of the Scheduled Appointment Times (National Target)	
Target: 100%	**SLT Lead: Director of Operations**
Current Performance	



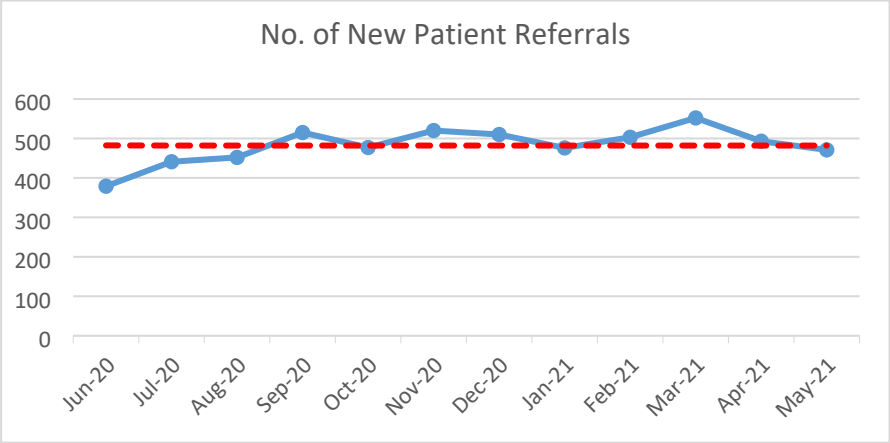
Total	No. of Patients Subject to No Wait	Median Wait (50% of Patients Seen)	Mean (Average) Wait	Percentage Seen Within 30 Minutes	Longest Wait
202	50 (25%)	15 minutes	20 minutes	159 (78%)	180 minutes (1 patient)

This data is obtained from a manual data collection exercise undertaken by nursing staff for one week each month. This can result in some clinic and waiting times data not being fully captured. The exercise relates only to face-to-face appointments and does not capture virtual interactions

Trend	Actions
Outpatient activity delivered in outreach contexts prior to the advent of the COVID-19 pandemic was repatriated to VCC. Demand for phlebotomy services at VCC, typically delivered in primary and secondary care contexts prior to the pandemic, continues to be extremely high. The ration of face-to-face to virtual appointments remains at approximately 50:50.	• Plan to repatriate element of phlebotomy activity to local health boards to be delivered (June 2021). • Bid for capital funding to be used to relocate phlebotomy service and to increase number of available chairs to be developed and submitted to the Trust Capital Planning Group (June 2021).

Outpatient Department – Operational Context

Referral Trends



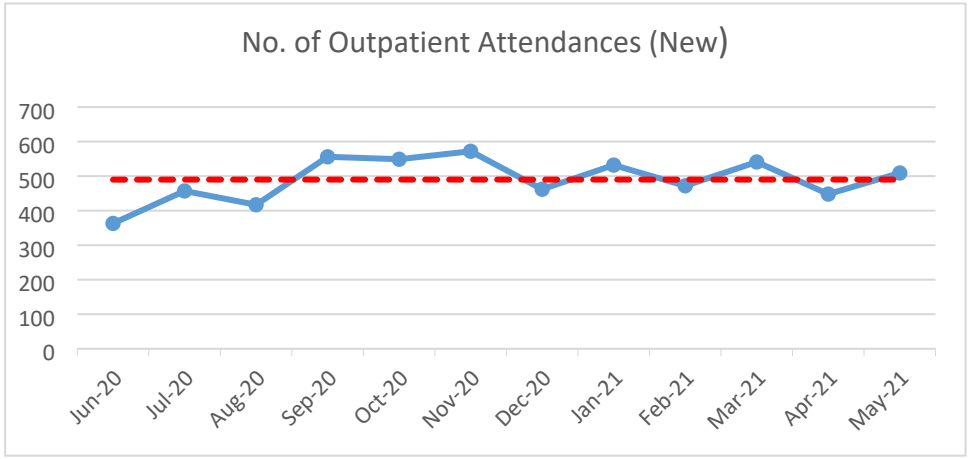
During the year to May 2021 an average of 482 new patient referrals were received each month.

In May 2021, the actual total of new patient referrals received was 471.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Number of New Patient Referrals	379	441	452	515	477	520	510	476	503	552	493	471

Outpatient Department – Operational Context

Activity



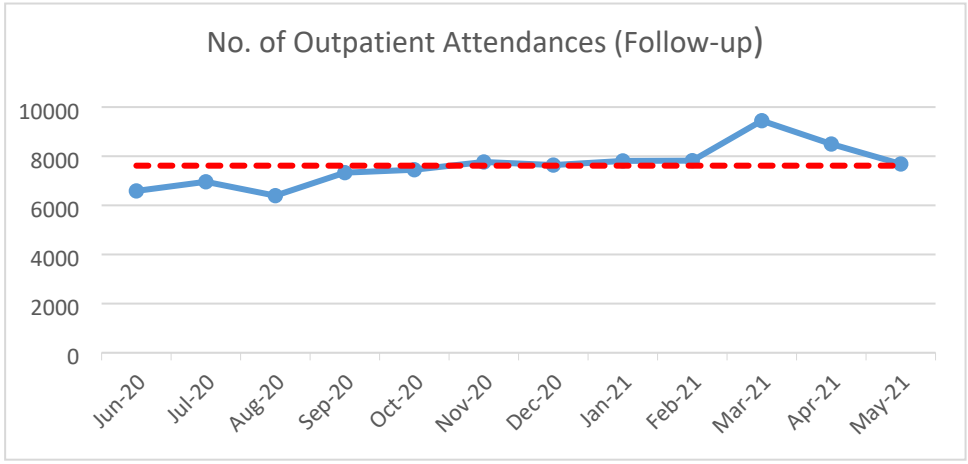
During the year to May 2021, there was an average of 490 new outpatient attendances each month.

In May 2021, the actual total of new outpatient attendances was 509.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
No. of New Outpatient Attendances	363	457	417	556	549	572	462	532	472	541	448	509

Outpatient Department – Operational Context

Activity



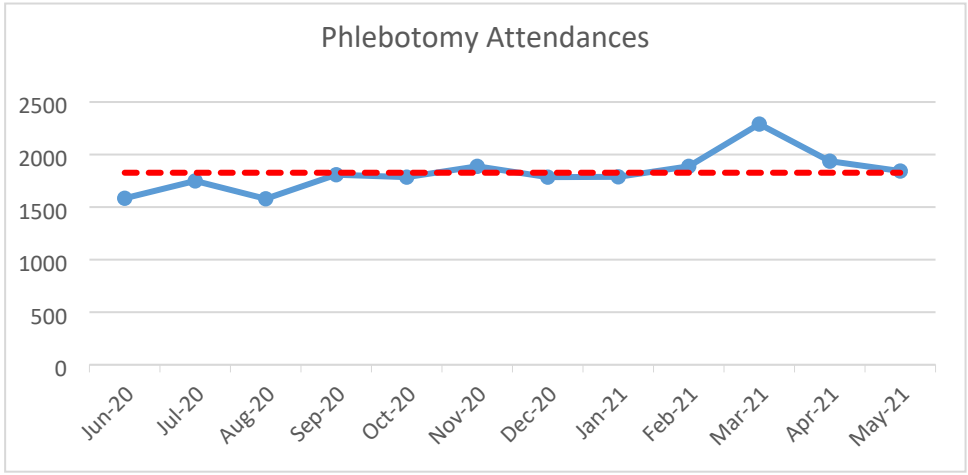
During the year to May 2021, there was an average of 7,615 follow-up attendances each month.

In May 2021, the actual total of follow-up outpatient attendances was 7,684.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
No. of Follow-up Outpatient Attendances	6587	6959	6394	7331	7449	7766	7639	7809	7819	9446	8496	7684

Outpatient Department – Operational Context

Activity - Phlebotomy



Phlebotomy attendances are included within the count of follow-up attendances. Historically, four chairs have been utilised to administer the service at VCC. Social distancing and enhanced infection control measures have reduced this capacity to two chairs (a third can be utilised in emergency circumstances). This reduction in capacity locally and the reduction in primary and secondary care phlebotomy capacity realised I response to the pandemic have caused acute physical capacity issues in the VCC outpatients department.

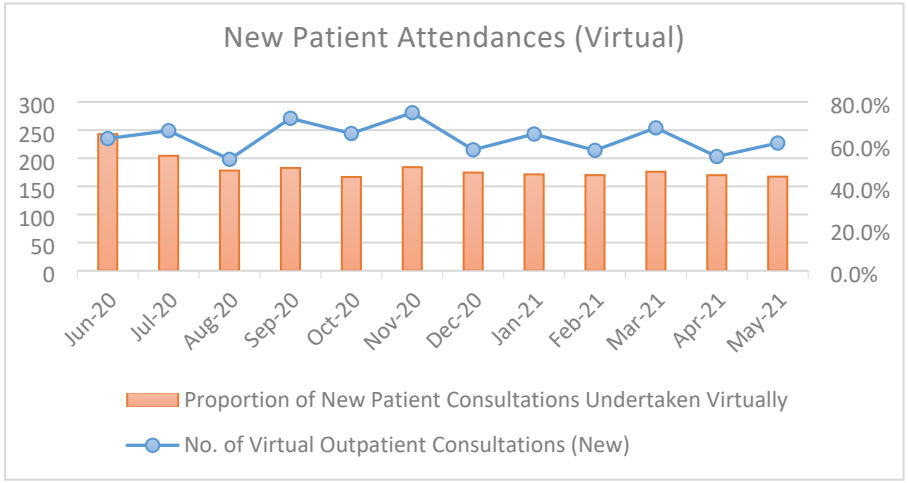
During the year to May 2021, there was an average of 1,827 follow-up attendances each month.

In May 2021, the actual total of follow-up outpatient attendances was 1,843.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Phlebotomy Attendances	1584	1749	1579	1808	1785	1888	1785	1788	1888	2290	1937	1843

Outpatient Department – Operational Context

Activity – Virtual Consultations

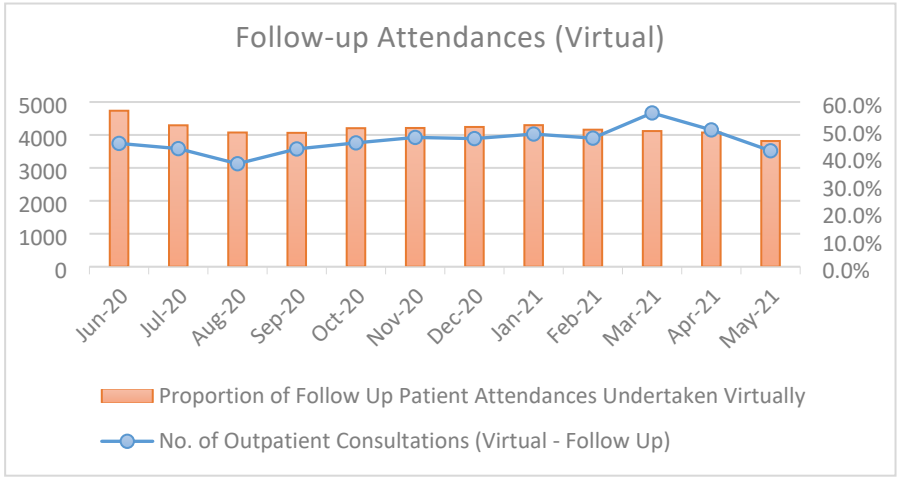


During the early phases of the pandemic response, the number of virtual consultations increased markedly. Subsequently, the overall proportion of consultations with new patients has stabilised at a proportion marginally below 50%.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
No. of Virtual Outpatient Consultations (New)	235	249	198	271	244	281	215	243	214	254	203	227
Proportion of New Patient Consultations Undertaken Virtually	64.7%	54.5%	47.5%	48.7%	44.4%	49.1%	46.5%	45.7%	45.3%	47.0%	45.3%	44.6%

Outpatient Department – Operational Context

Activity – Virtual Consultations



During the early phases of the pandemic response, the number of virtual consultations increased markedly. Subsequently, the overall proportion of follow-up consultations with has stabilised at a proportion marginally below 50%.

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
No. of Virtual Outpatient Consultations (Follow-up)	3743	3585	3126	3575	3759	3925	3889	4027	3903	4668	4153	3519
Proportion of Follow-up Patient Consultations Undertaken Virtually	56.8%	51.5%	48.9%	48.8%	50.5%	50.5%	50.9%	51.6%	49.9%	49.4%	48.9%	45.8%

Equitable and Timely Access to Services - Therapies

Target: 100% | **SLT Lead: Head of Nursing**

Current Performance

Percentage of Therapies Referrals (Inpatients) Seen Within 2 Working Days

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Dietetics	100%	100%	100%	95%	98%	96%	97%	100%	100%	100%	100%	100%
Physiotherapy	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OT	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
SLT	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Percentage of Urgent Therapies Referrals (Outpatients) Seen Within 2 Weeks

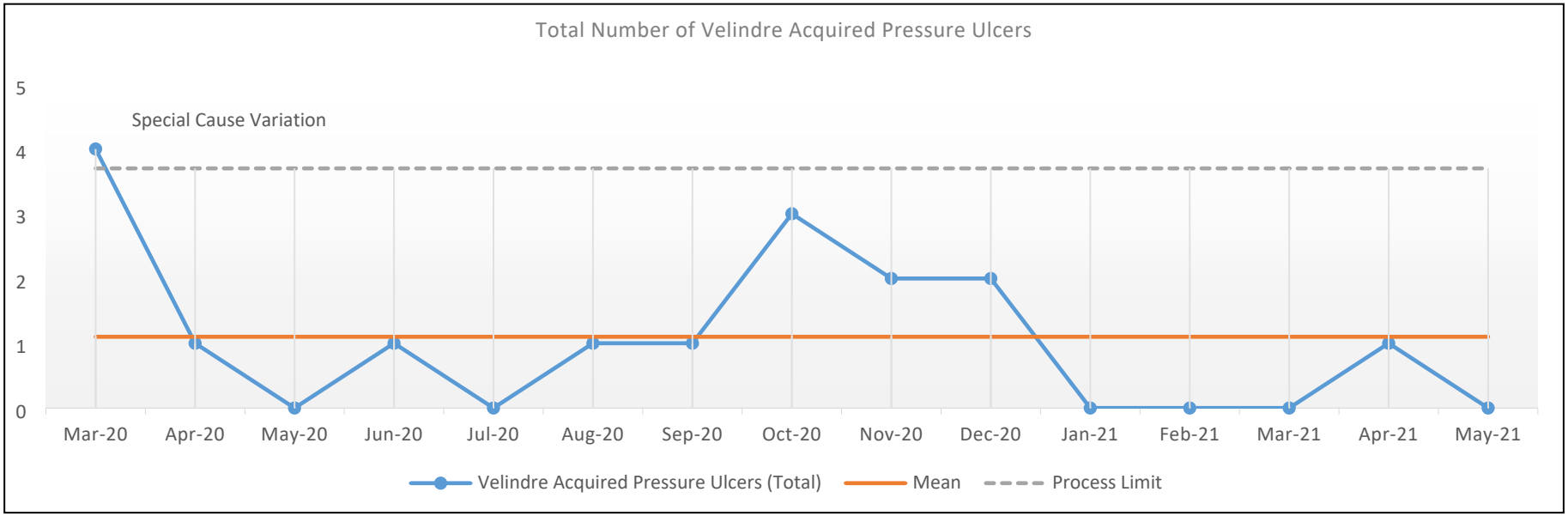
	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Dietetics	100%	100%	100%	95%	98%	96%	97%	100%	100%	100%	100%	100%
Physiotherapy	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OT	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
SLT	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Percentage of Routine Therapies (Outpatients) Seen Within 6 Weeks

	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Dietetics	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Physiotherapy	80%	85%	88%	67%	94%	100%	100%	100%	100%	100%	100%	100%
OT	100%	100%	100%	100%	100%	94%	100%	100%	100%	100%	100%	100%
SLT	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Trend	Action
All performance targets for all Therapy modalities were met in May 2021.	

Velindre Acquired Pressure Ulcers	
Target: 0	**SLT Lead: Head of Nursing**
Current Performance	

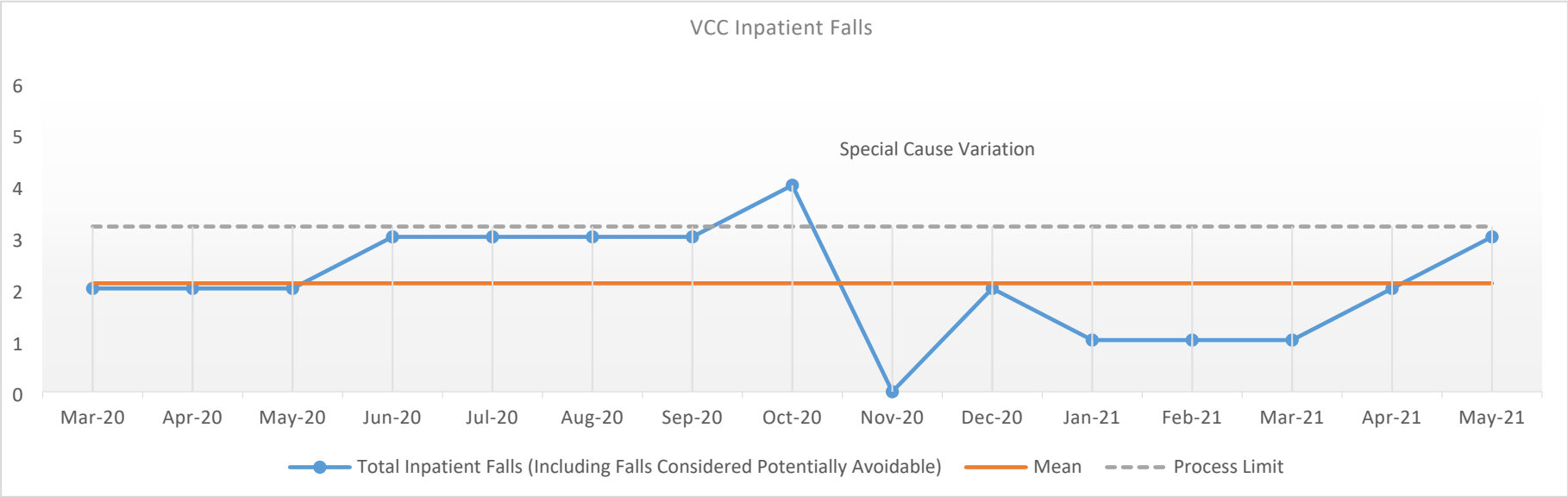


	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Velindre Acquired Pressure Ulcers (Total)	4	1	0	1	0	1	1	3	2	2	0	0	0	1	0
Potentially Avoidable Velindre Acquired Pressure Ulcers	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0

Trend	Action

There was no Velindre acquired pressure ulcer reported in May 2021. No Velindre acquired ulcers were reported to Welsh Government as a Serious Incident (SI).	

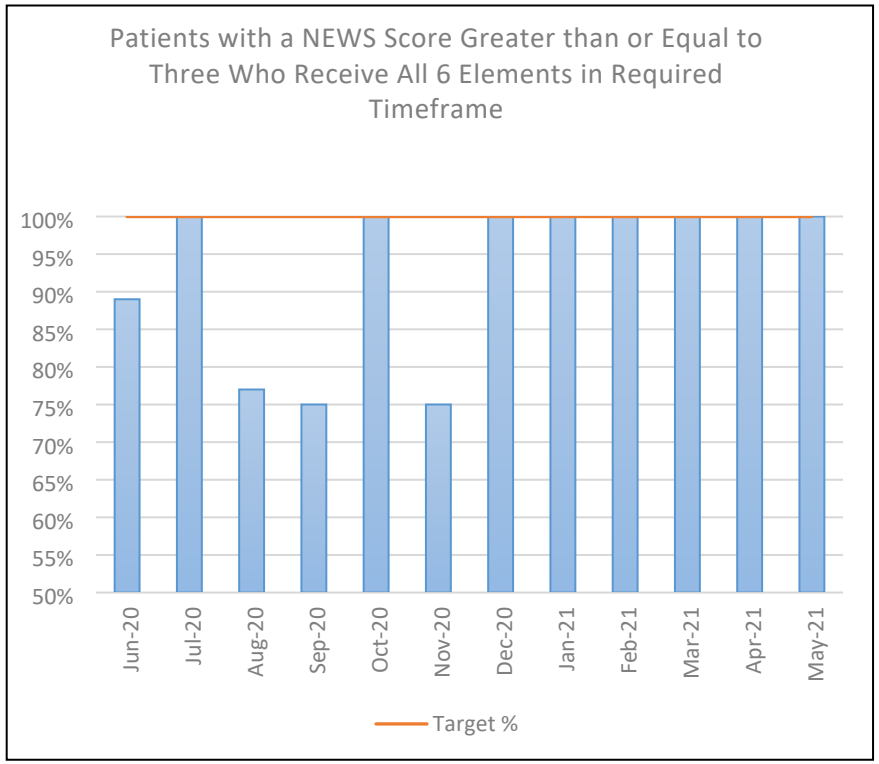
Velindre Inpatient Falls	
Target: 0	**SLT Lead: Head of Nursing**
Current Performance	



	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Total Inpatient Falls	2	2	2	3	3	3	3	4	0	2	1	1	1	2	3
Potentially Avoidable Inpatient Falls	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0

Trend	Action
There were three inpatient falls reported in May 2021. • Full investigations were undertaken by the VCC Falls Scrutiny Panel. • All incidents were considered to be unavoidable.	Good practice and lessons learned have been identified following these incidents: 1) falls risk assessments completed on admission 2) early referral to physiotherapy 3) ongoing neurological observation conducted by ward staff, when required 4) patients reviewed post-fall by medic 5) patients referred to Therapies immediately post-fall, when deemed appropriate.

Patients with a NEWS Score Greater Than or Equal to Three Who Receive All 6 Elements in Required Timeframe	
Target: 100%	**SMT Lead: Clinical Director**
Current Performance	Trend



Fourteen patients met the criteria for sepsis treatment in May 2021. All of these patients received all elements of the sepsis bundle within one hour.

During May 2021, nine patients received a diagnosis of sepsis. Of these, eight received all elements of the sepsis bundle within one hour. In the case of the ninth patient, the administration of antibiotics was delayed because it proved difficult to cannulate the patient. The patient received all other elements within the stipulated one hour timeframe.

The measure refers to the treatment of newly presenting patients only.

Actions

The patient who did not receive all elements of the bundle within one hour, as stipulated, was subsequently administered with antibiotics.

The patient was monitored closely throughout and the patient experienced no harm.

Healthcare Acquired Infections (HAIs)	
Target: 0	**SLT Lead: Clinical Director**

Current Performance

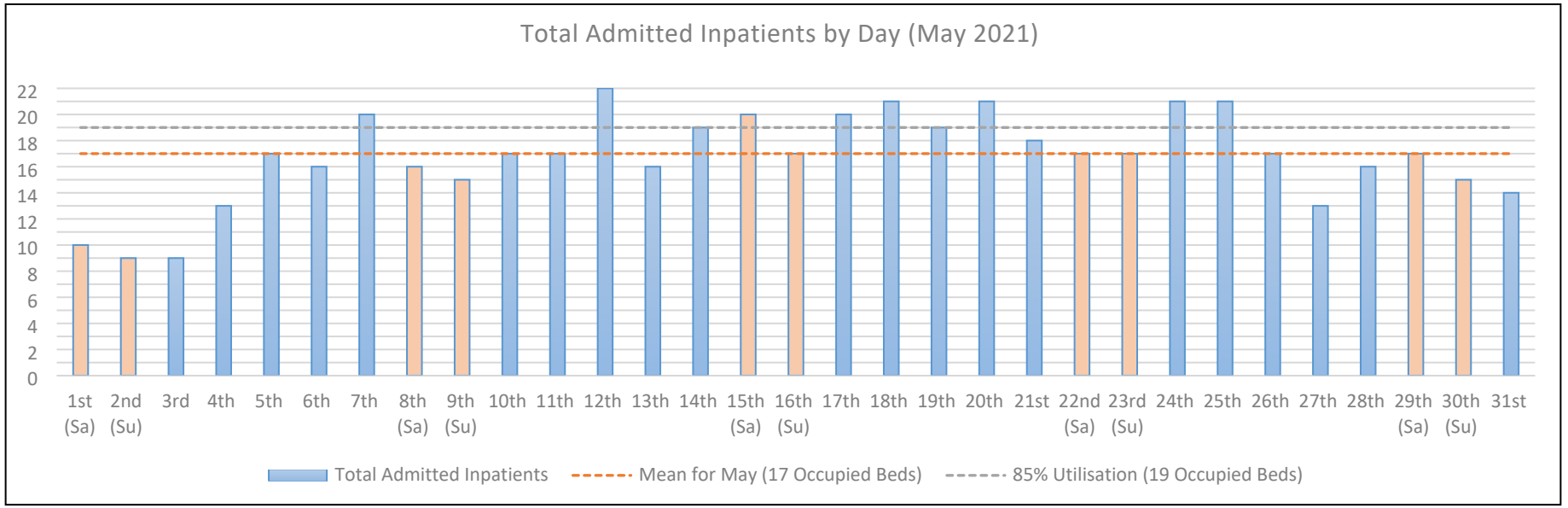
	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
C.diff	0	0	0	0	0	0	0	1	0	0	0	0
MRSA	0	0	0	0	0	0	0	0	0	0	0	0
MSSA	0	0	0	0	0	0	0	0	0	0	0	0
E.coli	1	1	0	0	0	0	0	0	0	0	0	0
Klebsiella	0	0	0	0	0	0	0	0	0	0	0	0
Pseudomonas Aeruginosa	0	0	0	0	0	0	0	0	0	0	0	0

Trend	Action
No VCC Healthcare Acquired Infections (HAIs) were reported in May 2021.	

Inpatients – Operational Context

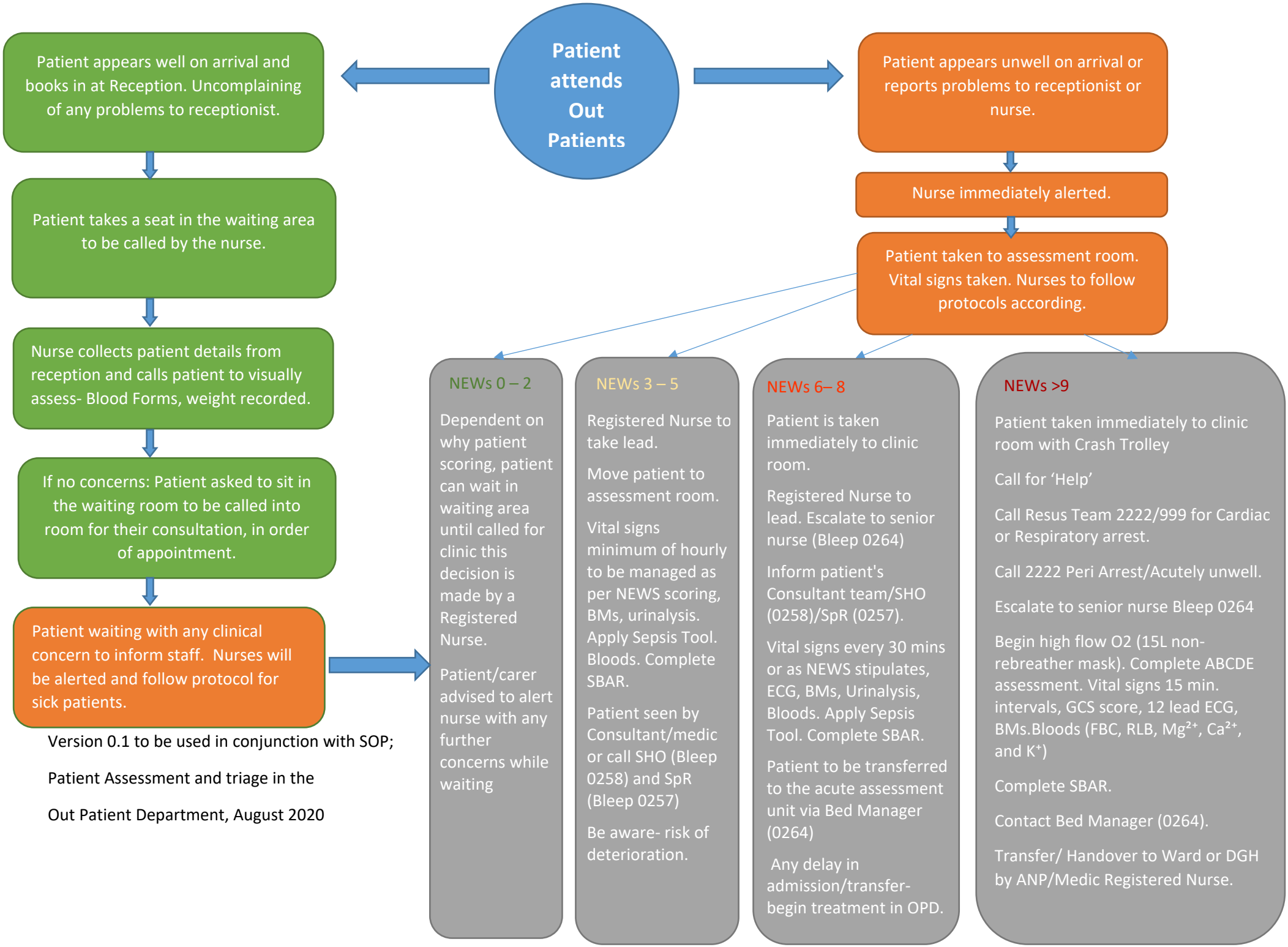
Bed Occupancy

VCC currently operates a total of 22 inpatient beds (including 2 isolation cubicles). An occupation rate of 85% would require 19 of the 22 beds to be occupied.



** Bed utilisation rate calculated assuming use of all 22inpatient beds.

Mean Daily No. of Admitted Patients (May-21)	Av. Daily Bed Utilisation Rate (May-21)	Minimum No. of Patients Admitted (May-21)	Minimum Daily Bed Utilisation Rate (May-21)	Maximum No. of Patients Admitted (May-21)	Maximum Daily Bed Utilisation Rate (May-21)
17	77%	9	41%	22	100%



Version 0.1 to be used in conjunction with SOP;

Patient Assessment and triage in the

Out Patient Department, August 2020

Canolfan Ganser Felindre
Velindre Cancer Centre

GIG CYMRU NHS WALES

Standard Operating Procedure (SOP)

Patient Assessment & Triage in the Outpatients Department

Version: 0.3

Document Control

Document Information:

Document Name: SOP – Patient Assessment & Triage in the Outpatient Department
Version: 0.3
Issue Date: 14.08.20
Status: Draft
Document Author: Viv Cooper, Head of Nursing & Clinical Lead for Outpatients & Sarah Seary, Outpatients Business Manager

Document History:

Version	Purpose of Change	Author	Date	Status
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0.2	Revisions and comments	Sue Hopkins, Karen Arndell ,Viv Cooper, Ceri Stubbs, Ailsa Hayes	23.01.20	DRAFT
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Reviewers:

Name	Position	Organisation
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Karen Arndell	Outpatients Sister	Velindre Cancer Centre

Approval:

Name	Position	Organisation	Date Approved
Vivienne Cooper	Head of Nursing	VCC	06/07/20
Eve Gallop-Evans	Clinical Director	VCC	07/07/20
Quality and Safety Management Group		VCC	Final Approval 14/08/20

1. Introduction

This Standard Operating Procedure (SOP) describes the operational aspects of the Velindre Cancer Centre (VCC) patient assessment and triage procedure that is undertaken in the Outpatients Department (OPD). It details the relevant actions taken by the OPD nursing staff and the referral pathway for unwell patients requiring advice and / or referral to the VCC Assessment Unit due to acute presentation, treatment toxicities or complications of their cancer.

It is important to undertake an initial assessment of all patients attending the Outpatients Department for the following reasons:

- Improving patient safety
- Identifying acuity to ensure that the most unwell patients are treated appropriately as quickly as possible
- Improving efficiency in the department to ensure that patients do not wait unnecessarily for further investigations or decision making.

The initial assessment of vital signs, recording and advice given regarding a potentially ill patient is essential to ensure patient safety and the best possible outcome. Patient safety is an essential part of quality care; each and every situation should be managed according to the individual patient needs and the SOP for the management of the unwell patient.

2. Scope

This SOP applies to the VCC Outpatients Department and documents the actions required by staff working in the department, including medical staff, nursing staff and administrative staff. It applies to patients who are currently under the care of VCC Oncologists and who may be new to VCC, receiving treatment including SACT, Radiotherapy and post treatment follow up.

Its aim is to give clear guidance on the pathway, referral and management of unwell patients who may require assessment and/or admission to the VCC Assessment Unit.

3. Procedure

The procedure documented below outlines how the patient assessment process is delivered for all patients in the OPD.

The assessment process begins as soon as the patient arrives in the Outpatient Department to book into clinic or for those who arrive without an appointment. The initial ‘visual’ assessment done by Receptionists, HCSW and Qualified nurses is carried out by ‘looking at the patient’ as they arrive. Any patients who report they feel unwell, or are identified as looking ‘unwell’ or reported by the patient or family as ‘unwell’, will be immediately handed over to a Registered nurse to begin a thorough assessment, performed in the Patient Assessment Room / Nurse Treatment Room to ensure privacy and confidentiality.

For all other patients who present at the Reception Desk the normal procedure will be as follows:

- Patient arrives in the Outpatients department to check in at the Reception desk.
- The patient is checked in on CANISC by the receptionist and advised to take a seat in the waiting area.
- Once the patient has been checked in, the patient's summary clinic sheet is placed on the desk for the nursing staff to collect.
- If patient appears unwell, or the patient, or family member, reports they are unwell, the receptionist will advise a member of the nursing staff who will attend to the patient immediately.
- Nursing staff collect the patient details sheet from the front desk and review the details. All SACT patients are called by the nurse for an assessment, which includes height and weight observations, and depending on the SACT regime may have blood pressure and vital signs. All SACT patients who have not had recent bloods will be given a blood form to have a blood test before their consultation. New patients will all have an assessment, which includes vital signs, height and weight.
- If the nurse is concerned through observation that the patient is unwell, vital signs are taken. These are recorded onto a Velindre News chart and score calculated. News scores will determine the patient's condition and acted on in accordance with the VCC NEWS CHART. Any clinical concern should be escalated **regardless of the NEWS score**.

- NEWS Score 0 -2
  Depending on why the patient is scoring, the Patient will wait in waiting area until called to clinic, this decision will be made by a registered nurse.
  The patient or carer advised to speak to a nurse with any concerns while waiting.

- NEWS Score 3-5
  Registered nurse to take charge.
  Move patient to Nurse Treatment room/vacant clinic room or back to waiting area based on clinical judgement (Be aware patient is at risk of deterioration).
  Escalate in accordance with NEWS SOP and inform on call SHO.
  Observations monitored as per NEWS score, Urinalysis and Blood glucose monitored.
  Apply Sepsis Tool.
  Patient reviewed by medical staff sooner than allocated time or bleep on call SHO 0258, on call SpR 0257.
  Consultant will decide on next course of action / further treatment if required.

- NEWS Score 6-8
  Patient taken straight to a vacant clinic room (with a Nurse call Alert- for nurse to call for help if needed), where a Registered nurse takes charge.
  Escalate to Senior Nurse – Bleep 0264
  Inform patient's Consultant.
  Observations taken every 30 minutes – NEWS score documented. ABCDE assessment, ECG, Blood Glucose and bloods, taken in clinic room.
  For patients attending clinic- Consultant to immediately see patient to assess and plan care. If unable to review and for all 'walk in patients' SHO/SpR escalation as necessary (call SHO on bleep 0258/ SpR bleep 0257).
  SBAR completed for summary of action taken and plan. (Include as appendix) If admission needed, Bed manager (bleep 0264) contacted for advice on place for further review.

- NEWS Score >9
  Patient taken to clinic room for urgent assessment. Registered Nurse to take lead and Call for 'Help'
  Call Resus Team on 2222
  Escalate to senior Nursing Bleep 0264
  Resus Trolley brought to room.
  Until Crash Team arrive - High flow oxygen 15L min non-rebreather mask, ABCDE assessment, 15 minute observations NEWS score recorded, GCS score, 12 Lead ECG, Blood glucose and bloods (FBC, RLB –Mg^{2+}, Ca^{2+} and $K^{+)}$).
  Escalation to patients Consultant. Contact Bed manager (call 0264).

  Patients transferred to Assessment Unit under supervision of Resus Team -ensure patient is stable for transfer and Registered nurse or ANP to accompany patient and provide– hand over to Assessment unit team using SBAR Tool.

  Patients who remain in OPD whilst a suitable place for assessment can be arranged or needing direct transfer to DGH then Registered nurse and ANP must remain with patient for monitoring - immediate action taken – Consider - Cannulation, fluids, Oxygen, bloods, Urinalysis, BM's. Document on SBAR any new intervention and action plan.

  Nurses to use clinical judgement in all cases for unwell patients regardless of NEWS score. If concerned about patient's condition, increase frequency of observations and escalate to medical team.

4. Outpatients Nursing Staff Training Needs

- Registered Nurses Annual compliance with ILS
- 6 monthly Registered Nurse Simulation training
- HCSW compliance with BLS Training.
- Velindre training on 'Recognition of the sick' by Resus practitioner for HCSW
- Velindre HCSW AOS training
- De-briefing/Education by AOS/Resus to OPD staff for each 'sick' patient.
- Registered nurse compliance with Hospira infusion pumps and IV medication training and competence.
- Cannulation

5. Related documents, references and attachments

- Velindre NEWS Chart
- NEWS Chart Calculation Action Plan
- VCC Emergency Call Algorithm
- Severe Sepsis Care Pathway – First Hour Care Duties
- Outpatient Flow Chart – Escalation of Care for Sick Patients

Welsh Blood Service Monthly Report

May 2021

Gwasanaeth Gwaed Cymru
Welsh Blood Service

- The WBS continued to experience pressure on specific blood groups and platelets during May as demand returns to pre Covid levels.
- All demand for red cells was met. The service was supported by NHSBT under its mutual aid agreement of 150 Group O+ to supplement the 200 O+ units provided at the end of April.
- O+ Group issues in May dropped compared to in March & April. Supported by stronger collections this provides a well-balanced stock position for May.
- All clinical demand for platelets was met, and is now at pre Covid levels (approx. 200 units per week) showing high levels of variability.
- There were 228 new bone marrow volunteers added to the Welsh Bone Marrow Donor Registry (WBMDR) in May. The inability to hold whole blood donation clinics in schools and Universities, continues to hinder recruitment.
- Turnaround times for routine Antenatal tests in May remained above target at 96%.
- Turnaround times for specialist referrals is below current target at 68%. Work is being prioritised based on clinical need and all compatibility testing was completed to the required time/date.
- Whole Blood Collection productivity continues to be below target, at 1.02% for May, but shows an increase of 0.03% increase to April.
- Quality Incident Records closing times continue to be behind target. The new 'live' incident reporting system has been designed to streamline the process and improve performance.
- There were no Serious Adverse Events (SAE) reported to the MHRA in May.
- At 2.92% the overall Part Bag rate for May is within a tolerance of 3% is an improvement in performance compared to April (3.26%) .
- 513 new donors completed a donation in May, 8.5% of the total donations received in the month.
- Overall donor satisfaction continued to exceed target at 96.3%. In total there were 936 respondents, 181 were from North Wales and 755 were from South Wales
- There were 6 new apheresis donors in May 2021, and the quarterly target has already been met.
- Increased collections and transfer of staff to support vaccine delivery has contributed to Processing Productivity being above target for May.
- Increased platelet production occurred in preparation for the two May bank holidays, has led to an increased platelet expiry, at 16.68%.
- In May 2021 over 7,000 donors were registered at donation clinics, 7 concerns (0.1%) were reported within this period all were managed as early resolution.

