

EXTRAORDINARY PUBLIC TRUST BOARD - TGI BUSINESS CASE

Thu 30 April 2026, 10:00 - 10:10

Trust Headquarters, Nantgarw / Microsoft Teams

Agenda

10:00 - 10:00 1. STANDARD BUSINESS 0 min

1.1. Welcome and Apologies

Sara Moseley, Chair

1.2. In Attendance

Sara Moseley, Chair

1.3. Declarations of Interest

Sara Moseley, Chair

10:00 - 10:00 2. ITEMS FOR DISCUSSION 0 min

2.1. Talbot Green Infrastructure (TGI) Programme - Strategic Business Case

Lauren Fear, Director of Place, Portfolio and Partnerships

**presentation to accompany on the day.

- 📄 Cover Paper - OBC TB Public Apr26 -Final.pdf (7 pages)
- 📄 260421 WBS OBC v10.2 Strategic Case.pdf (39 pages)
- 📄 SIGNED EQIA Form and Action Plan v2.pdf (12 pages)
- 📄 EQIA Appendix A - WBS Infrastructure Project Brief - H&K Issue No.10.pdf (3 pages)
- 📄 EQIA Appendix B - TGI Communication & Engagement Plan V0.4.pdf (13 pages)
- 📄 TGI QIA Final.pdf (5 pages)

10:00 - 10:00 3. ANY OTHER BUSINESS 0 min

Sara Moseley, Chair

10:00 - 10:00 4. ITEMS FOR DISCUSSION AT PART B 0 min

Sara Moseley, Chair

- Talbot Green Infrastructure (TGI) Programme - Full Business Case

10:00 - 10:00 5. CLOSE 0 min

Sara Moseley, Chair

TRUST BOARD

**Talbot Green Infrastructure Programme – Outline Business Case
Strategic Case**

DATE OF MEETING	30/04/2026
PUBLIC OR PRIVATE REPORT	Public
IF PRIVATE PLEASE INDICATE REASON	NOT APPLICABLE - PUBLIC REPORT
REPORT PURPOSE	APPROVAL
IS THIS REPORT GOING TO THE MEETING BY EXCEPTION?	NO
PREPARED BY	Sarah Richards, Head of Planning & Performance Services; Jason Hoskins, Assistant Director of Estates, Environment & Capital Development
PRESENTED BY	Lauren Fear, Director of Place, Portfolio & Partnerships
APPROVED BY	Lauren Fear, Director of Place, Portfolio & Partnerships
EXECUTIVE SUMMARY	<p>This report presents the Strategic Case for the Outline Business Case (OBC) for the Talbot Green Infrastructure (TGI) Programme.</p> <p>The TGI Programme represents a major strategic investment for the Welsh Blood Service and a critical enabler for NHS Wales. It responds to longstanding estate limitations at the Talbot Green headquarters which constrain service capacity, resilience, sustainability, and future development.</p>

	The Strategic Case sets out the rationale for change, demonstrating the need to modernise infrastructure to support increasing and changing demand for blood and transplant services, maintain regulatory compliance, enable innovation, and support workforce wellbeing. It highlights the importance of ensuring long-term service continuity and resilience for critical clinical services across Wales.
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RECOMMENDATION / ACTIONS	<p>The Trust Board is asked to:</p> <ol style="list-style-type: none"> 1. Approve the Strategic Case for investment in the Talbot Green Infrastructure Programme to ensure long-term resilience, sustainability, and service continuity for NHS Wales.
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GOVERNANCE ROUTE	
List the Name(s) of Committee / Group who have previously received and considered this report:	Date
TGI Programme Board	17/04/2026
Subject to WBS SLT	23/04/2026
Executive Management Board	20/04/2026
Strategic Development Committee	27/04/2026
SUMMARY AND OUTCOME OF PREVIOUS GOVERNANCE DISCUSSIONS	
TGI Programme Board – Endorsed	
Executive Management Board - Endorsed:	
<ul style="list-style-type: none"> • Research, Development and Innovation (RD&I) Considerations – EMB sought assurance that RD&I needs had been sufficiently considered and future-proofed within the design. EMB received assurance that RD&I considerations were explicitly embedded into the scheme design and that the proposal support long-term service development and future capacity. 	
Strategic Development Committee – Endorsed	
<ul style="list-style-type: none"> • Capacity - SDC sought assurance that there is sufficient capacity across WBS strategic change. Assurance was provided that this has been considered and there will be increased resource at key points, for instance from Validation, Digital and Subject Matter Experts and this has been built into the programme. 	

7 LEVELS OF ASSURANCE
N/A

ASSURANCE RATING ASSESSED BY BOARD DIRECTOR/SPONSOR	Select Current Level of Assurance
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APPENDICES	
Appendix 1	TGI Programme Strategic Case
Appendix 2	Equality Impact Assessment
Appendix 3	Quality Impact Assessment

1. SITUATION

This report presents the Strategic Case for the Talbot Green Infrastructure (TGI) Programme for consideration by the Trust Board in public session.

The TGI Programme is a major strategic investment for the Welsh Blood Service and a critical enabler for the wider NHS Wales. It aims to deliver sustainable, modern infrastructure at the Talbot Green headquarters to secure the long-term resilience and capability of blood and transplant services across Wales. By future-proofing the site, the Programme will address current and emerging service requirements, support innovation, enhance staff wellbeing, and ensure NHS Wales' ability to meet patient needs now and in the future.

2. BACKGROUND

The Talbot Green Infrastructure (TGI) Programme is a key component of the WBS Futures strategy, supporting the Trust's ambition to deliver high-quality, sustainable, and innovative blood and transplant services for Wales.

The Programme responds to well-recognised limitations of the existing Talbot Green estate and seeks to develop modern laboratory and support facilities that align with best practice standards, regulatory requirements, and forecast future service demand.

3. ASSESSMENT

The Strategic Case for the Talbot Green Infrastructure (TGI) Programme has been developed through a robust process of stakeholder engagement, strategic planning, and technical appraisal. It demonstrates that the current Talbot Green estate is no longer fit for purpose to meet the evolving operational, clinical, and regulatory requirements of the Welsh Blood Service, nor to support the future needs of NHS Wales.