6 Key Performance Indicators were above the previous month's performance

7 Key Performance Indicators remained the same as the previous month's performance, 5 achieved target.

7 Key Performance Indicators were down on the previous month's performance, however 3 achieved target..

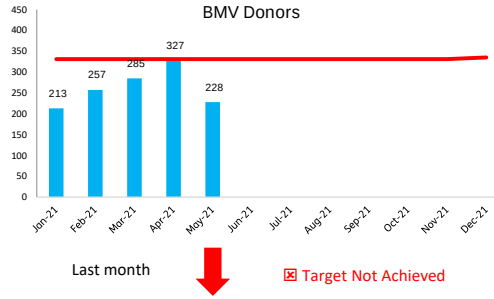
Reference Table

Measure	Target	Timeframe	National / Local
Number of new bone marrow donors aged 18-30 recruited to the Welsh Bone Marrow Donor Registry (WBMDR)	4,000	Annual	Local
Number of days when the Red Blood Cell (RBC) stockholding for O, A & B- fell below 3 days cover	0 days	Monthly	Local
Number of bags of RBCs manufactured as a % of the number of issues to hospitals **(% Red Cell Demand Met)**	100%	Monthly	Local
Number of bags of platelets manufactured as a % of the number of issues to hospitals **(% Platelet Demand Met)**	100%	Monthly	Local
Number of Confirmatory Tests (CTs) requested and bled as a % of the total CTs requested **(Confirmatory Tests Bled)**	65%	Monthly	Local
Number of Stem Cell Collections	80	Annual	Local
Number of antenatal patient results provided to customer hospitals within 3 working days from receipt of sample **(Antenatal Turnaround Times)**	90%	Monthly	Local
Number of samples referred for red cell reference serology work ups provided to customer hospitals within 2 working days. **(Reference Serology Turnaround Times)**	80%	Monthly	Local
% of Quality Incident Records (recorded in DATIX), closed within 30 days over a rolling 3 month period	90%	Rolling	Local
Number of critical non-conformances through external audits or inspections	0	Annual	Local
Number of Serious Adverse Blood Reactions & Events (SABRE) reported to the Medicines and Healthcare products Regulatory Agency (MHRA)	0	Annual	Local
Number of whole blood donations that are collected on session which are below the minimum viable volume, as a % of the total number of whole blood donations collected **(% Part Bags)**	3%	Monthly	Local
Number of donors where venepuncture is attempted to be performed on but no blood enters the bag, as a % of the number of donors who have reached the donation chair **(% Unsuccessful Venepuncture)**	2%	Monthly	Local
The number of blood components (weighted) collected per Standardised FTE (**Blood Collection Efficiency)**	1.25 WTE	Monthly	Local
Number of components manufactured per Standardised FTE. **(Manufacturing Efficiency)**	392	Monthly	Local
Number of platelets which have time expired as a % of the total number of platelets manufactured **(Time Expired Platelets)**	10%	Monthly	Local
Number of RBC units which become non-viable during the manufacturing process which could have been avoided, as a % of the number of complete whole blood donations **(Controllable Manufacturing Losses)**	0.5%	Monthly	Local
Number of bags of RBC, including Paediatric bags, which have time expired as a % of the total number of RBC bags manufactured **(Time Expired Red Cells)**	1%	Monthly	Local
Number of donors that scored 5 or 6 out of 6 (6 being totally satisfied and 1 being totally dissatisfied with their overall donation experience after they have been registered on clinic to donate **(Donor Satisfaction)**	71%	Monthly	Local
Number of 'formal' and 'informal' concerns received from blood donors	~	~	~
% of 'formal' concerns received and treated under 'Putting things Right Regulations within 30 working days	100%	Monthly	National
% of all concerns (formal and informal) acknowledged within 2 working days as required by the 'Putting things Right' Regulations	100%	Monthly	National
Number of new Whole Blood Donors recruited to the donor panel	2,750	Quarterly	Local
Number of new Apheresis Donors recruited to the donor panel	14	Quarterly	Local
Number of Deceased Donor Typing / Cross Matching reported within given period	80%	Quarterly	Local
Number of Anti D & -c Quantitation patient results provided to customer hospitals within 5 working days	90%	Quarterly	Local

Monthly Reporting

Equitable and Timely Access to Services

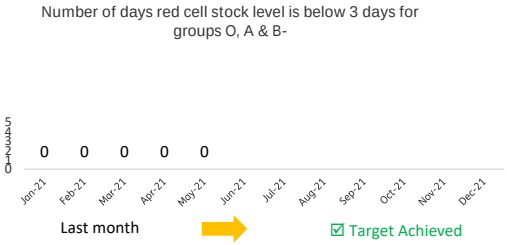
May-21



Annual Target: 4000 (ave 333 per month)	SMT Lead: Jayne Davey / Tracey Rees	
What are the reasons for performance?	Action (s) being taken to improve performance	By When
There were 228 new bone marrow volunteers added to the Welsh Bone Marrow Donor Registry (WBMDR) in May. The inability to hold whole blood donation clinics in schools and Universities, continues to hinder recruitment of new BMV's	A new donor recruitment and retention strategy for the WBMDR aligned to WBS strategic intent is being prepared. The new Strategy will be informed by: - a review of the existing donor panel to assess the required growth; - a review of the outcomes of the new bone marrow pilot recruitment to provide proof of concept and operational readiness for a recruitment strategy that is not solely dependent on blood-donors. A Task and Finish group has been established to take forward the recruitment of non blood donors	The Original deadlines for the strategy have been delayed due to COVID and it is anticipated this will be delivered by September 2021

Safe and Reliable Service

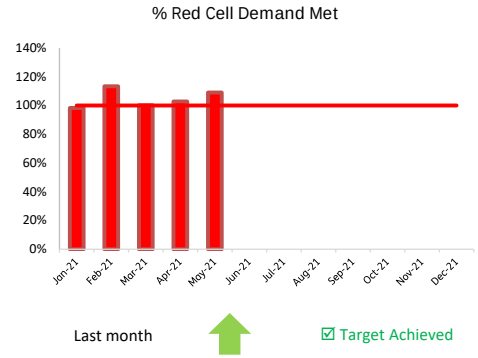
May-21



Monthly Target: 0	SMT Lead: Jayne Davey / Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
All stock groups were maintained above 3 days. Stock levels are balanced across all groups.	Daily Resilience meetings are held in a collaboration of blood collection and manufacturing teams; this forum facilitates operational actions in response to challenges in maintaining adequate stock levels in order to minimise blood shortages.	Business as Usual, reviewed daily

Safe and Reliable service

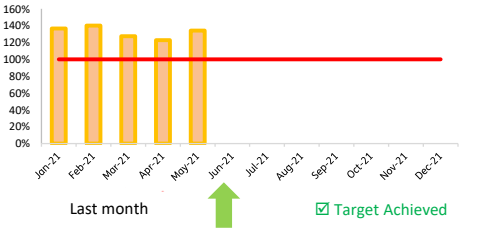
May-21



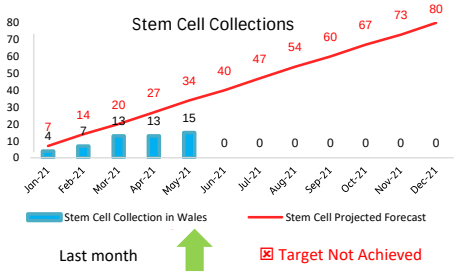
Monthly Target: 100%	SMT Lead: Jayne Davey/ Tracey Rees	
What are the reasons for performance?	Actions(s) being taken to improve performance	By When
All demand for red cells was met, with continued communications between the Collections and Laboratory teams enabling agile responses to variations of stock levels and service needs. 150 Group O+ red cells were received from NHSBT, the second part of the mutual aid arranged at the end of April. O+ Group issues in May dropped from those in March & April by approx.400 units. Supported by stronger collections this provides a well-balanced stock position for May.	Daily Resilience meetings are held in a collaboration of blood collection and manufacturing teams; this forum facilitates operational actions in response to challenges in maintaining adequate stock levels in order to minimise blood shortages.	Business as Usual, reviewed daily

Safe and Reliable service

May-21



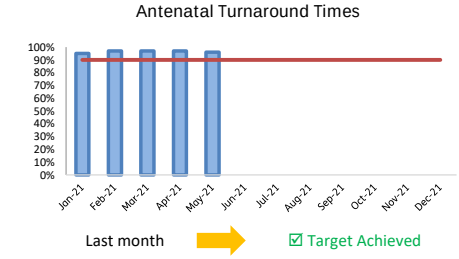
Monthly Target: 100%	SMT Lead: Jayne Davey / Tracey Rees	
What are the reasons for performance?	Actions(s) being taken to improve performance	By When
All clinical demand for platelets was met. This is the result of established daily communications between the Collections and Laboratory teams enabling agile responses to variations of stock levels and service needs. Platelet demand is at pre covid levels (approx 200 units per week) and shows high levels of variability.	The Ambient Overnight Hold (AONH) production process allows flexibility in the production plan for platelets. Adjustments on the weekly production are being made to better align with demand.	Business as Usual, reviewed daily



Safe and Reliable service

May-21

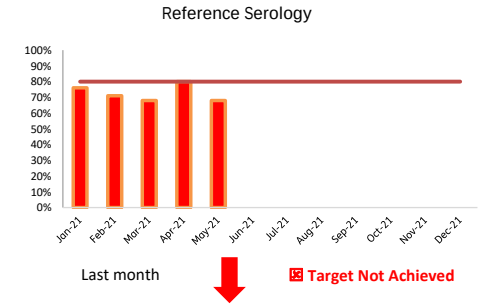
Annual Target: 80 (ave 7 per month)	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
There were 2 Stem Cell Collections in May with YTD collections below target position. 1 x PBL collection 1 x Cancellations at work up stage due to donor reasons.	Work is ongoing with Velindre Cancer Centre, to relocate the service. Define and agree future strategy for Stem Cell collection as part of wider review of future strategy for the WBMDR.	31 March 2022



Safe and Reliable service

May-21

Monthly Target: 90%	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Turnaround times for routine Antenatal tests in May remained above target at 96%. Continued monitoring and active management is in place.	Continuation of existing processes which are maintaining high performance against current target.	Business as Usual, reviewed daily



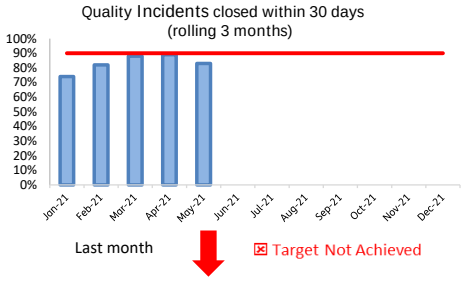
Safe and Reliable service

May-21

Monthly Target: 80%	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Work is being prioritised based on clinical need, and all compatibility testing (>48% of referrals) completed to the required time/date. Turnaround times for specialist referrals is below current target at 68%. Whilst Targets have not yet been amended to be in line with other blood services (90% in 5 working days), 91% was achieved in this time frame. Workload remains high (194 hospital patient referrals compared to average of 181 in 2020).	A review of complex patient referrals will be undertaken as part of a laboratory modernisation project which is currently being scoped. This work was suspended due to COVID, but is now recommencing. The implementation of a project aimed to increase automation in RCI is anticipated to improve performance in this area.	Date yet to be decided due to scoping project.

Safe and Reliable service

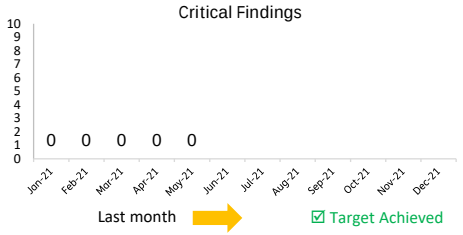
May-21



Monthly Target: 90%	SMT Lead: Peter Richardson	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Performance in May has failed to meet the target position, with 83% of quality incidents closed within the required 30 days. This indicates an 6% decline in performance from the previous month. The number of incidents reported in the three month rolling period has decreased (69 reports, 11 less than the previous period) whilst the number not closed has increased from 9 in the previous three month rolling period to 12 in this reporting period .	The agreed SMT action plan will remain in place to ensure that the improved performance is sustained. A revised process for managing low-impact incidents has been developed to streamline the process and improve performance; this will release more resource to focus on timely investigation of more serious incidents. The revised process went live on 1st June 2021, following robust system validation. It should be noted there are open incidents within Datix v.12 that are still being managed to closure through the original process.	Continue with close monitoring.

Safe and Reliable service

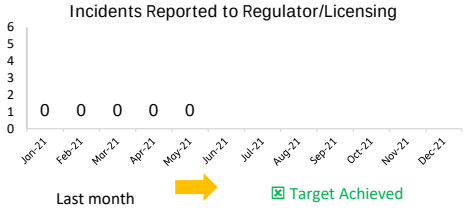
May-21



Target: 0	SMT Lead: Peter Richardson	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
The MHRA undertook an inspection of South Wales facilties and operational activity from10th to 14th May 2021. There were no critical or major inspection findings. There were 6 findings categorised as 'Other'.	A formal repsonse to the inspection findings will be submitted to MHRA detailing the proposed corrective and preventive action to address the inspection non-conformities. A formal action plan will be written and progress will be monotored by QA Systems.	Submit formal repsonse to MHRA by 14/06/2021. MHRA action plan to be managed as BAU. Monthly progress reports to be submitted to RAGG until completion of the plan.

Safe and Reliable service

May-21



Annual Target: 0	SMT Lead: Peter Richardson	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
There were no Serious Adverse Events (SAE) reported to the MHRA in May.	None required	N/A

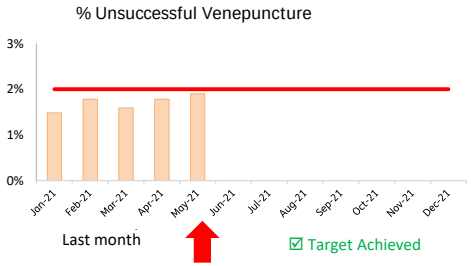
Spending Every Pound Well

May-21

Monthly Target: Maximum 3%	SMT Lead: Janet Birchall	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
The overall Part Bag rate is within tolerance at 2.92% for May 2021. This is an improvement on April's performance of 3.26%.	Performance analysis has taken place with operational colleagues following April's breach. Several venepuncturists were identified with higher 'Part Bag' percentage rates, and continue to be supported by senior colleagues. Venepuncturists who are training, and those who have just passed their Assessment have been encouraged to seek support, and operational staff will continue to monitor and support them. Monitoring of part bag rates (overall and by team) will continue. The service is currently revieiwing its training and education package.	This is being monitored monthly July 2021

Spending Every Pound Well

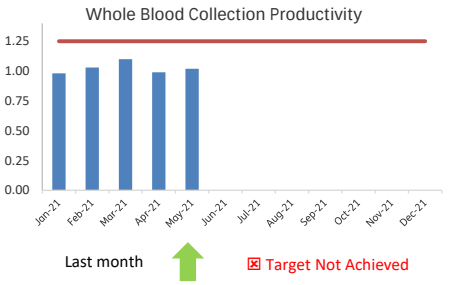
May-21



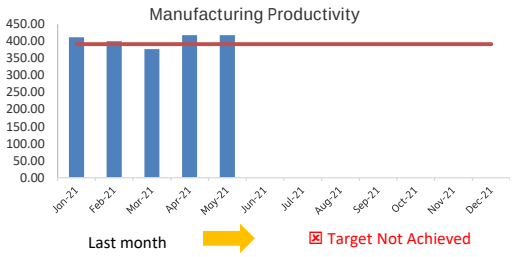
Monthly Target: Maximum 2%	SMT Lead: Janet Birchall	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
The overall Failed Venepuncture (FVP) rate in May 2021 remained within the tolerance threshold at 1.90% of donors where a donation was attempted. FVP rates remain higher on the North Team (Bangor 2.4% - 11 events, Wrexham 4.0% - 29 events)	Ongoing monitoring of FVP rates by the team continues, with further performance analysis taking place in order to identify any emerging trends in partnership with the north Wales Operations Manager.	This is being monitored monthly

Spending Every Pound Well

May-21

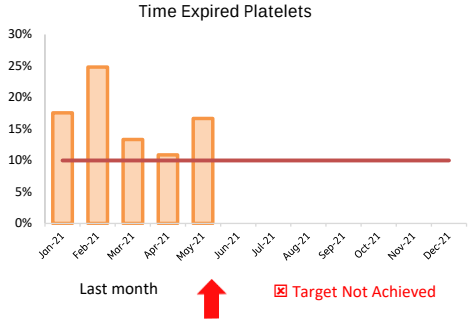


Monthly Target: 1.25	SMT Lead: Jayne Davey	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Collection productivity continues to be below target, at 1.02 for May. However this is a 0.03 increase from April. Decrease in appointments and increase in DNA rates have contributed to this decrease in productivity mainly due easing of restrictions, plus onboarding of additional staff. The ongoing COVID 19 response requirement to resource the additional Triage role on donation clinics will continue to affect productivity. This is an essential element of infection prevention and control (IPC) and will remain in place while COVID 19 is present in the community.	The changes which were due to be brought in under the Blood Supply Chain 2020 have been put on hold during the COVID 19 pandemic. Following discussions with Trades Union Partners, a consulation that was paused due to Covid will be recommenced.	Quarter 4 2021/22



Spending Every Pound Well

Monthly Target 392	SMT Lead: Tracey Rees	
What are the reasons for performance?	Actions(s) bring taken to improve performance	By When
Increased collections and the movement of staff from Manufacturing to Hospital Services to support vaccine delivery has contributed to this metric being above target.	The target will remain at its current level until the impact of covid restrictions on collections and surge planning are evaluated.	Dec-21



Spending Every Pound Well

May-21

Monthly Target: Maximum 10%	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Increased platelet production was required in preparation for two bank holidays and the loss of x2 collection days. This has led to an increased platelet expiry, above the desired expiry target.	Ongoing platelet production will continue to be based in line with required daily targets, leading to decreased platelet expiry percentages.	Ongoing and reviewed daily

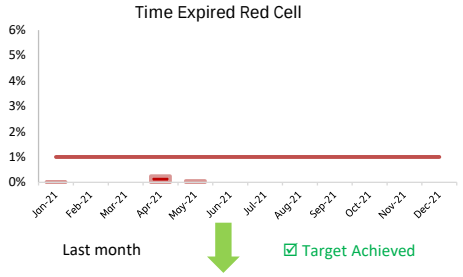
Spending Every Pound Well

May-21

Monthly Target: Maximum 0.5%	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Controllable Losses: Incorrect Storage : 4 Heat Seal : 1 Blood Press : 1 This is within the target.	Local reporting and management of incidents where they occur for monitoring of losses and lessons learnt.	Business as Usual, reviewed monthly

Spending Every Pound Well

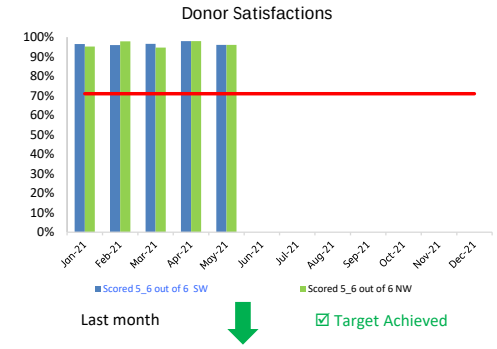
May-21



Monthly Target: Maximum 1%	SMT Lead: Tracey Rees	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Time expired red cells are below the target of 1%. Red cell collections and demand very closely aligned with minimal wastage.	Monitoring continues	Business as usual, reviewed daily

First Class Donor Experience

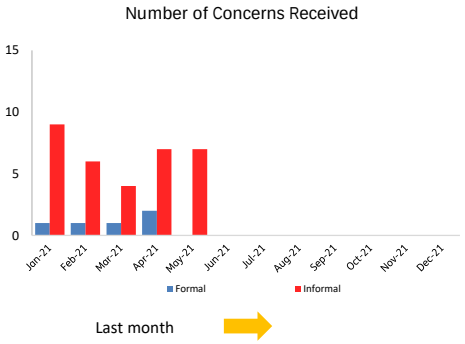
May-21



Monthly Target: Minimum 71%	SMT Lead: Jayne Davey	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Overall donor satisfaction continued to exceed target at 96.3%. In total there were 936 respondents, who had made a full donation and shared their donation experience, 181 were from North Wales and 755 were from South Wales (where location was able to be defined).	Findings to be reported to management at Collections managment meeting for actions from individual teams.	Business as usual, reviewed monthly

First Class Donor Experience

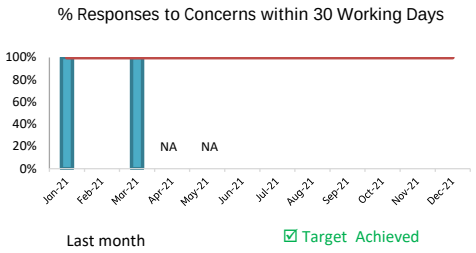
May-21



Target: N/A	SMT Lead: Alan Prosser	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
In May 2021 over 7,000 donors were registered at donation clinics. 7 concerns (0.1%) were reported within this period: 7 concerns were mangaged as early resolution. Concern themes during this period include: 1) Lack of signage at venue, Start of session delayed 2) lack of empathy 3) Staff attitude and behaviour 4) Turned away from session 5) Technical issues at registration	All concerns have been investigated and lessons learnt identified and actioned as appropriate. Examples of action taken include: 1) Discussions with staff and address any lessons learnt, to be lead by operational leads. 2) Discussion had with staff member to address any lessons learned. Team Manager to arrange empathy and customer care training. 3) Robust donor feedback regarding invesigation findings and rationale for practice. 4) Working group to Look at current preactice, implement as identified. 5) Issue rectified, operational leads to revisit correct process with staff.	Business as usual, reviewed daily

First Class Donor Experience

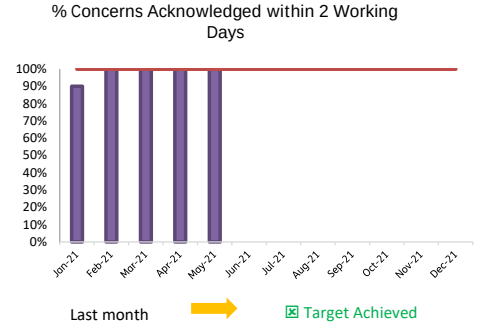
May-21



Monthly Target: 100%	SMT Lead: Alan Prosser	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
There were no formal concerns received in May 2021.	Continue to monitor 30 day response compliance.	Business as Usual, reviewed daily

First Class Donor Experience

May-21



Monthly Target: 100%	SMT Lead: Alan Prosser	
What are the reasons for performance?	Action(s) being taken to improve performance	By When
Initial responses to all concerns within target.	Continue to monitor concern management timescales	ongoing, revewied daily

Monthly Data Dashboard as at end of May 2021

Sickness Data

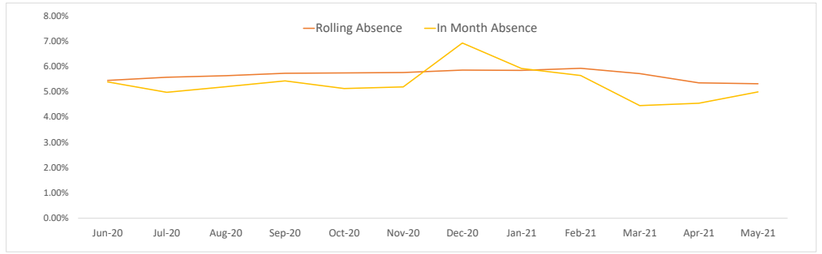
Sickness Statistics - Target 3.54%

12 Month Cumulative Average %	In Month %
5.31%	4.99%

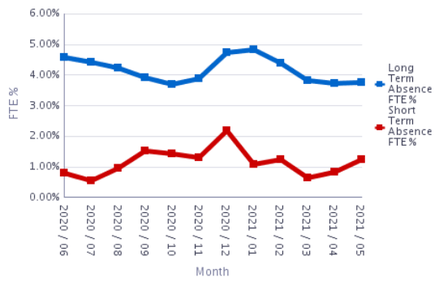
Short Term/Long Term - In Month figure	
Short Term %	1.24%
Long Term%	3.75%

Covid Sickness & Special Leave - In Month figure	
Sickness Non Covid-19 related %	4.58
Sickness Covid-19 related %	0.41
Special Leave Non Covid-19 related %	0.28
Special Leave Covid-19 related %	0.57

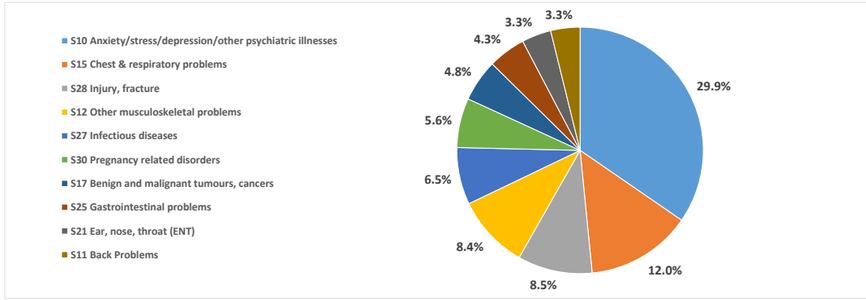
12 Months Cumulative & In Month Sickness % (Last 12 Months)



Short Term/Long Term last 12 Months



Top Ten Sickness Reasons by FTE % (Last 12 Month)



PADR Compliance - These figures exclude Trainee Doctors, those on Maternity, Starters within first 6 Months, those currently off on sickness absence.

Statutory and Mandatory Training compliance These figures exclude those on Maternity and those currently off with sickness absence

PADR Compliance % for Month	79.19%	Statutory & Mandatory Compliance for all CSTF Training for Month %:	81.77%	Covid - 19 Risk Assessment Compliance %:	80.91%
Assignments in Post:	716	Required:	7910	Required:	791
Reviews Completed:	567	Achieved:	6468	Achieved:	640

Staff in Post	
Headcount	959.00
FTE	743.58

Turnover, Starters/Leavers - NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.		
Turnover	FTE	Headcount
Turnover for Month	0.26%	0.25%
Turnover for 12 Months	8.97%	8.96%

Starters/Leavers	FTE	Headcount
Starters for Month	2.80	3
Leavers for Month	1.80	2

Vacancy Variance based on ESR Positions Establishment		
Division ESR FTE Positions Establishment	Division ESR FTE Positions in Post	Division ESR FTE Positions Variance
1133.45	742.38	-391.07

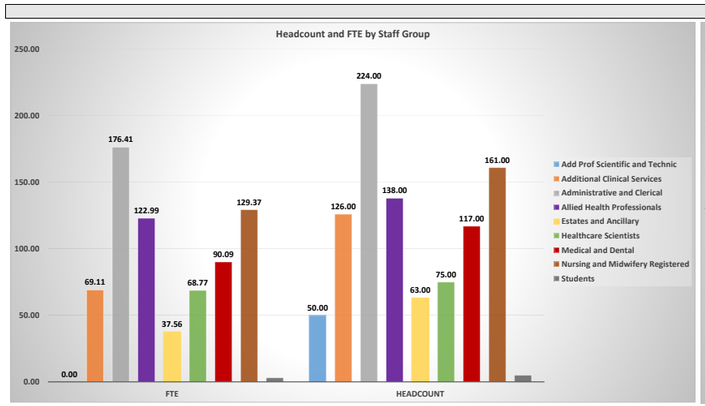
Employee Relations

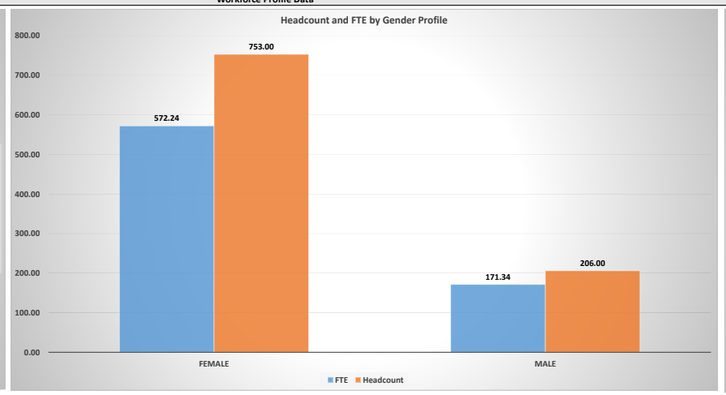
№ of Disciplinary Investigations:	№ of Grievances:	Of the Disciplinary № of Fast Track Processes:	№ of Dignity at Work Issues:
0	0	0	0
Last Month Figure:	Last Month Figure:	Last Month Figure:	Last Month Figure:
0	0	0	0

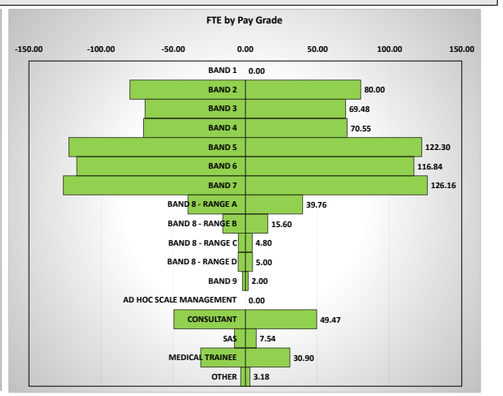
Medical & Dental Job Plans for Consultants and SAS Doctors

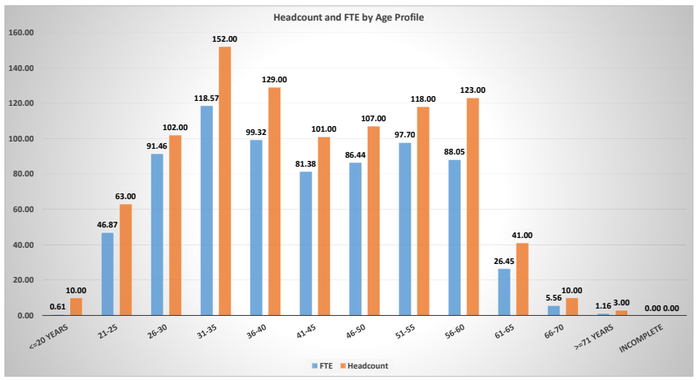
Role	Assignments	With Current Plan	% With Current Plan
Consultant	58	33	56.90%
Medical Director	1	1	100.00%
Specialty Doctor	0	0	#DIV/0!
GP	1	1	100.00%
Grand Total	60	35	58.33%

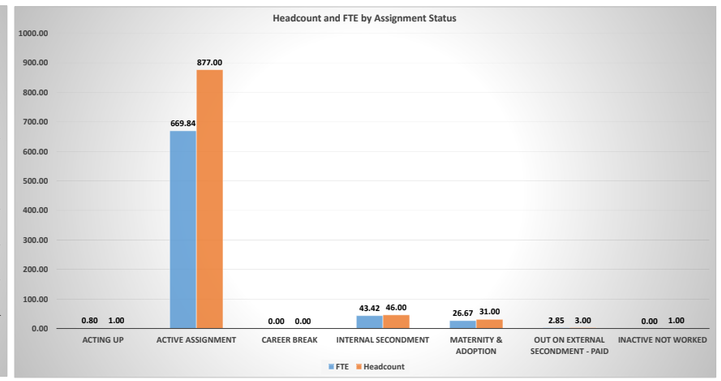
Workforce Profile Data

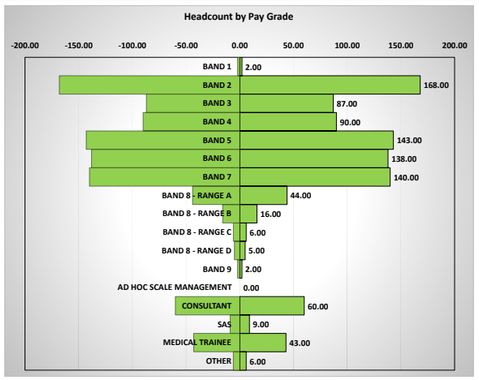


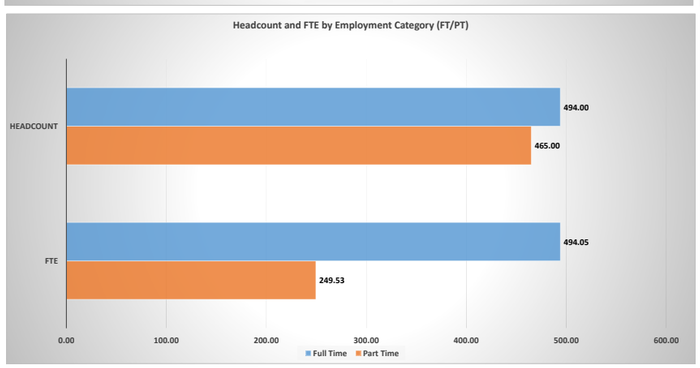


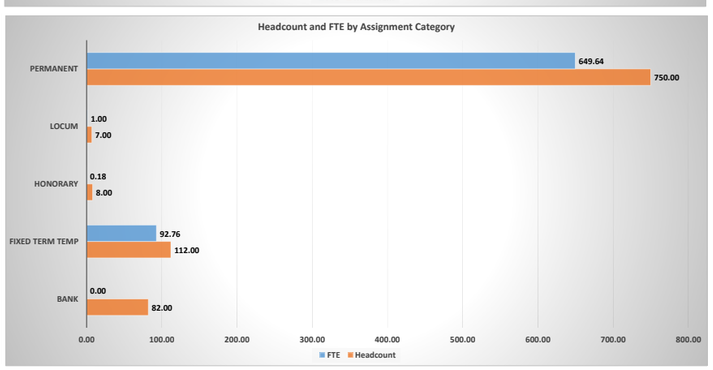












Vacancy Variance based on ESR Positions Establishment

	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
Division Totals	**1133.45**	**742.38**	**-391.07**

Org L5	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
120 VCC Cancer Services Management Office Section	136.10	30.90	-105.20
120 VCC Clinical Audit Section	2.84	2.84	0.00
120 VCC Information Section	103.38	75.39	-27.99
120 VCC Medical Physics Section	102.11	68.15	-33.96
120 VCC Medical Staffing Section	120.65	78.56	-42.09
120 VCC Nuclear Medicine Section	7.60	6.00	-1.60
120 VCC Nursing Section	239.54	177.59	-61.95
120 VCC Operational Services Section	61.64	44.64	-17.00
120 VCC Outpatients Section	27.58	17.71	-9.87
120 VCC Palliative/Chronic Pain Section	48.43	24.97	-23.46
120 VCC Pharmacy Section	92.41	66.81	-25.60
120 VCC Psychology Section	7.60	6.00	-1.60
120 VCC Radiology Section	23.83	16.14	-7.69
120 VCC Radiotherapy Section	128.97	105.75	-23.22
120 VCC Staff Volunteers Section	0.67	0.40	-0.27
120 VCC Therapies Section	30.10	20.53	-9.57
Grand Total	**1133.45**	**742.38**	**-391.07**

Org L8	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
120 C100 VCC Physics Engineering	11.00	9.60	-1.40
120 C101 VCC Physics Radiotherapy	67.51	40.70	-26.81
120 C104 VCC Physics Electronics	5.00	3.00	-2.00
120 C110 VCC Radiation Protection	18.60	14.85	-3.75
120 C120 VCC Radiotherapy	128.97	105.75	-23.22
120 C151 VCC Chemotherapy Services	71.73	51.15	-20.58
120 C180 VCC Pharmacy	87.01	61.41	-25.60
120 C181 VCC IM&T Projects	26.20	12.80	-13.40
120 C185 VCC Homecare Drugs	5.40	5.40	0.00
120 C200 VCC Outpatients	24.25	15.37	-8.88
120 C201 VCC Phlebotomy	3.33	2.33	-1.00
120 C203 VCC Radiology	23.83	16.14	-7.69
120 C210 VCC Medical Snr	52.75	43.58	-9.17
120 C211 VCC Medical Jnr	55.45	26.26	-29.19
120 C212 Medical Directorate Office	7.45	5.21	-2.24
120 C250 VCC Inpatient Services	79.28	61.80	-17.48
120 C252 VCC Bank Nurses	0.00	0.00	0.00
120 C300 VCC Medical Pal Medicine	23.50	12.90	-10.60
120 C301 VCC Chronic Pain Service	1.63	1.55	-0.08
120 C302 VCC Dipl of Palliative Medicine	2.90	1.00	-1.90
120 C303 VCC One Wales Palliative Care	20.40	9.53	-10.88
120 C350 VCC Operating Theatres	3.05	3.03	-0.02
120 C400 VCC Nuclear Medicine	7.60	6.00	-1.60
120 C501 VCC Occupational Therapy	5.35	4.15	-1.20
120 C502 VCC Speech and Language Therapist	7.90	4.50	-3.40
120 C503 VCC Physiotherapy	9.55	6.47	-3.08
120 C504 VCC Dietetics	7.30	5.40	-1.90
120 C505 VCC Complementary Therapies	2.60	2.00	-0.60
120 C550 VCC Facilities Management	25.64	16.33	-9.31
120 C551 VCC Domestic Services	7.68	6.99	-0.69
120 C552 VCC Staff Catering	2.92	2.92	0.00
120 C553 VCC Patient Catering	6.32	6.32	0.00
120 C556 VCC Portering	19.08	12.08	-7.00
120 C588 VCC IT/Supplies SLA	17.00	10.00	-7.00
120 C590 VCC Clinical Audit	2.84	2.84	0.00
120 C595 VCC Medical Records	47.67	43.39	-4.28
120 C598 VCC Clinical Coding	12.51	9.20	-3.31
120 C600 VCC Directorate Office	13.80	10.60	-3.20
120 C603 VCC Service Improvement	1.60	0.80	-0.80
120 C610 VCC Cancer Services Management	23.60	8.70	-14.90
120 C615 VCC Quality & Safety Office	2.00	2.00	0.00
120 C616 VCC Psychology	5.00	4.00	-1.00
120 C617 VCC WIBSS	3.00	3.00	0.00
120 C618 VCC Planning	6.00	5.00	-1.00
120 C620 VCC Nurse Management	48.08	20.20	-27.88
120 C621 VCC Clinical Nurse Specialist Department	26.40	30.70	4.30
120 C622 VCC Assessment Unit	9.00	8.72	-0.28
120 C644 COVID-19	88.10	2.80	-85.30
120 C650 VCC Private Patients Office	5.00	3.51	-1.49
120 C670 VCC Staff Volunteers	0.67	0.40	-0.27
Grand Total	**1133.45**	**742.38**	**-391.07**

M&D Consultant and SAS Job Plans

Information provided by Medical Staffing Manager

Role	Assignments	With Expired Plan	% With Expired Plan	With Current Plan (within 1 Year)	% With Current Plan	With Current but Unsigned Plan	% With Current but Unsigned Plan
Consultant	58	25	**43%**	33	**57%**	13	**39%**
Medical Director	1	0	**0%**	1	**100%**	0	**0%**
Specialty Doctor	0	0	**#DIV/0!**	0	**#DIV/0!**	0	**#DIV/0!**
GP	1	0	**0%**	1	**100%**	0	**0%**
Grand Total	**60**	**25**	**42%**	**35**	**58%**	**13**	**37%**

Employee Relations	This Month		Last Month
№ of Disciplinary Investigations:			
Of the Disciplinary № of Fast Track Processes:			
№ of Grievances:			
№ of Dignity at Work Issues:			

Overall Staff Movement (Turnover)

NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05
Headcount	791	789	794	795	798	810	811	815	813	815	816	817
FTE	687.47	686.38	690.79	694.13	695.96	705.64	705.78	708.49	707.43	709.42	708.20	708.50
Leavers Headcount	6	9	10	8	2	1	9	8	5	8	4	2
Leavers FTE	5.00	7.56	7.80	6.76	2.00	0.80	9.00	7.33	4.00	7.51	3.08	1.80
Starters Headcount	13	5	13	8	3	13	8	15	3	5	10	3
Starters FTE	10.23	4.80	11.10	8.00	2.67	10.32	6.80	13.40	2.53	3.60	7.61	2.80
Maternity	17	15	15	16	16	19	18	19	19	19	23	25
Turnover Rate (Headcount)	0.75%	1.12%	1.25%	1.00%	0.25%	0.12%	1.12%	1.00%	0.62%	1.00%	0.50%	0.25%
Turnover Rate (FTE)	0.72%	1.09%	1.12%	0.97%	0.29%	0.11%	1.29%	1.05%	0.57%	1.08%	0.44%	0.26%
Avg Headcount	801.50	801.50	801.50	801.50	801.50	801.50	801.50	801.50	801.50	801.50	801.50	801.50
Average FTE	695.96	695.96	695.96	695.96	695.96	695.96	695.96	695.96	695.96	695.96	695.96	695.96
Leavers (12m)	67	72	71	73	69	66	73	75	75	72	73	72
Leavers FTE (12m)	53.94	58.10	57.38	58.64	55.24	53.01	60.21	62.44	62.87	61.76	63.04	62.64
Turnover Rate (12m)	8.76%	9.41%	9.26%	9.46%	8.87%	8.38%	9.21%	9.42%	9.43%	9.03%	9.13%	8.96%
Turnover Rate FTE (12m)	8.14%	8.75%	8.63%	8.75%	8.17%	7.76%	8.76%	9.04%	9.09%	8.91%	9.07%	8.97%
Avg Headcount (12m)	765.00	765.50	767.00	772.00	778.00	787.50	792.50	796.50	795.50	797.50	799.50	804.00
Average FTE (12m)	662.92	664.06	665.23	670.43	676.21	683.33	687.61	691.06	691.41	693.43	694.87	697.99

Staff Turnover for the past 12 Months by Section

Org L5	Avg Headcount	Avg FTE	Starters Headcount	Starters FTE	Leavers Headcount	Leavers FTE	LTR Headcount %	LTR FTE %
120 VCC Cancer Services Management Office Section	31.50	29.81	6	5.60	4	4.00	12.70%	13.42%
120 VCC Clinical Audit Section	4.00	2.84	0		0		0.00%	0.00%
120 VCC Information Section	85.00	77.13	6	5.2	6	5.31	7.06%	6.88%
120 VCC Medical Physics Section	69.50	64.55	13	11.40	5	3.80	7.19%	5.89%
120 VCC Medical Staffing Section	62.50	55.39	9	7.52	6	5.60	9.60%	10.11%
120 VCC Nuclear Medicine Section	7.00	6.05	0		0		0.00%	0.00%
120 VCC Nursing Section	202.50	173.41	18	14.87	15	13.43	7.41%	7.74%
120 VCC Operational Services Section	61.50	45.20	4	2.13	5	4.20	8.13%	9.29%
120 VCC Outpatients Section	25.50	17.65	11	7.84	9	6.71	35.29%	37.99%
120 VCC Palliative/Chronic Pain Section	19.00	14.10	0		1	0.20	5.26%	1.42%
120 VCC Pharmacy Section	70.00	64.31	13	11.60	7	6.60	10.00%	10.26%
120 VCC Psychology Section	7.50	5.00	1	0.90	2	1.20	26.67%	24.00%
120 VCC Radiology Section	19.00	16.00	4	3.00	1	1.00	5.26%	6.25%
120 VCC Radiotherapy Section	112.50	104.21	11	11.00	9	9	8.00%	8.64%
120 VCC Staff Volunteers Section	1.50	0.83	0		1	0.60	66.67%	72.00%
120 VCC Therapies Section	23.00	19.47	3	2.80	1	1.00	4.35%	5.14%

Staff Turnover for the past 12 Months by Department

Org L8	Avg Headcount	Avg FTE	Starters Headcount	Starters FTE	Leavers Headcount	Leavers FTE	LTR Headcount %	LTR FTE %
120 C100 VCC Physics Engineering	9.00	8.60	2	2	1	1.00	11.11%	11.63%
120 C101 VCC Physics Radiotherapy	42.00	38.30	8	7.00	2	1.00	4.76%	2.61%
120 C104 VCC Physics Electronics	3.50	3.50	0		0		0.00%	0.00%
120 C110 VCC Radiation Protection	15.00	14.15	3	2.40	2	1.80	13.33%	12.72%
120 C120 VCC Radiotherapy	112.50	104.21	11	11.00	9	9.00	8.00%	8.64%
120 C151 VCC Chemotherapy Services	59.50	52.30	11	10.07	4	3.63	6.72%	6.93%
120 C180 VCC Pharmacy	65.00	59.61	10	9.20	6	5.60	9.23%	9.39%
120 C181 VCC IM&T Projects	16.50	15.30	0		2	2	12.12%	13.07%
120 C185 VCC Homecare Drugs	5.00	4.70	3	2.40	1	1.00	20.00%	21.28%
120 C200 VCC Outpatients	22.00	15.00	11	7.84	8	6.07	36.36%	40.44%
120 C201 VCC Phlebotomy	3.50	2.65	0		1	0.64	28.57%	24.12%
120 C203 VCC Radiology	19.00	16.00	4	3.00	1	1	5.26%	6.25%
120 C210 VCC Medical Snr	45.50	40.83	1	1	0		0.00%	0.00%
120 C211 VCC Medical Jnr	6.50	5.98	6	5.32	5	4.80	76.92%	80.27%
120 C212 Medical Directorate Office	7.00	5.47	1	0.4	1	0.8	14.29%	14.62%
120 C250 VCC Inpatient Services	61.50	54.53	2	2.00	5	4.52	8.13%	8.29%
120 C300 VCC Medical Pal Medicine	5.00	4.35	0		0		0.00%	0.00%
120 C301 VCC Chronic Pain Service	2.50	1.23	0		0		0.00%	0.00%
120 C302 VCC Dipl of Palliative Medicine	1.00	1.00	0		0		0.00%	0.00%
120 C303 VCC One Wales Palliative Care	10.50	7.53	0		1	0.20	9.52%	2.66%
120 C350 VCC Operating Theatres	6.00	3.03	0		0		0.00%	0.00%
120 C400 VCC Nuclear Medicine	7.00	6.05	0		0		0.00%	0.00%
120 C501 VCC Occupational Therapy	4.50	3.82	2	1.8	1	1	22.22%	26.16%
120 C502 VCC Speech and Language Therapist	5.00	4.10	0		0		0.00%	0.00%
120 C503 VCC Physiotherapy	8.00	6.65	0		0		0.00%	0.00%
120 C504 VCC Dietetics	5.50	4.90	1	1.00	0		0.00%	0.00%
120 C505 VCC Complementary Therapies	3.00	2.00	0		1	0.4	33.33%	20.00%
120 C550 VCC Facilities Management	23.50	16.23	4	2.13	4	3.40	17.02%	20.95%
120 C551 VCC Domestic Services	11.00	7.65	0		1	0.80	9.09%	10.45%
120 C552 VCC Staff Catering	4.00	2.92	0		0		0.00%	0.00%
120 C553 VCC Patient Catering	9.00	6.32	0		0		0.00%	0.00%
120 C556 VCC Portering	14.00	12.08	0		0		0.00%	0.00%
120 C588 VCC IT/Supplies SLA	10.00	10.00	1	1	0		0.00%	0.00%
120 C590 VCC Clinical Audit	4.00	2.84	0		0		0.00%	0.00%
120 C595 VCC Medical Records	48.00	42.31	5	4.2	3	2.4	6.25%	5.67%
120 C598 VCC Clinical Coding	10.50	9.51	0		1	0.91	9.52%	9.53%
120 C600 VCC Directorate Office	9.50	9.10	1	0.8	0		0.00%	0.00%
120 C603 VCC Service Improvement	1.00	0.80	0		0		0.00%	0.00%
120 C610 VCC Cancer Services Management	9.00	8.55	1	1	2	2.00	22.22%	23.39%
120 C615 VCC Quality & Safety Office	1.50	1.50	0		0		0.00%	0.00%
120 C616 VCC Psychology	4.50	3.00	1	0.9	1	0.8	22.22%	26.67%
120 C617 VCC WIBSS	3.00	3.00	0		0		0.00%	0.00%
120 C618 VCC Planning	5.00	4.85	2	2	0		0.00%	0.00%
120 C620 VCC Nurse Management	52.00	42.35	3	1.8	6	5.28	11.54%	12.47%
120 C621 VCC Clinical Nurse Specialist Department	17.50	15.35	2	1.00	0		0.00%	0.00%
120 C622 VCC Assessment Unit	4.50	4.36	0		0		0.00%	0.00%
120 C644 COVID-19	4.00	3.51	2	1.80	2	2.00	50.00%	57.03%
120 C650 VCC Private Patients Office	3.50	3.11	1	0.8	0		0.00%	0.00%
120 C670 VCC Staff Volunteers	1.50	0.83	0		1	0.6	66.67%	72.00%

Reasons for Leaving and Destination of Leaving for the last 12 Months

NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.

Leaving Reason	Destination On Leaving	Count of Employee Number	Sum of FTE
Death in Service	No Employment	1.00	1.00
Dismissal - Capability	Unknown	2.00	1.80
End of Fixed Term Contract	General Practice	1.00	0.20
	NHS Organisation	3.00	2.80
	Other Public Sector	1.00	1.00
End of Fixed Term Contract - Completion of Training Scheme	Other Public Sector	1.00	0.99
End of Fixed Term Contract - Other	Unknown	1.00	1.00
Flexi Retirement	NHS Organisation	3.00	3.00
	Return to Practice	3.00	2.80
Retirement - Ill Health	NHS Organisation	1.00	1.00
Retirement Age	No Employment	9.00	7.16
	Unknown	6.00	4.45
Voluntary Resignation - Better Reward Package	NHS Organisation	1.00	1.00
	Unknown	1.00	1.00
Voluntary Resignation - Child Dependants	Unknown	1.00	0.40
Voluntary Resignation - Health	No Employment	1.00	0.60
Voluntary Resignation - Lack of Opportunities	NHS Organisation	2.00	2.00
Voluntary Resignation - Other/Not Known	NHS Organisation	1.00	0.60
	Unknown	5.00	4.33
Voluntary Resignation - Promotion	NHS Organisation	11.00	10.20
	Other Private Sector	1.00	0.80
	Other Public Sector	1.00	1.00
	Prison Service	1.00	1.00
	Unknown	4.00	3.59
Voluntary Resignation - Relocation	NHS Organisation	2.00	2.00
	Other Public Sector	1.00	1.00
	Unknown	5.00	4.91
Voluntary Resignation - To undertake further education or training	Education /Training	1.00	1.00
Voluntary Resignation - Work Life Balance	NHS Organisation	1.00	1.00
Grand Total		72.00	63.63

Sickness Absence

Rolling Monthly Absence % (FTE)	Absence Days	Abs (FTE)	Avail (FTE)
5.31%	16,450	14,139.75	266,183.88

In Month Absence

Absence % (FTE)	Target %
4.99%	3.54%

12 Month Absence by:	Absence % (FTE) Jun-20	Absence % (FTE) Jul-20	Absence % (FTE) Aug-20	Absence % (FTE) Sep-20	Absence % (FTE) Oct-20	Absence % (FTE) Nov-20	Absence % (FTE) Dec-20	Absence % (FTE) Jan-21	Absence % (FTE) Feb-21	Absence % (FTE) Mar-21	Absence % (FTE) Apr-21	Absence % (FTE) May-21
Rolling Absence	5.44%	5.57%	5.63%	5.73%	5.74%	5.76%	5.85%	5.84%	5.92%	5.71%	5.35%	5.31%
In Month Absence	5.38%	4.97%	5.20%	5.43%	5.12%	5.19%	6.92%	5.92%	5.64%	4.45%	4.54%	4.99%

Long Term & Short Term in Month Figure

Short Term	1.24%
Long Term	3.75%

COVID-19 Statistics for Reporting Month

Covid Sickness In Month Figure	
Sickness Non Covid-19 related %	4.58
Sickness Covid-19 related %	0.41

Covid Special Leave In Month Figure	
Special Leave Non Covid-19 related %	0.28
Special Leave Covid-19 related %	0.57

In Month & Cumulative Sickness Absence Broken down by Section & Department

12 Month in Month Absence Rate by Org Level 5

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05	Absence FTE %
	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	
120 VCC Cancer Services Management Office Section	1.14%	0.57%	0.00%	0.38%	0.00%	0.25%	3.52%	5.97%	3.58%	3.90%	3.46%	3.84%	**2.28%**
120 VCC Clinical Audit Section	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.54%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.98%**
120 VCC Information Section	7.96%	8.17%	8.26%	6.23%	4.76%	7.60%	8.55%	8.48%	5.81%	2.51%	3.36%	4.75%	**6.40%**
120 VCC Medical Physics Section	1.00%	2.46%	3.20%	1.68%	2.19%	0.66%	1.06%	1.02%	0.69%	0.38%	0.76%	0.34%	**1.27%**
120 VCC Medical Staffing Section	1.32%	1.60%	1.55%	3.19%	4.18%	3.42%	3.85%	2.85%	4.14%	3.51%	2.62%	3.80%	**3.03%**
120 VCC Nuclear Medicine Section	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	6.45%	0.54%	0.00%	0.00%	0.00%	0.43%	**0.71%**
120 VCC Nursing Section	7.26%	6.03%	5.57%	6.39%	6.96%	7.68%	10.64%	8.33%	7.30%	4.98%	5.12%	5.75%	**6.84%**
120 VCC Operational Services Section	12.25%	10.95%	8.36%	7.70%	7.05%	5.52%	7.35%	11.93%	7.95%	6.92%	8.86%	11.76%	**8.90%**
120 VCC Outpatients Section	4.27%	0.00%	3.81%	3.30%	11.14%	5.95%	5.33%	4.41%	9.57%	9.26%	9.00%	12.18%	**6.46%**
120 VCC Palliative/Chronic Pain Section	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.22%	4.03%	**0.50%**
120 VCC Pharmacy Section	9.27%	7.70%	8.87%	7.40%	7.30%	9.88%	11.88%	8.94%	11.35%	11.70%	9.72%	8.35%	**9.36%**
120 VCC Psychology Section	0.00%	0.00%	0.00%	0.00%	0.51%	1.57%	0.57%	0.00%	0.00%	0.49%	1.13%	0.00%	**0.37%**
120 VCC Radiology Section	6.73%	6.73%	9.85%	8.65%	6.61%	5.35%	3.27%	0.79%	4.43%	0.00%	2.45%	1.51%	**4.52%**
120 VCC Radiotherapy Section	3.61%	4.90%	5.99%	7.68%	5.51%	4.18%	5.85%	4.85%	5.46%	5.10%	4.72%	3.99%	**5.16%**
120 VCC Staff Volunteers Section	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 VCC Therapies Section	5.10%	0.17%	1.58%	8.77%	0.35%	0.00%	6.51%	1.58%	0.88%	0.32%	1.21%	1.43%	**2.30%**
Grand Total	**5.38%**	**4.97%**	**5.20%**	**5.43%**	**5.12%**	**5.19%**	**6.92%**	**5.92%**	**5.64%**	**4.45%**	**4.54%**	**4.99%**	**5.31%**

12 Month in Month Absence Rate by Org Level 8

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05	Absence FTE %
	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	
120 C100 VCC Physics Engineering	6.58%	1.27%	6.37%	7.89%	7.20%	1.95%	0.23%	4.44%	1.79%	0.00%	0.00%	0.00%	**2.96%**
120 C101 VCC Physics Radiotherapy	0.30%	3.92%	3.89%	1.24%	2.07%	0.68%	0.00%	0.65%	0.72%	0.39%	0.00%	0.00%	**1.12%**
120 C104 VCC Physics Electronics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 C110 VCC Radiation Protection	0.00%	0.00%	0.48%	0.00%	0.00%	0.00%	4.69%	0.00%	0.00%	0.71%	3.78%	1.57%	**0.95%**
120 C120 VCC Radiotherapy	3.61%	4.90%	5.99%	7.68%	5.51%	4.18%	5.85%	4.85%	5.46%	5.10%	4.72%	3.99%	**5.16%**
120 C151 VCC Chemotherapy Services	7.06%	6.52%	5.16%	7.94%	6.03%	8.24%	9.07%	6.62%	9.66%	6.24%	6.54%	7.40%	**7.15%**
120 C180 VCC Pharmacy	8.08%	7.49%	9.47%	7.88%	7.52%	8.71%	11.09%	8.02%	10.63%	11.05%	8.94%	7.46%	**8.86%**
120 C181 VCC IM&T Projects	10.67%	5.07%	0.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.73%	0.00%	**1.56%**
120 C185 VCC Homecare Drugs	30.93%	11.43%	0.00%	0.00%	4.03%	27.50%	22.96%	20.00%	20.00%	19.16%	18.52%	18.52%	**16.26%**
120 C200 VCC Outpatients	1.36%	0.00%	4.33%	3.76%	12.67%	6.82%	6.09%	5.02%	7.05%	6.55%	10.39%	12.76%	**6.41%**
120 C201 VCC Phlebotomy	18.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.02%	27.65%	0.00%	8.33%	**6.79%**
120 C203 VCC Radiology	6.73%	6.73%	9.85%	8.65%	6.61%	5.35%	3.27%	0.79%	4.43%	0.00%	2.45%	1.51%	**4.52%**
120 C210 VCC Medical Snr	2.29%	2.29%	2.28%	3.62%	4.59%	4.57%	4.57%	3.37%	4.48%	2.73%	2.21%	2.13%	**3.26%**
120 C211 VCC Medical Jnr	0.00%	0.90%	0.00%	1.12%	2.70%	2.72%	3.62%	2.87%	4.25%	1.75%	0.00%	0.99%	**1.74%**
120 C212 Medical Directorate Office	0.00%	0.00%	4.77%	6.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.92%**
120 C250 VCC Inpatient Services	13.65%	9.38%	8.96%	8.02%	11.16%	9.80%	15.15%	10.29%	8.45%	5.67%	7.70%	6.94%	**9.61%**
120 C300 VCC Medical Pal Medicine	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 C301 VCC Chronic Pain Service	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 C302 VCC Dipl of Palliative Medicine	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 C303 VCC One Wales Palliative Care	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.60%	10.50%	**1.31%**
120 C350 VCC Operating Theatres	0.00%	0.00%	0.00%	0.00%	1.36%	0.00%	0.00%	0.00%	0.00%	0.00%	3.30%	0.00%	**0.39%**
120 C400 VCC Nuclear Medicine	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	6.45%	0.54%	0.00%	0.00%	0.00%	0.43%	**0.71%**
120 C501 VCC Occupational Therapy	0.00%	0.98%	0.00%	10.25%	0.00%	0.00%	12.74%	1.94%	0.84%	0.00%	1.93%	0.00%	**2.46%**
120 C502 VCC Speech and Language Therapist	2.28%	0.00%	1.35%	9.09%	0.00%	0.00%	1.47%	0.00%	0.86%	0.00%	1.14%	4.80%	**1.75%**
120 C503 VCC Physiotherapy	10.74%	0.00%	0.00%	0.00%	0.49%	0.00%	8.73%	3.42%	0.54%	0.00%	1.29%	1.00%	**2.21%**
120 C504 VCC Dietetics	3.03%	0.00%	5.13%	20.45%	0.73%	0.00%	2.20%	0.00%	1.33%	1.19%	0.62%	0.48%	**2.77%**
120 C505 VCC Complementary Therapies	0.00%	0.00%	0.00%	0.00%	0.00%	1.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.11%**
120 C550 VCC Facilities Management	5.41%	9.99%	10.24%	6.11%	7.45%	6.85%	3.57%	7.50%	4.99%	3.94%	9.01%	10.70%	**7.12%**
120 C551 VCC Domestic Services	9.62%	1.69%	0.00%	1.67%	0.58%	2.66%	0.00%	6.72%	0.35%	0.00%	0.00%	0.00%	**2.03%**
120 C552 VCC Staff Catering	68.95%	40.34%	29.22%	30.59%	44.47%	32.65%	53.31%	49.77%	49.77%	49.77%	50.84%	49.77%	**45.76%**
120 C553 VCC Patient Catering	0.00%	0.35%	1.14%	5.27%	1.91%	0.00%	0.00%	10.48%	18.35%	12.60%	13.15%	12.74%	**6.25%**
120 C556 VCC Portering	16.00%	16.56%	9.82%	9.36%	4.27%	1.66%	9.61%	13.08%	1.18%	2.14%	1.38%	10.30%	**8.01%**
120 C588 VCC IT/Supplies SLA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.93%	2.64%	0.00%	0.00%	**0.54%**
120 C590 VCC Clinical Audit	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.54%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.98%**
120 C595 VCC Medical Records	10.38%	11.73%	12.87%	9.29%	6.67%	13.94%	16.04%	15.52%	9.74%	2.81%	3.56%	6.14%	**9.86%**
120 C598 VCC Clinical Coding	1.02%	7.22%	10.18%	10.18%	10.18%	2.04%	0.23%	0.53%	0.00%	4.58%	10.31%	10.00%	**5.52%**
120 C600 VCC Directorate Office	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%	0.00%	0.49%	**0.20%**
120 C603 VCC Service Improvement	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.90%	0.00%	0.00%	0.00%	0.00%	0.00%	**1.10%**
120 C610 VCC Cancer Services Management	3.01%	0.00%	0.00%	0.00%	0.00%	0.74%	3.94%	6.77%	12.50%	12.50%	14.29%	14.24%	**5.17%**
120 C615 VCC Quality & Safety Office	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.84%	**0.52%**
120 C616 VCC Psychology	0.00%	0.00%	0.00%	0.00%	0.89%	1.84%	1.00%	0.00%	0.00%	0.74%	1.71%	0.00%	**0.54%**
120 C617 VCC WIBSS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.23%	**0.27%**
120 C618 VCC Planning	0.00%	3.43%	0.00%	0.00%	0.00%	0.00%	12.95%	9.15%	0.00%	0.00%	0.58%	0.00%	**2.00%**
120 C620 VCC Nurse Management	3.05%	3.58%	3.87%	4.27%	3.84%	5.93%	8.18%	8.34%	5.10%	3.99%	0.46%	0.91%	**4.76%**
120 C621 VCC Clinical Nurse Specialist Department										4.52%	3.68%	6.41%	**4.91%**
120 C622 VCC Assessment Unit										0.00%	0.00%	0.00%	**0.00%**
120 C644 COVID-19	1.58%	0.00%	0.00%	7.56%	0.00%	0.00%	0.00%	25.31%	0.00%	0.00%	0.00%	0.00%	**3.26%**
120 C650 VCC Private Patients Office	0.00%	0.00%	0.00%	8.62%	16.68%	0.00%	3.59%	1.47%	6.52%	32.18%	32.32%	51.33%	**13.40%**
120 C670 VCC Staff Volunteers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
Grand Total	**5.38%**	**4.97%**	**5.20%**	**5.43%**	**5.12%**	**5.19%**	**6.92%**	**5.92%**	**5.64%**	**4.45%**	**4.54%**	**4.99%**	**5.31%**

Short & Long Term 12 Month Absence by Department in Month Figure

	2020 / 06		2020 / 07		2020 / 08		2020 / 09		2020 / 10		2020 / 11		2020 / 12		2021 / 01		2021 / 02		2021 / 03		2021 / 04		2021 / 05	
Org L8	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term
120 C100 VCC Physics Engineering	6.58	0.00	1.27	0.00	0.00	6.37	0.00	7.89	1.13	6.08	1.95	0.00	0.23	0.00	4.44	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C101 VCC Physics Radiotherapy	0.00	0.30	0.00	3.92	0.13	3.76	0.18	1.06	1.33	0.73	0.68	0.00	0.00	0.00	0.65	0.00	0.72	0.00	0.39	0.00	0.00	0.00	0.00	0.00
120 C104 VCC Physics Electronics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C110 VCC Radiation Protection	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.69	0.00	0.00	0.00	0.00	0.00	0.71	0.00	3.78	0.00	1.57	0.00
120 C120 VCC Radiotherapy	0.42	3.18	0.77	4.13	1.47	4.51	3.71	3.98	2.15	3.37	1.89	2.29	2.11	3.74	1.27	3.59	1.14	4.32	0.58	4.52	1.05	3.66	1.43	2.56
120 C151 VCC Chemotherapy Services	0.10	6.96	1.33	5.20	0.81	4.35	3.68	4.26	2.08	3.95	3.65	4.59	3.86	5.21	1.21	5.42	3.11	6.55	0.49	5.75	1.02	5.52	0.87	6.53
120 C180 VCC Pharmacy	1.57	6.51	0.37	7.12	1.42	8.05	2.06	5.83	1.57	5.94	1.70	7.00	4.26	6.83	0.11	7.91	1.58	9.05	1.39	9.67	1.30	7.64	0.95	6.51
120 C181 VCC IM&T Projects	0.00	10.67	0.00	5.07	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00
120 C185 VCC Homecare Drugs	0.00	30.93	0.00	11.43	0.00	0.00	0.00	0.00	3.23	0.81	2.50	25.00	0.00	22.96	0.00	20.00	0.00	20.00	0.00	19.16	0.00	18.52	0.00	18.52
120 C200 VCC Outpatients	1.36	0.00	0.00	0.00	4.33	0.00	1.16	2.59	9.13	3.54	3.09	3.73	2.39	3.70	0.46	4.56	0.47	6.58	0.24	6.31	1.61	8.78	3.66	9.11
120 C201 VCC Phlebotomy	0.00	18.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.02	0.00	27.65	0.00	0.00	8.33	0.00
120 C203 VCC Radiology	0.00	6.73	0.00	6.73	0.00	9.85	0.36	8.30	1.11	5.50	1.19	4.16	3.27	0.00	0.79	0.00	4.43	0.00	0.00	0.00	2.45	0.00	1.51	0.00
120 C210 VCC Medical Snr	0.00	2.29	0.00	2.29	0.00	2.28	0.00	3.62	0.00	4.59	0.00	4.57	0.00	4.57	0.90	2.47	0.00	4.48	0.00	2.73	0.08	2.13	0.00	2.13
120 C211 VCC Medical Jnr	0.00	0.00	0.90	0.00	0.00	0.00	0.00	1.12	0.37	2.32	0.30	2.42	1.22	2.40	0.48	2.40	1.83	2.42	0.33	1.41	0.00	0.00	0.99	0.00
120 C212 Medical Directorate Office	0.00	0.00	0.00	0.00	4.77	0.00	6.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C250 VCC Inpatient Services	0.95	12.70	0.22	9.16	1.05	7.92	1.05	6.98	2.80	8.36	1.14	8.66	3.39	11.76	1.71	8.57	3.13	5.32	0.30	5.37	1.60	6.10	1.65	5.28
120 C300 VCC Medical Pal Medicine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C301 VCC Chronic Pain Service	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C302 VCC Dipl of Palliative Medicine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C303 VCC One Wales Palliative Care	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	3.85	0.00	10.50
120 C350 VCC Operating Theatres	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	0.00	0.00	0.00
120 C400 VCC Nuclear Medicine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	6.45	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00
120 C501 VCC Occupational Therapy	0.00	0.00	0.98	0.00	0.00	0.00	10.25	0.00	0.00	0.00	0.00	0.00	12.74	0.00	1.94	0.00	0.84	0.00	0.00	0.00	1.93	0.00	0.00	0.00
120 C502 VCC Speech and Language Therapist	2.28	0.00	0.00	0.00	1.35	0.00	9.09	0.00	0.00	0.00	0.00	0.00	1.47	0.00	0.00	0.00	0.86	0.00	0.00	0.00	1.14	0.00	4.80	0.00
120 C503 VCC Physiotherapy	0.00	10.74	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	8.73	0.00	3.42	0.00	0.54	0.00	0.00	0.00	1.29	0.00	1.00	0.00
120 C504 VCC Dietetics	3.03	0.00	0.00	0.00	0.00	5.13	0.00	20.45	0.73	0.00	0.00	0.00	2.20	0.00	0.00	0.00	1.33	0.00	1.19	0.00	0.62	0.00	0.48	0.00
120 C505 VCC Complementary Therapies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C550 VCC Facilities Management	1.06	4.35	5.22	4.78	4.01	6.23	0.00	6.11	0.64	6.81	3.65	3.19	0.41	3.16	0.00	7.50	0.00	4.99	0.53	3.40	0.80	8.21	4.67	6.03
120 C551 VCC Domestic Services	0.00	9.62	0.00	1.69	0.00	0.00	1.67	0.00	0.58	0.00	2.66	0.00	0.00	0.00	6.72	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C552 VCC Staff Catering	19.18	49.77	5.16	35.19	0.00	29.22	1.37	29.22	15.25	29.22	0.00	32.65	3.54	49.77	0.00	49.77	0.00	49.77	0.00	49.77	1.07	49.77	0.00	49.77
120 C553 VCC Patient Catering	0.00	0.00	0.35	0.00	1.14	0.00	5.27	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	10.48	0.00	18.35	3.74	8.86	4.29	8.86	3.88	8.86
120 C556 VCC Portering	1.93	14.07	0.00	16.56	1.54	8.28	1.08	8.28	0.00	4.27	1.66	0.00	6.94	2.67	4.81	8.28	1.18	0.00	2.14	0.00	1.38	0.00	5.34	4.96
120 C588 VCC IT/Supplies SLA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.93	0.00	2.64	0.00	0.00	0.00	0.00	0.00
120 C590 VCC Clinical Audit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C595 VCC Medical Records	1.22	9.17	1.17	10.57	1.88	10.99	0.63	8.66	1.85	4.82	2.80	11.14	1.34	14.70	2.90	12.62	1.70	8.04	0.42	2.39	0.08	3.48	1.72	4.41
120 C598 VCC Clinical Coding	1.02	0.00	0.00	7.22	0.00	10.18	0.00	10.18	0.00	10.18	0.00	2.04	0.23	0.00	0.53	0.00	0.00	0.00	0.31	4.28	0.00	10.31	0.00	10.00
120 C600 VCC Directorate Office	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	0.00	0.49	0.00
120 C603 VCC Service Improvement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C610 VCC Cancer Services Management	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	3.94	0.00	0.00	6.77	0.00	12.50	0.00	12.50	0.00	14.29	0.00	14.24
120 C615 VCC Quality & Safety Office	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.84	0.00
120 C616 VCC Psychology	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	1.84	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	1.71	0.00	0.00	0.00
120 C617 VCC WIBSS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23	0.00
120 C618 VCC Planning	0.00	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.95	0.00	9.15	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00
120 C620 VCC Nurse Management	1.65	1.39	0.20	3.38	0.92	2.95	1.24	3.04	0.62	3.23	0.82	5.11	2.03	6.15	1.45	6.88	0.38	4.72	1.57	2.41	0.46	0.00	0.91	0.00
120 C621 VCC Clinical Nurse Specialist Department																			0.77	3.75	0.35	3.32	3.15	3.26
120 C622 VCC Assessment Unit																			0.00	0.00	0.00	0.00	0.00	0.00
120 C644 COVID-19	1.58	0.00	0.00	0.00	0.00	0.00	7.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C650 VCC Private Patients Office	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.62	0.00	16.68	0.00	0.00	3.59	0.00	1.47	0.00	6.52	0.00	10.84	21.34	0.00	32.32	0.00	51.33
120 C670 VCC Staff Volunteers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 C680 VCC Fundraising Office	0.00	0.00																						

Top Ten Reasons for Sickness Absence for last 12 Months

Absence Reason	Headcount	Abs Occurrences	Abs Days	Abs Estimated Cost	%	%
S10 Anxiety/stress/depression/other psychiatric illnesses	89	100	4,233.36	£359,274.55	29.9	29.9%
S15 Chest & respiratory problems	86	109	1,693.24	£262,904.48	12.0	12.0%
S28 Injury, fracture	27	28	1,198.03	£97,349.98	8.5	8.5%
S12 Other musculoskeletal problems	19	21	1,182.42	£50,354.30	8.4	8.4%
S27 Infectious diseases	51	51	915.58	£79,624.83	6.5	6.5%
S30 Pregnancy related disorders	27	53	794.39	£91,523.18	5.6	5.6%
S17 Benign and malignant tumours, cancers	7	8	674.72	£58,513.04	4.8	4.8%
S25 Gastrointestinal problems	79	93	603.01	£60,150.10	4.3	4.3%
S21 Ear, nose, throat (ENT)	44	51	472.09	£42,901.97	3.3	3.3%
S11 Back Problems	29	31	470.08	£29,017.55	3.3	3.3%

Top Ten Reasons for Sickness Absence for this Month

Absence Reason	Headcount	Abs Occurrences	FTE Days Lost	Abs Estimated Cost	%
S10 Anxiety/stress/depression/other psychiatric illnesses	19	19	403.77	£32,822.59	35.4
S15 Chest & respiratory problems	7	7	113.59	£17,428.43	10.0
S12 Other musculoskeletal problems	5	5	83.35	£5,140.51	7.3
S28 Injury, fracture	5	5	82.59	£2,841.39	7.2
S17 Benign and malignant tumours, cancers	3	3	78.12	£4,599.23	6.9
S25 Gastrointestinal problems	18	18	71.49	£6,980.10	6.3
S11 Back Problems	6	6	59.60	£2,906.05	5.2
S27 Infectious diseases	3	3	52.84	£4,733.90	4.6
S21 Ear, nose, throat (ENT)	9	9	52.11	£3,813.85	4.6
S30 Pregnancy related disorders	5	6	31.64	£3,430.71	2.8

PADR Compliance

These figures exclude Trainee Doctors, those on Maternity, Starters within first 6 Months, those currently off on sickness absence.

Assignment Count	Reviews Completed	Reviews Completed %
716	567	79.19

Org L5	Assignment Count	Reviews Completed	Reviews Completed %
120 VCC Cancer Services Management Office Section	26	17	65.38
120 VCC Clinical Audit Section	4	2	50.00
120 VCC Information Section	76	60	78.95
120 VCC Medical Physics Section	65	58	89.23
120 VCC Medical Staffing Section	60	18	30.00
120 VCC Nuclear Medicine Section	7	7	100.00
120 VCC Nursing Section	181	163	90.06
120 VCC Operational Services Section	56	46	82.14
120 VCC Outpatients Section	18	13	72.22
120 VCC Palliative/Chronic Pain Section	19	10	52.63
120 VCC Pharmacy Section	60	57	95.00
120 VCC Psychology Section	7	5	71.43
120 VCC Radiology Section	18	15	83.33
120 VCC Radiotherapy Section	97	77	79.38
120 VCC Staff Volunteers Section	1	1	100.00
120 VCC Therapies Section	21	18	85.71
Grand Total	**716**	**567**	**79.19**

Org L8	Assignment Count	Reviews Completed	Reviews Completed %
120 C100 VCC Physics Engineering	9	8	88.89
120 C101 VCC Physics Radiotherapy	39	34	87.18
120 C104 VCC Physics Electronics	3	3	100.00
120 C110 VCC Radiation Protection	14	13	92.86
120 C120 VCC Radiotherapy	97	77	79.38
120 C151 VCC Chemotherapy Services	45	37	82.22
120 C180 VCC Pharmacy	57	54	94.74
120 C181 VCC IM&T Projects	13	7	53.85
120 C185 VCC Homecare Drugs	3	3	100.00
120 C200 VCC Outpatients	15	11	73.33
120 C201 VCC Phlebotomy	3	2	66.67
120 C203 VCC Radiology	18	15	83.33
120 C210 VCC Medical Snr	44	10	22.73
120 C211 VCC Medical Jnr	7	1	14.29
120 C212 Medical Directorate Office	6	5	83.33
120 C250 VCC Inpatient Services	62	61	98.39
120 C300 VCC Medical Pal Medicine	5	2	40.00
120 C301 VCC Chronic Pain Service	3	1	33.33
120 C302 VCC Dipl of Palliative Medicine	1	1	100.00
120 C303 VCC One Wales Palliative Care	10	6	60.00
120 C350 VCC Operating Theatres	6	5	83.33
120 C400 VCC Nuclear Medicine	7	7	100.00
120 C501 VCC Occupational Therapy	5	4	80.00
120 C502 VCC Speech and Language Therapist	5	5	100.00
120 C503 VCC Physiotherapy	7	5	71.43
120 C504 VCC Dietetics	4	4	100.00
120 C505 VCC Complementary Therapies	2	1	50.00
120 C550 VCC Facilities Management	23	17	73.91
120 C551 VCC Domestic Services	10	9	90.00
120 C552 VCC Staff Catering	2	1	50.00
120 C553 VCC Patient Catering	7	6	85.71
120 C556 VCC Portering	14	13	92.86
120 C588 VCC IT/Supplies SLA	9	3	33.33
120 C590 VCC Clinical Audit	4	2	50.00
120 C595 VCC Medical Records	45	42	93.33
120 C598 VCC Clinical Coding	9	8	88.89
120 C600 VCC Directorate Office	10	4	40.00
120 C603 VCC Service Improvement	1	1	100.00
120 C610 VCC Cancer Services Management	7	6	85.71
120 C615 VCC Quality & Safety Office	2	1	50.00
120 C616 VCC Psychology	5	4	80.00
120 C617 VCC WIBSS	2	2	100.00
120 C618 VCC Planning	4	2	50.00
120 C620 VCC Nurse Management	27	25	92.59
120 C621 VCC Clinical Nurse Specialist Department	31	29	93.55
120 C622 VCC Assessment Unit	8	5	62.50
120 C644 COVID-19	2	2	100.00
120 C650 VCC Private Patients Office	3	2	66.67
120 C670 VCC Staff Volunteers	1	1	100.00
Grand Total	**716**	**567**	**79.19**

Statutory & Mandatory Training Compliance By Organisation (10x CSTF skills)

These figures exclude those on Maternity and those currently off with sickness absence

Assignment Count	Required	Achieved	Compliance %
791	7910	6468	81.77%

Statutory & Mandatory Training Compliance By Section (10x CSTF skills)

Org L5	Assignment Count	Required	Achieved	Compliance %
120 VCC Cancer Services Management Office Section	29	290	225	77.59%
120 VCC Clinical Audit Section	4	40	38	95.00%
120 VCC Information Section	79	790	682	86.33%
120 VCC Medical Physics Section	72	720	559	77.64%
120 VCC Medical Staffing Section	82	820	519	63.29%
120 VCC Nuclear Medicine Section	7	70	60	85.71%
120 VCC Nursing Section	190	1900	1653	87.00%
120 VCC Operational Services Section	56	560	404	72.14%
120 VCC Outpatients Section	24	240	192	80.00%
120 VCC Palliative/Chronic Pain Section	30	300	188	62.67%
120 VCC Pharmacy Section	66	660	618	93.64%
120 VCC Psychology Section	7	70	61	87.14%
120 VCC Radiology Section	20	200	168	84.00%
120 VCC Radiotherapy Section	102	1020	879	86.18%
120 VCC Staff Volunteers Section	1	10	10	100.00%
120 VCC Therapies Section	22	220	212	96.36%

Statutory & Mandatory Training Compliance By Section by the (10x CSTF Skills)

Org L5	NHS|CSTF|Equality, Diversity and Human Rights - 3 Years|	NHS|CSTF|Fire Safety - 2 Years|	NHS|CSTF|Health, Safety and Welfare - 3 Years|	NHS|CSTF|Infection Prevention and Control - Level 1 - 3 Years|	NHS|CSTF|Information Governance (Wales) - 2 Years|	NHS|CSTF|Moving and Handling - Level 1 - 2 Years|	NHS|CSTF|Resuscitation - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Adults - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Children - Level 1 - 3 Years|	NHS|CSTF|Violence and Aggression (Wales) - Module A - No Specified Renewal|
120 VCC Cancer Services Management Office Section	75.86%	79.31%	86.21%	79.31%	82.76%	58.62%	82.76%	72.41%	68.97%	89.66%
120 VCC Clinical Audit Section	100.00%	100.00%	100.00%	100.00%	75.00%	100.00%	75.00%	100.00%	100.00%	100.00%
120 VCC Information Section	91.14%	79.75%	94.94%	86.08%	83.54%	72.15%	91.14%	83.54%	87.34%	93.67%
120 VCC Medical Physics Section	83.33%	77.78%	86.11%	70.83%	77.78%	55.56%	75.00%	81.94%	72.22%	95.83%
120 VCC Medical Staffing Section	62.20%	84.15%	53.66%	71.95%	81.71%	45.12%	71.95%	52.44%	60.98%	48.78%
120 VCC Nuclear Medicine Section	100.00%	100.00%	71.43%	100.00%	100.00%	28.57%	85.71%	100.00%	71.43%	100.00%
120 VCC Nursing Section	91.58%	93.16%	88.95%	93.16%	85.26%	57.89%	89.47%	90.00%	87.89%	92.63%
120 VCC Operational Services Section	67.86%	89.29%	76.79%	96.43%	53.57%	42.86%	66.07%	75.00%	75.00%	78.57%
120 VCC Outpatients Section	87.50%	91.67%	83.33%	95.83%	79.17%	54.17%	70.83%	79.17%	75.00%	83.33%
120 VCC Palliative/Chronic Pain Section	60.00%	73.33%	63.33%	70.00%	50.00%	56.67%	70.00%	56.67%	63.33%	63.33%
120 VCC Pharmacy Section	96.97%	92.42%	92.42%	98.48%	93.94%	86.36%	92.42%	95.45%	93.94%	93.94%
120 VCC Psychology Section	85.71%	100.00%	100.00%	85.71%	100.00%	57.14%	85.71%	85.71%	71.43%	100.00%
120 VCC Radiology Section	85.00%	95.00%	85.00%	85.00%	80.00%	60.00%	85.00%	90.00%	85.00%	90.00%
120 VCC Radiotherapy Section	89.22%	97.06%	85.29%	88.24%	85.29%	57.84%	89.22%	87.25%	89.22%	93.14%
120 VCC Staff Volunteers Section	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 VCC Therapies Section	100.00%	100.00%	100.00%	100.00%	81.82%	90.91%	95.45%	100.00%	95.45%	100.00%

Statutory & Mandatory Training Compliance by Department by the (10x CSTF Skills)

Org L8	NHS|CSTF|Equality, Diversity and Human Rights - 3 Years|	NHS|CSTF|Fire Safety - 2 Years|	NHS|CSTF|Health, Safety and Welfare - 3 Years|	NHS|CSTF|Infection Prevention and Control - Level 1 - 3 Years|	NHS|CSTF|Information Governance (Wales) - 2 Years|	NHS|CSTF|Moving and Handling - Level 1 - 2 Years|	NHS|CSTF|Resuscitation - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Adults - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Children - Level 1 - 3 Years|	NHS|CSTF|Violence and Aggression (Wales) - Module A - No Specified Renewal|
120 C100 VCC Physics Engineering	90.00%	70.00%	100.00%	100.00%	80.00%	80.00%	70.00%	70.00%	80.00%	100.00%
120 C101 VCC Physics Radiotherapy	83.72%	79.07%	88.37%	69.77%	81.40%	48.84%	76.74%	83.72%	74.42%	97.67%
120 C104 VCC Physics Electronics	66.67%	100.00%	100.00%	66.67%	100.00%	66.67%	66.67%	66.67%	33.33%	100.00%
120 C110 VCC Radiation Protection	81.25%	75.00%	68.75%	56.25%	62.50%	56.25%	75.00%	87.50%	68.75%	87.50%
120 C120 VCC Radiotherapy	89.22%	97.06%	85.29%	88.24%	85.29%	57.84%	89.22%	87.25%	89.22%	93.14%
120 C151 VCC Chemotherapy Services	88.00%	86.00%	84.00%	90.00%	86.00%	48.00%	82.00%	84.00%	84.00%	88.00%
120 C180 VCC Pharmacy	96.72%	93.44%	93.44%	100.00%	95.08%	86.89%	93.44%	96.72%	95.08%	95.08%
120 C181 VCC IM&T Projects	84.62%	84.62%	92.31%	92.31%	69.23%	53.85%	84.62%	76.92%	84.62%	84.62%
120 C185 VCC Homecare Drugs	100.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
120 C200 VCC Outpatients	85.71%	90.48%	85.71%	95.24%	80.95%	47.62%	71.43%	76.19%	76.19%	80.95%
120 C201 VCC Phlebotomy	100.00%	100.00%	66.67%	100.00%	66.67%	100.00%	66.67%	100.00%	66.67%	100.00%
120 C203 VCC Radiology	85.00%	95.00%	85.00%	85.00%	80.00%	60.00%	85.00%	90.00%	85.00%	90.00%
120 C210 VCC Medical Snr	62.22%	93.33%	51.11%	62.22%	82.22%	46.67%	66.67%	53.33%	64.44%	44.44%
120 C211 VCC Medical Jnr	55.56%	66.67%	48.15%	81.48%	74.07%	25.93%	74.07%	40.74%	48.15%	37.04%
120 C212 Medical Directorate Office	100.00%	100.00%	85.71%	100.00%	100.00%	85.71%	100.00%	100.00%	100.00%	100.00%
120 C250 VCC Inpatient Services	95.31%	95.31%	92.19%	96.88%	84.38%	48.44%	95.31%	96.88%	93.75%	98.44%
120 C300 VCC Medical Pal Medicine	57.14%	57.14%	50.00%	64.29%	35.71%	42.86%	71.43%	50.00%	64.29%	57.14%
120 C301 VCC Chronic Pain Service	100.00%	100.00%	100.00%	66.67%	66.67%	100.00%	100.00%	66.67%	66.67%	100.00%
120 C302 VCC Dipl of Palliative Medicine	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	100.00%
120 C303 VCC One Wales Palliative Care	50.00%	83.33%	66.67%	75.00%	58.33%	58.33%	66.67%	58.33%	58.33%	58.33%
120 C350 VCC Operating Theatres	100.00%	83.33%	100.00%	100.00%	83.33%	50.00%	83.33%	100.00%	100.00%	100.00%
120 C400 VCC Nuclear Medicine	100.00%	100.00%	71.43%	100.00%	100.00%	28.57%	85.71%	100.00%	71.43%	100.00%
120 C501 VCC Occupational Therapy	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	80.00%	100.00%
120 C502 VCC Speech and Language Therapist	100.00%	100.00%	100.00%	100.00%	80.00%	80.00%	80.00%	100.00%	100.00%	100.00%
120 C503 VCC Physiotherapy	100.00%	100.00%	100.00%	100.00%	85.71%	85.71%	100.00%	100.00%	100.00%	100.00%
120 C504 VCC Dietetics	100.00%	100.00%	100.00%	100.00%	60.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 C505 VCC Complementary Therapies	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 C550 VCC Facilities Management	56.52%	91.30%	69.57%	91.30%	47.83%	39.13%	47.83%	65.22%	65.22%	65.22%
120 C551 VCC Domestic Services	90.00%	100.00%	70.00%	100.00%	70.00%	60.00%	100.00%	80.00%	80.00%	90.00%
120 C552 VCC Staff Catering	50.00%	50.00%	100.00%	100.00%	50.00%	50.00%	50.00%	100.00%	100.00%	50.00%
120 C553 VCC Patient Catering	85.71%	100.00%	100.00%	100.00%	28.57%	42.86%	71.43%	100.00%	100.00%	100.00%
120 C556 VCC Portering	64.29%	78.57%	78.57%	100.00%	64.29%	35.71%	71.43%	71.43%	71.43%	85.71%
120 C588 VCC IT/Supplies SLA	50.00%	50.00%	90.00%	70.00%	50.00%	40.00%	60.00%	60.00%	70.00%	80.00%
120 C590 VCC Clinical Audit	100.00%	100.00%	100.00%	100.00%	75.00%	100.00%	75.00%	100.00%	100.00%	100.00%
120 C595 VCC Medical Records	100.00%	82.98%	97.87%	85.11%	93.62%	78.72%	97.87%	89.36%	91.49%	97.87%
120 C598 VCC Clinical Coding	100.00%	88.89%	88.89%	100.00%	88.89%	100.00%	100.00%	88.89%	88.89%	100.00%
120 C600 VCC Directorate Office	81.82%	63.64%	81.82%	72.73%	81.82%	36.36%	90.91%	63.64%	63.64%	81.82%
120 C603 VCC Service Improvement	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 C610 VCC Cancer Services Management	85.71%	100.00%	85.71%	85.71%	100.00%	85.71%	100.00%	71.43%	71.43%	100.00%
120 C615 VCC Quality & Safety Office	100.00%	100.00%	100.00%	100.00%	50.00%	50.00%	50.00%	100.00%	100.00%	100.00%
120 C616 VCC Psychology	80.00%	100.00%	100.00%	80.00%	100.00%	40.00%	80.00%	80.00%	60.00%	100.00%
120 C617 VCC WIBSS	50.00%	100.00%	50.00%	50.00%	100.00%	100.00%	0.00%	50.00%	50.00%	100.00%
120 C618 VCC Planning	60.00%	80.00%	100.00%	80.00%	40.00%	40.00%	80.00%	100.00%	100.00%	80.00%
120 C620 VCC Nurse Management	88.89%	100.00%	85.19%	81.48%	85.19%	85.19%	85.19%	81.48%	81.48%	88.89%
120 C621 VCC Clinical Nurse Specialist Department	87.88%	93.94%	87.88%	96.97%	87.88%	72.73%	93.94%	87.88%	81.82%	87.88%
120 C622 VCC Assessment Unit	100.00%	100.00%	100.00%	100.00%	87.50%	50.00%	100.00%	100.00%	100.00%	100.00%
120 C644 COVID-19	100.00%	100.00%	100.00%	100.00%	100.00%	66.67%	66.67%	66.67%	33.33%	100.00%
120 C650 VCC Private Patients Office	33.33%	66.67%	66.67%	66.67%	100.00%	100.00%	66.67%	33.33%	33.33%	100.00%
120 C670 VCC Staff Volunteers	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Section	Sum of Previous Year Carryover	Annual Leave Entitlement	Total leave entitlement (carry over & current year)	Total Leave Taken	Total Leave Booked	Total Leave Taken or Booked	Sum of Remaining Leave	% of leave taken	% of leave booked	% of leave unbooked	Percentage of annual leave unbooked reported end of reporting July
120 VCC Cancer Services Management Office Section	456.00	9038.50	**9494.50**	1593.50	1721.50	**3315.00**	6179.50	**16.78**	**18.13**	**65.09**	
120 VCC Clinical Audit Section	0.00	848.50	**848.50**	130.25	97.50	**227.75**	620.75	**15.35**	**11.49**	**73.16**	
120 VCC Information Section	654.75	21886.25	**22541.00**	4425.00	6329.00	**10754.00**	11787.00	**19.63**	**28.08**	**52.29**	
120 VCC Medical Physics Section	1912.85	19517.00	**21429.85**	3566.46	3599.34	**7165.80**	14264.05	**16.64**	**16.80**	**66.56**	
120 VCC Medical Staffing Section	105.00	2590.75	**2695.75**	484.75	783.50	**1268.25**	1427.50	**17.98**	**29.06**	**52.95**	
120 VCC Nuclear Medicine Section	82.50	1788.00	**1870.50**	385.75	596.25	**982.00**	888.50	**20.62**	**31.88**	**47.50**	
120 VCC Nursing Section	1426.75	51471.00	**52897.75**	5087.70	5080.00	**10167.70**	42730.05	**9.62**	**9.60**	**80.78**	
120 VCC Operational Services Section	197.00	12973.33	**13170.33**	1648.50	1764.25	**3412.75**	9757.58	**12.52**	**13.40**	**74.09**	
120 VCC Outpatients Section	0.00	5010.00	**5010.00**	633.00	1789.50	**2422.50**	2587.50	**12.63**	**35.72**	**51.65**	
120 VCC Palliative/Chronic Pain Section	22.50	1338.75	**1361.25**	166.10	125.10	**291.20**	1070.05	**12.20**	**9.19**	**78.61**	
120 VCC Pharmacy Section	93.25	19343.25	**19436.50**	3532.65	6506.40	**10039.05**	9397.45	**18.18**	**33.48**	**48.35**	
120 VCC Psychology Section	46.50	1754.50	**1801.00**	237.00	577.50	**814.50**	986.50	**13.16**	**32.07**	**54.78**	
120 VCC Radiology Section	345.00	4847.50	**5192.50**	949.25	1956.50	**2905.75**	2286.75	**18.28**	**37.68**	**44.04**	
120 VCC Radiotherapy Section	570.40	29942.50	**30512.90**	2511.51	7422.39	**9933.90**	20579.00	**8.23**	**24.33**	**67.44**	
120 VCC Staff Volunteers Section	22.50	130.50	**153.00**	20.00	5.00	**25.00**	128.00	**13.07**	**3.27**	**83.66**	
120 VCC Therapies Section	104.25	5848.50	**5952.75**	1075.40	1112.00	**2187.40**	3765.35	**18.07**	**18.68**	**63.25**	
Grand Total	**6039.25**	**188328.83**	**194368.08**	**26446.82**	**39465.73**	**65912.55**	**128455.53**	**13.61**	**20.30**	**66.09**	