Key drivers for investment include increasing and changing demand for blood and transplant services, the need to maintain compliance with regulatory and quality standards, and the requirement to support innovation, digital transformation, and

workforce wellbeing. In addition, the Strategic Case recognises a number of known risks associated with continued reliance on the existing estate, including risks to service resilience and continuity, growing capacity constraints, and limitations in the ability to support future service models.

4. SUMMARY OF MATTERS FOR CONSIDERATION

The Trust Board is asked to;

- Approve the Strategic Case for investment in the Talbot Green Infrastructure Programme to ensure long-term resilience, sustainability, and service continuity for NHS Wales.

5. IMPACT ASSESSMENT

TRUST STRATEGIC GOAL(S)	
Please indicate whether any of the matters outlined in this report impact the Trust's strategic goals: Choose an item	
If yes - please select all relevant goals:	
<ul style="list-style-type: none"> • Outstanding for quality, safety and experience <input checked="" type="checkbox"/> • An internationally renowned provider of exceptional clinical services that always meet, and routinely exceed expectations <input checked="" type="checkbox"/> • A beacon for research, development and innovation in our stated areas of priority <input checked="" type="checkbox"/> • An established 'University' Trust which provides highly valued knowledge for learning for all. <input type="checkbox"/> • A sustainable organisation that plays its part in creating a better future for people across the globe <input checked="" type="checkbox"/> 	
RELATED STRATEGIC RISK - TRUST ASSURANCE FRAMEWORK (TAF) <i>For more information: STRATEGIC RISK DESCRIPTIONS</i>	Choose an item
QUALITY AND SAFETY IMPLICATIONS / IMPACT	Select all relevant domains below
	<ul style="list-style-type: none"> Safe <input checked="" type="checkbox"/> Timely <input checked="" type="checkbox"/> Effective <input checked="" type="checkbox"/> Equitable <input checked="" type="checkbox"/> Efficient <input checked="" type="checkbox"/> Patient Centred <input checked="" type="checkbox"/>

	<p>The TGI Programme’s redevelopment of the Talbot Green headquarters is designed to deliver improvements across all six domains of quality as defined in the Welsh Government’s Quality and Safety Framework: Learning and Improving (2021). These domains are being monitored and reviewed through established programme governance, regular reporting to the Programme Board, and engagement with stakeholders to ensure continuous improvement and alignment with national quality standards.</p>
<p>QUALITY IMPACT ASSESSMENT</p> <p><i>The duty of quality requires quality-driven decision-making for all strategic decisions. The duty of quality is operationalised through the Health and Care Quality Standards. Therefore, when making decisions about healthcare services, NHS organisations are required to consider the impact of that decision on the Health and Care Quality Standards.</i></p>	<p>Yes - Fully completed and signed QIA Enclosed</p>
<p>SOCIO ECONOMIC DUTY ASSESSMENT COMPLETED:</p> <p>For more information: https://www.gov.wales/socio-economic-duty-overview</p>	<p>Yes</p> <p>Click or tap here to enter text</p>
<p>TRUST WELL-BEING GOAL(S) IMPLICATIONS / IMPACT</p>	
<p>The Trust Well-being goals being impacted by the matters outlined in this report should be clearly indicated. Please indicate whether any of the matters outlined in this report impact the Trust’s Wellbeing goals: YES - Select Relevant Goals below</p>	
<p>If yes select the relevant goals:</p> <ul style="list-style-type: none"> • A Prosperous Wales - An innovative society that develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities. <input checked="" type="checkbox"/> 	

<ul style="list-style-type: none"> • A Resilient Wales - Maintaining and enhancing a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience. <input checked="" type="checkbox"/> • A Healthier Wales - Physical and mental well-being are maximised and in which choices and behaviours that benefit future health <input checked="" type="checkbox"/> • A More Equal Wales - A society that enables people to fulfil their potential no matter what their background or circumstances <input checked="" type="checkbox"/> • A Wales of more Cohesive Communities - Attractive, viable, safe and well-connected communities. <input checked="" type="checkbox"/> • A Wales of Vibrant Culture and Thriving Welsh Language -Promoting and protecting culture, heritage and the Welsh language, encouraging people to participate in the arts, and sports and recreation. <input checked="" type="checkbox"/> • A Globally Responsible Wales – Consideration of whether an action may make a positive contribution to global well-being <input checked="" type="checkbox"/>

FINANCIAL IMPLICATIONS / IMPACT	There is no direct impact on resources as a result of the activity outlined in this report.
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	<p>Source of Funding: Choose an item</p> <p>Please explain if 'other' source of funding selected: Click or tap here to enter text</p> <p>Type of Funding: Choose an item</p> <p>Scale of Change Please detail the value of revenue and/or capital impact: Click or tap here to enter text</p> <p>Type of Change Choose an item Please explain if 'other' source of funding selected: Click or tap here to enter text</p>
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EQUALITY IMPACT ASSESSMENT <i>For more information:</i> https://nhs.wales365.sharepoint.com/sites/VEL_Intranet/SitePages/E.aspx	Yes - please outline what, if any, actions were taken as a result
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ADDITIONAL LEGAL IMPLICATIONS / IMPACT	There are no specific legal implications related to the activity outlined in this report.
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	Click or tap here to enter text

6. RISKS

ARE THERE RELATED RISK(S) FOR THIS MATTER	No
WHAT IS THE RISK?	
WHAT IS THE CURRENT RISK SCORE	
HOW DO THE RECOMMENDED ACTIONS IN THIS PAPER IMPACT THIS RISK?	
BY WHEN IS IT EXPECTED THE TARGET RISK LEVEL WILL BE REACHED?	
ARE THERE ANY BARRIERS TO IMPLEMENTATION?	Choose an item
All risks must be evidenced and consistent with those recorded in Datix	

Velindre University NHS Trust

Welsh Blood Service

Sustainable Infrastructure and Laboratory Utilisation Project –

Outline Business Case - Strategic Case

April 2026 – Final v10.2

Document Information

Status	Final
Date	21 st April 2026
Authors	Adcuris/VUNHST/ WBS
Circulation	Project Team/ Programme Board