Covid-19 Risk Assessment Compliance

These figures exclude those on Maternity and those currently off with sickness absence

Assignment Count	Required	Achieved	Compliance %
791	791	640	80.91%

Org L5	Assignment Count	Required	Achieved	Compliance %
120 VCC Cancer Services Management Office Section	29	29	21	72.41%
120 VCC Clinical Audit Section	4	4	3	75.00%
120 VCC Information Section	79	79	61	77.22%
120 VCC Medical Physics Section	72	72	63	87.50%
120 VCC Medical Staffing Section	82	82	64	78.05%
120 VCC Nuclear Medicine Section	7	7	5	71.43%
120 VCC Nursing Section	190	190	145	76.32%
120 VCC Operational Services Section	56	56	46	82.14%
120 VCC Outpatients Section	24	24	19	79.17%
120 VCC Palliative/Chronic Pain Section	30	30	20	66.67%
120 VCC Pharmacy Section	66	66	59	89.39%
120 VCC Psychology Section	7	7	5	71.43%
120 VCC Radiology Section	20	20	20	100.00%
120 VCC Radiotherapy Section	102	102	88	86.27%
120 VCC Staff Volunteers Section	1	1	1	100.00%
120 VCC Therapies Section	22	22	20	90.91%

Org L8	Assignment Count	Required	Achieved	Compliance %
120 C100 VCC Physics Engineering	10	10	10	100.00%
120 C101 VCC Physics Radiotherapy	43	43	36	83.72%
120 C104 VCC Physics Electronics	3	3	3	100.00%
120 C110 VCC Radiation Protection	16	16	14	87.50%
120 C120 VCC Radiotherapy	102	102	88	86.27%
120 C151 VCC Chemotherapy Services	50	50	42	84.00%
120 C180 VCC Pharmacy	61	61	54	88.52%
120 C181 VCC IM&T Projects	13	13	9	69.23%
120 C185 VCC Homecare Drugs	5	5	5	100.00%
120 C200 VCC Outpatients	21	21	17	80.95%
120 C201 VCC Phlebotomy	3	3	2	66.67%
120 C203 VCC Radiology	20	20	20	100.00%
120 C210 VCC Medical Snr	45	45	33	73.33%
120 C211 VCC Medical Jnr	27	27	23	85.19%
120 C212 Medical Directorate Office	7	7	6	85.71%
120 C250 VCC Inpatient Services	64	64	50	78.13%
120 C300 VCC Medical Pal Medicine	14	14	10	71.43%
120 C301 VCC Chronic Pain Service	3	3	2	66.67%
120 C302 VCC Dipl of Palliative Medicine	1	1	1	100.00%
120 C303 VCC One Wales Palliative Care	12	12	7	58.33%
120 C350 VCC Operating Theatres	6	6	4	66.67%
120 C400 VCC Nuclear Medicine	7	7	5	71.43%
120 C501 VCC Occupational Therapy	5	5	4	80.00%
120 C502 VCC Speech and Language Therapist	5	5	4	80.00%
120 C503 VCC Physiotherapy	7	7	7	100.00%
120 C504 VCC Dietetics	5	5	5	100.00%
120 C505 VCC Complementary Therapies	2	2	1	50.00%
120 C550 VCC Facilities Management	23	23	16	69.57%
120 C551 VCC Domestic Services	10	10	10	100.00%
120 C552 VCC Staff Catering	2	2	2	100.00%
120 C553 VCC Patient Catering	7	7	6	85.71%

120 C556 VCC Portering	14	14	12	85.71%
120 C588 VCC IT/Supplies SLA	10	10	6	60.00%
120 C590 VCC Clinical Audit	4	4	3	75.00%
120 C595 VCC Medical Records	47	47	40	85.11%
120 C598 VCC Clinical Coding	9	9	6	66.67%
120 C600 VCC Directorate Office	11	11	8	72.73%
120 C603 VCC Service Improvement	1	1	0	0.00%
120 C610 VCC Cancer Services Management	7	7	6	85.71%
120 C615 VCC Quality & Safety Office	2	2	0	0.00%
120 C616 VCC Psychology	5	5	4	80.00%
120 C617 VCC WIBSS	2	2	0	0.00%
120 C618 VCC Planning	5	5	4	80.00%
120 C620 VCC Nurse Management	27	27	20	74.07%
120 C621 VCC Clinical Nurse Specialist Department	33	33	24	72.73%
120 C622 VCC Assessment Unit	8	8	5	62.50%
120 C644 COVID-19	3	3	3	100.00%
120 C650 VCC Private Patients Office	3	3	2	66.67%
120 C670 VCC Staff Volunteers	1	1	1	100.00%

Staff in Post	FTE	Headcount
SIP	743.58	959.00
Grand Total	743.58	959.00

Gender	FTE	Headcount
Female	572.24	753.00
Incomplete	0.00	0.00
Male	171.34	206.00
Grand Total	743.58	959.00

Age Profile	FTE	Headcount
<=20 Years	0.61	10.00
21-25	46.87	63.00
26-30	91.46	102.00
31-35	118.57	152.00
36-40	99.32	129.00
41-45	81.38	101.00
46-50	86.44	107.00
51-55	97.70	118.00
56-60	88.05	123.00
61-65	26.45	41.00
66-70	5.56	10.00
>=71 Years	1.16	3.00
Incomplete	0.00	0.00
Grand Total	743.58	959.00

Employee Category	FTE	Headcount
Full Time	494.05	494.00
Part Time	249.53	465.00
Grand Total	743.58	959.00

Staff Group	FTE	Headcount
Add Prof Scientific and Technic	0.00	50.00
Additional Clinical Services	69.11	126.00
Administrative and Clerical	176.41	224.00
Allied Health Professionals	122.99	138.00
Estates and Ancillary	37.56	63.00
Healthcare Scientists	68.77	75.00
Medical and Dental	90.09	117.00
Nursing and Midwifery Registered	129.37	161.00
Students	3.07	5.00
Grand Total	697.37	959.00

Assignment Category	FTE	Headcount
Bank	0.00	82.00
Fixed Term Temp	92.76	112.00
Honorary	0.18	8.00
Locum	1.00	7.00
Permanent	649.64	750.00
Grand Total	743.58	959.00

Assignment Status	FTE	Headcount
Acting Up	0.80	1.00
Active Assignment	669.84	877.00
Career Break	0.00	0.00
Internal Secondment	43.42	46.00
Maternity & Adoption	26.67	31.00
Out on External Secondment - Paid	2.85	3.00
Inactive Not Worked	0.00	1.00
Grand Total	743.58	959.00

Payscale	FTE	Headcount	FTE	Headcount
A & C Trust Payspine - Grade C	0.00	0.00	0.00	0.00
Adhoc	3.18	6.00	-3.18	-6.00
Apprentice	0.00	0.00	0.00	0.00
Clinical Professional Grade C (40-46)	0.00	0.00	0.00	0.00
Off Payroll IR35 Ad Hoc	0.00	0.00	0.00	0.00
Band 1	0.00	2.00	0.00	-2.00
Band 2	80.00	168.00	-80.00	-168.00
Band 3	69.48	87.00	-69.48	-87.00
Band 4	70.55	90.00	-70.55	-90.00
Band 5	122.30	143.00	-122.30	-143.00
Band 6	116.84	138.00	-116.84	-138.00
Band 7	126.16	140.00	-126.16	-140.00
Band 8 - Range A	39.76	44.00	-39.76	-44.00
Band 8 - Range B	15.60	16.00	-15.60	-16.00
Band 8 - Range C	4.80	6.00	-4.80	-6.00
Band 8 - Range D	5.00	5.00	-5.00	-5.00
Band 9	2.00	2.00	-2.00	-2.00
Chief Executive	0.00	0.00	0.00	0.00
Director of Human Resources	0.00	0.00	0.00	0.00
Executive Director of Finance	0.00	0.00	0.00	0.00
Non-Executive Director	0.00	0.00	0.00	0.00
Consultant	48.57	58.00	-48.57	-58.00
Consultant Locum	0.90	2.00	-0.90	-2.00
Consultant Locum	0.00	0.00	0.00	0.00
Specialty Doctor	7.54	9.00	-7.54	-9.00
Specialty Registrar	13.00	16.00	-13.00	-16.00
Specialty Registrar Core training	6.00	6.00	-6.00	-6.00
Specialty Registrar Flexible Trainee	11.90	18.00	-11.90	-18.00
Specialty Registrar FTSTA	0.00	0.00	0.00	0.00
Specialty Registrar - Locum	0.00	3.00	0.00	-3.00
Grand Total	743.58	959.00	-743.58	-959.00

Grade	FTE	Headcount	FTE	Headcount
Band 1	0.00	2.00	0.00	-2.00
Band 2	80.00	168.00	-80.00	-168.00
Band 3	69.48	87.00	-69.48	-87.00
Band 4	70.55	90.00	-70.55	-90.00
Band 5	122.30	143.00	-122.30	-143.00
Band 6	116.84	138.00	-116.84	-138.00
Band 7	126.16	140.00	-126.16	-140.00
Band 8 - Range A	39.76	44.00	-39.76	-44.00
Band 8 - Range B	15.60	16.00	-15.60	-16.00
Band 8 - Range C	4.80	6.00	-4.80	-6.00
Band 8 - Range D	5.00	5.00	-5.00	-5.00
Band 9	2.00	2.00	-2.00	-2.00
Ad Hoc Scale Management	0.00	0.00	0.00	0.00
Consultant	49.47	60.00	-49.47	-60.00
SAS	7.54	9.00	-7.54	-9.00
Medical Trainee	30.90	43.00	-30.90	-43.00
Other	3.18	6.00	-3.18	-6.00
Grand Total	743.58	959.00	-743.58	-959.00

Monthly Data Dashboard as at end of May 2021

Sickness Data

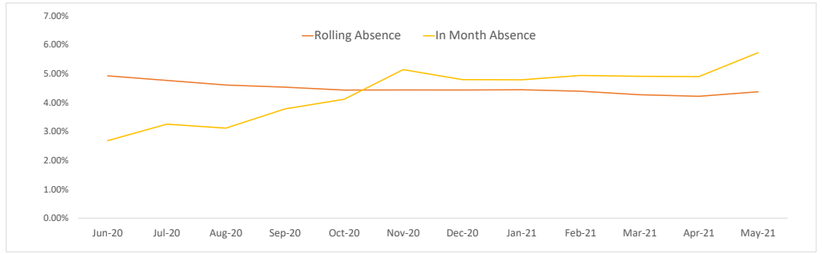
Sickness Statistics - Target 3.54%

12 Month Cumulative Average %	In Month %
4.37%	5.72%

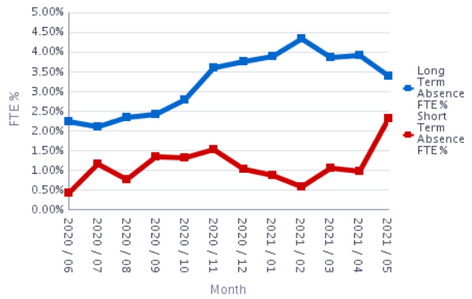
Short Term/Long Term - In Month figure	
Short Term %	2.31%
Long Term%	3.41%

Covid Sickness & Special Leave - In Month figure	
Sickness Non Covid-19 related %	5.72
Sickness Covid-19 related %	0.00
Special Leave Non Covid-19 related %	0.63
Special Leave Covid-19 related %	0.20

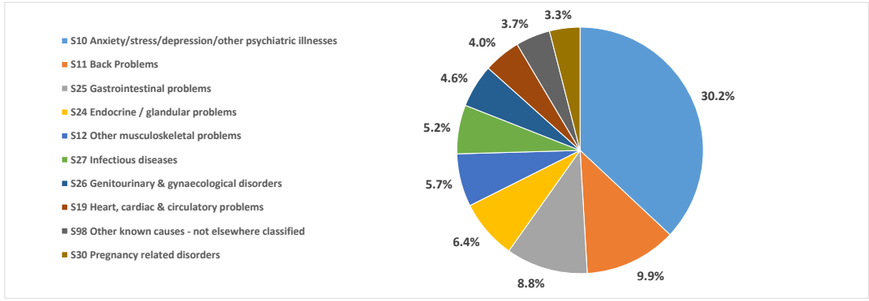
12 Months Cumulative & In Month Sickness % (Last 12 Months)



Short Term/Long Term last 12 Months



Top Ten Sickness Reasons by FTE % (Last 12 Month)



PADR Compliance - These figures exclude Trainee Doctors, those on Maternity, Starters within first 6 Months, those currently off on sickness absence.

Statutory and Mandatory Training compliance These figures exclude those on Maternity and those currently off with sickness absence

PADR Compliance % for Month	82.41%	Statutory & Mandatory Compliance for all CSTF Training for Month %:	92.23%	Covid - 19 Risk Assessment Compliance %:	70.04%
Assignments in Post:	432	Required:	4840	Required:	484
Reviews Completed:	356	Achieved:	4464	Achieved:	339

Staff in Post	
Headcount	529.00
FTE	446.45

Turnover, Starters/Leavers - NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.		
Turnover	FTE	Headcount
Turnover for Month	0.55%	0.62%
Turnover for 12 Months	8.72%	9.29%

Starters/Leavers	FTE	Headcount
Starters for Month	3.80	4
Leavers for Month	2.30	3

Vacancy Variance based on ESR Positions Establishment		
Division ESR FTE Positions Establishment	Division ESR FTE Positions in Post	Division ESR FTE Positions Variance
576.69	445.45	-131.24

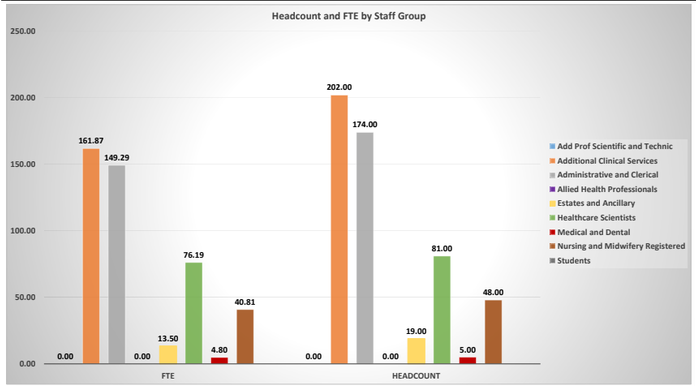
Employee Relations

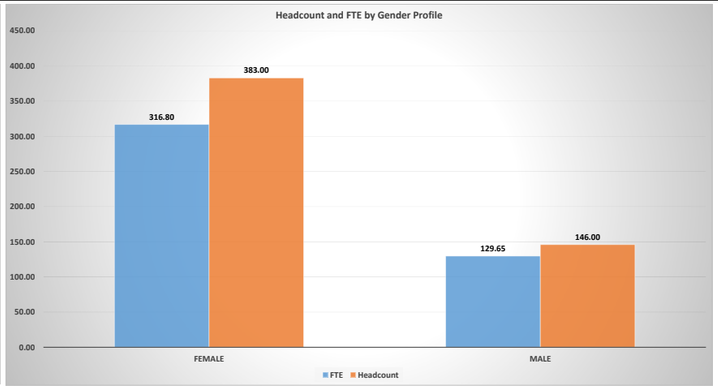
№ of Disciplinary Investigations:	№ of Grievances:	Of the Disciplinary № of Fast Track Processes:	№ of Dignity at Work Issues:
0	0	0	0
Last Month Figure:	Last Month Figure:	Last Month Figure:	Last Month Figure:
0	0	0	0

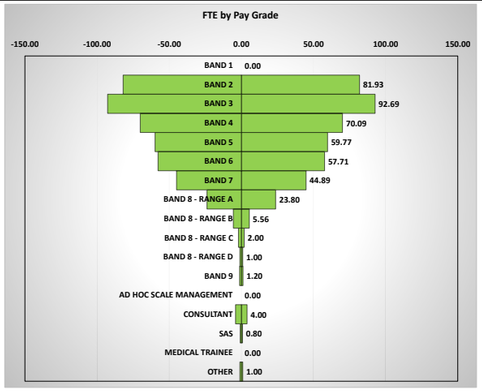
Medical & Dental Job Plans for Consultants and SAS Doctors

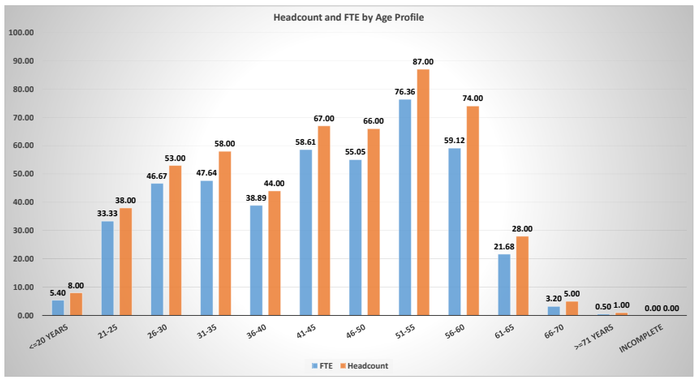
Role	Assignments	With Current Plan	% With Current Plan
Consultant	3	2	66.67%
Medical Director	1	1	100.00%
Specialty Doctor	1	1	100.00%
GP	0	0	#DIV/0!
Grand Total	5	4	80.00%

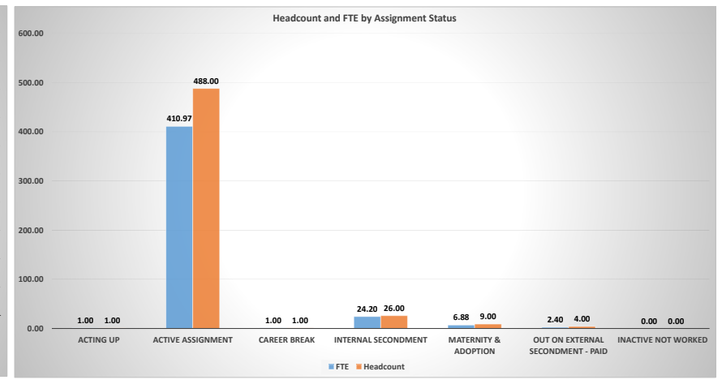
Workforce Profile Data

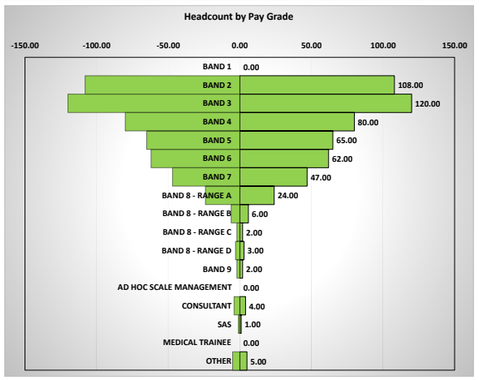


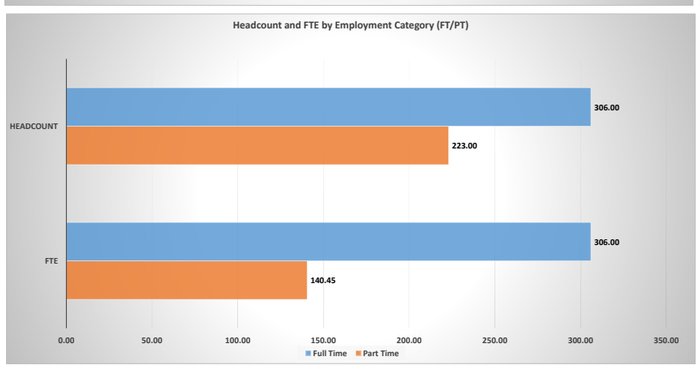


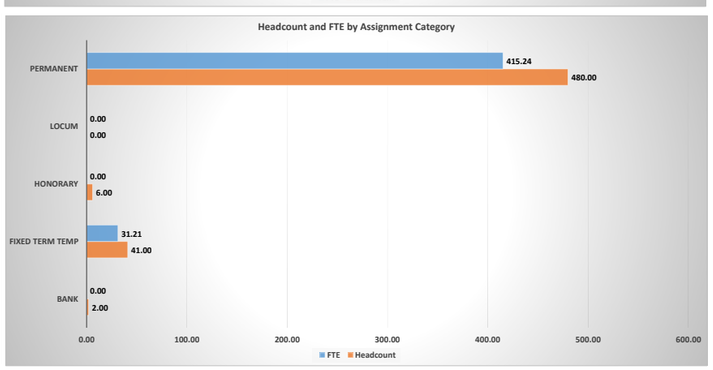












Vacancy Variance based on ESR Positions Establishment

	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
Division Totals	**576.69**	**445.45**	**-131.24**

Org L5	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
120 WBS Clinical Section	30.30	20.29	-10.01
120 WBS Collection Section	242.92	190.79	-52.13
120 WBS Directors Section	25.90	12.21	-13.69
120 WBS General Section	67.63	50.10	-17.53
120 WBS Laboratory Section	104.09	81.95	-22.14
120 WBS Quality Assurance Section	49.09	41.89	-7.20
120 WBS WTAIL Section	56.76	48.22	-8.54
Grand Total	**576.69**	**445.45**	**-131.24**

Org L8	Division ESR FTE Positions Budget	Division ESR FTE Positions Actual	Division ESR FTE Positions Variance
120 W103 WBS Donor Service Centre (DRM)	20.57	20.49	-0.08
120 W104 WBS Transport	16.50	14.50	-2.00
120 W105 WBS Collections Planning	6.00	5.00	-1.00
120 W106 WBS PR & Advertising	13.60	11.60	-2.00
120 W108 WBS Centralised Resourcing	3.60	2.60	-1.00
120 W110 WBS Central Team Coordination	19.00	8.80	-10.20
120 W130 WBS Talbot Green Donation Clinic	7.42	5.23	-2.19
120 W131 WBS Collections West	14.85	14.91	0.06
120 W132 WBS Talbot Green Teams	55.40	45.47	-9.93
120 W135 WBS Collection Team RN	23.60	15.77	-7.83
120 W200 WBS Laboratory General	10.00	6.87	-3.13
120 W201 WBS Processing, Verification & Issues (PVI)	41.60	36.29	-5.31
120 W212 WBS Automated Serology	21.89	18.39	-3.50
120 W220 WBS QA Laboratory	16.80	14.80	-2.00
120 W230 WBS Red Cell Immunohaematology	15.80	12.80	-3.00
120 W300 WBS Tissue Typing Management	27.34	23.09	-4.25
120 W303 WBS Molecular Genetics	4.00	3.00	-1.00
120 W304 WBS Antibody Testing	4.60	4.00	-0.60
120 W305 WBS Patient Services	4.30	3.50	-0.80
120 W310 WBS TT Unrelated Bone Marrow	10.33	9.93	-0.40
120 W320 WBS TT External Qa Scheme	6.19	4.69	-1.50
120 W400 WBS General Services	6.00	3.65	-2.35
120 W401 WBS Centre Services	11.39	8.06	-3.33
120 W402 WBS Estate	1.00	0.00	-1.00
120 W412 WBS Business Systems	33.24	24.64	-8.60
120 W501 WBS Stores	2.00	2.00	0.00
120 W600 WBS Clinical Services Administration	12.90	6.00	-6.90
120 W602 WBS Clinical Standards & Development	10.40	8.44	-1.96
120 W603 WBS Clinical Training	5.80	4.80	-1.00
120 W610 WBS Better Blood Transfusion	7.00	5.85	-1.15
120 W620 WBS Research & Development Admin	1.80	1.80	0.00
120 W635 WBS Advanced Therapies	7.00	1.45	-5.55
120 W650 WBS Component Development Laboratory	3.60	3.60	0.00
120 W670 COVID-19	12.90	7.75	-5.15
120 W675 WBS Covid Vaccines	2.00	0.00	-2.00
120 W680 CVP - Collection Services	18.05	12.64	-5.41
120 W681 CVP - Donor Support	5.00	0.00	-5.00
120 W682 CVP - Laboratory Services	3.00	2.00	-1.00
120 W690 WBS Infected Blood Inquiry	1.00	1.00	0.00
120 W700 WBS Directors Dept	5.00	2.00	-3.00
120 W701 WBS Programme Management	14.00	11.75	-2.25
120 W709 WBS National Programme Support	2.00	1.00	-1.00
120 W710 WBS QA Office	24.89	20.69	-4.20
120 W711 AWBS DRM - Collections Planning	2.80	2.80	0.00
120 W714 AWBS North East Collections	19.32	16.24	-3.08
120 W715 AWBS North West Collections	11.41	9.93	-1.48
120 W717 AWBS SHU & Distribution	9.80	5.60	-4.20
Grand Total	**576.69**	**445.45**	**-131.24**

M&D Consultant and SAS Job Plans | **Information provided by ESR**

Role	Assignments	With Expired Plan	% With Expired Plan	With Current Plan (within 1 Year)	% With Current Plan	With Current but Unsigned Plan	% With Current but Unsigned Plan
Consultant	3	1	**33%**	2	**67%**	0	**0%**
Medical Director	1	0	**0%**	1	**100%**	0	**0%**
Specialty Doctor	1	0	**0%**	1	**100%**	0	**0%**
GP	0	0	**#DIV/0!**	0	**#DIV/0!**	0	**#DIV/0!**
Grand Total	5	1	**20%**	4	**80%**	0	**0%**

Employee Relations	This Month		Last Month
№ of Disciplinary Investigations:			
Of the Disciplinary № of Fast Track Processes:			
№ of Grievances:			
№ of Dignity at Work Issues:			

Overall Staff Movement (Turnover)

NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05
Headcount	457	451	458	474	481	485	483	498	503	508	511	512
FTE	399.08	394.42	400.60	412.96	418.67	421.61	420.55	432.25	435.87	440.37	442.02	442.75
Leavers Headcount	4	3	6	3	5	5	5	3	4	1	3	3
Leavers FTE	3.53	1.61	4.62	2.50	4.20	4.24	4.60	2.53	3.10	1.00	2.48	2.30
Starters Headcount	2	0	12	20	11	10	3	17	11	6	6	4
Starters FTE	1.40		9.60	17.36	8.67	8.06	3	13.39	8.53	5.13	5.64	3.80
Maternity	8	7	6	7	7	7	6	7	7	9	9	9
Turnover Rate (Headcount)	0.82%	0.62%	1.24%	0.62%	1.03%	1.03%	1.03%	0.62%	0.82%	0.21%	0.62%	0.62%
Turnover Rate (FTE)	0.84%	0.38%	1.10%	0.59%	1.00%	1.01%	1.09%	0.60%	0.74%	0.24%	0.59%	0.55%
Avg Headcount	485.00	485.00	485.00	485.00	485.00	485.00	485.00	485.00	485.00	485.00	485.00	485.00
Average FTE	421.68	421.68	421.68	421.68	421.68	421.68	421.68	421.68	421.68	421.68	421.68	421.68
Leavers (12m)	64	63	62	56	55	59	62	62	58	53	51	45
Leavers FTE (12m)	50.29	49.75	48.31	43.44	43.06	46.30	49.26	49.53	47.17	43.83	41.55	36.72
Turnover Rate (12m)	14.00%	13.91%	13.64%	12.12%	11.76%	12.57%	13.18%	12.97%	12.07%	10.98%	10.53%	9.29%
Turnover Rate FTE (12m)	12.67%	12.65%	12.25%	10.83%	10.62%	11.38%	12.06%	11.91%	11.30%	10.45%	9.87%	8.72%
Avg Headcount (12m)	457.00	453.00	454.50	462.00	467.50	469.50	470.50	478.00	480.50	482.50	484.50	484.50
Average FTE (12m)	396.98	393.28	394.33	401.07	405.64	407.01	408.37	415.75	417.55	419.63	420.98	420.91

Staff Turnover for the past 12 Months by Section

Org L5	Avg Headcount	Avg FTE	Starters Headcount	Starters FTE	Leavers Headcount	Leavers FTE	LTR Headcount %	LTR FTE %
120 WBS Clinical Section	20.50	19.37	2	2.00	2	1.80	9.76%	9.29%
120 WBS Collection Section	222.00	176.81	67	50.39	21	14.22	9.46%	8.04%
120 WBS Directors Section	10.50	9.33	3	2.20	4	3.40	38.10%	36.44%
120 WBS General Section	51.50	49.55	4	4.00	2	2.00	3.88%	4.04%
120 WBS Laboratory Section	89.50	81.85	15	15.00	13	12.30	14.53%	15.03%
120 WBS Quality Assurance Section	40.50	38.29	8	8.00	2	2.00	4.94%	5.22%
120 WBS WTAIL Section	50.50	46.47	3	3.00	1	1	1.98%	2.15%

Staff Turnover for the past 12 Months by Department

Org L8	Avg Headcount	Avg FTE	Starters Headcount	Starters FTE	Leavers Headcount	Leavers FTE	LTR Headcount %	LTR FTE %
120 W103 WBS Donor Service Centre (DRM)	28.50	20.15	8	4.73	2	1.07	7.02%	5.29%
120 W104 WBS Transport	20.50	14.75	1	0.5	2	1	9.76%	6.78%
120 W105 WBS Collections Planning	4.50	4.50	0		0		0.00%	0.00%
120 W106 WBS PR & Advertising	13.00	11.60	1	1.00	1	0.49	7.69%	4.25%
120 W108 WBS Centralised Resourcing	3.00	2.50	0		0		0.00%	0.00%
120 W110 WBS Central Team Coordination	8.50	8.28	7	5.95	1	0.8	11.76%	9.66%
120 W130 WBS Talbot Green Donation Clinic	8.50	5.63	0		0		0.00%	0.00%
120 W131 WBS Collections West	14.50	13.55	4	3.4	0		0.00%	0.00%
120 W132 WBS Talbot Green Teams	54.00	44.17	22	17.4	6	4.56	11.11%	10.32%
120 W135 WBS Collection Team RN	19.00	15.94	14	11.52	8	5.62	42.11%	35.25%
120 W200 WBS Laboratory General	5.50	5.37	2	2.00	1	1.00	18.18%	18.63%
120 W201 WBS Processing, Verification & Issues (PVI)	41.50	38.84	9	9.00	7	6.8	16.87%	17.51%
120 W212 WBS Automated Serology	20.00	17.89	3	3.00	3	2.50	15.00%	13.97%
120 W220 WBS QA Laboratory	16.50	14.80	4	4.00	1	1.00	6.06%	6.76%
120 W230 WBS Red Cell Immunohaematology	14.00	12.80	1	1.00	1	1.00	7.14%	7.81%
120 W300 WBS Tissue Typing Management	24.50	22.59	0		0		0.00%	0.00%
120 W303 WBS Molecular Genetics	3.00	3.00	0		1	1	33.33%	33.33%
120 W304 WBS Antibody Testing	4.00	3.80	0		0		0.00%	0.00%
120 W305 WBS Patient Services	4.50	3.75	0		0		0.00%	0.00%
120 W310 WBS TT Unrelated Bone Marrow	10.00	9.13	1	1	0		0.00%	0.00%
120 W320 WBS TT External Qa Scheme	4.50	4.19	2	2.00	0		0.00%	0.00%
120 W400 WBS General Services	2.50	2.15	0		0		0.00%	0.00%
120 W401 WBS Centre Services	8.00	7.04	0		0		0.00%	0.00%
120 W412 WBS Business Systems	25.00	24.64	0		0		0.00%	0.00%
120 W501 WBS Stores	2.00	2.00	0		0		0.00%	0.00%
120 W600 WBS Clinical Services Administration	6.00	5.90	2	2	2	1.8	33.33%	30.51%
120 W602 WBS Clinical Standards & Development	8.50	7.62	0		0		0.00%	0.00%
120 W603 WBS Clinical Training	4.50	4.30	0		0		0.00%	0.00%
120 W610 WBS Better Blood Transfusion	6.00	5.85	0		0		0.00%	0.00%
120 W615 WBS Planning, Research & Clinical Department	1.50	1.50	2	2	0		0.00%	0.00%
120 W620 WBS Research & Development Admin	2.00	1.80	1	1	1	1	50.00%	55.56%
120 W635 WBS Advanced Therapies	3.00	2.45	1	1.00	3	3	100.00%	122.28%
120 W650 WBS Component Development Laboratory	1.50	1.50	0		0		0.00%	0.00%
120 W670 COVID-19	4.50	3.88	2	1.20	1	0.40	22.22%	10.32%
120 W680 CVP - Collection Services	8.00	6.32	0		0		0.00%	0.00%
120 W682 CVP - Laboratory Services	0.50	0.50	0		0		0.00%	0.00%
120 W690 WBS Infected Blood Inquiry	1.00	1.00	0		0		0.00%	0.00%
120 W700 WBS Directors Dept	2.00	2.00	0		0		0.00%	0.00%
120 W701 WBS Programme Management	12.50	12.22	2	2	2	2	16.00%	16.37%
120 W709 WBS National Programme Support	0.50	0.50	1	1.00	0		0.00%	0.00%
120 W710 WBS QA Office	20.00	19.69	2	2.00	0		0.00%	0.00%
120 W711 AWBS DRM - Collections Planning	3.00	2.80	0		0		0.00%	0.00%
120 W714 AWBS North East Collections	19.50	13.67	10	5.88	1	0.68	5.13%	4.97%
120 W715 AWBS North West Collections	13.00	8.64	0		0		0.00%	0.00%
120 W717 AWBS SHU & Distribution	8.00	6.45	0		1	1.00	12.50%	15.50%

Reasons for Leaving and Destination of Leaving for the last 12 Months

NB: Turnover exclude Bank, Trainee Doctors on rotation. The figures only relate to staff who have left employment within VUNHST and does not reflect internal movements.

Leaving Reason	Destination On Leaving	Count of Employee Number	Sum of FTE
Dismissal - Capability	No Employment	1.00	0.80
	Unknown	1.00	0.49
End of Fixed Term Contract	NHS Organisation	1.00	0.80
	Unknown	2.00	0.90
Retirement Age	No Employment	1.00	0.80
	Unknown	1.00	0.50
Voluntary Early Retirement - with Actuarial Reduction	No Employment	1.00	1.00
Voluntary Resignation - Better Reward Package	Unknown	1.00	1.00
Voluntary Resignation - Child Dependants	No Employment	1.00	0.53
Voluntary Resignation - Health	No Employment	1.00	1.00
	Unknown	2.00	1.53
Voluntary Resignation - Other/Not Known	NHS Organisation	7.00	5.72
	No Employment	1.00	0.50
	Other Private Sector	1.00	1.00
	Private Health/Social Care	1.00	1.00
	Unknown	7.00	5.98
Voluntary Resignation - Promotion	NHS Organisation	8.00	7.24
	Other Public Sector	1.00	1.00
	Private Health/Social Care	1.00	1.00
Voluntary Resignation - Relocation	NHS Organisation	1.00	1.00
Voluntary Resignation - To undertake further education or training	Unknown	1.00	1.00
Voluntary Resignation - Work Life Balance	NHS Organisation	3.00	1.92
Grand Total		45.00	36.72

Sickness Absence

Rolling Monthly Absence % (FTE)	Absence Days	Abs (FTE)	Avail (FTE)
4.37%	8,315	6,704.03	153,374.50

In Month Absence

Absence % (FTE)	Target %
5.72%	3.54%

12 Month Absence by:	Absence % (FTE) Jun-20	Absence % (FTE) Jul-20	Absence % (FTE) Aug-20	Absence % (FTE) Sep-20	Absence % (FTE) Oct-20	Absence % (FTE) Nov-20	Absence % (FTE) Dec-20	Absence % (FTE) Jan-21	Absence % (FTE) Feb-21	Absence % (FTE) Mar-21	Absence % (FTE) Apr-21	Absence % (FTE) May-21
Rolling Absence	4.92%	4.76%	4.60%	4.53%	4.43%	4.43%	4.43%	4.44%	4.39%	4.27%	4.21%	4.37%
In Month Absence	2.68%	3.25%	3.11%	3.78%	4.11%	5.14%	4.79%	4.78%	4.94%	4.91%	4.90%	5.72%

Long Term & Short Term in Month Figure

Short Term	2.31%
Long Term	3.41%

COVID-19 Statistics for Reporting Month

Covid Sickness In Month Figure	
Sickness Non Covid-19 related %	5.72
Sickness Covid-19 related %	0.00

Covid Special Leave In Month Figure	
Special Leave Non Covid-19 related %	0.63
Special Leave Covid-19 related %	0.20

In Month & Cumulative Sickness Absence Broken down by Section & Department

12 Month in Month Absence Rate by Org Level 5

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05	Absence FTE %
	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	
120 WBS Clinical Section	0.00%	1.00%	0.00%	0.00%	0.00%	0.59%	0.38%	3.22%	3.39%	1.39%	0.00%	3.22%	**1.10%**
120 WBS Collection Section	3.04%	4.05%	4.06%	4.90%	4.51%	7.19%	6.22%	5.88%	5.95%	5.01%	6.65%	7.78%	**5.49%**
120 WBS Directors Section	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	0.00%	1.11%	0.82%	3.36%	**0.66%**
120 WBS General Section	4.23%	4.20%	3.42%	2.04%	4.18%	3.32%	2.94%	2.88%	0.07%	0.00%	0.38%	1.40%	**2.43%**
120 WBS Laboratory Section	3.40%	3.82%	3.19%	3.35%	4.33%	4.39%	4.11%	5.16%	7.26%	9.57%	7.20%	5.75%	**5.13%**
120 WBS Quality Assurance Section	2.09%	2.52%	2.89%	4.88%	6.42%	5.88%	6.85%	2.77%	2.26%	4.17%	1.93%	3.17%	**3.85%**
120 WBS WTAIL Section	0.29%	0.14%	1.02%	3.45%	2.59%	2.43%	3.16%	4.36%	4.73%	3.76%	4.02%	5.94%	**3.00%**
Grand Total	**2.68%**	**3.25%**	**3.11%**	**3.78%**	**4.11%**	**5.14%**	**4.79%**	**4.78%**	**4.94%**	**4.91%**	**4.90%**	**5.72%**	**4.37%**

12 Month in Month Absence Rate by Org Level 8

	2020 / 06	2020 / 07	2020 / 08	2020 / 09	2020 / 10	2020 / 11	2020 / 12	2021 / 01	2021 / 02	2021 / 03	2021 / 04	2021 / 05	Absence FTE %
	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	Absence FTE %	
120 W103 WBS Donor Service Centre (DRM)	0.34%	0.40%	4.86%	2.72%	0.42%	1.38%	3.95%	3.79%	1.86%	1.35%	7.76%	4.60%	**2.78%**
120 W104 WBS Transport	4.22%	3.55%	4.62%	6.89%	3.76%	2.78%	3.23%	2.09%	4.40%	5.81%	6.22%	7.53%	**4.57%**
120 W105 WBS Collections Planning	0.00%	0.00%	0.81%	4.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.37%**
120 W106 WBS PR & Advertising	4.25%	0.71%	0.00%	0.00%	1.16%	7.14%	6.35%	6.35%	6.59%	8.51%	7.13%	7.01%	**4.67%**
120 W108 WBS Centralised Resourcing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W110 WBS Central Team Coordination	0.00%	5.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	1.24%	0.00%	0.00%	**0.70%**
120 W130 WBS Talbot Green Donation Clinic	0.00%	0.34%	0.00%	7.33%	2.28%	0.00%	0.00%	15.43%	22.34%	13.02%	12.23%	12.23%	**6.73%**
120 W131 WBS Collections West	4.49%	11.06%	11.26%	15.46%	15.94%	11.59%	6.96%	6.76%	6.32%	5.67%	5.74%	7.11%	**8.86%**
120 W132 WBS Talbot Green Teams	3.33%	5.98%	5.65%	6.09%	5.42%	11.06%	8.86%	6.89%	6.54%	5.88%	11.52%	13.72%	**7.62%**
120 W135 WBS Collection Team RN	2.48%	0.00%	0.00%	3.56%	1.77%	2.38%	1.93%	2.96%	0.00%	0.57%	4.47%	4.52%	**2.09%**
120 W200 WBS Laboratory General	0.00%	0.00%	3.95%	0.00%	5.78%	2.36%	0.43%	1.64%	1.36%	0.00%	1.02%	0.00%	**1.21%**
120 W201 WBS Processing, Verification & Issues (PVI)	6.03%	4.53%	2.07%	4.45%	8.33%	6.45%	8.67%	8.84%	7.71%	7.82%	6.22%	6.93%	**6.46%**
120 W212 WBS Automated Serology	1.75%	6.12%	8.01%	3.97%	0.00%	0.85%	0.68%	3.72%	13.65%	20.49%	16.17%	11.31%	**7.18%**
120 W220 WBS QA Laboratory	5.47%	5.55%	4.66%	4.48%	4.48%	4.48%	7.04%	6.16%	4.48%	5.03%	4.85%	8.02%	**5.45%**
120 W230 WBS Red Cell Immunohaematology	0.00%	0.00%	1.15%	0.42%	0.00%	5.21%	0.25%	0.15%	1.00%	5.29%	2.29%	0.00%	**1.32%**
120 W300 WBS Tissue Typing Management	0.44%	0.00%	0.00%	6.83%	5.33%	4.59%	6.37%	6.66%	6.88%	4.68%	5.24%	9.87%	**4.73%**
120 W303 WBS Molecular Genetics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W304 WBS Antibody Testing	0.93%	0.00%	0.00%	0.00%	0.00%	1.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.21%**
120 W305 WBS Patient Services	0.00%	1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	3.23%	0.00%	0.00%	0.00%	0.00%	**0.43%**
120 W310 WBS TT Unrelated Bone Marrow	0.00%	0.00%	5.42%	0.40%	0.00%	0.00%	0.00%	3.90%	6.72%	6.72%	7.38%	6.04%	**3.14%**
120 W320 WBS TT External Qa Scheme	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.06%	0.00%	0.00%	**0.22%**
120 W400 WBS General Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.98%	**0.28%**
120 W401 WBS Centre Services	0.00%	0.00%	0.00%	0.00%	9.49%	14.01%	14.01%	14.01%	0.50%	0.00%	1.72%	0.00%	**4.56%**
120 W412 WBS Business Systems	4.36%	4.30%	2.75%	0.00%	1.44%	0.00%	1.70%	0.00%	0.00%	0.00%	0.27%	2.62%	**1.45%**
120 W501 WBS Stores	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W600 WBS Clinical Services Administration	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.46%	0.00%	0.00%	0.00%	**0.29%**
120 W602 WBS Clinical Standards & Development	0.00%	2.71%	0.00%	0.00%	0.00%	1.39%	0.90%	7.62%	5.56%	3.25%	0.00%	7.87%	**2.50%**
120 W603 WBS Clinical Training	0.00%	0.00%	0.00%	0.00%	0.00%	1.39%	0.00%	0.00%	0.00%	1.89%	0.00%	0.00%	**0.31%**
120 W610 WBS Better Blood Transfusion	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W615 WBS Planning, Research & Clinical Department	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W620 WBS Research & Development Admin	0.00%	0.00%	0.00%	0.00%	48.39%	42.59%	46.33%	0.00%	0.00%	0.00%	0.00%	0.00%	**13.26%**
120 W635 WBS Advanced Therapies	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.85%	0.00%	6.66%	0.00%	0.00%	**0.43%**
120 W650 WBS Component Development Laboratory	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W670 COVID-19	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.29%	5.28%	**1.61%**
120 W680 CVP - Collection Services										0.26%	0.00%	2.14%	**1.03%**
120 W682 CVP - Laboratory Services							0.00%	0.00%	0.00%	0.00%	10.00%	0.00%	**1.65%**
120 W690 WBS Infected Blood Inquiry	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W700 WBS Directors Dept	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**
120 W701 WBS Programme Management	8.49%	8.49%	8.49%	8.57%	9.28%	5.60%	0.24%	3.25%	0.00%	0.00%	0.00%	0.00%	**4.22%**
120 W709 WBS National Programme Support												0.00%	**0.00%**
120 W710 WBS QA Office	0.16%	0.92%	2.10%	5.89%	4.23%	3.88%	3.87%	0.81%	0.98%	3.98%	0.14%	0.00%	**2.25%**
120 W711 AWBS DRM - Collections Planning	0.00%	0.00%	4.61%	0.00%	0.00%	26.19%	35.71%	35.71%	2.55%	0.00%	0.00%	0.00%	**8.81%**
120 W714 AWBS North East Collections	12.55%	4.87%	0.00%	4.15%	14.24%	13.35%	13.29%	12.41%	17.59%	9.91%	5.74%	9.12%	**9.81%**
120 W715 AWBS North West Collections	0.00%	11.55%	11.45%	1.41%	1.91%	11.22%	3.50%	4.63%	12.68%	14.08%	7.04%	17.17%	**8.04%**
120 W717 AWBS SHU & Distribution	0.00%	1.99%	0.00%	2.30%	0.00%	2.11%	0.45%	2.50%	6.40%	7.92%	1.79%	0.00%	**2.06%**
Grand Total	**2.68%**	**3.25%**	**3.11%**	**3.78%**	**4.11%**	**5.14%**	**4.79%**	**4.78%**	**4.94%**	**4.91%**	**4.90%**	**5.72%**	**4.37%**

Short & Long Term 12 Month Absence by Department in Month Figure

	2020 / 06		2020 / 07		2020 / 08		2020 / 09		2020 / 10		2020 / 11		2020 / 12		2021 / 01		2021 / 02		2021 / 03		2021 / 04		2021 / 05	
Org L8	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term	Long Term
120 W103 WBS Donor Service Centre (DRM)	0.21	0.13	0.40	0.00	1.34	3.52	0.00	2.72	0.42	0.00	1.38	0.00	3.64	0.31	0.59	3.21	0.43	1.43	0.08	1.26	1.28	6.48	2.52	2.08
120 W104 WBS Transport	0.00	4.22	0.22	3.33	0.00	4.62	0.56	6.33	0.43	3.33	1.11	1.67	0.00	3.23	0.00	2.09	2.78	1.62	2.47	3.33	1.67	4.56	2.55	4.98
120 W105 WBS Collections Planning	0.00	0.00	0.00	0.00	0.81	0.00	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W106 WBS PR & Advertising	0.00	4.25	0.00	0.71	0.00	0.00	0.00	0.00	1.16	0.00	3.94	3.20	0.00	6.35	0.00	6.35	0.00	6.59	1.61	6.90	0.23	6.90	0.11	6.90
120 W108 WBS Centralised Resourcing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W110 WBS Central Team Coordination	0.00	0.00	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	1.24	0.00	0.00	0.00	0.00	0.00
120 W130 WBS Talbot Green Donation Clinic	0.00	0.00	0.34	0.00	0.00	0.00	7.33	0.00	2.28	0.00	0.00	0.00	0.00	0.00	3.85	11.59	0.00	22.34	0.79	12.23	0.00	12.23	0.00	12.23
120 W131 WBS Collections West	3.09	1.40	4.06	6.99	0.56	10.70	0.27	15.19	0.79	15.15	0.00	11.59	0.00	6.96	0.00	6.76	0.00	6.32	0.00	5.67	0.38	5.36	1.21	5.90
120 W132 WBS Talbot Green Teams	0.06	3.27	2.18	3.80	1.52	4.13	2.21	3.88	2.10	3.32	4.00	7.06	1.02	7.84	0.52	6.37	0.28	6.26	0.59	5.28	2.68	8.84	4.64	9.08
120 W135 WBS Collection Team RN	2.48	0.00	0.00	0.00	0.00	0.00	3.56	0.00	1.77	0.00	2.38	0.00	1.93	0.00	2.96	0.00	0.00	0.00	0.57	0.00	0.00	4.47	1.18	3.34
120 W200 WBS Laboratory General	0.00	0.00	0.00	0.00	3.95	0.00	0.00	0.00	5.78	0.00	2.36	0.00	0.43	0.00	1.64	0.00	1.36	0.00	0.00	0.00	1.02	0.00	0.00	0.00
120 W201 WBS Processing, Verification & Issues (PVI)	0.08	5.95	1.12	3.41	0.15	1.92	2.37	2.08	4.03	4.30	1.99	4.47	2.90	5.77	2.23	6.61	2.47	5.24	1.81	6.01	2.74	3.48	3.58	3.35
120 W212 WBS Automated Serology	0.87	0.88	2.00	4.13	0.00	8.01	1.38	2.59	0.00	0.00	0.85	0.00	0.68	0.00	0.84	2.87	0.00	13.65	2.83	17.66	0.88	15.30	0.52	10.79
120 W220 WBS QA Laboratory	0.00	5.47	0.63	4.92	0.00	4.66	0.00	4.48	0.00	4.48	0.00	4.48	2.62	4.42	1.69	4.48	0.00	4.48	0.49	4.54	0.69	4.16	4.34	3.67
120 W230 WBS Red Cell Immunohaematology	0.00	0.00	0.00	0.00	1.15	0.00	0.42	0.00	0.00	0.00	5.21	0.00	0.25	0.00	0.15	0.00	1.00	0.00	5.29	0.00	2.29	0.00	0.00	0.00
120 W300 WBS Tissue Typing Management	0.44	0.00	0.00	0.00	0.00	0.00	4.23	2.60	0.74	4.59	0.00	4.59	1.78	4.59	0.00	6.66	0.00	6.88	0.28	4.39	0.44	4.80	2.96	6.90
120 W303 WBS Molecular Genetics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W304 WBS Antibody Testing	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W305 WBS Patient Services	0.00	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W310 WBS TT Unrelated Bone Marrow	0.00	0.00	0.00	0.00	5.42	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	1.52	0.00	6.72	0.00	6.72	1.34	6.04	0.00	6.04
120 W320 WBS TT External Qa Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.00	0.00	0.00	0.00	0.00
120 W400 WBS General Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.98	0.00
120 W401 WBS Centre Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.49	0.00	14.01	0.00	14.01	0.00	14.01	0.00	0.50	0.00	0.00	1.72	0.00	0.00	0.00
120 W412 WBS Business Systems	0.14	4.22	0.81	3.49	2.75	0.00	0.00	0.00	1.44	0.00	0.00	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	2.62	0.00
120 W501 WBS Stores	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W600 WBS Clinical Services Administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W602 WBS Clinical Standards & Development	0.00	0.00	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.90	0.00	3.14	4.48	0.00	5.56	1.25	2.00	0.00	0.00	7.87	0.00
120 W603 WBS Clinical Training	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89	0.00	0.00	0.00	0.00	0.00
120 W610 WBS Better Blood Transfusion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W615 WBS Planning, Research & Clinical Department	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W620 WBS Research & Development Admin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.39	0.00	18.52	24.07	0.00	46.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W635 WBS Advanced Therapies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85	0.00	0.00	0.00	6.66	0.00	0.00	0.00	0.00	0.00
120 W650 WBS Component Development Laboratory	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W670 COVID-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	0.00	5.28	0.00
120 W680 CVP - Collection Services																			0.26	0.00	0.00	0.00	2.14	0.00
120 W682 CVP - Laboratory Services													0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
120 W690 WBS Infected Blood Inquiry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W700 WBS Directors Dept	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W701 WBS Programme Management	0.00	8.49	0.00	8.49	0.00	8.49	0.00	8.57	0.00	9.28	1.40	4.20	0.24	0.00	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120 W709 WBS National Programme Support																							0.00	0.00
120 W710 WBS QA Office	0.16	0.00	0.92	0.00	0.31	1.79	1.61	4.28	0.16	4.06	0.00	3.88	0.00	3.87	0.31	0.50	0.98	0.00	3.98	0.00	0.14	0.00	0.00	0.00
120 W711 AWBS DRM - Collections Planning	0.00	0.00	0.00	0.00	4.61	0.00	0.00	0.00	0.00	0.00	0.00	26.19	0.00	35.71	0.00	35.71	0.00	2.55	0.00	0.00	0.00	0.00	0.00	0.00
120 W714 AWBS North East Collections	4.71	7.84	1.83	3.04	0.00	0.00	1.72	2.43	0.78	13.46	0.00	13.35	0.00	13.29	0.00	12.41	0.77	16.82	0.83	9.08	0.00	5.74	3.37	5.74
120 W715 AWBS North West Collections	0.00	0.00	8.39	3.16	4.09	7.36	1.41	0.00	1.91	0.00	3.05	8.17	1.59	1.91	0.00	4.63	0.00	12.68	0.00	14.08	1.41	5.63	17.17	0.00
120 W717 AWBS SHU & Distribution	0.00	0.00	1.99	0.00	0.00	0.00	2.30	0.00	0.00	0.00	2.11	0.00	0.45	0.00	2.50	0.00	0.00	6.40	0.00	7.92	0.00	1.79	0.00	0.00

Top Ten Reasons for Sickness Absence for last 12 Months

Absence Reason	Headcount	Abs Occurrences	Abs Days	Abs Estimated Cost	%	%
S10 Anxiety/stress/depression/other psychiatric illnesses	46	54	2,027.38	£147,175.23	30.2	30.2%
S11 Back Problems	18	19	661.95	£43,864.88	9.9	9.9%
S25 Gastrointestinal problems	60	73	588.64	£41,386.59	8.8	8.8%
S24 Endocrine / glandular problems	4	7	427.43	£22,530.03	6.4	6.4%
S12 Other musculoskeletal problems	19	22	380.31	£32,951.84	5.7	5.7%
S27 Infectious diseases	16	16	351.13	£24,375.78	5.2	5.2%
S26 Genitourinary & gynaecological disorders	28	31	310.51	£19,266.92	4.6	4.6%
S19 Heart, cardiac & circulatory problems	5	5	265.95	£18,821.79	4.0	4.0%
S98 Other known causes - not elsewhere classified	7	7	248.20	£16,847.49	3.7	3.7%
S30 Pregnancy related disorders	8	14	218.96	£11,963.59	3.3	3.3%

Top Ten Reasons for Sickness Absence for this Month

Absence Reason	Headcount	Abs Occurrences	FTE Days Lost	Abs Estimated Cost	%
S10 Anxiety/stress/depression/other psychiatric illnesses	15	15	255.39	£15,199.21	32.5
S26 Genitourinary & gynaecological disorders	8	8	86.77	£4,504.39	11.0
S25 Gastrointestinal problems	9	9	58.70	£3,482.67	7.5
S11 Back Problems	4	4	56.41	£4,020.18	7.2
S12 Other musculoskeletal problems	4	5	52.80	£4,167.11	6.7
S98 Other known causes - not elsewhere classified	3	3	50.64	£2,974.13	6.4
S28 Injury, fracture	4	4	49.47	£3,220.85	6.3
S13 Cold, Cough, Flu - Influenza	10	10	40.53	£3,123.53	5.2
S30 Pregnancy related disorders	2	3	35.16	£2,351.07	4.5
S24 Endocrine / glandular problems	2	2	22.60	£63.62	2.9

PADR Compliance

These figures exclude Trainee Doctors, those on Maternity, Starters within first 6 Months, those currently off on sickness absence.

Assignment Count	Reviews Completed	Reviews Completed %
432	356	82.41

Org L5	Assignment Count	Reviews Completed	Reviews Completed %
120 WBS Clinical Section	19	18	94.74
120 WBS Collection Section	198	162	81.82
120 WBS Directors Section	7	3	42.86
120 WBS General Section	49	31	63.27
120 WBS Laboratory Section	79	75	94.94
120 WBS Quality Assurance Section	35	24	68.57
120 WBS WTAIL Section	45	43	95.56
Grand Total	**432**	**356**	**82.41**

Org L8	Assignment Count	Reviews Completed	Reviews Completed %
120 W103 WBS Donor Service Centre (DRM)	23	22	95.65
120 W104 WBS Transport	19	19	100.00
120 W105 WBS Collections Planning	5	5	100.00
120 W106 WBS PR & Advertising	12	12	100.00
120 W108 WBS Centralised Resourcing	3	3	100.00
120 W110 WBS Central Team Coordination	9	8	88.89
120 W130 WBS Talbot Green Donation Clinic	7	7	100.00
120 W131 WBS Collections West	14	9	64.29
120 W132 WBS Talbot Green Teams	49	39	79.59
120 W135 WBS Collection Team RN	15	6	40.00
120 W200 WBS Laboratory General	4	4	100.00
120 W201 WBS Processing, Verification & Issues (PVI)	35	32	91.43
120 W212 WBS Automated Serology	18	18	100.00
120 W220 WBS QA Laboratory	13	6	46.15
120 W230 WBS Red Cell Immunohaematology	14	14	100.00
120 W300 WBS Tissue Typing Management	22	21	95.45
120 W303 WBS Molecular Genetics	3	3	100.00
120 W304 WBS Antibody Testing	4	4	100.00
120 W305 WBS Patient Services	4	3	75.00
120 W310 WBS TT Unrelated Bone Marrow	9	9	100.00
120 W320 WBS TT External Qa Scheme	3	3	100.00
120 W400 WBS General Services	2	1	50.00
120 W401 WBS Centre Services	8	7	87.50
120 W412 WBS Business Systems	25	16	64.00
120 W501 WBS Stores	2	2	100.00
120 W600 WBS Clinical Services Administration	4	4	100.00
120 W602 WBS Clinical Standards & Development	9	8	88.89
120 W603 WBS Clinical Training	4	3	75.00
120 W610 WBS Better Blood Transfusion	6	6	100.00
120 W615 WBS Planning, Research & Clinical Department	1	1	100.00
120 W620 WBS Research & Development Admin	1	0	0.00
120 W635 WBS Advanced Therapies	2	0	0.00
120 W650 WBS Component Development Laboratory	2	2	100.00
120 W670 COVID-19	2	2	100.00
120 W680 CVP - Collection Services	7	2	28.57
120 W682 CVP - Laboratory Services	1	1	100.00
120 W690 WBS Infected Blood Inquiry	1	0	0.00
120 W700 WBS Directors Dept	2	1	50.00
120 W701 WBS Programme Management	11	4	36.36
120 W710 WBS QA Office	19	16	84.21
120 W711 AWBS DRM - Collections Planning	3	3	100.00
120 W714 AWBS North East Collections	16	14	87.50

120 W715 AWBS North West Collections	12	10	**83.33**
120 W717 AWBS SHU & Distribution	7	6	**85.71**
Grand Total	**432**	**356**	**82.41**

Statutory & Mandatory Training Compliance By Organisation (10x CSTF skills)

These figures exclude those on Maternity and those currently off with sickness absence

Assignment Count	Required	Achieved	Compliance %
484	4840	4464	92.23%

Statutory & Mandatory Training Compliance By Section (10x CSTF skills)

Org L5	Assignment Count	Required	Achieved	Compliance %
120 WBS Clinical Section	21	210	193	91.90%
120 WBS Collection Section	225	2250	2099	93.29%
120 WBS Directors Section	14	140	88	62.86%
120 WBS General Section	50	500	460	92.00%
120 WBS Laboratory Section	84	840	791	94.17%
120 WBS Quality Assurance Section	42	420	380	90.48%
120 WBS WTAIL Section	48	480	453	94.38%

Statutory & Mandatory Training Compliance By Section by the (10x CSTF Skills)

Org L5	NHS|CSTF|Equality, Diversity and Human Rights - 3 Years|	NHS|CSTF|Fire Safety - 2 Years|	NHS|CSTF|Health, Safety and Welfare - 3 Years|	NHS|CSTF|Infection Prevention and Control - Level 1 - 3 Years|	NHS|CSTF|Information Governance (Wales) - 2 Years|	NHS|CSTF|Moving and Handling - Level 1 - 2 Years|	NHS|CSTF|Resuscitation - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Adults - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Children - Level 1 - 3 Years|	NHS|CSTF|Violence and Aggression (Wales) - Module A - No Specified Renewal|	
120 WBS Clinical Section	95.24%	80.95%	95.24%	90.48%	90.48%	100.00%	90.48%	90.48%	90.48%	95.24%	
120 WBS Collection Section	88.00%	95.11%	94.22%	98.67%	80.44%	97.33%	95.11%	94.22%	94.22%	95.56%	
120 WBS Directors Section	50.00%	78.57%	42.86%	85.71%	35.71%	92.86%	42.86%	71.43%	71.43%	57.14%	
120 WBS General Section	94.00%	94.00%	98.00%	92.00%	86.00%	98.00%	88.00%	86.00%	88.00%	96.00%	
120 WBS Laboratory Section	96.43%	88.10%	95.24%	92.86%	82.14%	98.81%	95.24%	96.43%	97.62%	98.81%	
120 WBS Quality Assurance Section	90.48%	92.86%	95.24%	88.10%	88.10%	92.86%	88.10%	88.10%	88.10%	92.86%	90.48%
120 WBS WTAIL Section	95.83%	95.83%	95.83%	93.75%	89.58%	93.75%	93.75%	93.75%	93.75%	97.92%	

Statutory & Mandatory Training Compliance by Department by the (10x CSTF Skills)

Org L8	NHS|CSTF|Equality, Diversity and Human Rights - 3 Years|	NHS|CSTF|Fire Safety - 2 Years|	NHS|CSTF|Health, Safety and Welfare - 3 Years|	NHS|CSTF|Infection Prevention and Control - Level 1 - 3 Years|	NHS|CSTF|Information Governance (Wales) - 2 Years|	NHS|CSTF|Moving and Handling - Level 1 - 2 Years|	NHS|CSTF|Resuscitation - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Adults - Level 1 - 3 Years|	NHS|CSTF|Safeguarding Children - Level 1 - 3 Years|	NHS|CSTF|Violence and Aggression (Wales) - Module A - No Specified Renewal|
120 W103 WBS Donor Service Centre (DRM)	96.55%	100.00%	96.55%	100.00%	96.55%	100.00%	96.55%	96.55%	96.55%	100.00%
120 W104 WBS Transport	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	94.74%	100.00%
120 W105 WBS Collections Planning	100.00%	100.00%	100.00%	100.00%	80.00%	80.00%	100.00%	100.00%	100.00%	100.00%
120 W106 WBS PR & Advertising	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W108 WBS Centralised Resourcing	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W110 WBS Central Team Coordination	88.89%	77.78%	88.89%	88.89%	88.89%	77.78%	66.67%	88.89%	88.89%	100.00%
120 W130 WBS Talbot Green Donation Clinic	85.71%	100.00%	100.00%	100.00%	71.43%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W131 WBS Collections West	86.67%	93.33%	93.33%	93.33%	80.00%	93.33%	93.33%	93.33%	93.33%	93.33%
120 W132 WBS Talbot Green Teams	79.59%	89.80%	95.92%	100.00%	75.51%	100.00%	95.92%	95.92%	95.92%	97.96%
120 W135 WBS Collection Team RN	84.21%	89.47%	94.74%	100.00%	84.21%	100.00%	94.74%	100.00%	94.74%	100.00%
120 W200 WBS Laboratory General	100.00%	83.33%	100.00%	100.00%	83.33%	83.33%	100.00%	100.00%	100.00%	100.00%
120 W201 WBS Processing, Verification & Issues (PVI)	92.11%	89.47%	89.47%	86.84%	84.21%	100.00%	94.74%	92.11%	94.74%	97.37%
120 W212 WBS Automated Serology	100.00%	83.33%	100.00%	100.00%	66.67%	100.00%	88.89%	100.00%	100.00%	100.00%
120 W220 WBS QA Laboratory	82.35%	82.35%	88.24%	76.47%	76.47%	94.12%	70.59%	76.47%	70.59%	82.35%
120 W230 WBS Red Cell Immunohaematology	100.00%	85.71%	100.00%	100.00%	85.71%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W300 WBS Tissue Typing Management	95.45%	100.00%	100.00%	95.45%	100.00%	100.00%	90.91%	90.91%	90.91%	100.00%
120 W303 WBS Molecular Genetics	100.00%	100.00%	100.00%	100.00%	66.67%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W304 WBS Antibody Testing	100.00%	100.00%	100.00%	75.00%	75.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W305 WBS Patient Services	100.00%	100.00%	100.00%	100.00%	75.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W310 WBS TT Unrelated Bone Marrow	90.00%	80.00%	80.00%	90.00%	80.00%	70.00%	90.00%	90.00%	90.00%	90.00%
120 W320 WBS TT External Qa Scheme	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W400 WBS General Services	100.00%	66.67%	100.00%	100.00%	33.33%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W401 WBS Centre Services	75.00%	87.50%	87.50%	75.00%	62.50%	100.00%	62.50%	37.50%	37.50%	100.00%
120 W412 WBS Business Systems	100.00%	100.00%	100.00%	96.00%	92.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W501 WBS Stores	50.00%	50.00%	100.00%	100.00%	100.00%	50.00%	50.00%	100.00%	100.00%	50.00%
120 W600 WBS Clinical Services Administration	100.00%	83.33%	83.33%	83.33%	83.33%	100.00%	83.33%	83.33%	83.33%	83.33%
120 W602 WBS Clinical Standards & Development	88.89%	88.89%	100.00%	88.89%	100.00%	100.00%	100.00%	88.89%	88.89%	100.00%
120 W603 WBS Clinical Training	80.00%	100.00%	100.00%	100.00%	100.00%	80.00%	100.00%	100.00%	100.00%	100.00%
120 W610 WBS Better Blood Transfusion	100.00%	66.67%	100.00%	100.00%	83.33%	100.00%	83.33%	100.00%	100.00%	100.00%
120 W615 WBS Planning, Research & Clinical Department	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%
120 W620 WBS Research & Development Admin	100.00%	100.00%	100.00%	50.00%	100.00%	0.00%	100.00%	50.00%	100.00%	100.00%
120 W635 WBS Advanced Therapies	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W650 WBS Component Development Laboratory	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W670 COVID-19	33.33%	77.78%	22.22%	88.89%	22.22%	100.00%	22.22%	66.67%	66.67%	33.33%
120 W680 CVP - Collection Services	62.50%	93.75%	62.50%	100.00%	37.50%	100.00%	100.00%	93.75%	93.75%	68.75%
120 W682 CVP - Laboratory Services	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W690 WBS Infected Blood Inquiry	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W700 WBS Directors Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	100.00%
120 W701 WBS Programme Management	100.00%	100.00%	100.00%	90.91%	100.00%	100.00%	90.91%	81.82%	90.91%	100.00%
120 W709 WBS National Programme Support	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W710 WBS QA Office	95.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W711 AWBS DRM - Collections Planning	66.67%	100.00%	100.00%	100.00%	66.67%	66.67%	66.67%	66.67%	66.67%	100.00%
120 W714 AWBS North East Collections	95.45%	100.00%	95.45%	95.45%	68.18%	100.00%	90.91%	72.73%	81.82%	86.36%
120 W715 AWBS North West Collections	100.00%	100.00%	100.00%	100.00%	75.00%	100.00%	100.00%	100.00%	100.00%	100.00%
120 W717 AWBS SHU & Distribution	100.00%	100.00%	100.00%	85.71%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Section	Sum of Previous Year Carryover	Annual Leave Entitlement	Total leave entitlement (carry over & current year)	Total Leave Taken	Total Leave Booked	Total Leave Taken or Booked	Sum of Remaining Leave	% of leave taken	% of leave booked	% of leave unbooked	Percentage of annual leave unbooked reported end of reporting July
120 WBS Clinical Section	149.00	4910.50	**5059.50**	938.20	1386.00	**2324.20**	2735.30	**18.54**	**27.39**	**54.06**	
120 WBS Collection Section	780.10	54429.50	**55209.60**	10583.93	23708.60	**34292.53**	20917.08	**19.17**	**42.94**	**37.89**	
120 WBS Directors Section	145.50	3189.75	**3335.25**	518.00	898.85	**1416.85**	1918.40	**15.53**	**26.95**	**57.52**	
120 WBS General Section	754.75	14558.75	**15313.50**	2669.64	3119.06	**5788.70**	9524.80	**17.43**	**20.37**	**62.20**	
120 WBS Laboratory Section	675.50	23420.25	**24095.75**	4183.95	5098.40	**9282.35**	14813.40	**17.36**	**21.16**	**61.48**	
120 WBS Quality Assurance Section	213.75	11964.00	**12177.75**	2255.00	2338.00	**4593.00**	7584.75	**18.52**	**19.20**	**62.28**	
120 WBS WTAIL Section	206.25	13628.75	**13835.00**	2667.02	1996.90	**4663.92**	9171.08	**19.28**	**14.43**	**66.29**	
Grand Total	**2924.85**	**126101.50**	**129026.35**	**23815.74**	**38545.81**	**62361.55**	**66664.81**	**18.46**	**29.87**	**51.67**	

Covid-19 Risk Assessment Compliance

These figures exclude those on Maternity and those currently off with sickness absence

Assignment Count	Required	Achieved	Compliance %
484	484	339	70.04%

Org L5	Assignment Count	Required	Achieved	Compliance %
120 WBS Clinical Section	21	21	18	85.71%
120 WBS Collection Section	225	225	124	55.11%
120 WBS Directors Section	14	14	7	50.00%
120 WBS General Section	50	50	47	94.00%
120 WBS Laboratory Section	84	84	72	85.71%
120 WBS Quality Assurance Section	42	42	35	83.33%
120 WBS WTAIL Section	48	48	36	75.00%

Org L8	Assignment Count	Required	Achieved	Compliance %
120 W103 WBS Donor Service Centre (DRM)	29	29	27	93.10%
120 W104 WBS Transport	19	19	19	100.00%
120 W105 WBS Collections Planning	5	5	5	100.00%
120 W106 WBS PR & Advertising	12	12	11	91.67%
120 W108 WBS Centralised Resourcing	3	3	3	100.00%
120 W110 WBS Central Team Coordination	9	9	7	77.78%
120 W130 WBS Talbot Green Donation Clinic	7	7	2	28.57%
120 W131 WBS Collections West	15	15	3	20.00%
120 W132 WBS Talbot Green Teams	49	49	6	12.24%
120 W135 WBS Collection Team RN	19	19	8	42.11%
120 W200 WBS Laboratory General	6	6	5	83.33%
120 W201 WBS Processing, Verification & Issues (PVI)	38	38	32	84.21%
120 W212 WBS Automated Serology	18	18	15	83.33%
120 W220 WBS QA Laboratory	17	17	12	70.59%
120 W230 WBS Red Cell Immunohaematology	14	14	13	92.86%
120 W300 WBS Tissue Typing Management	22	22	19	86.36%
120 W303 WBS Molecular Genetics	3	3	2	66.67%
120 W304 WBS Antibody Testing	4	4	0	0.00%
120 W305 WBS Patient Services	4	4	3	75.00%
120 W310 WBS TT Unrelated Bone Marrow	10	10	7	70.00%
120 W320 WBS TT External Qa Scheme	5	5	5	100.00%
120 W400 WBS General Services	3	3	2	66.67%
120 W401 WBS Centre Services	8	8	7	87.50%
120 W412 WBS Business Systems	25	25	25	100.00%
120 W501 WBS Stores	2	2	2	100.00%
120 W600 WBS Clinical Services Administration	6	6	5	83.33%
120 W602 WBS Clinical Standards & Development	9	9	7	77.78%
120 W603 WBS Clinical Training	5	5	5	100.00%
120 W610 WBS Better Blood Transfusion	6	6	6	100.00%
120 W615 WBS Planning, Research & Clinical Department	1	1	1	100.00%
120 W620 WBS Research & Development Admin	2	2	2	100.00%
120 W635 WBS Advanced Therapies	2	2	2	100.00%
120 W650 WBS Component Development Laboratory	2	2	1	50.00%
120 W670 COVID-19	9	9	3	33.33%

120 W680 CVP - Collection Services	16	16	5	31.25%
120 W682 CVP - Laboratory Services	1	1	0	0.00%
120 W690 WBS Infected Blood Inquiry	1	1	1	100.00%
120 W700 WBS Directors Dept	2	2	1	50.00%
120 W701 WBS Programme Management	11	11	10	90.91%
120 W709 WBS National Programme Support	1	1	1	100.00%
120 W710 WBS QA Office	20	20	19	95.00%
120 W711 AWBS DRM - Collections Planning	3	3	2	66.67%
120 W714 AWBS North East Collections	22	22	12	54.55%
120 W715 AWBS North West Collections	12	12	9	75.00%
120 W717 AWBS SHU & Distribution	7	7	7	100.00%

Workforce Monthly Report

May 2021

Workforce Report provides the following:

- Overview of Key Performance Indictors for Sickness, PADR, Statutory and Mandatory training in all Divisions of the Trust, including Corporate Divisions, TCS and Research and Development (excluding hosted);
- Corporate Divisions include Finance, Workforce and OD, Corporate Estates and Planning, Corporate IT, Clinical Governance, Infection Control, Fundraising and Trust Management and Board;
- The report provides a 12 monthly trend report for Sickness, PADR, Statutory and Mandatory training;
- Hotspots identified, with in month actions to explain improvement trajectory work. Hotspots defined as areas where KPIs are not met and there has been a downward trend over the last three months;
- In month Job Planning figures with narrative to notify areas of improvement;
- Usage of Work in Confidence platform.

At a Glance for Velindre (Excluding Hosted)

Velindre (Excluding Hosted	Current Month	Previous Month	Target
	May-21	Apr-21	
PADR	76.77	76.07	85%
Sickness	4.81	4.82	3.54%
S&M Compliance	84.09	82.92	85%

Workforce Dashboard

Data below highlights rolling figures for workforce KPI's. This provides a running total of the values of the last 12 months of an indicator providing trend data for the indicators. Granular monthly data is generated for divisions as separate reports. Data Rag Rated for ease of reading.

Key	85%-100%		50% - 84.99%		0% - 49.99%								
These figures exclude Trainee Doctors, those on Maternity, Starters within first 6 Months, those currently off on sickness absence.													
PADR	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	51.46	43.93	41.28	41.59	44.35	44.07	45.76	47.46	39.82	41.74	43.44	45.00	49.58
Research, Development & Innovation	72.50	69.77	70.45	69.57	71.11	75.00	77.27	75.00	42.22	34.04	58.33	60.00	64.58
Transforming Cancer Services	69.23	75.00	61.54	60.00	62.50	50.00	50.00	37.50	40.00	64.29	60.00	66.67	68.75
Velindre Cancer Centre	60.26	58.52	62.75	67.60	71.61	73.63	74.23	76.98	78.68	77.53	79.78	81.07	78.88
Welsh Blood Service	67.25	64.94	65.11	68.69	70.22	71.46	69.32	66.18	67.97	73.19	77.25	78.65	82.41
Velindre Organisations	62.28	59.89	61.92	65.67	68.61	70.02	69.89	70.32	70.19	71.32	74.64	76.07	76.77
Target 85%	85	85	85	85	85	85	85	85	85	85	85	85	85

Key	85%-100%		50% - 84.99%		0% - 49.99%								
These figures exclude those on Maternity and those currently off with sickness absence													
Stat and Mand Compliance (10x CSTF)	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	70.73	68.94	70.00	72.80	66.67	70.00	69.45	70.47	71.61	70.62	69.47	69.06	70.08
Research, Development & Innovation	75.92	76.27	75.96	80.79	72.41	75.71	76.73	76.25	77.45	82.50	83.73	82.59	83.08
Transforming Cancer Services	69.41	65.29	66.67	70.99	70.00	65.26	70.56	70.56	71.18	69.38	64.12	65.29	70.00
Velindre Cancer Centre	77.76	77.62	78.82	79.87	77.79	78.94	80.13	80.23	80.69	81.53	81.57	80.98	81.77
Welsh Blood Service	93.27	93.79	93.79	91.99	90.65	89.69	91.67	91.42	90.43	89.54	90.90	90.43	92.23
Velindre Organisations	81.83	81.74	82.49	82.99	80.57	81.26	85.59	82.66	82.81	83.06	83.39	82.92	84.09

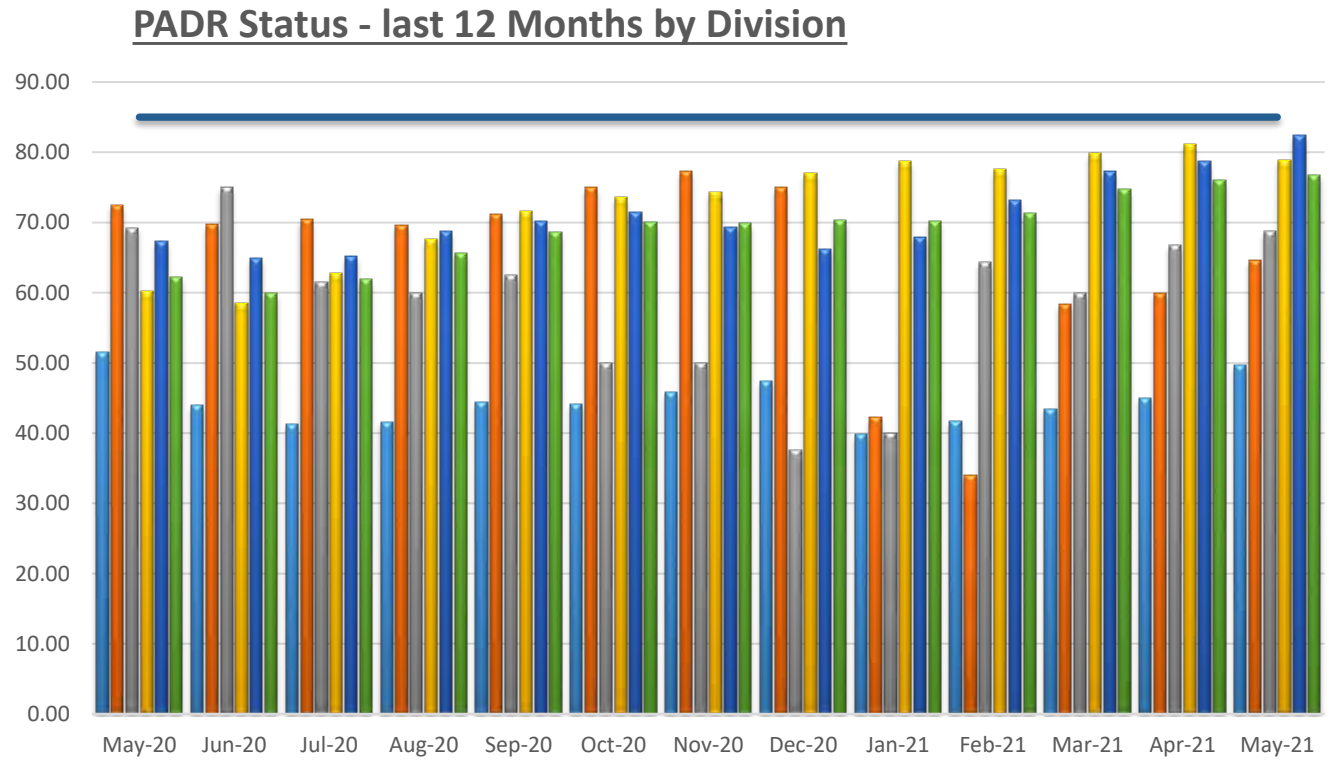
Key	0% - 3.54%		3.55% - 4.49%		4.5 % & Above								
Sickness Rolling %	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	4.85	4.87	4.91	5.20	5.38	5.40	5.19	5.21	5.26	5.16	4.88	4.63	4.51
Research, Development & Innovation	4.68	5.01	5.14	4.88	4.68	4.51	4.62	4.60	4.37	4.23	4.01	3.73	3.46
Transforming Cancer Services	3.81	3.69	3.08	2.46	2.38	2.31	2.24	2.46	2.41	2.41	2.01	1.34	0.88
Velindre Cancer Centre	5.26	5.44	5.57	5.63	5.73	5.74	5.75	5.85	5.84	5.92	5.71	5.35	5.31
Welsh Blood Service	5.09	4.92	4.76	4.60	4.53	4.43	4.43	4.43	4.44	4.39	4.27	4.21	4.36
Velindre Organisations	5.13	5.19	5.21	5.21	5.25	5.22	5.21	5.26	5.26	5.27	5.08	4.82	4.81
Target 3.54%	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54

Monthly Sickness Rolling Covid Only Absence %	0%		0.01% - 0.49%		0.50 % & Above								
Sickness Leave Covid Related	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	0.19	0.19	0.18	0.18	0.20	0.23	0.28	0.42	0.56	0.61	0.58	0.53	0.59
Research, Development & Innovation	0.18	0.18	0.18	0.21	0.31	0.35	0.36	0.43	0.45	0.46	0.42	0.31	0.30
Transforming Cancer Services	0.33	0.32	0.31	0.30	0.29	0.28	0.28	0.27	0.26	0.26	0.21	0.00	0.00
Velindre Cancer Centre	0.69	0.76	0.79	0.84	0.94	1.02	1.09	1.27	1.37	1.41	1.27	0.91	0.83
Welsh Blood Service	0.18	0.18	0.19	0.19	0.21	0.26	0.30	0.37	0.42	0.45	0.39	0.31	0.29
Velindre Organisations	0.46	0.50	0.52	0.55	0.62	0.68	0.74	0.87	0.95	0.99	0.89	0.65	0.61

Monthly Special Leave Absence %	0%		0.01% - 0.49%		0.50 % & Above								
Special Leave Non Covid Related	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	0.43	0.43	0.41	0.40	0.42	0.39	0.38	0.37	0.30	0.23	0.17	0.11	0.05
Research, Development & Innovation	0.60	0.58	0.61	0.69	0.70	0.65	0.67	0.71	0.74	0.65	0.50	0.46	0.42
Transforming Cancer Services	0.00	0.00	0.02	0.02	0.02	0.02	0.16	0.32	0.51	0.51	0.51	0.51	0.51
Velindre Cancer Centre	0.35	0.34	0.34	0.36	0.38	0.39	0.39	0.40	0.42	0.43	0.43	0.41	0.40
Welsh Blood Service	0.52	0.52	0.52	0.53	0.54	0.58	0.57	0.62	0.63	0.61	0.61	0.57	0.56
Velindre Organisations	0.42	0.41	0.41	0.43	0.44	0.45	0.45	0.47	0.49	0.48	0.47	0.43	0.42

Monthly Special Leave Absence %	0%		0.01% - 0.49%		0.50 % & Above								
Special Leave Covid Related	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	0.35	0.42	0.49	0.57	0.58	0.59	0.59	0.58	0.58	0.58	0.49	0.32	0.25
Research, Development & Innovation	1.25	1.53	1.82	1.97	1.96	1.94	1.99	1.98	1.96	1.95	1.45	1.04	0.76
Transforming Cancer Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velindre Cancer Centre	1.13	1.39	1.61	1.74	1.83	1.87	1.97	2.16	2.29	2.39	2.16	1.77	1.49
Welsh Blood Service	0.77	1.03	1.22	1.32	1.39	1.45	1.52	1.63	1.73	1.79	1.70	1.39	1.14
Velindre Organisations	0.94	1.18	1.37	1.49	1.56	1.60	1.68	1.81	1.92	1.99	1.81	1.47	1.22

PADR – The Figures



	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	51.46	43.93	41.28	41.59	44.35	44.07	45.76	47.46	39.82	41.74	43.44	45.00	49.58
Research, Development & Innovation	72.50	69.77	70.45	69.57	71.11	75.00	77.27	75.00	42.22	34.04	58.33	60.00	64.58
Transforming Cancer Services	69.23	75.00	61.54	60.00	62.50	50.00	50.00	37.50	40.00	64.29	60.00	66.67	68.75
Velindre Cancer Centre	60.26	58.52	62.75	67.60	71.61	73.63	74.23	76.98	78.68	77.53	79.78	81.07	78.88
Welsh Blood Service	67.25	64.94	65.11	68.69	70.22	71.46	69.32	66.18	67.97	73.19	77.25	78.65	82.41
Velindre Organisations	62.28	59.89	61.92	65.67	68.61	70.02	69.89	70.32	70.19	71.32	74.64	76.07	76.77
Target 85%	85	85	85	85	85	85	85	85	85	85	85	85	85

PADR – The Narrative

Performance Indicator	RAG / change from previous month	April Figure	Hotspot Areas	%	Comment to include reasons for change / rates high or low
PADR Compliance (85%)	76.77% ↑	76.07%	WBS - Directors Section	42.86% ↔	Only 7 people in this section, 3 completed, 4 remaining.
			WBS - General Section	63.27% ↑	2 departments within this area have a compliance rate over the target, 2 remain in amber territory.
			WBS – Quality Assurance	68.57% ↓	Further analysis is taking place into this Department.
			VCC – Medical Staffing	30% ↓	Slight decrease on previous month.
			VCC - Clinical Audit	50% ↔	Same as last month.
			VCC - Palliative/Chronic Pain	52.63% ↔	Same as last month.
			Corporate	49.58% ↑	Increase on last month.

			RD+I	64.58%	Increase on last month.
			TCS	68.75%	Increase on last month.
			HTW	50%	A significant decrease on last month. WOD Team to pick up with Manager.

Action/ initiatives:

WBS

- Support mangers in areas of low compliance to improve compliance.
- Operational workforce team are working with these department Managers to develop plan to increase compliance.
- Resolve issues with recording on ESR.