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GLOSSARY OF ABBREVIATIONS

1MVA	Mega Volt Amp
AEDET	Achieving Excellence Design Evaluation Toolkit
AHU	Air Handling Unit
ASHP	Air Source Heat Pump
AT	Automated Testing
ATMP	Advanced Therapy Medicinal Products
BAU	Business As Usual
BCR	Benefit-cost Ratio
BHNNOG	Blood Health National Oversight Group
BHP	Blood Health Plan
BMS	Building Management System
BRP	Benefits Realisation Plan
CAR-T	Chimeric Antigen Receptor
CHP	Combined Heat and Power
CIA	Comprehensive Investment Appraisal
CPD	Continuous Professional Development
CRB	Cash Releasing Benefits
CVUHB	Cardiff and Vale University Health Board
EBMT	European Group for Blood and Marrow Transplantation
EQA	External Quality Assessment
EIA	Equality Impact Assessment
FBC	Full Business Case
GMP	Good Manufacturing Practice
HLA	Human Leukocyte Antigens
HSE	Health and Safety Executive
HTA	Human Tissue Authority
HTW	Health Technology Wales
IBI	Infected Blood Inquiry
IMTP	Integrated Medium-Term Plan
ISCT	International Society for Cellular Therapy

ISO	International Organisation for Standardisation
JACIE	Joint Accreditation Committee of the ISCT and EBMT
LED	Light-emitting Diode
LV	Low-Voltage
LZC	Low and Zero Carbon
M&D	Manufacturing and Distribution
M&E	Mechanical and Electrical
MCCP	Motor Control Centre Panels
MEP	Mechanical, Electrical, Plumbing
MHRA	Medicines and Healthcare products Regulatory Agency
MSP	Managing Successful Programmes
NEQAS	National External Quality Assessment Service
NHS	National Health Service
NHSWSSP	NHS Wales Shared Services Partnership
Non CRB	Non-Cash Releasing Benefits
Non QB	Non-Quantifiable Benefits
NPC	Net Present Cost
NPV	Net Present Value
NPSV	Net Present Social Value
NWJCC	NHS Wales Joint Commissioning Committee
OBC	Outline Business Case
OLED	Organic Light-emitting Diode
PBA	Project Bank Account
PBC	Programme Business Case
PSBA	Public Sector Broadband Aggregation
PSO	Programme Spending Objective
PV	Photovoltaic
QA	Quality Assurance
QB	Quantifiable Benefits
RAG	Red, Amber, Green

RCI	Red Cell Immunohaematology
RD&I	Research, Development and Innovation
RDS	Room Data Sheets
RPA	Risk Potential Assessment
SCP	Supply Chain Partner
SFIs	Standing Financial Instructions
SLT	Senior Leadership Team
SNBTS	Scottish National Blood Transfusion Service
SRO	Senior Responsible Owner
TG	Talbot Green
TGI	Talbot Green Infrastructure
TOR	Terms of Reference
UKAS	United Kingdom Accreditation Services
VAT	Value Added Tax

VCS	Velindre Cancer Service
VFM	Value for Money
VRF	Variable Refrigerant Flow
VUNHST	Velindre University NHS Trust
WBMDR	Welsh Bone Marrow Donor Registry
WBS	Welsh Blood Service
WG	Welsh Government
WHAIS	Welsh Histocompatibility and Immunogenetics Service
WHBN	Welsh Health Building Note
WHTM	Welsh Health Technical Memorandum
WTAIL	Welsh Transplantation and Immunogenetics Laboratory (now known as Transplantation Service)
WPD	Western Power Distribution
WWIC	Welsh Wound Innovation Centre

1.0 OVERVIEW

This business case seeks the approval for a capital investment of £59.402m (excluding optimism bias) to enable the Welsh Blood Service (WBS) to undertake a phased project of works in relation to the Talbot Green Infrastructure (TGI) Programme. The service headquarters at Talbot Green (TG) continues to be the primary strategic location over the medium to long term for the WBS, as agreed with Welsh Government, therefore the Trust Board has confirmed that it will continue to provide service delivery from the site, however a critical need has been identified to modernise the dated electrical and mechanical infrastructure at Talbot Green with the current facilities exhibiting a substantial risk to business continuity and the existing infrastructure being past end of life.

The above presents a very real and vast risk to the future of the All Wales Blood Service as any event of catastrophic failure is likely to significantly impact service delivery and loss of product, in turn creating huge consequences across the entire Welsh Healthcare System.

1.1 Progress Since the Programme Business Case

A Programme Business Case (PBC) has been developed and was approved by the Velindre University NHS Trust (VUNHST) Board and submitted to Welsh Government (WG).

The PBC set out a programme of strategic developments in relation to the improvements required at Talbot Green and demonstrated the need to support the continued sustainability of the WBS as being absolute paramount.

With this in mind, the Trust/WBS has also taken the opportunity to review ways in which the technical infrastructure could support modernisation and maximise utilisation of the laboratory accommodation to further negate any service and business risk.

Throughout this project, carbon initiatives and solutions are also being evaluated which will offer lower carbon alternatives whilst delivering a quality, safe, sustainable, efficient service and ensuring Good Manufacturing Practice (GMP) and other recognised standards and regulations are adhered to.

This Outline Business Case (OBC) focuses on the preferred way forward of the PBC which is to provide the necessary electrical and mechanical infrastructure required to enable fit for purpose service delivery, support infrastructure alterations to the laboratory accommodation whilst offering a selective number of lower carbon solutions.

This work has indicated there are two clear phases for the redevelopment of Talbot Green. These include:

- 1 – Enabling / advanced works (to include construction of a new energy centre)
- 2 – Wider redevelopment scope of works to further improve laboratory accommodation and ensure future sustainability and flexibility at TG are realised

1.2 Structure And Content of the Document

This document describes the OBC for the investment and has been developed to reflect the guidance set out in HM Treasury's Green Book (a Guide to Investment Appraisal in the Public Sector) and the Infrastructure Investment Guidance for the NHS in Wales.