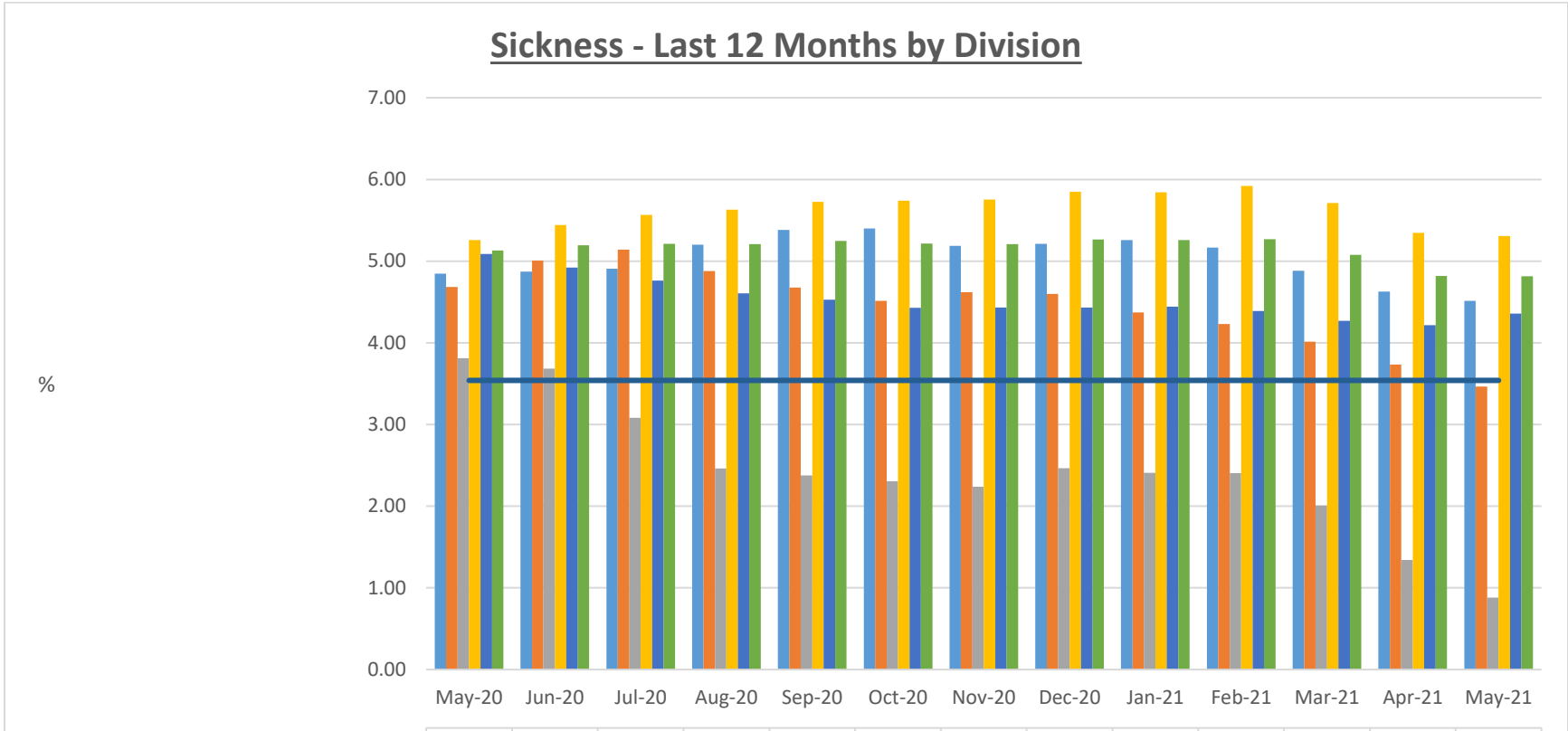
VCC

- Although down this month, overall PADR compliance continues to steadily improving in VCC and Workforce business meetings with the managers in the hotspot areas have been arranged for June 2021 to ensure improved compliance. Oncology and Palliative Care are working together to progress the MARS figures onto ESR following approval that the appraisals can be re-established – data for 'approved missed appraisals' during 2020-2021 suspension are not recorded in either system.

Corporate Areas (including RD&T, HTW & TCS)

- Despite the increased compliance in most of the corporate areas, Managers are reporting that working arrangements (WFH) are making PADRs more difficult.
- Work to be undertaken in some corporate areas to ensure Managers know how to update PADR data in ESR.

Sickness Data – The Figures



	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Corporate	4.85	4.87	4.91	5.20	5.38	5.40	5.19	5.21	5.26	5.16	4.88	4.63	4.51
Research, Development & Innovation	4.68	5.01	5.14	4.88	4.68	4.51	4.62	4.60	4.37	4.23	4.01	3.73	3.46
Transforming Cancer Services	3.81	3.69	3.08	2.46	2.38	2.31	2.24	2.46	2.41	2.41	2.01	1.34	0.88
Velindre Cancer Centre	5.26	5.44	5.57	5.63	5.73	5.74	5.75	5.85	5.84	5.92	5.71	5.35	5.31
Welsh Blood Service	5.09	4.92	4.76	4.60	4.53	4.43	4.43	4.43	4.44	4.39	4.27	4.21	4.36
Velindre Organisations	5.13	5.19	5.21	5.21	5.25	5.22	5.21	5.26	5.26	5.27	5.08	4.82	4.81
Target 3.54%	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54

Sickness – The Narrative

Performance Indicator	RAG/ Change from previous month	April Figure	Hotspot	%	Comment to include reasons for change / rates high or low
Sickness absence (3.42%)	4.81% ↓	4.82%	WBS - Collection Service	7.78% ↑	5 departments have LTS of 5% or more, a number also experienced some STS throughout May.
			WBS – Laboratory Services	5.75% ↓	Decrease from 7.08% in April
			WTAIL	5.94% ↑	Increase from 3.83% in April. Two areas within WTAIL have LTS of 6%+.
			VCC - Pharmacy	8.35% ↓	Outpatients and Operational Services have both had significant increase in absence in the past 6 months at 6.85% and 4.41% respectively. Pharmacy has continued to improve absence figures reducing 3.52% in the same period.
			VCC - Outpatients	12.18% ↑	
			VCC – Operational Services	8.71% ↔	
			Corporate	4.51% ↓	0.63% of in month absence Covid related (slight reduction on last month).

					Around 65% of absence due to stress/anxiety/depression – double elsewhere in the Trust.
			RD+I	3.46%	0% of in month absence Covid related.
			TCS	0.88%	No COVID absence reported.
			HTW	2.38%	No Covid absence reported.

Action/ initiatives:

WBS

- HR Operational Team continue to support mangers to resolve sickness cases.

VCC

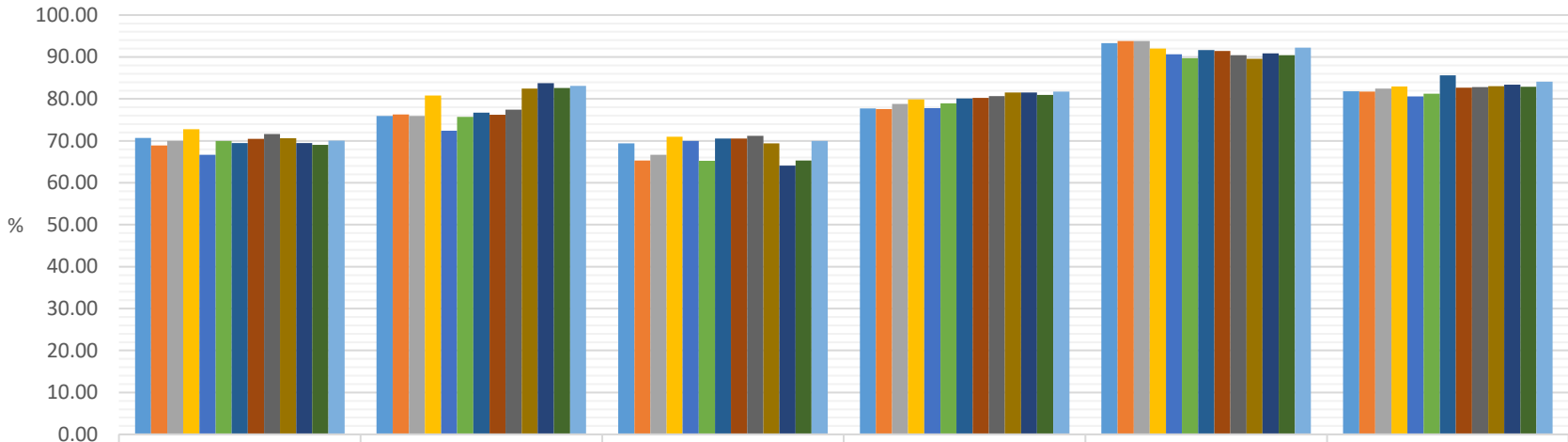
- Short-term sickness continues to remain relatively low in VCC, suggesting that appropriate management actions are being taken under the Managing Attendance at Work Policy, however overall rolling absence remains just over the 5% mark, which has been the common trend from some time.
- Business Meetings are being held between WOD operational team and managers in the hotspot areas to understand the complexity of the absence management cases and to consider solutions to progress.

- Emotional health and mental illnesses remain the highest cause for sickness absence in VCC accounting for 29.9% and the Healthy and Engaged Steering group are in discussions on how to understand the detail and nature of these figures and to consider implementing initiatives required across the Trust.

Corporate Areas (including RD&T, HTW & TCS)

- Corporate has around 130 staff (headcount) across 11 departments. Between 2 and 32 staff per department so each staff member can have between 3% and 50% impact on that department's figures. Managers are engaging in Workforce conversations and acting to support staff back into work.

Statutory and Mandatory Figures – The Figures



	Corporate	Research, Development & Innovation	Transforming Cancer Services	Velindre Cancer Centre	Welsh Blood Service	Velindre Organisations
May-20	70.73	75.92	69.41	77.76	93.27	81.83
Jun-20	68.94	76.27	65.29	77.62	93.79	81.74
Jul-20	70.00	75.96	66.67	78.82	93.79	82.49
Aug-20	72.80	80.79	70.99	79.87	91.99	82.99
Sep-20	66.67	72.41	70.00	77.79	90.65	80.57
Oct-20	70.00	75.71	65.26	78.94	89.69	81.26
Nov-20	69.45	76.73	70.56	80.13	91.67	85.59
Dec-20	70.47	76.25	70.56	80.23	91.42	82.66
Jan-21	71.61	77.45	71.18	80.69	90.43	82.81
Feb-21	70.62	82.50	69.38	81.53	89.54	83.06
Mar-21	69.47	83.73	64.12	81.57	90.90	83.39
Apr-21	69.06	82.59	65.29	80.98	90.43	82.92
May-21	70.08	83.08	70.00	81.77	92.23	84.09

Statutory and Mandatory Figures – The Narrative

Performance Indicator	RAG/ Change from previous month	April Figure	Hotspot	%	Comment to include reasons for change / rates high or low
Stat & Mand Training (85%)	**84.09%** ↑	82.92%	VCC - Palliative/Chronic Pain	63.29% ↑	Palliative/Chronic Pain improving month on month, however externally hosted employees will impact on compliance. CD working within area to develop process to mitigate this risk.
			VCC - Medical Staffing	62.67% ↑	Improvement on last month.
			VCC – Operational Services	72.14% ↓	Operational Services has slowly declined by 2.95% in 6 months.
			Corporate	70.08% ↑	Slight increase in compliance. All managers committed to getting staff to undertake the relevant training.
			RD&I	83.08% ↑	Small increase on last month.

			TCS	70%	Small increase on last month.
			HTW	83.13%	Small increase on last month.

Action/ initiatives:

WBS

- As a whole, WBS is currently achieving a compliance rate of 92.23%, with all departments (except one) being above the 85% target.

VCC

- The pandemic has impacted significantly on the ability to carry out face to face training and ESR inconsistencies have impacted on e-learning availability.
- Education and Development team continue to work closely with departments to improve their stats and overall compliance.
- A detailed paper will be submitted to SLT in respect of training leads within departments for Ed &Dev. to work closer to the service and champion the compliance of training.

Corporate Areas (including RD&T, HTW & TCS)

Hotspot areas being addressed up during Workforce/Management meetings. Issues with ESR learning portal may have impacted on compliance.

Job Planning Figures for Consultants

VCC & WBS Combined

Role	Assignments	With Expired Plan	% With Expired Plan	With Current Plan (within 1 Year)	% With Current Plan	With Current but Unsigned Plan	% With Current but Unsigned Plan
Consultant	61	26	**43%**	35	**57%**	13	**37%**
Grand Total	61	26	**43%**	35	**57%**	13	**37%**

NB

Data on the job plans associated with other 'medical' posts within the Trust have not been included in the above; this is due to the relatively small numbers involved and therefore the immediately identifiable nature of this information.

Work In Confidence (WIC)

No detail has been provided this month in terms of the number of staff who have accessed the WIC platform, or categorisation of the type of conversations that have taken place; this is primarily the result of low usage of the platform over the last month and therefore the potential to identify those who have made contact.

In all contacts with staff, staff are encouraged, where appropriate, to share their concerns with their Line Manager (or next appropriate Manager), in order to achieve an early, informal resolution. The WOD Team have also been previously involved in facilitating discussions between the Manager and member of staff.

TRUST BOARD

FINANCE REPORT FOR THE PERIOD ENDED 31 MAY 2021 (M2)

DATE OF MEETING	29/07/2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Matthew Bunce – Deputy Director of Finance
PRESENTED BY	Mark Osland, Executive Director of Finance & Informatics
EXECUTIVE SPONSOR APPROVED	Mark Osland, Executive Director of Finance & Informatics

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
Executive Management Board Quality, Safety & Performance Committee	5/7/2021 15/7/2021	Noted Noted

ACRONYMS	
IMTP	Integrated Medium Term Plan
WBS	Welsh Blood Service
WTAIL	Welsh Transplantation and Immunogenetics Laboratory
WG	Welsh Government
VCC	Velindre Cancer Centre

1. SITUATION/BACKGROUND

1.1 The attached report outlines the financial position and performance for the period to the end of May 2021.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

2.1 Performance against Key Financial Targets:

KPI Target	Unit	Current Month £000	Year to date £000	Year End Forecast £000
Revenue (To ensure net operating costs do not exceed income)	Variance	3	3	0
Capital (To ensure that costs do not exceed the Capital Expenditure limit)	Actual Spend	275	463	9,281
Public Sector Payment Performance (Administrative Target – To pay 95% of non NHS invoices within 30 days measured against number of invoices paid).	%	97.5%	96.6%	95.0

2.2 Revenue Budget

At this stage in the financial year the overall revenue budget is broadly in line with expectations as planned within the 2021/22 Annual Plan, with a projected forecast outturn position of breakeven

The overall position against the profiled revenue budget to the end of May is an underspend of **£3k**, with an underachievement against income offset by an underspend on both Pay and Non pay.

A large element of the underachievement on planned income relates to WBS WTAIL and Blood Components due to the impact of Covid, for which the Trust is expecting to receive WG funding to cover.

Cost pressures which have / will surface during the year, will continue to be managed by budget holders in line with normal budgetary control procedures, to ensure the delegated expenditure control limits are not exceeded.

At this stage the Trust is currently planning to fully achieve the savings target during 2021-22 of £1.1m, however further work is in progress to develop more detailed measures to ensure delivery and consequently at this stage our savings target will remain a financial risk.

The Trust is reporting a year end forecast breakeven position, however this is based on the assumption that all additional Covid-19 costs are fully reimbursed by WG, all planned additional income is received and savings targets achieved.

2.3 Covid Expenditure

Covid-19 Revenue Spend/ Funding		
	YTD Actual £000	Plan 2021/22 £000
Mass Covid Vaccination	91	365
Cleaning Standards	94	560
PPE	60	360
Covid Recovery	60	3,480
Other Covid Related Spend Cost Reduction	506	1,230
B/Fwd Savings Loss		700
Total Covid Spend /Funding Requirement 2021/22	**811**	**6,695**
Funding Received		2,500
Funding Confirmed		2,185
Balance of Funding Requirement		**2,010**

The overall gross funding requirement related to Covid is £6,695k which includes £5,995k of expenditure directly associated, and £700k in relation to the non-achievement of savings carried forward from 2020/21.

2.4 Reserves

The financial strategy for 2021-22 facilitated the development of a recurrent and non-recurrent reserve in support of the Trust transformation and delivery agenda. These reserves could only be accommodated on the basis that all income expectations are received, planned savings schemes delivered and new emerging cost pressures managed. In addition, the Trust holds an emergency reserve of 522k.

The remaining recurrent unallocated budget is £635k.

2.5 Financial Risks

Actions continue to be taken to ensure that funding is fully draw down from WG to match the anticipated spend on Covid.

At this stage the Trust is currently planning to fully achieve the savings target during 2021-22 of £1.1m, however this will remain a financial risk until further work is undertaken to develop more detailed plans.

All other financial risks are expected to be mitigated or managed at Divisional level

2.6 Capital

a) All Wales Programme

Performance against the current agreed All Wales Programme budget allocations are at this stage expected to deliver to budget.

The Trust has had a formal budget allocation of £7.3m for the All Wales Capital Programme schemes at this stage, £3.8m of which relates to the TCS programme.

Other Major Schemes in development that will be considered during 2021/22 in conjunction with WG include, Integrated Radiotherapy Solution (IRS), WBS HQ, VCC Ventilation & Infrastructure/ Outpatients.

b) Discretionary Programme

The allocation of the Trust Discretionary funding is currently being finalised and is expected to be signed off by EMB during July.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	The Trust financial position at the end of May 2021 is an underspend of £3k with a year-end forecast break-even position in accordance with the approved IMTP

4. RECOMMENDATION

4.1 Trust Board are asked to **NOTE** the contents of the May 2021 financial report and in particular the financial performance to date, and the year-end forecast to achieve financial break-even.

Canolfan Ganser Felindre
Velindre Cancer Centre

GIG CYMRU NHS WALES
Ymddiriedolaeth GIG
Prifysgol Felindre
Velindre University
NHS Trust

Welsh Blood Service
Gwasanaeth Gwaed Cymru

FINANCIAL PERFORMANCE REPORT

FOR THE PERIOD ENDED MAY 2021/22

TRUST BOARD

29/07/2021

1. Introduction

The purpose of this report is to outline the financial position and performance for the year to date, performance against financial savings targets, highlights the financial risks, and forecast for the financial year, outlining the actions required to deliver the IMTP Financial Plan for 2021-22.

2. Background / Context

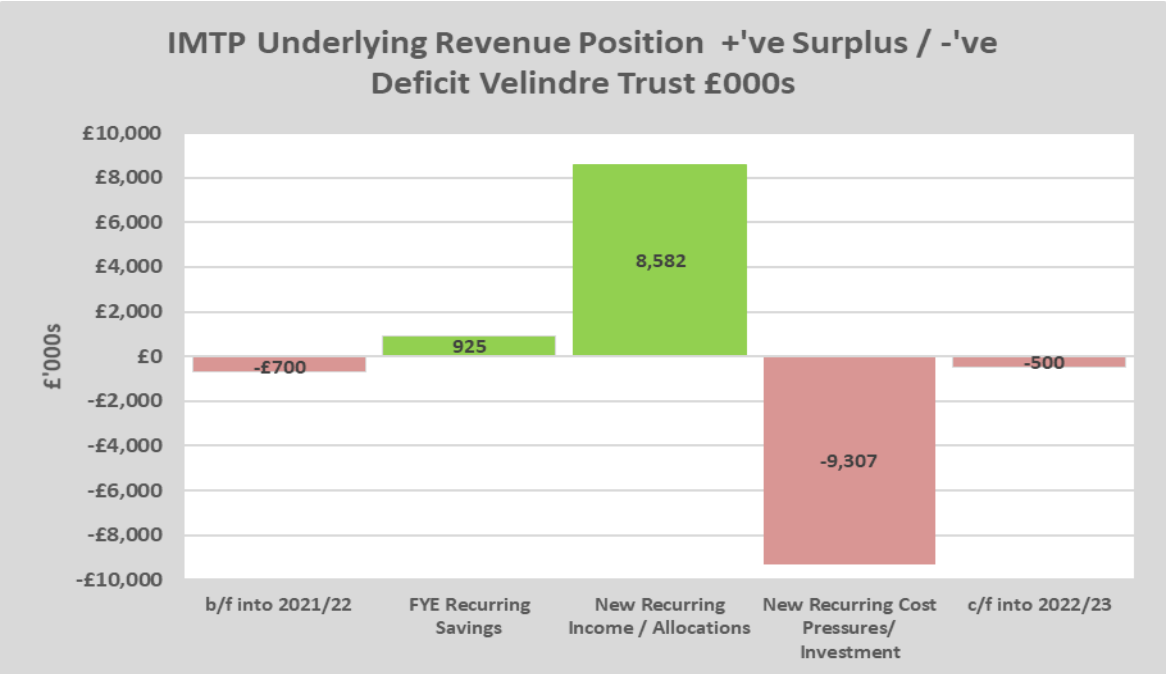
The Trust Financial Plan for 2021-22 was set within the following context.

- The Trust will be submitting a balanced one year financial plan, covering the period 2021-22 to Welsh Government on the 30 June 2021.

- For 2021-22 the Plan (excl Covid) included;
  - an underlying **deficit of £700k brought forward from 2020-21,**
  - **new cost pressures/ Investment** in 2020-21 of **£9,307k** (Recurring FYE effect £1,357k),
  - offset by **new recurring Income of £8,582k,**
  - and **savings schemes** of **£1,100k, (**£925k FYE recurring).

- Due to the ongoing pandemic and the inability to fully enact savings schemes & cost reduction, the Trust is not expecting to be in a position to fully eliminate the underlying deficit during 2021-22, however in line with the submitted financial plan the Trust will be aiming to reduce the deficit by £200k to carry forward an underlying position of £500k into 2022-23.

- **In order to reduce the underlying deficit the savings target set for 2021-22 must be achieved.**



Underlying Position +Deficit/(-Surplus) £000s	b/f into 2021/22	Recurring Savings	New Recurring Income / Allocations	FYE New Cost Pressures/ Investment	c/f into 2022/23
Velindre NHS Trust	- 700	925	8,582	- 9,307	- 500

3. Executive Summary

Summary of Performance against Key Financial Targets (Excluding Hosted Organisations)

(Figures in parenthesis signify an adverse variance against plan)

Table 1 - Key Targets

KPI Target	Unit	Current Month £000	Year to date £000	Year End Forecast £000
Revenue (To ensure net operating costs do not exceed income)	Variance	3	3	0
Capital (To ensure that costs do not exceed the Capital Expenditure limit)	Actual Spend	275	463	9,281
Public Sector Payment Performance (Administrative Target – To pay 95% of non NHS invoices within 30 days measured against number of invoices paid).	%	97.5%	96.6%	95.0

Performance against Planned Savings Target

Efficiency Savings /	Variance	0	0	0

Revenue

The Trust has reported a **£3k** in-month underspend for May'21, with a cumulative position of **£3k** underspent, and an outturn forecast of **Breakeven**.

Capital

The approved Capital Expenditure Limit (CEL) as at May 2021 is **£9,281k** for 2021-22. This represents all Wales Capital funding of **£7,370k**, Discretionary funding of **£1,911k.**

PSPP (Excluding Hosted Organisations)

During May '21 the Trust (core) achieved a compliance level of **97.5%** (April '21: 95.6%) of Non-NHS supplier invoices paid within the 30 day target, which gives a cumulative compliance figure of **96.6%** to the end of May compared to the target of 95%. The Trust continues to work with its staff and NWSSPP Accounts Payable to ensure prompt authorisation of invoices and receipting of goods.

Efficiency/ Savings

At this stage the Trust is currently planning to fully achieve the savings target during 2021-22, however Divisions are still working up some savings plans, so subject to change.

4. Revenue Position

Cumulative				Forecast		
£3,345 Underspent				Breakeven		
Type	YTD Budget (£'000)	YTD Actual (£'000)	YTD Variance (£'000)	Full Year Budget (£'000)	Full Year Forecast (£'000)	Forecast Variance (£'000)
Income	(26,612)	(26,404)	(208)	(160,433)	(160,069)	(364)
Pay	11,500	11,441	59	69,767	69,748	19
Non Pay	15,112	14,960	152	90,666	90,321	345
Total	(0)	(3)	3	0	0	0

The overall position against the profiled revenue budget to the end of May is an underspend of **£3k**, with an underachievement against income offset by an underspend on both Pay Non Pay. This is further analysed in the tables below:

The Trust is reporting a year end forecast breakeven position, however this is based on the assumption that all additional Covid-19 costs are fully reimbursed by WG, all planned additional income is received and savings targets achieved.

4.1 Income Analysis

	Cumulative			Year End Forecast		
	£(208)k Underachievement			£(364)k underachievement		
Income Type	YTD Budget (£'000)	YTD Actual (£'000)	YTD Variance (£'000)	Full Year Budget (£'000)	Full Year Forecast (£'000)	Forecast Variance (£'000)
Core Income - HB / WHSSC	11,752	11,752	0	71,583	71,583	0
Nice/ High Cost Drugs	8,113	8,113	0	46,500	46,500	0
WBS Wholesale Blood Products	2,448	2,449	1	12,464	12,467	3
WBS WTAIL	521	386	(135)	3,210	2,883	(327)
WBS Blood Components	73	18	(55)	435	187	(248)
Home Care Drugs	107	165	58	665	1,012	347
Private Patient	292	309	17	1,842	1,974	132
VCC Over Activity	289	289	0	1,734	1,734	0
Radiation Protection	31	31	0	819	819	0
Staff Recharges	379	377	(2)	2,038	1,895	(143)
One Wales Palliative and EOL Care	182	182	0	1,094	1,094	0
Velindre Charity	408	383	(25)	2,514	2,444	(70)
Other Charity	159	149	(10)	903	860	(43)
RD&I*	427	426	(1)	3,058	3,058	0

HTW	274	274	0	1,645	1,645	0
Other Operating Income	346	290	(56)	3,234	3,219	(15)
COVID Income	811	811	0	6,695	6,695	0
Total	**26,612**	**26,404**	(208)	**160,433**	**160,069**	(364)

*RD&I full year budget includes £1,341k of Velindre Charity income.

The Trust has reported a cumulative year to date underachievement of **£(208)k** on Income, and is currently forecasting an outturn underachievement position of circa **£(364)k.**

- Welsh Transplantation and Immunogenetics Laboratory (WTAIL), and WBS Blood Components is underachieving due to reduced activity as a result of Covid. The forecast deficit of circa £(575)k is expected to be fully replenished via WG Covid funding.
- Home Care Drugs overachievement is due to the increased volume of homecare service Oral drugs provided in relation to SACT, which is above the baseline budget.
- Private Patient's continues to overachieve due to drug recharges to Insurance companies.
- Staff recharges and Velindre Charity income are expected to underachieve due to vacancies which are not being recharged to both the Charity and other organisations to recoup the income, which will be offset by an underspend in pay.
- At this stage the Trust is expecting to receive £6,695k from WG in relation to Covid. £3,419k confirmed or received to date, which has been deferred in the year to date position to match Covid spend.

4.2 Pay Analysis by Staff Group

	Cumulative			Year End Forecast		
	£59k Underspend			£19k Underspend		
PAY GROUP	YTD Budget (£'000)	YTD Actual (£'000)	YTD Variance (£'000)	Full Year Budget (£'000)	Full Year Forecast (£'000)	Forecast Variance (£'000)
ADD PROF SCIENTIFIC AND TECHNICAL	416	396	20	2,457	2,379	78
ADDITIONAL CLINICAL SERVICES	1,153	1,079	74	6,416	6,253	163
ADMINISTRATIVE & CLERICAL	3,603	3,492	111	20,730	20,269	461
ALLIED HEALTH PROFESSIONALS	1,010	1,051	(41)	6,033	6,313	(280)
ESTATES AND ANCILLIARY	453	428	25	2,060	2,082	(22)
HEALTHCARE SCIENTISTS	1,423	1,307	116	8,379	7,983	396
MEDICAL AND DENTAL	2,013	2,129	(116)	11,724	12,043	(319)
NURSING	1,731	1,541	190	9,794	9,401	393
STUDENTS	13	15	(2)	79	92	(13)
SAVINGS & VACANCY FACTOR TARGET	(315)	3	(318)	(1,886)	(1,048)	(838)
COVID (Forecast Pay Spend)	0	0	0	3,981	3,981	0
Total	**11,500**	**11,441**	59	**69,767**	**69,748**	19

The Trust has reported a cumulative year to date position underspend of **£59k** on Pay and is forecasting a year end outturn overspend position of circa **£19k.**

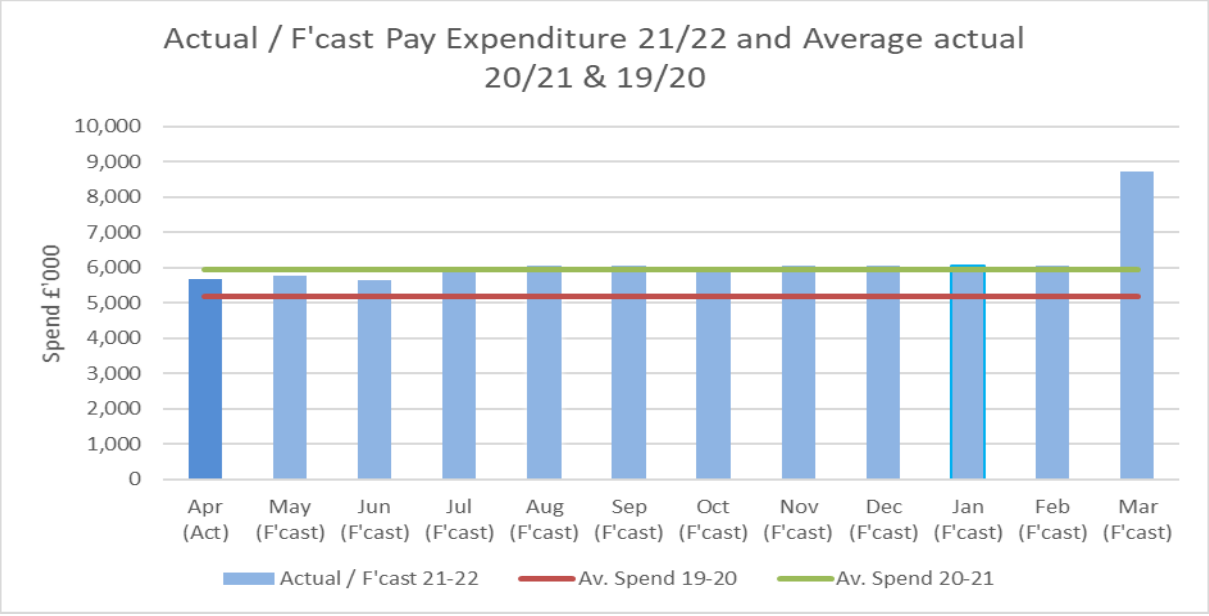
Included within the various staff group expenditure values shown within the above table is total agency spend for May of £199k (April £142k), giving a cumulative year to date spend of **£341k** and a forecast outturn spend of circa **£1,320k.** Of these totals the year to date spend on agency directly relating to Covid is £140k and forecast spend is circa £616k.

- Allied Health Professionals are experiencing an overspend of £(41)k which is due to the use of agency in both Radiotherapy and Medical Physics. VCC is aiming to recruit on a permanent basis against some of these posts, which is expected to create a saving from the premium cost for agency.
- Medical & Dental costs have increased due to rotation of junior doctors and an increase in consultant sessions. The majority of the additional spend is expected to be covered by Covid funding.
- Each Division of the Trust will hold a savings and vacancy factor target which will be delivered in year via establishment control. The forecast variance will be achieved through various underspends across numerous staffing groups, as illustrated in the above table.
- The year to date spend on Covid related Pay costs is £387k and is spread across the various Pay groups. The total Pay spend on Covid is expected to be circa £3,981k

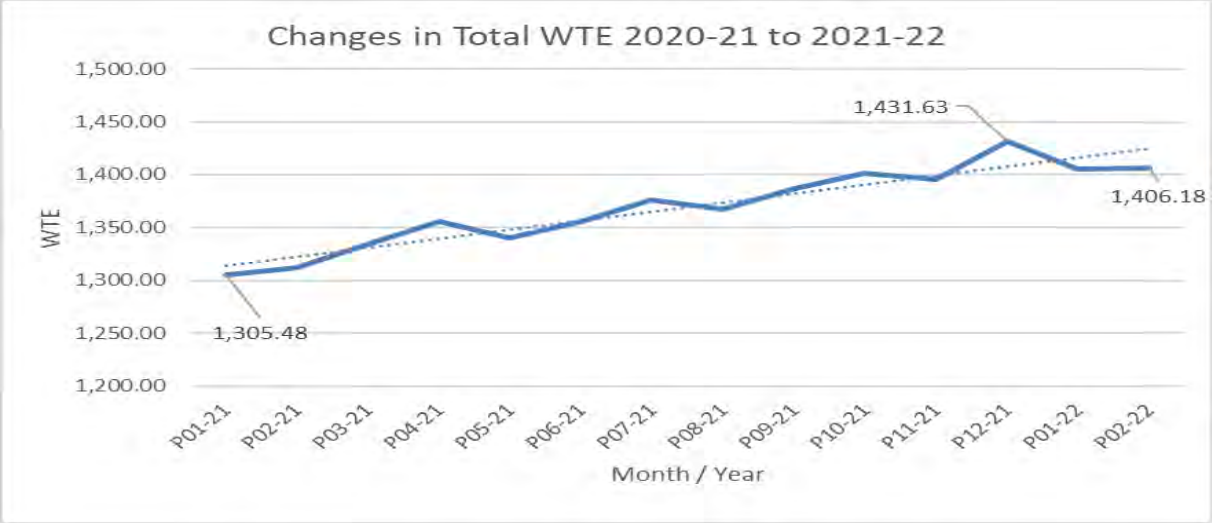
Pay Spend Trends (Run Rate)

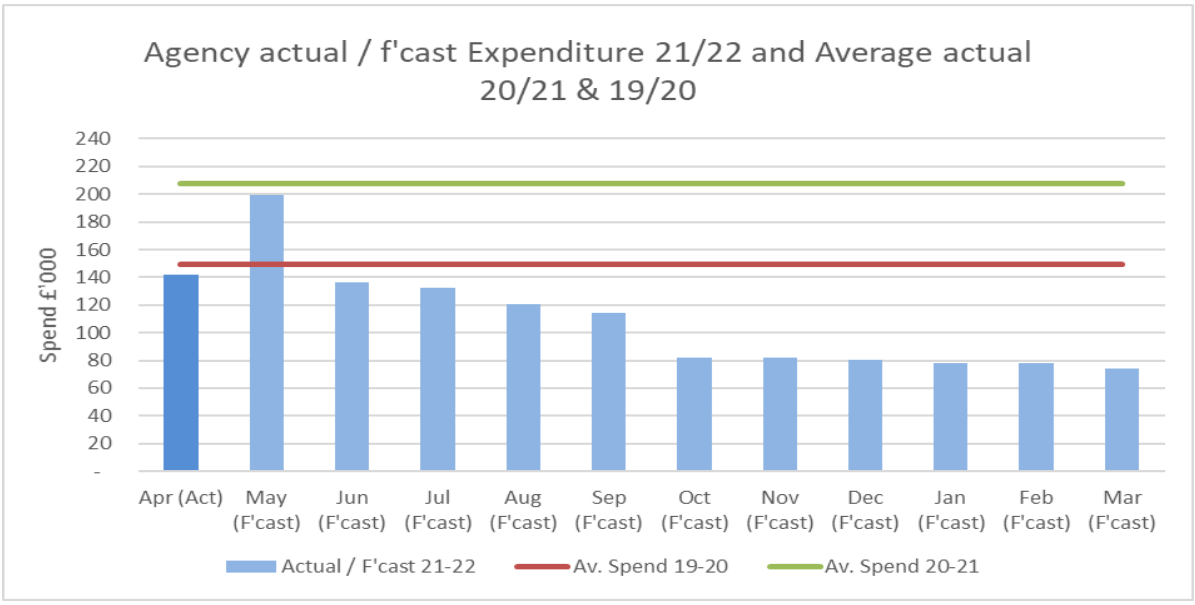
The pay spend for 20-21 was 14.82% above av. pay in 2019-20. 3% can be accounted for by the pay award, 1.14% can be accounted for by an increase in use of agency, 2.3% relates to the NHS Bonus Payment with the remaining being the additional staff recruited over the course of 2020/21 (c. 126 wte), and the expected pay costs associated with Covid.

The pay award for 2021/22 is yet to be agreed so these costs are not yet reflected in the pay spend. But the Pay spend is expected to increase with the recruitment of additional posts to meet 'surge' capacity in both VCC and WBS in response to Covid recovery. Agency costs are expected to reduce over the course of the year as posts are recruited into permanently.



*March costs included the increase in NHS pension which is paid every year in month 12 and funded by WG.





*The increase in May costs relates to backlog of invoicing for staff specifically related to Covid and funded via WG.

4.3 Non Pay Analysis

	Cumulative £152k Underspend			Year End Forecast £345k Underspent		
NON PAY CATEGORY	YTD Budget (£'000)	YTD Actual (£'000)	YTD Variance (£'000)	Full Year Budget (£'000)	Full Year Forecast (£'000)	Forecast Variance (£'000)
NICE & High Cost Drugs	8,025	8,025	0	46,500	46,500	0
Blood Wholesaling	2,460	2,512	(52)	12,537	12,589	(52)
Depreciation	1,069	1,064	5	6,416	6,416	0
Clinical Services & Supplies	856	777	79	5,207	5,165	42
Facilities Management	173	181	(8)	825	874	(49)
Maintenance & Repairs	512	480	32	2,939	2,861	78
General Drugs	445	354	91	2,473	2,184	289
Utilities/ Rent /Rates	389	390	(1)	2,283	2,333	(50)
General Services & Supplies	376	343	33	1,912	1,989	(77)
Blood Components	368	282	86	2,096	1,936	160
Transport	171	154	17	1,062	1,039	23
Printing / Stationary / Postage	133	64	69	821	540	281
Computer Maintenance & Supplies	154	139	15	930	866	64
Travel & Subsistence	69	22	47	576	552	24
Equipment & Consumables	44	53	(9)	232	285	(53)
Education & Development	53	47	6	311	279	32
NHS SLA	(66)	(64)	(2)	(177)	(207)	30
Audit Fees	70	76	(6)	306	312	(6)
Telecoms	57	64	(7)	198	267	(69)
One Wales End of Life Care	(8)	(8)	0	(47)	(47)	0
General Reserves / Savings Target	(238)	5	(243)	1,252	1,574	(322)
COVID (Forecast Non-Pay Spend)	0	0		2,014	2,014	0
Total	**15,112**	**14,960**	152	**90,666**	**90,321**	345

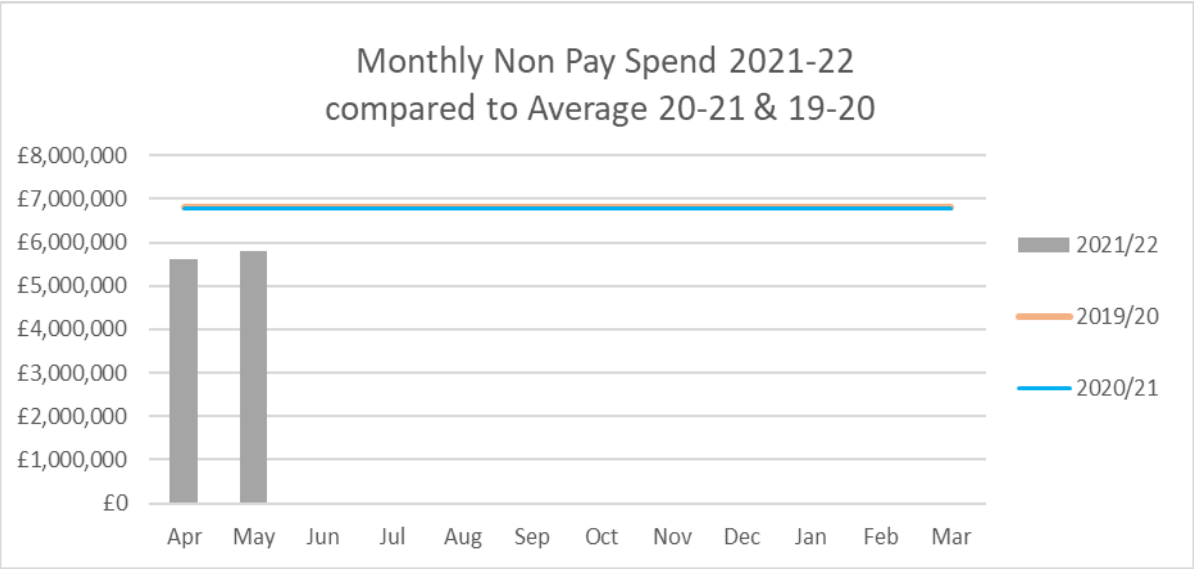
The Trust has reported a cumulative year to date position of **£152k** underspent on Non-Pay and is forecasting an outturn Underspend of **£344k**.

- Clinical Service & supplies, General drugs & Blood Components are underspending due to reduced activity related to Covid.
- Transport, Travel & subsistence and Education are all underspending due to reduced activity in the Trust largely related to Covid.
- Printing / Stationary & Postage is underspending due to a reduction in office based activity and paper based communications given homeworking because of Covid.
- Telecoms associated costs have increased due to the emergence of virtual hubs in response to Covid.
- General Reserves / Savings Target is currently reporting an underachievement of £(243)k to date as a result of Cost improvement Plan (CIP) targets held centrally within divisions.

These CIP's are being achieved through the underspends in a number of areas of non-pay as illustrated in the table above. The Trust reserves and investment funding is held in month 12 and will be released into the position to match spend.

- The year to date spend on Covid related Non Pay expenditure is £318k and is spread across various Non Pay categories. The total Covid Non pay spend is expected to be circa £2,714k.

Non-pay (c£81.2m) av. monthly spend remined fairly static between 19/20 and 20/21 at £6.8m. The average monthly spend for 21-22 is currently £1m (18%) less for 21/22, which is in large due to the absence of Covid pass through money provided to the Hospices of £9.3m during 20/21.



4.4 Covid-19

Covid-19 Revenue Spend/ Funding		
	YTD Actual £000	Plan 2021/22 £000
Mass Covid Vaccination	91	365
Cleaning Standards	94	560
PPE	60	360
Covid Recovery	60	3,480
Other Covid Related Spend Cost Reduction	506	1,230
BFWD Savings Loss		700
Total Covid Spend /Funding Requirement 2021/22	**811**	**6,695**
Funding Received		2,500
Funding Confirmed		2,185
Balance of Funding Requirement		**2,010**

The Trust has currently received or had confirmation of funding from WG to the sum of £4,685k, £2,500k towards Covid Recovery, and £2,185k to cover the first six months of Covid

Response and costs of national programmes such as Vaccinations. This leaves a current funding gap of £2,010k, against the total forecasted spend of £6,695k.

Covid Recovery

The spend and funding requirement in regard to Covid Recovery / Surge Capacity comprises direct outsourcing and enablement of additional clinical sessions within VCC, and an additional collection team within WBS. The resources required will provide coverage for a surge in capacity of up to 20% above pre-Covid levels for VCC £2,840k and 10% for WBS £600k.

Vaccinations

The Trust is expecting to spend circa £365k on the Covid Vaccination programme during 2021/22. The £365k revenue spend requirement for 2021/22 largely relates to the WBS storage and distribution for NHS Wales (£312k), with the balance of funding relating to the delivery of vaccinations to front line staff in both Velindre and WAST, and the rollout of the Patient Vaccination programme which has now ended (£53k).

5. Savings

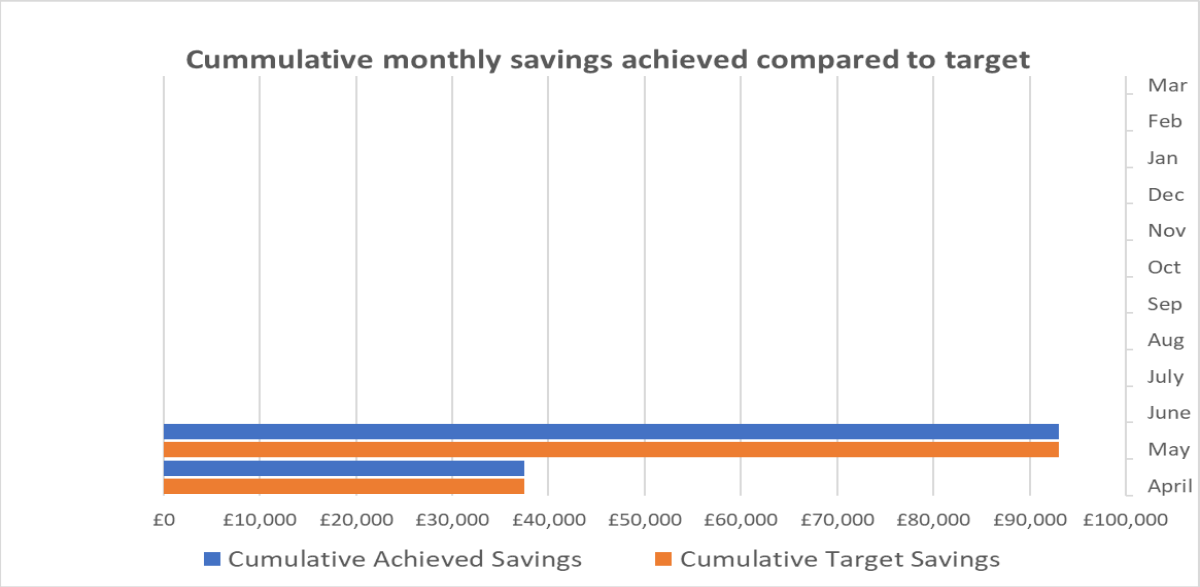
The Trust established as part of the IMTP a savings requirement of £1,100k for 2021-22, (£525k) recurrent (£925k full year recurrent) and (£575k) non-recurrent, with £1,050k being categorised as actual saving schemes and £50k being income generating schemes.

The Divisional share of the overall Trust savings target has been allocated to VCC £413k (38%), WBS £368k (33%), and Corporate £119k (11%), with £200k (18%) being set at Trust level for combined vacancy factor above the baseline target set by each Division.

Within the identified savings, £900k of the schemes are now RAG rated as green, with £200k relating to post Covid savings currently classified as amber.

ORIGINAL PLAN	TOTAL £000	Planned YTD £000	Actual YTD £000	Variance YTD £000	Full Year Actual £000	Variance Full Year £000
VCC TOTAL SAVINGS	413	8	8	0	413	0
			100%		100%	
WBS TOTAL SAVINGS	368	50	50	0	368	0
			100%		100%	
CORPORATE TOTAL SAVINGS	119	17	17	0	119	0
			100%		100%	
TRUST TOTAL SAVINGS IDENTIFIED	900	75	75	0	900	0
TRUST ADDITIONAL NON-RECURRENT SAVINGS	200	18	18	0	200	(0)
TRUST TOTAL SAVINGS	1,100	93	93	0	1,100	(0)
			100%		100%	

Scheme Type	RAG RATING	TOTAL £000	Planned YTD £000	Actual YTD £000	Variance YTD £000	F'cast Full Year £000	Variance Full Year £000
Savings Schemes							
Premium of Agency Staffing	Green	150	0	0	0	150	0
Premium of Agency Staffing	Green	100	0	0	0	100	0
Post Covid Savings (VCC)	Orange	113	0	0	0	113	0
Blood Supply Chain 2020	Green	75	13	13	0	75	0
Blood Supply Chain 2020	Green	25	4	4	0	25	0
Stock Management	Green	200	33	33	0	200	0
Post Covid Savings (WBS)	Orange	68	0	0	0	68	0
Establishment Control	Green	100	17	17	0	100	0
Post Covid Savings (Corporate)	Orange	19				19	0
Total Saving Schemes		**850**	67	67	0	850	0
Income Generation							
Maximinsing Income Opportunities	Green	50	8	8	0	50	0
Total Income Generation		**50**	8	8	0	50	0
TRUST ADDITIONAL NON-RECURRENT SAVINGS - VACANY FACTOR		200	18	18	0	200	(0)
TRUST TOTAL SAVINGS		1,100	93	93	0	1,100	(0)
				100%		100%	



6. Reserves

The financial strategy for 2021-22 facilitated the development of a recurrent and non-recurrent reserve in support of the Trust transformation and delivery agenda. These reserves could only be accommodated on the basis that all income expectations are received, planned savings schemes delivered and new emerging cost pressures managed. In addition, the Trust holds an emergency reserve of 522k.

The current remaining available funding is shown below:-

Summary of Total Reserves Remaining Available in 2021/22	£k
Recurrent Reserve Available 2021/22	635

In addition to the recurrent and emergency reserve, the Board agreed to make available £1m of non-recurrent funding for investment during 2021/22 from the release of accountancy gains. The current spend to May '21 against the £1m is £128k with the reaming balance committed, albeit with some slippage expected which will be offered up for re-investment if transpires.

7. End of Year Forecast / Risk Assessment

The Trust is currently reporting a year end breakeven position against its revenue budget, however there are a number of risks which are being managed and closely monitored. The table below summarises the key financial risks & opportunities highlighted to Welsh Government.

Non-Delivery of Savings (Medium)
£200k of the £1,100k target remains in amber as it relates to post Covid savings such as reduction of travel expenses and office printing & stationary costs from the potential new working arrangements. The expectation is that this should turn green as the year progresses but will be depended on what the operating model of the future working arrangements looks like. This is currently being developed through the Trust's agile project working group.

Covid (Medium)
To date the Trust has received £2,500k of Covid recovery, and received confirmation that £919k of Covid response funding relating to the first 6 months of the year will be made available by WG.

The Trust is in dialogue with WG about the balance of the Covid funding requirement and is hopeful to have clarification of the remaining £3,276k in due course.

8. CAPITAL EXPENDITURE

Administrative Target

- *To ensure that net Capital expenditure does not exceed the Capital Expenditure Limit (CEL) approved by the Welsh Government.*
- *To ensure the Trust does not exceed its External Financing Limit*

	Approved CEL £000s	YTD Spend £000s	Committed Orders Outstanding £000s	Budget Remaining @ M2 £000s	Full Year Actual Spend £000s	Year End Variance £000s
All Wales Capital Programme						
VCC - Transforming Cancer Services	3,836	272	0	3,564	3,836	0
VCC Radiotherapy Procurement Solution	312	15	0	297	312	0
IT - WPAS (CANISC replacement phase 2)	993	134	0	859	993	0
Fire Safety	1,100	10	0	1,090	1,100	0
National Programmes - Decarbonisation	109	0	0	109	109	0
National Programmes - Imaging	1,020	0	0	1,020	1,020	0
Total All Wales Capital Programme	7,370	431	0	6,939	7,370	0
Discretionary Capital	1,911	32	0	1,879	1,911	0
Sub Total	9,281	463	0	8,818	9,281	0
Charitable Funded Capital Scheme	45	0	0	45	45	0
TOTAL	**9,326**	**463**	**0**	**8,863**	**9,326**	**0**

The approved 2021/22 Capital Expenditure Limit (CEL) as at May 2021 was £9,281k (excl Charity). This includes All Wales Capital funding of £7,370k, and discretionary funding of £1,911k.

Major Schemes in Development

The Trust has also been in discussions with WG over other project funding which it is seeking to secure from the All Wales Capital programme.

Other Major Schemes in development that will be considered during 2021/22 in conjunction with WG include:

Scheme	£m	Business Case Stage
Integrated Radiotherapy Solution	10	Full Business Case (FBC)
WBS HQ	2.55	Trust responding to WG Comments on Business Case
VCC Ventiation	2.5	Submitted as Part of IMTP
VCC Infrastructure/ Outpatients	0.5	Submitted as Part of IMTP

Performance to date

The actual cumulative expenditure to May 2021 on the All Wales Capital Programme schemes was £431k, this is broken down between spend on the TCS Programme £272k, IT WPAS £134k, Radiotherapy Procurement £15k, Fire Safety £10k.

. In line with usual practice, £100k has been allocated to VCC, WBS, Estates and IT/Digital to allow for business continuity, and to ensure that any urgent works can still be progressed.

Spend to date on Discretionary Capital is £32k.

Year-end Forecast Spend

The year-end forecast outturn is currently expected to be managed to a breakeven position.

9. BALANCE SHEET (Including Hosted Organisations)

The Balance Sheet in NHS Financial Statements is known as the Statement of Financial Position. It provides a snapshot of the Trust's financial position including the hosted divisions at a point in time.

The statement shows the Trust's assets and liabilities. As part of the Trust SFIs there is a mandatory requirement to report movement in working capital.

The Balance Sheet in line with WG timelines will be reported from Month 3.

10. CASH FLOW (Includes Hosted Organisations)

Cash held in the Trusts bank account is a key indicator of its financial health in terms of income, expenditure and surplus or deficit. The Trust is mainly reliant on its commissioners for cash, however if the Trust has a deficit it would need to secure a loan from Welsh Government to cover the cash shortfall created by the deficit.

The cash-flow forecast is important to enable the Trust to plan for sufficient cash availability throughout the financial year to pay its debts, such as payroll, services provided by other health bodies and private companies. The cash-flow forecast ensures that the Trust has an early understanding of any cash-flow difficulties and can liaise with Welsh Government to secure a loan.

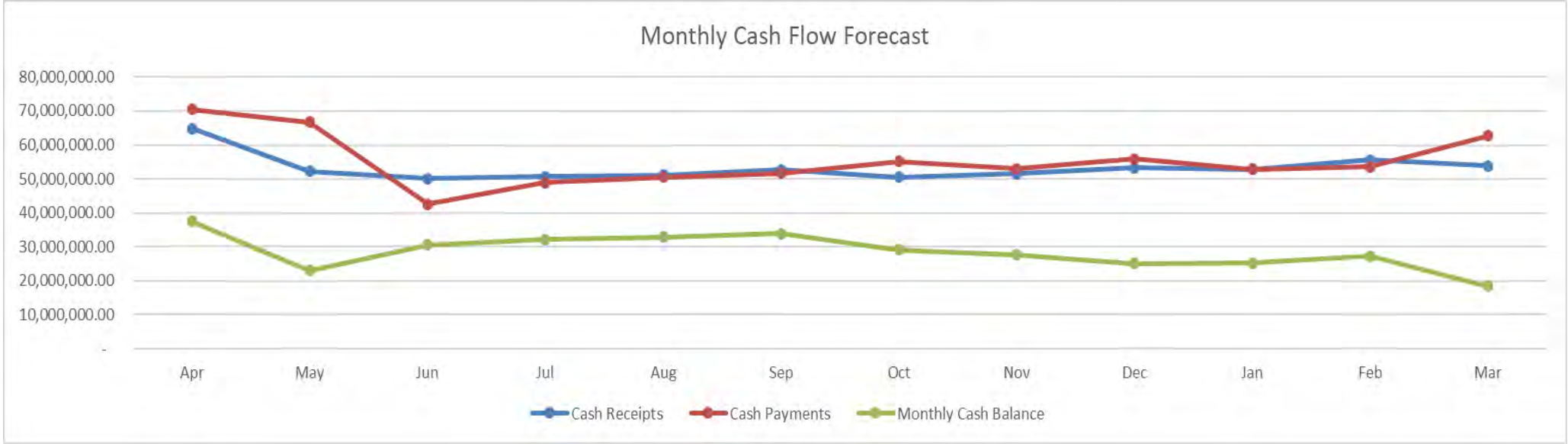
As part of the Brexit emergency planning an additional £5m of stock had been purchased by NWSSP and an additional £2m of commercial blood products were purchased by WBS, to provide resilience for NHS Wales due to the uncertainty around supply chain reliability as a result of Brexit.

To aid the Trust's cash flow while the additional stock was being held for Brexit, Welsh Government provided the Trust with additional cash of £7m during 2019/20 with the expectation that it is now repaid during 2021/22. WBS did intend to run down the commercial blood stock from April, however given the uncertain situation with Covid and potential impact on supply chain the Trust will continue to hold this stock and assess the situation throughout the year. NWSSP are currently reviewing the timing of the All Wales Brexit stock run down.

Due to the high levels of purchases relating to Covid within NWSSP, the cash levels over the past year have been significantly higher than usual and may continue to be above average with ongoing need for Covid related purchases. Due to this, the cash balance can fluctuate significantly on a daily / weekly basis.

Cash levels are monitored on a daily basis using a detailed cash flow forecast in order to ensure the Trust has sufficient cash balances to meet anticipated commitments.

		Apr £'000	May £'000	Jun £'000	Jul £'000	Aug £'000	Sep £'000	Oct £'000	Nov £'000	Dec £'000	Jan £'000	Feb £'000	Mar £'000	Totals £'000
	RECEIPTS													
1	LHB / WHSSC income	23,348	22,492	27,254	28,398	28,998	27,452	27,998	29,398	30,998	30,598	30,598	29,798	337,327
2	WG Income	33,807	26,132	20,433	19,685	19,585	22,610	19,960	19,610	19,710	19,860	22,610	21,135	265,136
3	Short Term Loans													0
4	PDC													0
5	Interest Receivable													0
6	Sale of Assets													0
7	Other	7,643	3,682	2,419	2,600	2,525	2,600	2,525	2,600	2,525	2,450	2,450	2,975	36,994
8	TOTAL RECEIPTS	**64,797**	**52,306**	**50,105**	**50,683**	**51,108**	**52,662**	**50,482**	**51,607**	**53,232**	**52,907**	**55,657**	**53,907**	**639,457**
	PAYMENTS													
9	Salaries and Wages	15,189	22,734	20,620	21,034	23,213	23,666	24,205	24,992	27,682	27,717	27,721	31,360	290,133
10	Non pay items	52,989	43,749	21,057	26,741	25,716	26,741	22,741	26,651	26,716	23,716	23,716	27,766	348,298
11	Short Term Loan Repayment							7,000						7,000
12	PDC Repayment													0
14	Capital Payment	2,375	277	877	1,233	1,575	1,222	1,222	1,402	1,451	1,437	2,173	3,500	18,744
15	Other items													0
16	TOTAL PAYMENTS	**70,552**	**66,760**	**42,554**	**49,008**	**50,504**	**51,629**	**55,168**	**53,045**	**55,849**	**52,870**	**53,610**	**62,626**	**664,175**
17	Net cash inflow/outflow	(5,755)	(14,454)	7,551	1,676	605	1,033	(4,685)	(1,437)	(2,616)	38	2,048	(8,718)	
18	Balance b/f	43,235	37,480	23,026	30,577	32,252	32,857	33,890	29,205	27,767	25,151	25,188	27,236	
19	Balance c/f	37,480	23,026	30,577	32,252	32,857	33,890	29,205	27,767	25,151	25,188	27,236	18,518	



DIVISIONAL ANALYSIS

(Figures in parenthesis signify an adverse variance against plan)

Core Trust

Velindre Trust Core Divisional Finance Performance

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Variance £000
VCC	5,955	5,959	(3)	36,207	36,207	0
RD&I	22	21	1	(474)	(474)	0
WBS	3,394	3,394	0	22,739	22,739	0
Sub-Total Divisions	**9,371**	**9,374**	**(2)**	**58,472**	**58,472**	**0**
Corporate Services Directorates	1,158	1,153	6	6,718	6,718	0
Delegated Budget Position	**10,529**	**10,526**	**3**	**65,189**	**65,189**	**0**
TCS	89	89	0	536	536	0
Health Technology Wales	0	(0)	0	0	0	0
Non recurrent measures to achieve financial breakeven general reserves	0	0	0	0	0	0
Trust Position	**10,619**	**10,615**	**4**	**65,725**	**65,725**	**0**

VCC

Velindre Cancer Centre (VCC)

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Full Year Budget £000	Full Year Forecast £000	Year End Projected Variance £000
Income	**10,425**	**10,420**	**(5)**	**58,133**	**58,333**	**200**
Expenditure						
Staff	6,551	6,508	44	38,058	38,208	**(150)**
Non Staff	9,829	9,871	(42)	56,282	56,331	**(50)**
Sub Total	**16,381**	**16,378**	**2**	**94,340**	**94,540**	**(200)**
Total	**5,955**	**5,959**	**(3)**	**36,207**	**36,207**	**0**

VCC Key Issues:

The reported financial position for the Velindre Cancer Centre as at the end of May 2021 was a small overspend of **£(3)k**, and an expected outturn position of **breakeven**.

Income at Month 2 represents a small underachievement of **£(5)k**. An increase in VAT savings from providing additional SACT Homecare, and an increase in private patient drug recharges (incl. top-up), is largely offsetting the Management savings target.

Staff was **£44k** underspent as at Month 2. A high level of vacancies within the division which is above the vacancy factor target is helping to offset the cost of agency (£221k to the end of May).

Non Staff Expenditure at Month 2 was a **£(42)k** overspent. There are underspends on general drugs, along with various underspends across other services due to low activity, such as Radiotherapy, Directors office and General Management. This is in part offsetting the management savings target and an overspend in Pharmacy due to one off spend on uniform and consumables.

WBS

Welsh Blood Service (WBS)

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Projected £000
Income	**3,484**	**3,294**	**(190)**	**16,877**	**16,350**	**(527)**
Expenditure						
Staff	2,865	2,842	23	17,435	17,476	**(41)**
Non Staff	4,013	3,846	167	22,180	21,613	**568**
Sub Total	**6,878**	**6,687**	**191**	**39,616**	**39,089**	**527**
Total	**3,394**	**3,394**	**0**	**22,739**	**22,739**	**0**

WBS Key Issues:

The reported financial position for the Welsh Blood Service at the end of May 2021 was **breakeven** with an outturn forecast position of **breakeven** also expected.

Income underachievement to date is **£(190)k**, where activity is lower than planned on Plasma Sales, and Bone Marrow due to Covid suppressed activity. Any income loss on this activity is expected to be covered from WG Covid funding.

Staff reported a year to date underspend of **£23k** for May, which is above the division's vacancy factor target. On average circa 35 vacancies are being held in the division although recruitment has improved in recent months.

Non Staff underspend of **£167k** is largely due to reduced costs from suppressed activity, underspend on collections services, Laboratory Services, and WTAIL, which is offsetting the divisions savings target

Corporate

Corporate Services

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Projected £000
Income	**249**	**238**	**(11)**	**915**	**876**	**(38)**
Expenditure						
Staff	1,325	1,331	(6)	7,221	7,161	**59**
Non Staff	83	60	22	412	433	**(21)**
Sub Total	**1,407**	**1,391**	**16**	**7,633**	**7,594**	**38**
Total	**1,158**	**1,153**	**6**	**6,718**	**6,718**	**0**

Corporate Key Issues:

The reported financial position for the Corporate Services division at the end of May 2021 was an underspend of **£6k**. The Corporate division is currently expecting to achieve an outturn position of **breakeven**.

Income underachievement is due to the Charity Director vacancy and not recharging the costs to the Charity, which is offset by an underspend against the post in staff.

Staff is reflecting a small overspend of **£(6)k** as at the end of May but is expected to underspend by the year end due to the carrying of vacancies.

The forecast Non pay overspend circa **£(21k)** is due to the divisional savings target which will be met in year via staff and vacancies. In addition, a number of departments have little or no non pay budget to allow for unforeseen spend.

RD&I

RD&I Key Issues

The reported financial position for the RD&I Division at the end of May 2021 was an underspend of **£1k**. RD&I is currently expecting to achieve an outturn position of **breakeven**.

RD&I

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Projected £000
Income	**427**	**426**	**(1)**	**3,058**	**3,058**	**0**
Expenditure						
Staff	433	435	(2)	2,403	2,403	**0**
Non Staff	16	12	4	181	181	**0**
Sub Total	**449**	**447**	**2**	**2,584**	**2,584**	**0**
Total	**22**	**21**	**1**	**(474)**	**(474)**	**0**

TCS – (Revenue)

Hosted Other - TCS

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Projected Variance £000
Income	**0**	**0**	**0**	**0**	**0**	**0**
Expenditure						
Staff	83	83	0	499	499	**0**
Non Staff	6	6	0	37	37	**0**
Sub Total	**89**	**89**	**0**	**536**	**536**	**0**
Total	**89**	**89**	**0**	**536**	**536**	**0**

TCS Key Issues

The reported financial position for the TCS Programme at the end of May 2021 was **breakeven** with a forecasted outturn position of **breakeven.**

HTW

	YTD Budget £000	YTD Actual £000	YTD Variance £000	Annual Budget £000	Full Year Forecast £000	Year End Projected Variance £000
Income	**274**	**274**	**0**	**1,645**	**1,645**	**0**
Expenditure						
Staff	243	242	0	1,456	1,456	**0**
Non Staff	31	31	0	189	189	**0**
Sub Total	**274**	**274**	**0**	**1,645**	**1,645**	**0**
Total	**0**	**(0)**	**0**	**0**	**0**	**0**

HTW Key Issues

The reported financial position for Health Technology Wales at the end of May 2021 was **breakeven,** with a forecasted outturn position of **breakeven.**

HTW is fully funded by WG.

Appendix 1

TCS PROGRAMME DELIVERY BOARD

TCS PROGRAMME FINANCIAL REPORT FOR 2021-22 MAY 2021

DATE OF MEETING	16th June 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Mark Ash, Assistant Director of Finance - TCS Programme
PRESENTED BY	Mark Ash, Assistant Director of Finance - TCS Programme
EXECUTIVE SPONSOR APPROVED	Mark Osland, Executive Director of Finance

REPORT PURPOSE	ENDORSE FOR BOARD APPROVAL

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
N/A		Choose an item.

ACRONYMS	
TCS	Transforming Cancer Services
Trust	Velindre University NHS Trust
PBC	Project Business Case
PMO	Programme Management Office
EW	nVCC Enabling Works
nVCC	New Velindre Cancer Centre
WG	Welsh Government
IRS	Integrated Radiotherapy Solution
SDT	Service Delivery and Transformation

1. PURPOSE

1.1 The purpose of this report is to provide a financial update to the TCS Programme Delivery Board for the financial year 2021-22, outlining spend to date against budget as at Month 02.

2. BACKGROUND

2.1 In January 2015 the Minister for Health and Social Services approved the initial version of the Strategic Outline Programme 'Transforming Cancer Services in South East Wales'. Following the completion of the Key Stage Review in June/July 2015, approval was received from the Minister to proceed to the next stage of the Programme.

2.2 As at March 2021, the Cabinet Secretary for Health, Well-being and Sport, had approved capital and revenue funding for the TCS Programme and associated Projects of £20.710m and £1.678m respectively.

2.3 Included in this approval was funding for the IRS Project (Project 3a). The PBC for this project was endorsed by WG in 2019-20, providing capital funding of £1.110m from July 2019 to December 2022. The provision was £0.250m in 2019-20, £0.548m in 2021-22, and £0.312m in 2021-22.

2.4 In addition to WG funding, NHS Commissioners agreed in December 2018 to provide annual revenue funding towards the TCS Programme. £0.400m was provided in the initial year of 2018-19, with £0.420m annually thereafter.

2.5 Further revenue funding was provided by Trust in 2019-20 and 2020-21 from its own baseline revenue budget. Funding of £0.060m and £0.030m respectively was provided for nVCC Project Delivery (previously provided by WG until March 2019). Another £0.039m (2019-20) and £0.166m (2020-21) was provided to cover the costs of staff secondment from Velindre Cancer Centre.

2.6 The total funding and expenditure for the TCS Programme and associated Projects by the end of March 2021 was £23.923m: £20.710m Capital, £3.213m Revenue.

3. FUNDING

Funding provision for the financial year 2021-22 is outlined below, with a breakdown of funding provided in Appendix 1.

Description	Funding	
	Capital	Revenue
Programme Management Office There is no capital funding requirement for the PMO at present Allocation from £0.420m funding provided from Commissioners for 2021-22 to cover direct clinical/management support and Programme Management	**£ nil**	**£0.240m** £0.240m
Project 1 – Enabling Works for nVCC Capital funding from WG was provided on 24 March 2021 There is currently no revenue funding for Projects 1	**£0.358m** £0.358m	**£ nil**
Project 2 – New Velindre Cancer Centre Capital funding from WG was provided on 24 March 2021 There is currently no revenue funding for Projects 2	**£3.478m** £3.478m	**£ nil**
Project 3a – Radiotherapy Procurement Solution Final 9 months of a 28 month project, running from 1st July 2019 to 31st December 2021, with a funding allocation of £0.312m for 2021-22 from an overall funding allocation of £1.110m	**£0.312m** £0.312m	**£ nil**
Project 4 – Radiotherapy Satellite Centre The project is led and funded by the hosting organisation, Aneurin Bevan University Health Board; no funding requirement is expected from the Trust for 2021-22	**£ nil**	**£ nil**
Project 5 – SACT and Outreach Funding has been requested for this project however none has been provided to date	**£ nil**	**£ nil**
Project 6 – Service Delivery, Transformation and Transition No capital funding requirement at present Allocation from £0.420m funding provided from Commissioners for 2021-22 to cover direct clinical/management support and Programme Management Funding provided from the Trust's core revenue budget towards the costs of the Project Director post Funding transferred from Velindre Cancer Centre toward the costs for the Project Manager post	**£ nil**	**£0.296m** £0.180m £0.061m £0.055m
Project 7 – VCC Decommissioning No funding requested or provided for this project to date	**£ nil**	**£ nil**

Description	Funding	
	Capital	Revenue
Total funding provided to date	£4.148m	£0.536m
	£4.684m	

4. FINANCIAL SUMMARY AS AT 31ST MAY 2021

4.1 The summary financial position for the TCS Programme for the year 2021-22 is outlined below:

TCS Programme Budget & Spend 2021-22

CAPITAL	Current Month			Financial Year		
	Budget to May-21	Spend to May-21	Variance to May-21	Annual Budget	Annual Forecast	Annual Variance
	£	£	£	£	£	£
PAY						
Project Leadership	39,333	31,466	7,867	236,000	219,401	16,599
Project 1 - Enabling Works	23,167	27,866	-4,699	208,000	192,230	15,770
Project 2 - New Velindre Cancer Centre	93,383	93,548	-165	1,061,000	1,093,335	-32,335
Project 3a - Radiotherapy Procurement Solution	69,333	53,940	15,393	312,000	168,451	143,549
Capital Pay Total	**225,216**	**206,820**	**18,396**	**1,817,000**	**1,673,418**	**143,582**
NON-PAY						
nVCC Project Delivery	4,290	4,290	0	50,500	50,160	340
Project 1 - Enabling Works	15,000	15,000	0	150,000	150,000	0
Project 2 - New Velindre Cancer Centre	33,500	32,188	1,312	2,130,000	2,130,000	0
Project 3a - Radiotherapy Procurement Solution	0	28,386	-28,386	0	159,864	-159,864
Capital Non-Pay Total	**52,790**	**79,864**	**-27,074**	**2,330,500**	**2,490,024**	**-159,524**
CAPITAL TOTAL	**278,006**	**286,684**	**-8,678**	**4,147,500**	**4,163,442**	**-15,942**

REVENUE	Current Month			Financial Year		
	Budget to May-21	Spend to May-21	Variance to May-21	Annual Budget	Annual Forecast	Annual Variance
	£	£	£	£	£	£
PAY						
Programme Management Office	33,841	47,413	-13,572	203,048	203,048	0
Project 6 - Service Change Team	49,333	55,757	-6,424	296,000	296,000	0
Revenue Pay total	**83,175**	**103,170**	**-19,996**	**499,048**	**499,048**	**0**
NON-PAY						
nVCC Project Delivery	0	4,947	-4,947	0	24,318	-24,318
Programme Management Office	6,159	0	6,159	36,952	36,952	0
Project 6 - Service Change Team	0	44	-44	0	0	0
Revenue Non-Pay Total	**6,159**	**4,991**	**1,168**	**36,952**	**61,269**	**-24,318**
REVENUE TOTAL	**89,333**	**108,161**	**-18,828**	**536,000**	**560,318**	**-24,318**

5. FINANCIAL POSITION FOR TCS PROGRAMME AND ASSOCIATED PROJECTS AS AT 31ST MAY 2021

CAPITAL SPEND

Projects 1 and 2 Pay Costs

5.1 ***WG Funded Staffing -*** An in-year spend of **£0.153m** for posts funded by WG reflects the current 'interim' posts against a budget of **£0.156m**. There is a budget and forecast spend of **£1.505m** for the year. The pay costs have been analysed by each element of the Project(s).

Projects 1 and 2 Non-Pay Costs

5.2 ***nVCC Project Delivery -*** There is a capital budget and spend of **£4k** for the year to date for project support and running costs for Projects 1 and 2. This is made internal audit document portal fees. The forecast spend for the financial year 2020-21 is **£50k** against a budget of **£51k**.

5.3 ***Enabling Works -*** There is an in-year capital spend of **£0.043m**, with a forecast spend for the year of **£0.342m**, against budgets of **£0.038m** and **£0.358m** respectively.

Work package	Spend to 31st May 2021
Pay	£0.028m
Third Party Undertakings	£nil
Enabling Works – Technical Advisers	£0.015m
Enabling Works – Works	£nil
Enabling Works Reserves	£nil

5.4 ***nVCC -*** There is an in-year capital spend of **£0.157m**, with a forecast spend for the year of **£3.443m**, against budgets of **£0.166m** and **£3.427m** respectively.

Work package	Spend to 31st May 2021
Pay (including Project Leadership)	£0.125m
Competitive Dialogue – PQQ & Dialogue	£0.034m
Legal Advice	£nil
nVCC Reserves	-£0.001m

Project 3a – Integrated Radiotherapy Procurement Solution

5.5 There is an in-year spend of **£0.082m** (£0.054m pay, £0.028m non-pay) for the IRS Project against a budget of **£0.069m**. The overspend is due to increased legal costs. The Project is currently forecasting a break even position against a budget of **£0.312m**.

REVENUE SPEND

Programme Management Office

5.6 The PMO spend to date is **£0.047m** against a budget of **£0.040m**, made up of pay costs. This overspend of £7k is due to the full costs for the Associate Director of Programmes being borne by the PMO from April 2021. The budget and current forecast outturn for the financial year 2021-22 is **£0.240m**.

Projects 1 and 2 Delivery Costs

5.7 There is a revenue project delivery cost for the nVCC and Enabling Works Projects of **£5k** with an expected spend for the year of **£24k**. This spend is made up of rates and other running costs. There is currently no revenue budget for these costs.

Project 6 – Service Delivery, Transformation and Transition (Service Change)

5.8 Service Change spend to date is **£0.056m** against a budget of **c£0.049m**. This spend is made up of pay costs. The Project is currently forecasting a break even position for the year against a budget of **£0.296m**. The current and forecast overspend is due to increased pay costs.

6. CONSIDERATIONS FOR BOARD

6.1 An extract of this report is reported in the Trust Boards Finance Report.

7. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Staff and Resources
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	See above.

8. RECOMMENDATION

8.1 The TCS Programme Board are asked to **ENDORSE** the financial position for the TCS Programme and Associated Projects for 2021-22 as at 31st May 2021.

TRUST BOARD

REPORT OPEN RISKS IN DATIX

DATE OF MEETING	29th July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not applicable

PREPARED BY	Lenisha Wright, Chief of Staff Manager
PRESENTED BY	Lauren Fear, Director of Corporate Governance & Chief of Staff
EXECUTIVE SPONSOR APPROVED	Lauren Fear, Director of Corporate Governance & Chief of Staff

REPORT PURPOSE	FOR NOTING

ACRONYMS	
VCC	Velindre Cancer Centre
VUNHST	Velindre University NHS Trust
WBS	Welsh Blood Service

1. Situation

This report is to provide Trust Board with information on the status of open risks recorded in version 12 of Datix. The report provides high level data on the following:

- the number of open risks;
- risks by division or directorate;
- when (year) risks were recorded; and
- risk grade or level.

2. Background

Risk mitigation is an important aspect of risk management and involves taking action to reduce exposure to exposure that could have detrimental harm on the Trust. Risks are closed when they have been successfully mitigated or accepted based on the target risk rating and risk appetite. Actions and learnings identified may continue to be implemented following the closure of risks. The monitoring of risk closure does not mean that risks open in Datix should be closed without thorough assessments and outcomes or that open risks should be seen in a negative light. Depending on the type of risk and escalations, it may mean that the process, from the time the risk was identified to the time the risk is closed, is extended for thorough assessments to take place.

Monitoring risks that remain open, the description of the risks and the risk grade (current and target) is important to provide assurance that risks are being managed effectively. This report presents an analysis of information with the intention of providing assurance to the Board, that attention is being given to the effective management and mitigation of risks identified in the Trust.

3. Introduction

The purpose of this report is to present Trust Board with an analysis of data pertaining to open risks as recorded in version 12 of Datix, providing assurance that risk is being managed and plans for ongoing improvement, is being put in place.

Trust Board is requested to:

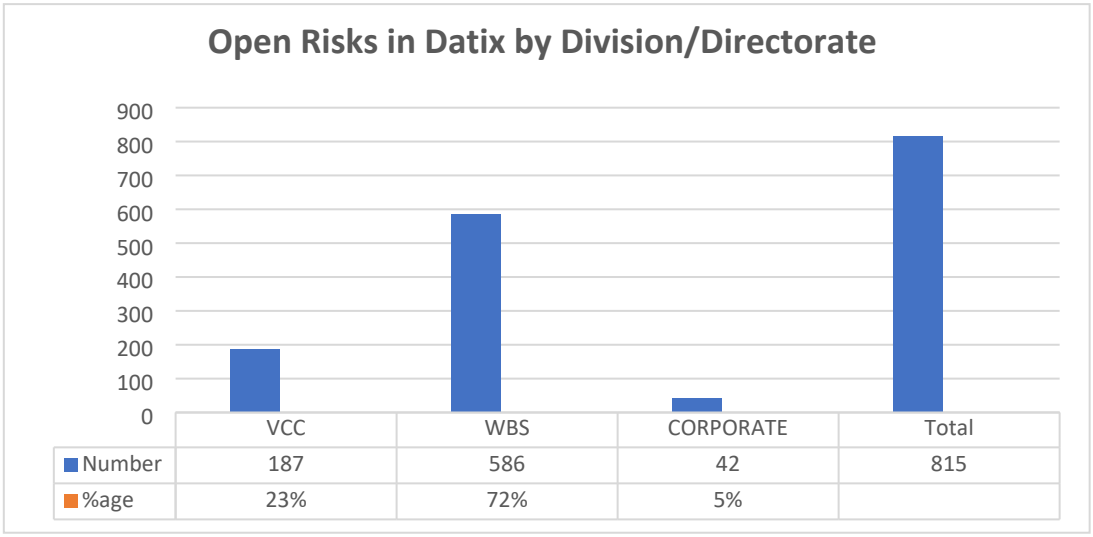
i. Note the data presented
ii. Provide assurance that Trust risks will be managed / mitigated

The content of this report includes data and analysis of the number of open risks and the division or directorate where they have been identified. Data is provided of the current level or grading of risks and further analysis of target levels identified for risks level 20 and 25.

Data extracted from Datix is as at 1st July. Reports on open risks were sent to Divisions for review prior to this report being compiled. Dashboards and reports are set up in Datix to monitor the status of risks

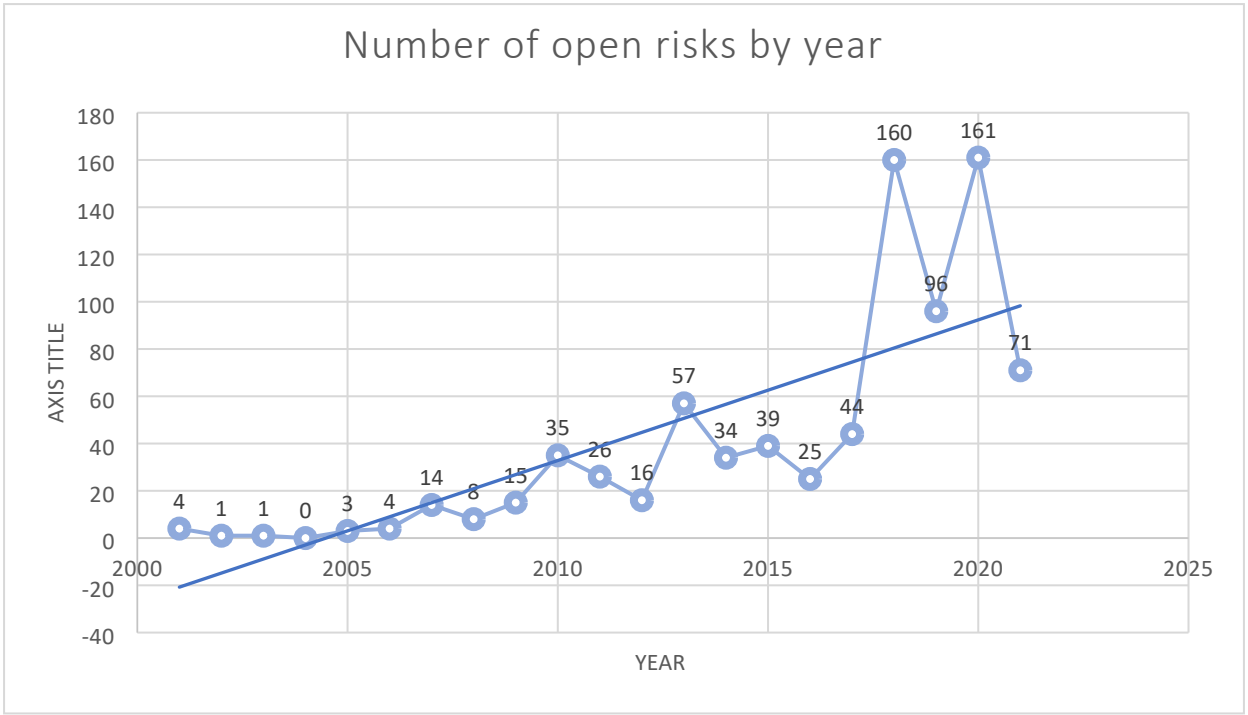
4. Open Risks by Division/Directorate

As per the data drawn from Datix on 1st July, there are 815 open risks in Datix. As represented in the graph below. 72% (586) of which relate to the Welsh Blood Services, 23% (187) to the Velindre Cancer Centre and 5% (42) to Corporate.



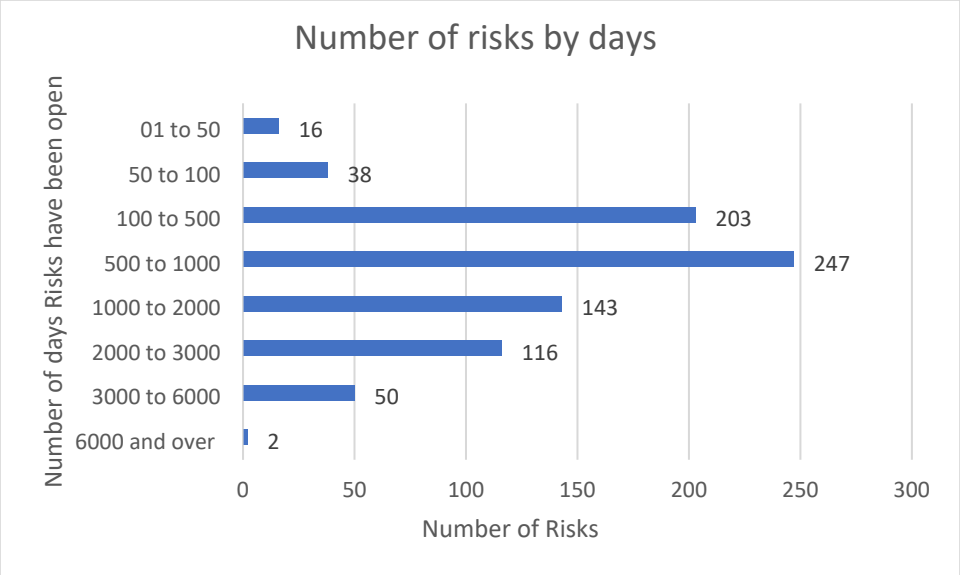
5. Number of risks by year

The graph below represents the number of risks and the year it was recorded or the initial risk assessment date. Open risks in the system are from 2001 to 2021.



6. Number of days risks are open

The graph below provides an analysis of the number of days risks have been open. Of the 815 risks, 2% have been open for under 50 days, 60% between 50 and 1000 days, 38% between 1000 and 6000 days, and 2 risks have been open for more than 3000 days.

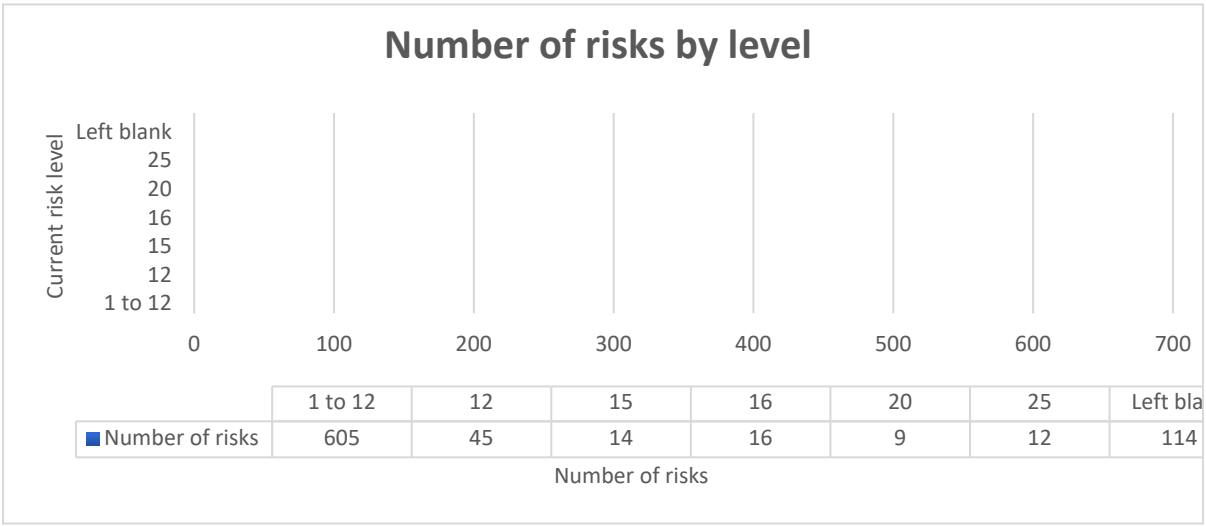


7. Status of risks and closure

All 815 risks are recorded as “final status” which could indicate that assessments and actions for the majority have been finalised, and that these risks could be closed. Finalisation and approval will require appropriate governance route and audit trail.