Although this document presents the OBC for the project, as noted above, there are a number of enabling / advanced works that are required to allow the project to move forward from a development point of view and allow full continuation of services during any proposed construction, as well as provide long term sustainability for the site.

To support this, a Business Justification Case (BJC) has been produced in conjunction with this OBC which details the elements required for phase 1. However, the two phases of the project are intrinsically linked and therefore both business cases will be submitted to Welsh Government at the same time for consideration to support the wider investment. This approach aims to aid governance approvals and ensure a smooth transition whilst also demonstrating value for money for the wider programme of works.

The documents together centre on the investment required for the scheme in its entirety which includes the upgrade and planned replacement of electrical and mechanical infrastructure focused on:

- Providing the WBS with a new energy centre and air handling unit (AHU) compound to centralise new plant and provide site resilience
- Provision of full mechanical and electrical statutory compliance
- Seizing the opportunity to move towards a lower carbon service
- Supporting the modernisation of laboratories in line with best practice where possible by providing the relevant technical infrastructure and reconfiguration to support better efficiency, utilisation and innovation moving forwards whilst ensuring safety standards
- Continuing to invest in the quality, care and excellence in the services provided by VUNHST and the WBS.

Strategic Case

2.0 THE STRATEGIC CASE

2.1 Introduction

This business case seeks WG approval for a capital investment of £59.402m (excluding optimism bias) to enable the WBS to support works in relation to the TGI Programme. The TGI programme focuses on providing the mechanical and electrical infrastructure required, including renewables and carbon footprint reduction, and the infrastructure to assist in the remodelling of facilities to support laboratory modernisation and maximise utilisation of services.

It is focused on delivering sustainable, modern infrastructure at the Talbot Green headquarters to ensure the long-term resilience and capability of blood and transplant services across Wales. By future-proofing the existing site, the project will also support any current and emerging service requirements, innovation methods, and enhance staff well-being, safeguarding the ability of NHS Wales to meet patient needs both now and in the years ahead.

As outlined above, this business case is presented as an OBC to support the wider site development works however there are a number of elements that support a series of enabling / advanced works that are essential to the wider programme that are included within the BJC developed in parallel to this document. This section of the business case therefore sets out the context within which both investments will be made and comprises:

- An overview of the organisation – the size and role of the WBS and the scale and nature of the demand in the area that it serves
- The national, regional and local strategies that underpin this investment
- The strategic drivers for this investment
- A compelling case for change

PART A – THE STRATEGIC CONTEXT

2.2 Organisational Overview: Velindre University NHS Trust and the Welsh Blood Service

The VUNHST an NHS Wales Trust established in 1994 as a specialist provider of cancer services in Wales. It runs the Velindre Cancer Service (VCS) and the WBS. It also incorporates, on a hosted basis, the NHS Wales Shared Services Partnership (NHSWSSP) and Health Technology Wales (HTW).

The VCS provides non-surgical tertiary oncology services to patients from across South East Wales. Working closely with local partners in ensuring that services are offered at appropriate locations, in line with best practice standards. An increasing number of services are also delivered on an outreach basis. The specialist treatment, teaching and research work serves a population of approximately 1.7million.

The WBS division of VUNHST, is a national service for the population of Wales and plays a vital role in giving thousands of people across Wales and internationally a lifeline in their time of greatest need. Thanks to generosity of donors across the country, the service is able to help patients in need, from saving someone’s life to helping others live theirs and are the primary supplier of blood products to NHS Wales.

The WBS has the responsibility for coordinating and supplying blood and blood components to all hospitals across NHS Wales. It provides a range of essential multifaceted, highly specialised services, ensuring that it has access to blood and blood components to treat patients and support stem cell and solid organ transplant programmes through the Welsh Transplantation and Immunogenetics Laboratory. The laboratory services also operate as a reference centre for complex blood transfusion patients ensuring they receive the blood transfusions to meet their specific needs and support routine testing across Wales to help mothers and babies through their pregnancy. Finally, the WBS procures, stores and distributes a variety of medicines to NHS in Wales including plasma derived medicines.

Figure 1 below shows the estate across Wales and puts the service provided by WBS into context:



Key service metrics include:

- 80,000 Donations taken per year
- 1,200 Donation sessions per year
- 581 Staff
- 150+ Donor venues
- 350 Units - issuing daily to 18 Customer hospitals
- 4 Team bases – Cardiff, Dafen, Bangor and Wrexham (stock holding unit)
- Specialised transplantation laboratories and unrelated stem cell donation provision for patients in Wales and internationally
- Diagnostic laboratories supporting maternity services and other patients
- A national stockholding and distribution service for a selection of medicines

Figure 1: Welsh Blood Service Estate Locations / Service Context

Research, Development and Innovation

The WBS is at the heart of cutting-edge research, covering a broad range of healthcare topics supporting crucial trials. The Research, Development and Innovation (RD&I) team supports researchers to conduct high quality and ethical research.

Alongside its own independent research, the team also work with academics, partners and other organisations to help improve the entire blood supply chain and advance care, for everybody, across the world.

Talbot Green Headquarters

The WBS main facility is situated at Talbot Green (TG). This site plays a vital contribution in supporting the collection, supply and manufacturing of blood products across the whole of Wales. In addition, the service supports the solid organ and stem cell transplant programmes that run out of Cardiff & Vale University Health Board (CVUHB) and runs the Welsh Bone Marrow Donor Registry (WBMDR) which provides stem cell products nationally and internationally. It is the only laboratory of its kind in Wales, supporting all stem cell, kidney, and pancreas transplants performed in the country.

Furthermore, WBS provides highly specialist diagnostic services on an all-Wales basis for platelet immunology testing, pharmacogenetic testing, and HLA disease association testing—services that no other laboratory in Wales offers.

The WBS also hosts the Advanced Therapies Wales programme, which focuses on pioneering research and development in regenerative medicine, cell therapy, and advanced medical treatments.



Figure 2: Customer Hospitals supported by the WBS

2.2.1 The Commissioner's Perspective

The WBS is commissioned by the NHS Wales Joint Commissioning Committee (NWJCC) on behalf of Health Boards in Wales as part of VUNHST.

NWJCC is the commissioning body who plan, secure and monitor the quality of a range of highly specialised (tertiary services) for the population of Wales. NWJCC receives funding from the Health Boards to pay for these services for everyone who lives in Wales and is entitled to NHS care.

For the WBS this consists of the provision of blood components for patients, diagnostics including antenatal screening, organ and stem cell transplant services.

The WBS estate and infrastructure is supported by the funding allocated to VUNHST via the discretionary capital programme, alternatively through direct funding submissions to Welsh Government.

NWJCC is not allocated a discretionary capital programme as provided direct to Health Boards/Trusts. Revenue funding cost pressures are intended to be managed by VUNHS Trust. However, service developments beyond the current scope of commissioned services are submitted to NWJCC for its consideration. If approved, these are resourced by funding flows from Health Boards.

2.3 Business Strategies

The following section reflects the review of strategies for the Trust relating to the national, regional or local strategies as well as the specific strategies that relate to the WBS that are seen as being critical to the project.

2.3.1 National Context

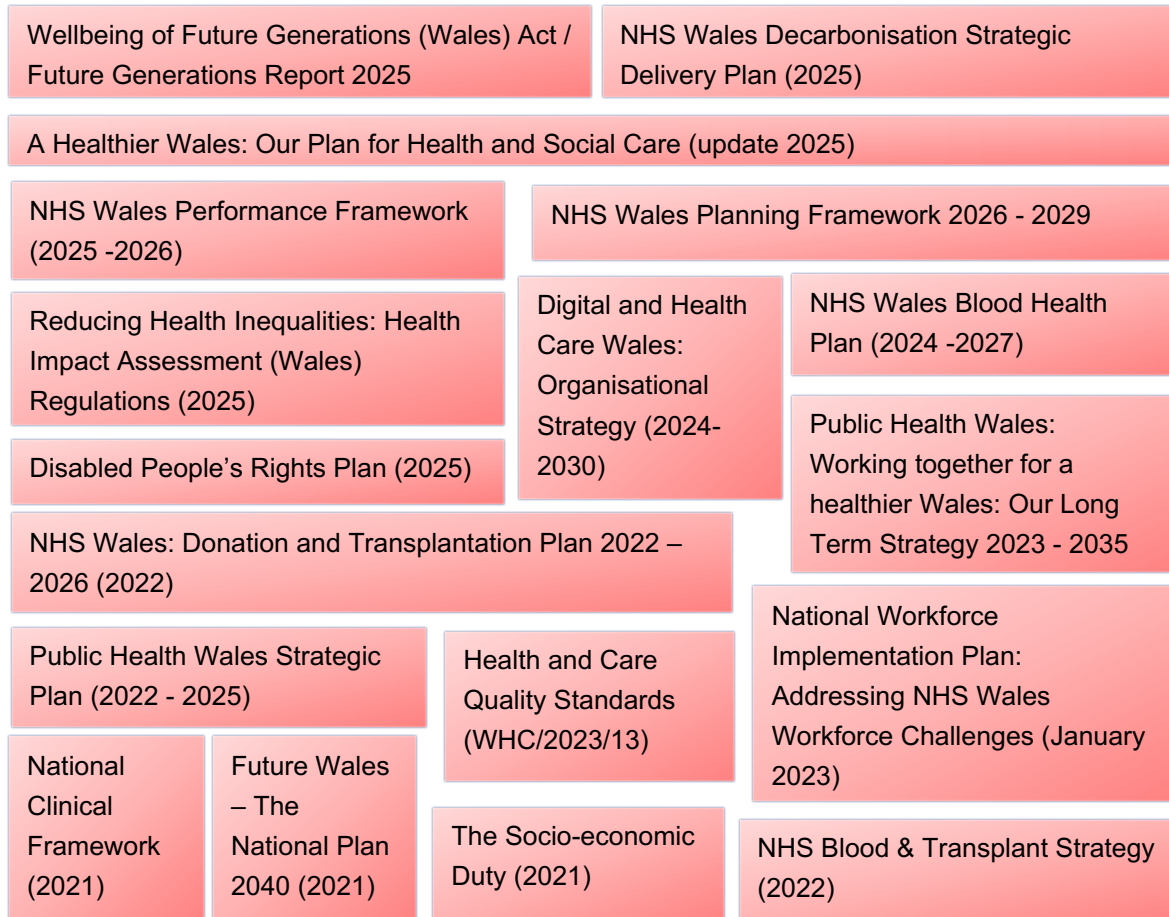


Figure 3: National Business Strategies

This project will support a number of the national strategic drivers outlined above by allowing the WBS to make improvements in service amenities and support the ongoing provision of high quality, safe, sustainable, efficient services and ensure Good Manufacturing Practice (GMP).

The works identified within the project will look to improve the pathway for the management and processing of blood and transfusion services within the WBS and bring operational efficiencies to the service, reducing waste and moving towards models of excellence comparable with other leading Blood Services.

Specifically, the works will aim to:

- Ensure continuity via provision of an integrated sustainable blood service

- Ensuring fit for purpose facilities that enable the introduction of best practice with efficient flows and adjacencies to enable the maximum use of facilities
- Support effective planning and management of the blood supply chain identifying best practice principles for stock management and blood usage
- Use technology to optimise and standardise in order to reduce variation in provision and outcomes
- Back the NHS workforce: by providing a pleasant working environment which permits staff to deliver services to the levels they believe are necessary
- Improve the well-being of staff, the population of Wales and the World through contributing to the global reduction in carbon emissions

The Health and Social Care (Quality and Engagement) (Wales) Act 2020 in particular places a duty on the WBS to consider the 6 domains of quality in everything it does. Quality means safe, timely, effective, efficient, equitable and person-centred health care which is embedded within a culture of continuous learning and improvement. The project also supports compliance with *A Healthier Wales* and *The Wellbeing of Future Generations Act*.

Summaries of some of the more recent key national policies that support this project can be found at Appendix 1.

2.3.1.1 *Infected Blood Inquiry*

The Infected Blood Inquiry (IBI) is an independent public statutory inquiry established to examine the circumstances in which men, women and children treated by National Health Services in the United Kingdom were given infected blood and infected blood products, in particular since 1970.