8. Risk grade / level

The number of risks by current risk level is represented in the graph below.

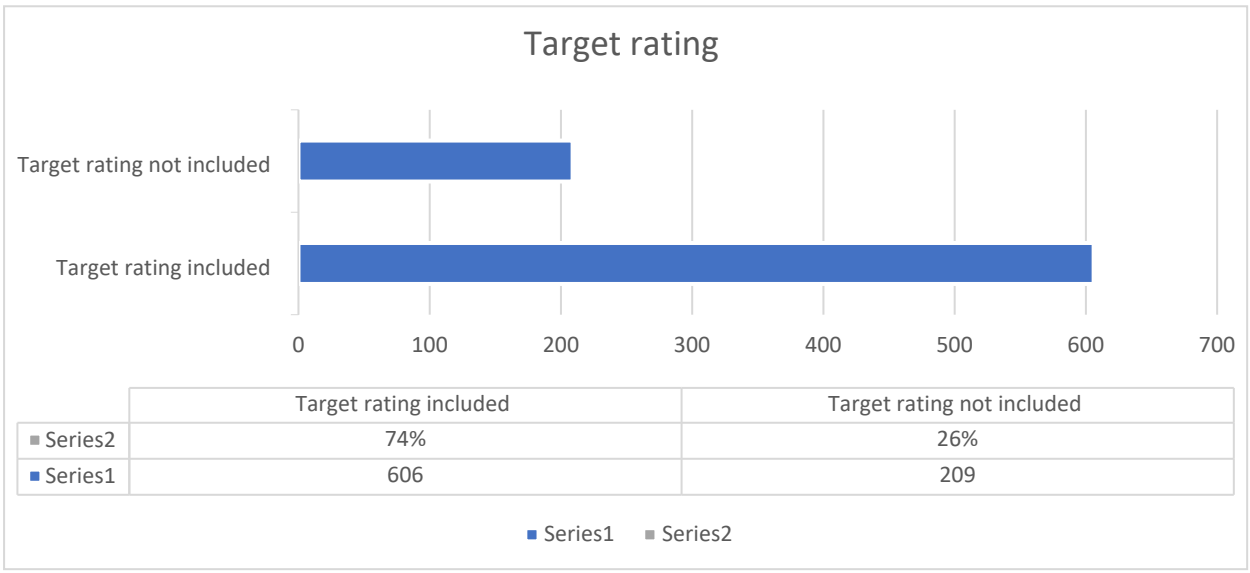


8.1. Target risk rating for risks level 20 & 25

There are three risk ratings in Datix Vs 12, initial, current and target risk ratings. The target risk rating is the optimal level of the risk identified by the division or directorate. This is usually based on the desired return or outcome and the ability to manage the related risks. As an example, the 2 risks rated 20 in the graph below had an initial rating of 25.

8.2. Target ratings included or not included

All risks were not assigned a target risk rating. The majority 74% have a target risk rating while 26% were left blank.



9. Next steps

Following board approval on the risk appetite and the drafting of a risk framework, work has been undertaken to establish and implement a new risk process and form in Datix Vs 14. Alongside this work, monitoring the status and closure risks where possible, is important. The following work is currently underway

- A risk project plan with identified goals and objectives.
- Specific issues and regulatory constraints identified with the aim of establishing solutions or alternatives.
- Ongoing discussion and working together with divisions on the transfer of risks to Vs 14.

10. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below)
	Is considered to have an impact on quality, safety and patient experience.
RELATED HEALTHCARE STANDARD	Safe Care
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Risks open for extended periods of time without indication that work is being undertaken could expose the Trust that may have legal implications.
FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	If risks aren't managed / mitigated it could have financial implications.

11. RECOMMENDATION

Trust Board are asked to:

- Note the content of this report.
- Note that work has resumed to implement a new risk process.
- Note that closure of risks is being monitored and that follow up reports will be presented to the Board.

TRUST BOARD

HIGHLIGHT REPORT FROM THE CHAIR OF THE STRATEGIC DEVELOPMENT COMMITTEE

DATE OF MEETING	29/07/2021
PUBLIC OR PRIVATE REPORT	Public
IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report
PREPARED BY	Laura Tolley, Business Support Officer
PRESENTED BY	Stephen Harries, Vice-Chair
EXECUTIVE SPONSOR APPROVED	Carl James, Director of Strategic Transformation, Planning & Digital
REPORT PURPOSE	FOR NOTING

ACRONYMS	
AOS	Acute Oncology Service
IMTP	Integrated Medium Term Plan
JET	Joint Executive Team
MIM	Mutual Investment Model
WBS	Welsh Blood Service

DRAFT

1. PURPOSE

1.1 This paper has been prepared to provide the Trust Board with details of the key issues considered by the Strategic Development Committee held on 10th June 2021 and an Extra Ordinary Meeting held on 28 June 2021.

1.2 Key highlights from the meeting are reported in section 2.

1.3 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	There were no items identified for Alert / Escalation to the Trust Board.
ADVISE	**Acute Oncology Service (AOS) Business Case Update:** The Committee were encouraged to note the excellent progress made by the Trust in the development of the AOS business case. The Committee were advised that the Trust and other Health Boards had agreed and prioritised individual plans with the aim of the business case being submitted for approval in July. Whilst there would be significant challenges across the region to implement the AOS service, there are clear benefits of regional investment, such as: • Better and safer patient care; • Better patient experience; • Reduced length of stay and release of beds. **Trust Draft Strategies – Progress Update:** The Committee were pleased to note the recommencement of the Trust Strategy work which would see an overarching 2030 Trust Strategy with both supporting and service strategies aligned to it. Work is being undertaken to finialise the suite of strategies and it is hoped that the Trust will be in a position to approve them in November 2021. The Committee are looking forward to receiving updates on this exciting work as it progresses. **Welsh Blood Service (WBS) Infrastructure Business Case Update & Next Steps:** The Committee were advised that £150,000.00 had been awarded to the Trust in March 2021 to support improvements to the building in Llantrisant. The Committee were pleased to hear the service had an ambition for the site to be 0% carbon dioxide emissions, if this is achieved it would be the first site of its kind in NHS Wales. The Committee also noted Welsh Government's support for upgrading and modernising the site, which has been recently recognised as an NHS Wales critical facility. **Digital Health & Care Record Update:** The Committee received a verbal update from the Deputy Chief Digital Officer informing them of the challenges the Trust faced to deliver on the expected September 2021 deadline. The

	Committee noted these challenges and are expecting a formal detailed paper at the next meeting. **Demand & Capacity Model Presentation & Next Steps:** The Committee were presented with the Trusts' Demand & Capacity Model, this was an excellent presentation which detailed how the COVID-19 pandemic had impacted on services across the Trust. The presentation also illustrated an upstream view of demand and patient flow within the Trust. The Committee have requested that a Board Development session be held on the Demand & Capacity modeling in the near future. **Performance Management Framework:** The Committee were pleased to see the re-commencement of the refreshed Performance Management Framework development. The Committee endorsed the phased approach and timescales and are looking forward to receiving updates on this work as it progresses. **Estates:** The Committee noted the removal of obstructions and debris at ground level of the recently acquired Mutual Investment Model (MIM) Site. The Committee understood that there would potentially be a negative reaction from the local community to the actions, however, recognised the importance of the Trust discharging its Health and Safety responsibilities for the site. It was also discussed that a formal decision would need to be made in the near future with regard to fencing off the site for health and safety reasons.
ASSURE	**Trust Assurance Framework:** The Committee noted the Trust Assurance Framework and next steps.
INFORM	**Patient Engagement:** The Committee received an update on Patient Engagement across the Trust and were pleased to note that the Patient Liaison Group and Community Health Council continue to be actively engaged with on a regular basis. **Partnership Boards Update:** The Committee noted a verbal update provided in relation to the partnership boards. The Committee were pleased to see meetings between the Trust, Cardiff & Vale University Health Board and Cwm Taf Morgannwg University Health Board had taken place with key areas of focus established and were encouraged to hear that initial plans were in place to establish a partnership board with Aneurin Bevan University Health Board. The Committee are looking forward to receiving regular updates on the regional working. **Plasma for Fractionation:** The Committee were informed that work was underway to submit a proposition to Welsh Government in relation to plasma for fractionation. This would be a significant and exciting development for the

	Welsh Blood Service and the Committee are looking forward to receiving updates as this progresses. **Minecraft Presentation:** The Committee were pleased to hear about the Trust's engagement with young people through gamification in relation to the design of the new Velindre Cancer Centre. The Committee were also encouraged to see the Wellbeing of Future Generation Goals being used as themes throughout the project. **Capital Programme 2021-22:** The Committee noted the Capital Programme 2021-22 Update. **Joint Executive Team (JET) Meeting:** The Committee were informed that a JET meeting between the Trust and Welsh Government had not taken place due to COVID-19, however a meeting had been scheduled for 2nd July 2021. The Committee noted that guidance from Welsh Government had asked the Trust to provide a look back over the past few months, in addition to future plans and ambitions for the organisation. **Annual Operating Plan/Integrated Medium Term Plan (IMTP):** The Committee held an Extra Ordinary Committee meeting on 28 June 2021 to consider the Trust's draft Annual Operating Plan (IMTP) for 2021-22. The Committee noted the progress made to date in the development of the Trust draft Annual Operating Plan for 2021-22 and endorsed the submission of the Trust Annual Operating Plan to the Trust Board (subject to agreed changes). Due to the time constraints with the deadline for submission to Welsh Government, the approval of the Trust's Annual Operating Plan 2021-22 to Welsh Government was undertaken using an urgent Chair's Action. The detail of the urgent Chair's Action is included under agenda item 3.2 Chairs Urgent Action Matter Report within the papers for this Trust Board meeting.
APPENDICES	**None**

TRUST BOARD

HIGHLIGHT REPORT FROM THE CHAIR OF THE TCS PROGRAMME SCRUTINY SUB-COMMITTEE

DATE OF MEETING	29/07/21

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Bethan Lewis, TCS Programme Risk Advisor
PRESENTED BY	Stephen Harries, Independent Member
EXECUTIVE SPONSOR APPROVED	Carl James, Director of Strategic Transformation, Planning and Digital

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
n/a	n/a	n/a

ACRONYMS	
nVCC	New Velindre Cancer Centre
TCS	Transforming Cancer Services
WG	Welsh Government
RSC	Radiotherapy Satellite Centre
IRS	Integrated Radiotherapy Solution

1. PURPOSE

1.1 This paper has been prepared to provide the Board with details of the key issues considered by the TCS Programme Scrutiny Sub-Committee at its Public meeting on the 20th July 2021.

1.2 This is not considered a full update on the Programme but a high level record of the matters of business conducted by the TCS Programme Scrutiny Sub-Committee.

1.3 Key highlights from the meeting are reported in section 2.

1.4 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	
ADVISE	**TCS Programme Finance Report** The Sub-Committee were advised that the report outlines the current capital funding and revenue spend position for the Project and Programme. The Assistant Director of Finance highlighted that there is a small underspend of £3k on the Capital budgets, and a small overspend of £13K on the Revenue budgets. The year-end forecast positions are being worked through with Project Leads to agree actions to deliver a balanced year-end.
ASSURE	**TCS Programme Risk Register** The Sub-Committee were assured that the Programme and Projects risk position remains stable with the majority proportion of risks rated as 'yellow' which relates to a moderate risk score. Changes and updates to Project Risk scores were highlighted, including the new risk raised in regards to the Judicial Review lodged against the Welsh Government decision to approve to OBC for the nVCC. It was confirmed that all evidence from Velindre University NHS Trust to support WG's defense has been submitted. Review of highest rated risks has been undertaken in this reporting period to ensure that there are clear action plans with due dates and confirmed actionees against them.
INFORM	**Communications & Engagement** The sub-committee were informed of the latest Communications and Engagement activity undertaken in this reporting period including, attendance by Steve Ham, CEO; David Powell, TCS Project Director & Phil Roberts,

	Velindre Advisor at the Whitchurch Community Group which was organised by Julie Morgan MS & Anna McMorrin MP. This was an important event enabling Velindre University NHS Trust opportunity to engage with the community and residents and opening up further opportunities for future engagement. The Digital Conversation was launched on the 16th June supported by the Down to Earth Project, and a drop-in event was held on the 13th July. It was confirmed that the Minecraft competition closed on 28th June with announcement of shortlist expected by the end of July.
APPENDICES	**Not Applicable**

TRUST BOARD

Communications and Engagement Update

DATE OF MEETING	29/07/21

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable – Public Report

PREPARED BY	NON GWILYM, ASSISTANT DIRECTOR COMMUNICATIONS AND ENGAGEMENT
PRESENTED BY	NON GWILYM, ASSISTANT DIRECTOR COMMUNICATIONS AND ENGAGEMENT
EXECUTIVE SPONSOR APPROVED	LAUREN FEAR, DIRECTOR CORPORATE GOVERNANCE

REPORT PURPOSE	For noting

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**
TCS Programme Delivery Board	16/06/21	Noted

ACRONYMS	
	None

1. BACKGROUND

1. This paper provides the Trust Baord with an update on Programme communications and engagement since June 2021.

2. The Programme Board approved the Transforming Cancer Services (TCS) Programme Communications and Engagement strategy in December 2019. The strategy emphasises the importance of good one-to-one stakeholder engagement,

building positive relationships and informing our patients, staff and communities of interest.

2. ASSESMENT / SUMMARY OF MATTERS FOR CONSIDERATION

Over the reporting period we focused our efforts on:

Communications

- Responding to correspondence from a wide range of stakeholders;
- Monitoring media relating to Judicial Review challenge made by local resident:
    - https://www.bbc.co.uk/news/uk-wales-57540838
    - https://nation.cymru/news/patient-launches-legal-challenge-against-plans-for-new-cardiff-cancer-centre/
- Launching the Digital Conversation through Velindre Matters social channels and supported by the Down To Earth Project (press release available as Annex A)
    - https://www.southwalesargus.co.uk/news/19387305.new-velindre-cancer-centre-cardiff-look/
    - https://www.buildingbetterhealthcare.com/news/article_page/Velindre_Cancer_Centre_to_be_rebuilt/177531
    - https://www.walesonline.co.uk/news/wales-news/cardiff-velindre-hospital-latest-plans-20863234
    - Western Mail article (Annex B)
    - GB news report (not available)

Delivering the second edition of the Velindre Matters newsletter (June 30)

- English version has received a 47% open rate - http://createsend.com/t/t-58CA5367CB53864A2540EF23F30FEDED
- Welsh version has received a 40% open rate - http://createsend.com/t/t-4E28255D84221DAD2540EF23F30FEDED

Engagement

- Undertaking media briefings relating to the launch of the Digital Conversation to share images of the updated reference design and to clarify next steps in the design process for the new Velindre Cancer Centre;
- Delivering public online events to promote the Down to Earth digital conversation
- Ongoing promotion of the Radiotherapy Satellite Centre service change engagement
    - Events concluded on Wednesday 30 June

    - Diverse Cymru have received some responses through postal and telephone engagements
    - The digital survey, as of 6 July 2021, has received 275 responses
- Delivered first meeting of patient engagement framework steering group
- Supporting the Whitchurch Community Group event organised by Julie Morgan MS and Anna McMorrin MP. The event was attended by Steve Ham, David Powell and Phil Roberts to provide information regarding the new Velindre Cancer Centre project and opportunities to
    - https://velindre.nhs.wales/transformingcancerservices/get-involved/whitchurch-community-group/
- Meeting with the MS MP
- Working on the nVelindre Minecraft Competition closed on Monday 28 June
    - 120 registrations from teachers and students from across south east Wales
    - 20 worlds submitted for the competition
    - Review panel being established to announce shortlisted worlds and students by end of July;

Next Steps

For the next month, our priorities will be as follows:

- Launching bimonthly Velindre Matters newspaper for local community to support monthly digital version;
- Ongoing information sharing with MS / MP;
- Provide appropriate communications and engagement counsel regarding security protocols for new cancer centre site;
- Review and report to Community Health Council on findings of service change engagement for Radiotherapy Satellite Centre and agree next steps;
- Continue to maintain media briefings and information sharing with key outlets;
- Finalise a series of local public engagement events including the Down to Earth programme on community benefits in late summer 2021;
- Continue to manage the Velindre Matters social media channels;
- Supporting the Velindre Futures communications and engagement needs;
- Supporting the ongoing staff engagement sessions.

Annex A: Digital conversation press release

Velindre wants you to get involved in the next stage of designing the greenest hospital in the UK

It is estimated that around 230,000 people in Wales will be living with cancer by 2030 and Velindre Cancer Centre has a proud history of delivering excellent cancer services, treatment and care to the patient population of south east Wales.

However, the current Velindre Cancer Centre is over 65 years old and simply does not have the facilities or space to meet this future challenge. The pandemic and the impact in its aftermath has only consolidated the Trust's view that it needs to act now.

So where are we now?

Over the coming months, Velindre will start the competition to build the new cancer centre. As it prepares for this next stage, we are asking for feedback from the public on the updated reference design and continuing the conversation about the benefits the project could deliver for the local community.

The feedback gathered will be included in the information pack provided to bidders at the very start of the process. As part of the competition, the bidders will be expected to deliver their own version of the new centre's design, drawing on or improving the established reference design. Velindre expects the designs to reflect the ambition of the design principles it aims to achieve – a building that makes people feel good, is strong and long-lasting and functions well as a cancer centre.

We also want the development of the new cancer centre to generate genuine community benefits for Whitchurch, embracing the social, economic and environmental opportunities the project presents.

David Powell, project director for the new Velindre Cancer Centre said, "The design process is a key part of the next stage for the project and gathering the thoughts of our patients, their families, carers, staff and community is a critical part of that process. Without it, we may have an updated reference design, but we would not have the ability to build the heart into the cancer centre. We want to talk to as many partners and interested parties as possible so that the project team can listen and learn from the community.

“The project not only aspires to be the greenest hospital in the UK, but we want to ensure that it is an inspiring workplace for our dedicated, professional staff to thrive, as well as becoming a focal point for international research and be a place that benefits the local community.

“It is the amazing work of Velindre that drives this project and why we are encouraging everyone to add their voice to the design process, so that we can deliver a new cancer centre that we can all be proud of and is a state-of-the-art facility which is able to treat more people and help them to live longer.”

What happens next? How people can get involved.

Velindre is encouraging as many people as possible to take part in the digital conversation which is being delivered in collaboration with the team at Down to Earth Project who have a 16-year track record in providing life changing healthcare and education programmes.

The digital conversation survey can be completed through the Fit for the Future website: https://vcc.fitforthefuture.uk

Mark McKenna, founder of Down to Earth added, “We are delighted to be working with the new Velindre Cancer Centre project team to support their plans. As a social enterprise, we work with organisations designing and developing a new approach to their healthcare delivery through nature-based solutions, so that it creates an urban and rural built environment infrastructure which is fit for the future. For us, it’s about creating an infrastructure which is good for people and good for the planet.”

Velindre and Down to Earth will be hosting engagement events that will provide further details relating to the updated reference design, as well as how people can get involved:

- Online workshop 1, Monday 28 June at 09:00
- Online workshop 2, Friday 2 July at 12:00
- Online workshop 3, Thursday 8 July at 18:00

The events will be hosted through the Velindre University NHS Trust Zoom channel and it is advised to register in advance of the event, to enable language preference – Welsh or English – to be delivered equally where required. Interested parties can email Velindre.communications@wales.nhs.uk for more information.

To learn about the latest developments, people can also sign up to the Velindre Matters newsletter by emailing contact.velindre@wales.nhs.uk

Annex B: Western Mail article

19 June 2021

WESTERN MAIL SATURDAY, JUNE 19, 2021

InYourArea.co.uk

15 NEWS

New details of planned cancer unit revealed

NEW images have been revealed for what a proposed cancer hospital in north Cardiff could look like as a public consultation on the design begins.

The new Velindre Cancer Centre will be built on the Northern Meadows in Whitchurch, with construction expected to begin in March 2023.

Building work will take about two years and the hospital is likely to open in summer 2025.

After the Welsh Government signed off the outline business case for the hospital in March, the next stage is a major public consultation to inform the final design of the buildings.

ALEX SEABROOK
Local democracy reporter
alex.seabrook@reachplc.com

David Powell, project director for Velindre, said: "The design process is a key part of the next stage for the project and gathering the thoughts of our patients, their families, carers, staff and community is a critical part of that process.

"Without it, we may have an updated reference design but we would not have the ability to build the heart into the cancer centre. We want to talk to as many partners and interested parties as possible so that the project team can listen and learn from the community."

> New artist's impression of Velindre Cancer Centre
John Cooper Architects

Velindre has revealed a new "reference design" giving more details than previously about how the hospital would look. Together with public comments from the consultation, this will go to contractors bidding to work on the final design of the hospital.

The consultation will run for about a month and then the tendering process, which will take about a year, will begin. In the meantime, enabling works to prepare the site will likely begin this autumn.

Local campaigners Save the Northern Meadows, who want the hospital built elsewhere, said they boycotted the first of this round of consultation events, held on Thursday. Instead, they demonstrated outside the consultation venue.

A spokesman for the campaign said: "It is too little, too late. Real, meaningful consultation should have been undertaken years ago.

"The Northern Meadows are a haven for wildlife, a crucial part of the area's biodiversity, have been used by the community for decades, and have been a lifeline to thousands of local people throughout the pandemic while also offering some protection from the pollution of the M4, A470, and Coryton Interchange and decreasing the risk of flooding.

The consultation held on Tuesday was one of the first in-person events to be held since the start of the pandemic.

3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	There are no specific quality and safety implications related to the activity outined in this report.
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	If more than one Healthcare Standard applies please list below:
EQUALITY IMPACT ASSESSMENT COMPLETED	Not required
LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.

4. RECOMMENDATION

4.1 The Trust Board is asked to **NOTE** the paper.

TRUST BOARD

EQUALITY, DIVERSITY & INCLUSION AMBASSADORS

DATE OF MEETING	29th July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Ceri Harris – Equality & Diversity Manager
PRESENTED BY	Sarah Morley, Executive Director of Organisational Development and Workforce
EXECUTIVE SPONSOR APPROVED	Sarah Morley, Executive Director of Organisational Development & Workforce

REPORT PURPOSE	FOR NOTING

COMMITTEE/GROUP WHO HAVE RECEIVED OR CONSIDERED THIS PAPER PRIOR TO THIS MEETING		
COMMITTEE OR GROUP	**DATE**	**OUTCOME**

ACRONYMS	
SEP	Strategic Equality Objectives
LGBT+	Lesbian, Gay, Bisexual and Transgender
IMTP	Integrated Medium Term Plan
EQIA	Equality Impact Assessment

1. SITUATION/BACKGROUND

In January a paper was presented to the Exec Management Board setting out a framework for improving ownership, understanding and positive changes in the areas of equality, diversity and inclusion.

Posing the question; What does the Trust need to do to ensure that it is taking active measures to challenge discrimination and develop a shared ownership of equality, diversity and inclusion at all levels of the organisation?

The paper included a proposal that each member of the Executive Team and members of the Workforce and OD team align themselves with an area of work under the Equality Act 2010.

As a result of the pandemic, this work was postponed until the Spring, when a briefing paper, which included a role description and information on the areas of work was provided to the Executive team to put their nominations forward.

2. ASSESSMENT / SUMMARY OF MATTERS FOR CONSIDERATION

The Trust has developed its Strategic Equality Objectives for the next 4 years, but there is a need for further scrutiny and ownership of the agenda to take it forward.

To take these findings on board and respond effectively there is a need for Equality, Diversity and Inclusion (ED&I) to be better integrated in existing and developing strategies and be part of the Trust's framework of priorities.

The agreement to develop Equality Ambassadors is a move to ensure that ED&I is embedded in all aspects of the Trust's work.

Exec Team Equality Ambassadors

Steve Ham	Sexual Orientation & Welsh Language
Cath O'Brien	Sex/Gender
Lauren Fear	Gender Reassignment/Gender Identity
Carl James	Disability
Jacinta Abraham	Race
Nicola Williams	Age
Mark Osland	Pregnancy and Maternity & Marriage and Civil Partnership
Sarah Morley	Religion, Belief and Non Belief

Workforce and OD Equality Ambassadors

Susan Thomas	Gender Reassignment/Gender Identity
Claire Whiles	Religion, Belief and Non-Belief
Ceri-Ann Lawless	Age
Amanda Jenkins	Sexual Orientation
Donna Dibble	Disability
Gaynor Curtis	Pregnancy and Maternity & Marriage and Civil Partnership
Emily Mayers	Sex/Gender
Thomas Dorey	Race
Angela Voyle- Smith	Welsh Language

& Education and Development team

Training and Support

Once ambassadors were informed of their aligned areas of work, a 30 min session was arranged to identify base line knowledge and learning style. Over June/July training will be provided for each ambassador. This will include lived experience conversations as well as video, written and traditional training methods. Alongside this the Trust ED&I manager will provide research, article updates as they present themselves to maintain learning and support.

Intersectionality

Recognition that although aligned with a protected characteristic, equality ambassadors will still need to have an understanding of all aspects of equality and how they overlap and can present additional barriers to full inclusion.

Staff Networks

Equality ambassadors are invited to be part of the Trust Staff Networks, where they will also be given email updates of areas that are discussed, including staff involvement in policy development, awareness events and support. Currently the Trust networks are;

- Black, Asian and Minority Ethnic & Ally
- Disability & Ally
- LGBT+ & Ally
- Shielding Staff
- Menopause Café

Previous attempts to develop Women's, Carers and Welsh networks have not been successful, but ambassadors could work to develop these again.

Equality Impact Assessment (EQIA) meetings

Equality ambassadors are invited to attend the monthly EQIA meetings, to get a better understanding of the process and its importance in policy and strategy development and implementation.

Quarterly Equality Ambassador Meetings

Quarterly meetings will be developed for Ambassadors to revisit objectives and share learning as well as develop key areas of future work.

Involvement in Equality Calendar events and key areas for Ambassador support.

The goal for the ambassadors is to understand how ED&I fits into their own work areas from a strategic and operational level, identifying resources where necessary to ensure progress on equality integration.

This scheme will also ensure inclusion of equality within strategic decision making and key areas of work for the Trust, including:

- IMTP
- Health and Care Standards
- Disability Confident Scheme
- Welsh Government reports
- Race Equality Action Plan
- Equality and Human Rights Commission Audits
- Digital Inclusion
- TCS Programme

Equality Ambassador updates to Executive Management Board and Board

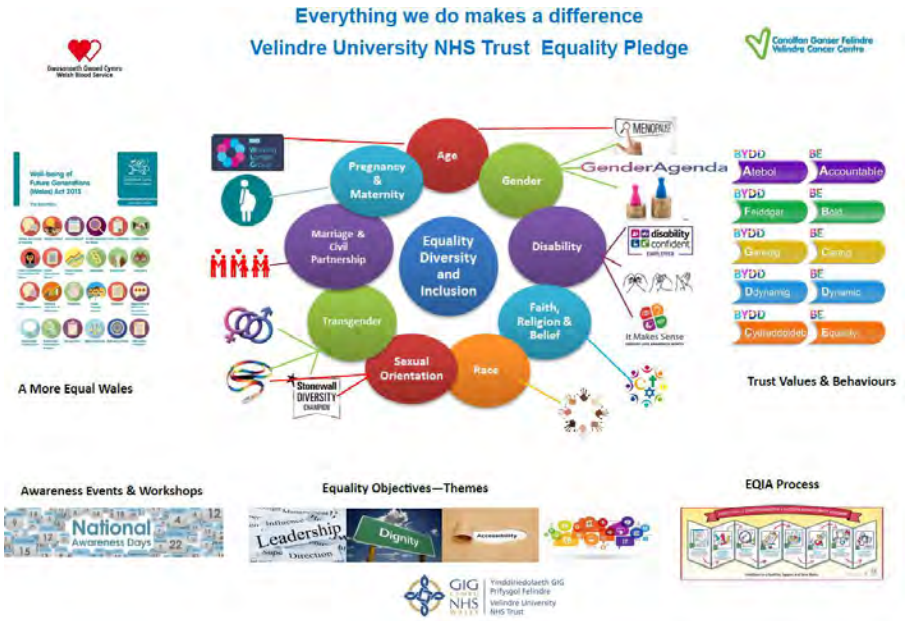
To ensure shared learning within the Executive Management Team and Trust Board, as well as progress on Strategic Equality Objectives, each Equality Ambassador to give an update on their area of work and the areas of development within the Trust on a two monthly basis, so each time a new area is acknowledged and understanding is shared. These can include lived experience stories from staff, patients and donors on all aspects of the Trust's services. This will also support intersectional areas of work throughout the Trust.

Principles Driving Equality, Diversity & Inclusion.

The actions described above support the principles that underpin our ED&I work in the organisation and are depicted in the ED&I Pledge.

- Involve people and listen to feedback.
- Decisions should be made by the correct people in the correct place with correct support
- Build relationships between and across VCC, WBS and Trust wide services
- Ensure everyone is able to effectively discharge their responsibilities from Board to Floor.
- Develop new systems through the lens of compassionate and values based leadership

- Deliver patient centred services by actively seeking and listening to patient needs.



3. IMPACT ASSESSMENT

QUALITY AND SAFETY IMPLICATIONS/IMPACT	Yes (Please see detail below)
	Work in this area will improve the quality of services provided by the organisation
RELATED HEALTHCARE STANDARD	Governance, Leadership and Accountability
	Staff and Resources Individual Care Dignified Care
EQUALITY IMPACT ASSESSMENT COMPLETED	Yes
	EQIA will be required across the individual elements of work.
LEGAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Meet our Duties under Equality Act 2010.

FINANCIAL IMPLICATIONS / IMPACT	Yes (Include further detail below)
	Financial implications of individual changes will be considered as work is planned.

4. RECOMMENDATION

The Trust Board is asked to **NOTE** the approach and themes of work described above.

Race Equality in Velindre University NHS Trust

Sarah Morley
Dr Jacinta Abraham

The Race Equality Action Plan: An Anti-racist Wales

The vision, purpose and values, as agreed with stakeholders are:

Vision: "A Wales that is Anti-racist by 2030."

Purpose: "To make meaningful and measurable changes to the lives of Black, Asian and Minority Ethnic people by tackling racism."

Values: "Open and Transparent, Rights based, and Lived experiences as core to all policy making."

Goals – Policy Areas:

Leadership and Representation	Housing and accommodation	Income and Employability (I&E)	Social partnership and Fair Work (I&E)	Entrepreneurship (I&E)
Health	Social Care	Education, including higher education	Crime and Justice	Culture, Heritage and Sport
Local Government	Welsh Language	Environment		

Cross cutting Goals:

Data	Engaging and funding communities	Impact assessment for better policy design	Services for individuals experiencing racism	Role of informal volunteering

Goals for Health

Leadership & accountability: to ensure that NHS Wales is anti-racist, with zero tolerance of any form of discrimination or inequality for employees or service users.

Workforce: to ensure that the NHS Wales workforce reflects the population it serves; and staff work in safe, inclusive environments that enables them to reach their full potential.

Data & Intelligence: to ensure that health data in relation to race, ethnicity and intersectional disadvantage is actively collected, understood and used to drive and inform continued improvements in services.

Access: to ensure public health messages to improve uptake and access to health services are developed through dialogue and in partnership; individuals are supported where necessary in order to access health care.

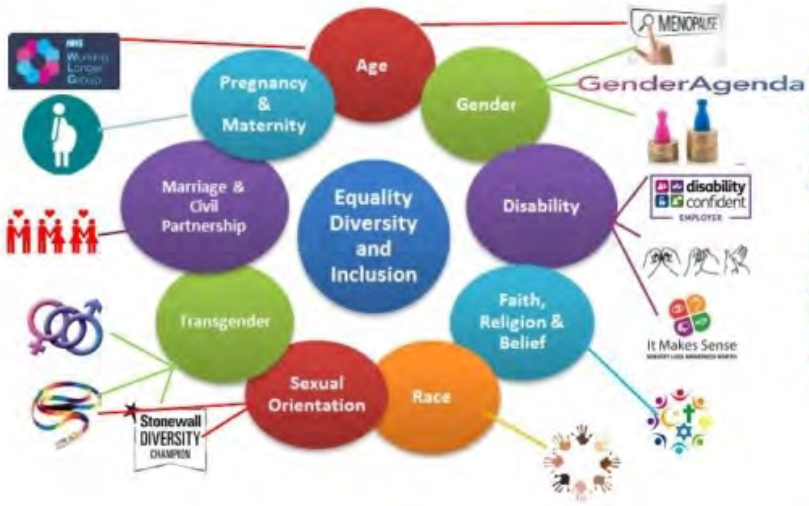
Tackling health inequalities: To ensure disease and condition specific delivery plans and strategies include actions to address the evident health inequalities experienced by some Black, Asian and Minority Ethnic people.

Trust Equality Ambassadors

Everything we do makes a difference

Velindre University NHS Trust Equality Pledge

A More Equal Wales



Trust Values & Behaviours

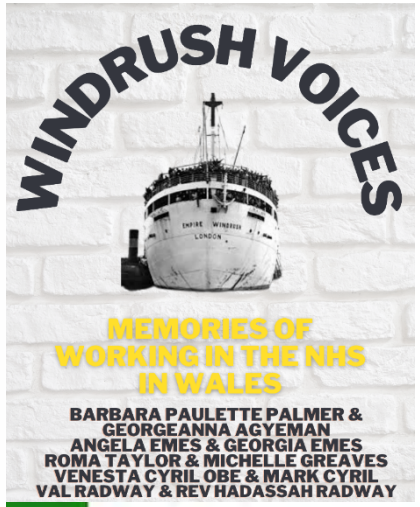
Awareness Events & Workshops

Equality Objectives—Themes

EQIA Process

GIG CYMRU NHS WALES
Ymddiriedolaeth GIG Prifysgol Felindre Velindre University NHS Trust

The Race Profile @VUNHST is active



What does this mean for me as the Trust Executive Race Ambassador?

- Getting to grips with the Race agenda: Anti racist vs Non racist
- Does it matter which box I tick?
- Knowing who is out there and making a meaningful connection
- Influencing in my role/national agenda
- Using levers such as the General Medical Council/Royal Colleges/Faculty of Medical Leadership and Management/King's Fund
- Seize the opportunities to make a difference

A message from Dame Clare Marx, Chair of the General Medical Council May 2021

"We all deserve the same opportunities, the same timely honest feedback, the same encouragement or constructive critique. But the GMC's data clearly shows disproportionate fitness to practise referrals of ethnic minority doctors from employers and unequal outcomes in education and training.

This is not simply chance alone. It is time for concerted focus and collaborative action to level the playing field.

That's why we're setting out our ambitions and qualifying them with clear, stretching targets. Focusing on two persistent areas of disproportionality, our goals are:

- *To eliminate disproportionate fitness to practise referrals from employers, in relation to ethnicity and primary medical qualifications, by 2026.*
- *To eliminate discrimination, disadvantage and unfairness in undergraduate and postgraduate medical education and training by 2031."*

What does this role mean for the Trust?

- **Leadership and accountability**: Visible involvement of minority ethnic in leadership and zero tolerance of discrimination
- **Workforce**: Promote staff engagement including the Unity@Velindre staff network. Giving staff a voice to help achieve the inclusive environment.
- **Data and intelligence**: Accurate and timely intelligence which we then shape into focused areas of improvement
- **Access**: For cancer this includes improving access to Prevention, Screening, the Service & Research i.e. entry into clinical trials. For blood and bone marrow donation: Increasing the access for minority ethnic donors.
- **Health Inequalities**: The Pandemic has exposed the gap, we now need to rise to the challenge it poses.

NEXT STEPS

- Work with Unity@Velindre on how we hear their voice
- Determine what our ambition is in regard to race equality - determine what our statement of intent should be as an organisation
- Engage the Board on specific Board member responsibilities under the Action Plan
- Determine what our specific gaps are in response to the Race Equality Action Plan

TRUST BOARD

HIGHLIGHT REPORT FROM THE CHAIR OF THE AUDIT COMMITTEE

DATE OF MEETING	29th July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Claire Bowden, Head of Financial Operations
PRESENTED BY	Martin Veale, Independent Member
EXECUTIVE SPONSOR APPROVED	Mark Osland, Executive Director of Finance

REPORT PURPOSE	FOR NOTING

ACRONYMS	

1. PURPOSE

1.1 This paper has been prepared to provide the Trust Board with details of the key issues considered by the Audit Committee at its Extraordinary meeting on the 8th June 2021.

1.2 Key highlights from the meeting are reported in section 2.

1.3 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	**n/a**
ADVISE	The Accountability Report & Annual Accounts for 2020/2021 were presented to the Committee. Key points were highlighted by the presenters, including the achievement of all statutory & administrative financial targets, and both documents were endorsed for Trust Board approval later that day, subject to minor amendments agreed. A Letter of Representation was also endorsed for sign off, and the Trust Response to Audit Wales Enquiries relating to Trust Governance and Management Arrangements was also shared with the Committee. Audit Wales presented their 'ISA260' report which highlighted amendments made to the draft documents to produce the versions presented to the Committee. It was noted that no amendments had affected the bottom line of the Trust and were small in number. Audit Wales provided information relating to an 'emphasis of matter', which was also included in the prior year's report. This was in relation to the impact of a Ministerial Direction regarding the funding of clinician's potential pension tax liabilities if they were to breach the annual or life time allowance, as a consequence of paying further pension contributions following the working of additional hours. Significant discussion took place regarding the opinion Audit Wales stated they would be placing on the accounts. Due to an internal policy developed by Audit Wales in response to the Welsh Government COVID 19 restrictions, Audit Wales had not been present at stocktakes on the Trust's inventory balances. This meant they were unable to confirm that the Trust's inventory balances at year end, totaling £95m, gave a true and fair view of the stock held. As this balance is material, they were giving a qualified limitation of scope opinion on the accounts. They were clear that this did not mean that the Trust's inventory balance did not give a true and fair view, just that they were unable to confirm that it did. The Committee heard that, whilst this opinion was a first for the Trust, it was not a first for NHS Wales, with a large Health Board receiving a similar opinion on their 2019/2020 accounts. Committee members voiced disappointment that this had not been brought to their attention sooner than a few days previously by Audit Wales. Audit Wales noted those comments and responded that they considered it had been brought to the attention of the Trust's management. The Executive Director of

	Finance acknowledged that a limitation of scope had been discussed, but there had not been knowledge that this would lead to a qualified audit opinion. It was acknowledged that as some restrictions had started to ease in mid-May, Audit Wales had offered to attend stocktakes if this could be facilitated by both sides, but, due to service capacity, short notice, and other factors, it was agreed by both sides these would not take place, with no blame being attributed to the Trust. Committee members were clear that if they had been made aware of the resulting qualified opinion, they would have requested further discussions take place to determine whether the stocktakes could have been facilitated. Some changes to the narrative and presentation of the executive level summary included on the contents page were discussed and Audit Wales agreed to consider and amend the report accordingly.
ASSURE	**Internal Audit Opinion & Annual Report** The Committee heard that a Reasonable Assurance opinion had been given, as it had been in recent years. It was confirmed that there have been more Substantial Assurance opinions this year than in the previous year.
INFORM	
APPENDICES	**NOT APPLICABLE**

TRUST BOARD

AUDIT COMMITTEE – PART A

DATE OF MEETING	8th July 2021

PUBLIC OR PRIVATE REPORT	Public

IF PRIVATE PLEASE INDICATE REASON	Not Applicable - Public Report

PREPARED BY	Mel Findlay, Business Support Officer
PRESENTED BY	Martin Veale, Independent Member
EXECUTIVE SPONSOR APPROVED	Mark Osland, Director of Finance

REPORT PURPOSE	FOR NOTING

ACRONYMS	

1. PURPOSE

1.1 This paper had been prepared to provide the Trust Board with details of the key issues considered by the Audit Committee which took place on 8th July 2021.

1.2 Key highlights from the meeting are reported in section 2.

1.3 The Board is requested to **NOTE** the contents of the report and actions being taken.

2. HIGHLIGHT REPORT

ALERT / ESCALATE	• Nothing of note to report
ADVISE	The Audit committee APPROVED the following in consent: • Revisions to Velindre University NHS Trust Model Standing Orders and Standing Finance Instructions **Trust Assurance Framework Update** Audit Committee received an update regarding the Trust Assurance Framework; although there is little change in terms of articulation of the strategic risk of the organisation, work is ongoing and includes peer working with governance colleagues from other organisations. The framework will be going to EMB in August and Trust Board in September. **Private Patients' Debts** The audit committee received an update regarding the ongoing work around private patient debts, the changes in working practices have led to a significant change to the debt over the last three months, although levels continue to fluctuate. Additionally, Audit Committee were informed of an expected report following a review by an independent company.
ASSURE	**Velindre Structured Assessment Phase 1 Report - Operational Planning** The committee received a positive report around operational planning during Covid which was robust and flexible to meet the changing demands as the Covid situation progressed. Congratulations were expressed to the Teams from the Committee. **Report on Open Risks in DATIX** The Audit Committee received an update regarding risk assessments and Datix, in particular the development work around risk resulting in a new module in Datix and the migration of risks from version 12 to version 14. There is also now a standardisation of how risks are assessed throughout the Trust. Considerable work has been done to cleanse data and manage outstanding risks.
INFORM	**Legislative & Regulatory Compliance Register** The Audit committee received a paper regarding the Legislative & Regulatory Compliance Register, which gives an overview of regulatory bodies that inspect us as a Trust, the standard being inspected, the date of last formal review, management responses, actions and where we know there is anything further scheduled in.

	Red and Green Audit Action Tracker The Audit Committee discussed and approved a number of recommendation for closure on the Audit Tracker. There was extended discussion in respect of: • Estates Management Update Report **Audit Wales Position Statement** The committee received an overview on the current status of Audit Wales' work, including the ongoing structured assessment work and the quality governance review. **Response in respect of Audit Wales budget breakdowns** The Audit Committee discussed the content of the report and raised a query regarding potential changes to fees in light of the changes to procedure which took place due to Covid, specifically around a stock take. **Final Internal Audit Reports** The Audit Committee received positive reports from internal audit on: • Final Internal Audit Report - New Velindre Cancer Centre Development Advisors (Reasonable Assurance) • Final Internal Audit Report - New Velindre Cancer Centre Development Planning (Substantial Assurance) • Final Internal Audit Report - New Velindre Cancer Centre Development Governance and Financial Management (Substantial Assurance) • Final Internal Audit Report - New Velindre Cancer Centre Development Contract Arrangements/Project Agreement (Substantial Assurance) • Radiotherapy Bookings (Substantial Assurance) • Health and Care Standrads (Substantial Assurance) • Welsh Language Standards (Reasonable Assurance) **COUNTER FRAUD** Audit Committee received an update on the work around Counter Fraud, including: • The closure of four outstanding investigations • The closure with no further action of 17 of 18 high risk matches from the National Fraud Initiative. • Training sessions have taken place with 245 staff from Velindre University NHS Trust and Shared Services having attended. The Audit Committee NOTED the following in consent: • Audit Wales report - Procuring and Supplying PPE for the COVID-19 Pandemic Report

	• Audit Wales report - Test, Trace, Protect in Wales: An Overview of Progress to Date • Audit Wales report - Rollout of the COVID-19 vaccination programme in Wales • Declarations of Interest, Gifts, Sponsorship, Hospitality and Honoraria • Closure Report for the Velindre/NWIS Transfer of Accountabilities Project • NWSSP Stock Control Report
APPENDICES	**NOT APPLICABLE**