The final report into the inquiry was published in May 2024. The WBS supported the Infected Blood Inquiry and all those whose lives have been so tragically affected. The WBS will continue to support implementing the recommendations of the Inquiry Report including any factors that relate to this project to provide a safe blood supply chain. The WBS also continues to meet the high standards of the service regulators and auditors, such as the Medicines and Healthcare Products Regulatory Agency (MHRA), Human Tissue Authority (HTA), UK Accreditation Services (UKAS), and the Health and Safety Executive (HSE).

Safety standards are rigorous and have greatly improved since the tragic events which are the subject of the Inquiry with transfusion and transplantation evolving to fulfil the needs of patients. As such the works that are proposed as part of this business case and the wider TGI programme will take into consideration the lessons learned from the Inquiry and continue to support the ongoing considerations, putting safety and quality at the heart of the services provided.

This project will support the IBI recommendations by:

- Ensuring the strategic aims / performance measures of the Blood Health National Oversight Group (BHNOC) and Blood Health Plan (BHP) are followed

- Providing a facility that has the infrastructure to be digitally smart therefore enabling the introduction of increased digital and technological innovations to assist in implementing enhanced donor to recipient traceability of blood components/ reasons for transplant in the future
- Provision of areas for training and continuous professional development (CPD) in patient blood management
- Provision of a modern WBS with increased automation that supports opportunities to develop a service that is integrated, efficient and maximises patient safety and improves health outcomes

2.3.2 Regulation and Accreditation Requirements

2.3.2.1 Regulation

As outlined above, the appropriate licences from the following organisations are required in order to deliver the services:

- The Human Tissue Authority (HTA) is the independent regulator of organisations that remove, store and use human tissue for research, medical treatment, post-mortem examination, education and training, and display in public. The HTA monitors, inspects, and regulates organisations, ensuring that there is compliance regarding the obtaining of tissue for further investigation, storage of such tissue etc.
- Medicines and Healthcare products Regulatory Agency (MHRA) have a responsibility to ensure medicines, medical devices and blood components for transfusion meet applicable standards of safety, quality and efficacy (effectiveness) in order to secure a safe supply chain for medicines, medical devices and blood components

2.3.2.2 Accreditation

Laboratory compliance against the international standard ISO 15189 is a mark of quality and provides objective evidence that a laboratory is not only competent, but safe, patient-focused, efficient and reliable. Through an externally assessed accreditation process, medical laboratories can demonstrate that they comply with defined standards and best practice and provides authoritative assurance of their technical competence to undertake specific analysis or measurements according to validated methods. The accreditation of laboratories against the ISO 15189 standard in Wales is not statutory but has been mandated by Welsh Government. Laboratories are accredited by the United Kingdom Accreditation Services (UKAS).

2.3.3 WBS and VUNHST Strategies and Priorities

2.3.3.1 *Velindre University NHS Trust – Destination 2033*

‘Destination 2033’ is the strategic plan set out by the Trust that will support VUNHST to deliver excellent care, inspirational learning and healthier people. ‘Destination 2033’ outlines what the Trust aims to achieve by the year 2033, and how it will set out to realise its goals. The strategy is underpinned by five strategic goals. They are for the Trust to be:

- Outstanding for quality, safety and experience
- An internationally renowned provider of exceptional clinical services that always meet, and routinely exceed, expectations
- A beacon for research, development and innovation in our stated areas of priority
- An established University Trust which provides highly valued knowledge and learning for all
- A sustainable organisation that plays its part in creating a better future for people across the globe

2.3.3.2 *Velindre University NHS Trust - Integrated Medium-Term Plan*

VUNHST is developing its Integrated Medium-Term Plan for 2026 - 2029. The plan builds upon the approved plan for 2023 – 2026 and is an output of the excellent work undertaken by teams from across the Trust, its partners and strong engagement with many stakeholders. The plan includes a set of ambitious priorities, which build upon the Trust’s strengths, and which will result in the people who use services receiving excellent and person-centred care. The following diagram shows the strategic delivery framework which provides a structured approach to the translation and delivery of the strategic goals and priorities within the organisation:

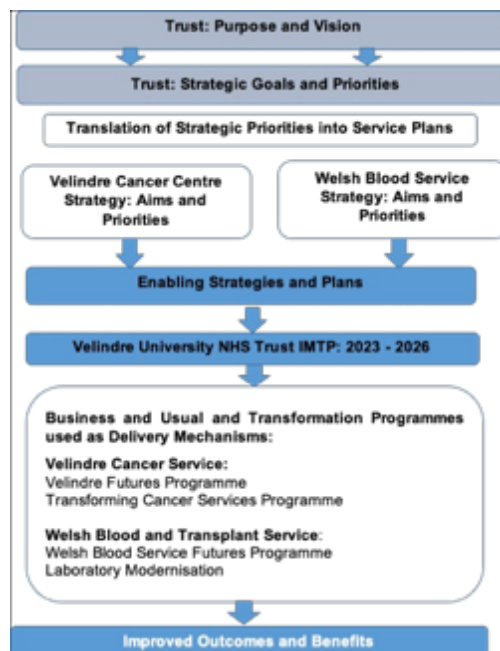


Figure 4: Strategic Delivery Framework: IMTP

2.3.3.3 *Welsh Blood Service – Research, Development & Innovation Strategy (Dec 2024)*

This strategy will guide the WBS’s research activities and partnerships with academia and NHS organisations, linking to funders, industry partners and educational leaders in the supporting infrastructure to perform research, development and innovation (RD&I) with the aim of improving the lives of people in Wales. Its implementation will ensure the research, development and innovation objectives of the *Welsh Blood improvement strategy* and *Velindre University NHS Trust Destination 2033* are further defined and met.

The mission that supports this strategy and vision are:

- Centred on improving patient and donor care
- Advancing blood components
- Advancing transplant research in Wales
- Using Innovation and Value-Based healthcare to improve services and performance
- Using collaboration to sustain RD&I
- Serve the people of Wales by supporting international initiatives
- Enhance the impact of RD&I and celebrate success

2.3.3.4 *Welsh Blood Service - Blood and Transplant Services for the Future (23 – 28)*

This WBS strategy sets out the vision for blood and transplant services in Wales for the next five years. It sets out where the organisation is now, where they want to be in 2028 and the steps it needs to take to get there.

Importantly, it describes how the WBS will work with staff, donors, patients and communities to ensure they have a safe and enjoyable experience which helps to improve their overall health and well-being; together with making a wider contribution to the communities and society it serves.

The WBS will seek to:

- Build upon existing services and capabilities to improve what is currently done
- Develop a new range of services and expertise to support the development of healthcare and well-being across Wales. Areas of focus will include plasma for medicines and support national resilience in the supply of plasma-derived products

The WBS has seven strategic themes which underpin the delivery of blood and transfusion services both now and in the future, ensuring strategic and operational plans remain focused and allow the service to deliver its strategic intent and includes the following:



Figure 5: WBS Strategy Strategic Themes

2.3.3.5 WBS – Two Year Service Improvement Strategy 2025 - 2026

The WBS continues to develop its two-year service improvement plan which supports the overarching strategy outlined above.

Service Improvement is a core, established function within WBS, designed to strengthen efficiency, quality, staff engagement and organisational resilience. The approach to service improvement is built around four pillars, Activity, Culture, Knowledge and Training, and is aligned with the WBS Strategy, IMTP and WBS Futures programme.

A structured approach is adopted, with an organisation-wide model that empowers teams to identify, test and embed improvements, supported by the Service Improvement Team and a network of service improvement representatives across directorates. This approach is reinforced by the completion of the previous three-year Service Improvement Action Plan, which supported development of the 2-year rolling plan.

The service improvement framework directly supports the ambitions of the TGI Programme by providing:

- A mature, consistent improvement methodology across WBS
- A workforce familiar with structured change and benefits realisation
- Strong governance and alignment mechanisms through WBS Futures and the IMTP
- Digital enablers (e.g. SimplyDo) that support transformation at scale
- A pipeline of service improvement capability that strengthens operational readiness for TGI-related improvements

This environment positions WBS to deliver the TGI transformation in a way that is methodical, evidence-led and culturally supported.

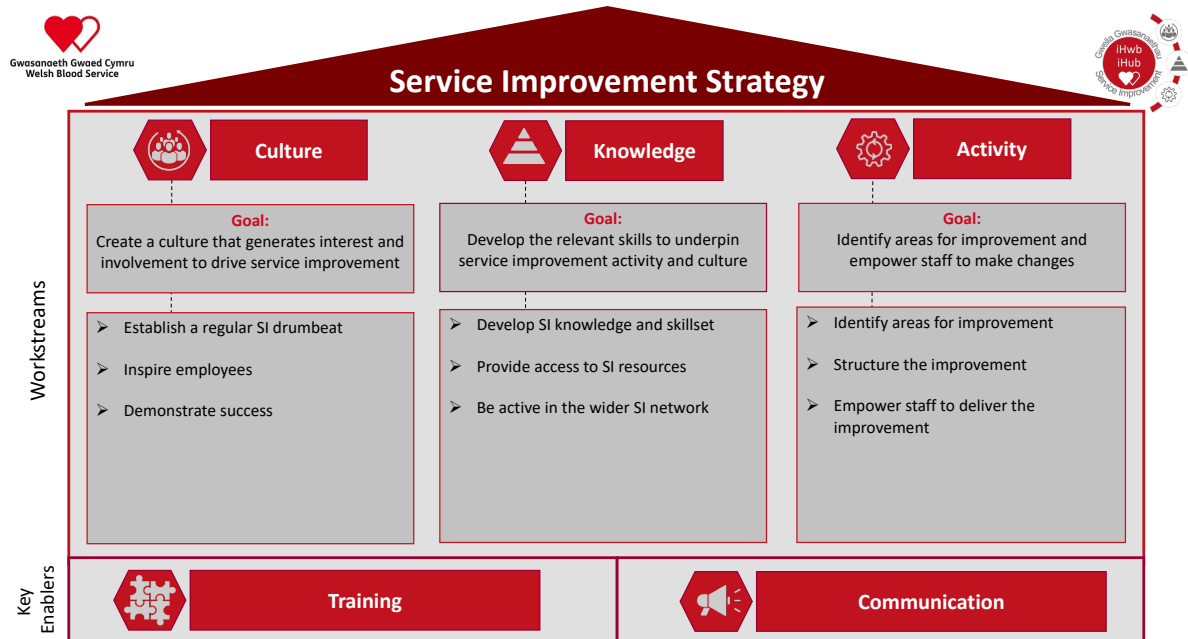


Figure 6: WBS 2 Year Service Improvement Strategy

STRATEGY OVERVIEW

This project is part of the key infrastructure workstream for the WBS and is a major driver in delivering the WBS Futures Initiative which will enable the service to:

- Drive a culture of excellence
- Put scientific and clinical leadership at the forefront of future service provision
- Work in partnership and collaboration with staff, donors and the public
- Develop the service model and future service configuration

This business case therefore sets out the investment, help and support required to provide the technical infrastructure, systems and expertise to deliver a sustainable and future-proofed service that will enable the strategic objectives of the WBS and VUNHST to be realised whilst delivering the 7 strategic themes and service development plan of the WBS.

This project will support the aims and objectives of the Trust and WBS by also:

- Improving the quality and quantity of research undertaken by the Trust/ service
- Providing donors with the best care and experience possible and ensure they continue to feel fully valued
- Providing an opportunity to promote blood donation to grow the donor pool via improvements in infrastructure for efficiency and data integration
- Improving donor care through the development of research activity at the WBS and utilise research and development activity to support the delivery of evidence-based care

The proposed investment aims to support all the referenced national and local strategies by:

- Ensuring site-wide resilience, including diverse mechanical and electrical systems to meet the critical nature of the site
- Provide full compliance with statutory mechanical and electrical standards
- Ensuring continued compliance with Good Manufacturing Practice guidelines and newly secured Joint Accreditation Committee - International Society for Cellular Therapy (ISCT) & European Group for Blood and Marrow Transplantation (EBMT) (ISCT) - JACIE accreditation
- Provision of a modernised, low-carbon facility aligned with national decarbonisation goals
- Providing reconfigured laboratories to improve efficiency, safety, and future flexibility in what are rapidly advancing scientific fields of practice
- Increasing income generation and the ability to re-patriate apheresis services, reducing financial waste and ensuring a tangible return on investment for Welsh Government expenditures

This investment is not only essential for maintaining current services but also for enabling the WBS to meet future demand, adopt new technologies, and support innovation within transfusion and transplantation services.

Moreover, it presents a unique opportunity to expand a national clinical support service for advanced therapies, addressing a pressing system need within the NHS. With clinical support services for advanced therapies unlikely to be adopted at scale elsewhere in the NHS, WBS is ideally positioned to fill this critical gap, ensuring resilience and meeting emerging healthcare demands.

Enhancing National Resilience in Stem Cell and Plasma Services

Should the application for investment via the business case process be successful, any inclusion of new facilities for apheresis stem cell collections and a dedicated stem cell processing lab would deliver significant strategic benefits:

- Address the UK-wide shortage of stem cell collection capacity, as highlighted in the UK Stem Cell Strategic Forum's 2022 report
- Provide complete supply chain for stem cells, reducing reliance on 3rd parties for stem cell processing and storage requirements
- Provide facilities for NHS Wales for storage of cells used for Advanced Therapy Medicinal Products (ATMPs) and transplantation
- Enhanced scope to provide service for delivery of ATMPs for Wales
- Provide contingency for existing regional services at VCS and Cardiff & Vale UHB
- Enable WBS to partner in the collection of stem cells for transplantation and the manufacture of ATMPs, such as chimeric antigen receptor T (CAR-T) cells
- Strengthen Wales's position in the field of advanced therapies and regenerative medicine and enable a greater volume of work to occur within Wales, expanding the ability to support patients in Wales closer to home

PART B – THE CASE FOR CHANGE

This section sets out the business/ service need whilst setting out the spending objectives, the drivers for change and the current issues impacting on the WBS such as resilience and efficiency methods. The section also highlights the main benefits and risks associated with the project.

2.4 Spending Objectives

The spending objectives for the TGI programme were developed within the context of the Well-Being of Future Generations Act 2015 (the Act). They seek to implement the principles of the Act within VUNHST through enhancing the contribution of the health sector to sustainable development in respect of procurement, facilities management, workforce and buildings. The TGI Programme of work focuses on delivering long-term well-being goals in a sustainable manner and has strong alignment with the goals of delivering a prosperous Wales, a resilient Wales.

These programme objectives have been reviewed and refined during development of this OBC to make them specific to the project deliverables.

These objectives can be evidenced as SMART (specific, measurable, achievable, relevant and time bound) and will typically address one or more of the following five generic drivers for intervention and spend:

- To improve the quality of public services in terms of the delivery of agreed outcomes (effectiveness). For example, by meeting new policy changes and operational targets
- To improve the delivery of public services in terms of outputs (efficiency). For example, by improving the throughput of services whilst reducing unit costs
- To reduce the cost of public services in terms of the required inputs (economy). For example, through 'invest to save' schemes and spend on innovative technologies
- To meet statutory, regulatory or organisational requirements and accepted best practice (compliance). For example, new health and safety legislation or building standards
- To re-procure services in order to avert service failure (replacement). For example, at the end of a service contract or when an enabling asset is no longer fit for purpose

Spending Objective 1: To be able to deliver and sustain quality and safety of services	
Specific	To provide facilities that deliver and sustain safe, quality services, that meet standards for legislation, regulation and of accreditation bodies
Measurable	Delivery against required standards including external regulation and accredited bodies including Medical and Health Products Regulatory Agency, United Kingdom Accreditation Standards and against standards as determined by audit outcomes
Achievable	Providing functionally suitable accommodation that enables the service to meet the appropriate best practice, quality and safety standards
Relevant	<p>This objective ensures the service will:</p> <ul style="list-style-type: none"> • Provide compliance with legislation, regulations and accreditation standards / performance • Support rapid adoption of best practice <p>The objective is aligned with the NHS Infrastructure Investment Guidance objectives and criteria. In particular:</p> <ul style="list-style-type: none"> • Health gain: Improving patient outcomes and providing sufficient capacity to meet future demand • Clinical and Skills Sustainability: Supporting the delivery of safe, sustainable services, and facilitating high standards of patient care • Value for Money: Promoting the maximum efficient utilisation of assets and improving asset condition and performance
Time-bound	Upon commissioning of the facilities
Spending Objective 2: Provision of fit for purpose mechanical and electrical infrastructure at Talbot Green	
Specific	To provide facilities that ensure mechanical and electrical infrastructure that is fit for purpose and provides resilience commensurate with the strategic importance of the service and site and is able to support continued provision of blood and blood products to hospitals across Wales both now and in the future
Measurable	<p>Evidenced by providing resilience to ensure the required capacity, leading to timely delivery of blood and blood products with increased productivity and no delays due to equipment down time. Specifically:</p> <ul style="list-style-type: none"> • A building where heating and cooling can be achieved in an efficient manner • A building that has a mechanical infrastructure that is fit for purpose and meets current WHTM and WHBN standards • Improved ventilation systems that meet the requirement of WHTM 03, with improved operational arrangements • A building that has an Electrical system fit for purpose and meets current WHTM and WHBN standards • An electrical system that provides the necessary resilience • A system that is controlled and managed in line with the associated risks moving forward
Achievable	Providing an infrastructure that will ensure the future sustainable delivery of services and that will support the rapid adoption of best practice

Relevant	<p>This objective will ensure built-in resilience to adapt to changing needs</p> <p>The objective is aligned with the NHS Infrastructure Investment Guidance objectives and criteria. In particular:</p> <ul style="list-style-type: none"> • Affordability: Ensuring services are affordable through the provision of modern, efficient mechanical and electrical infrastructure • Equity: Ensuring the supply of blood and blood products is not interrupted due to infrastructure failure • Value for Money: Promoting the maximum efficient utilisation of assets and improving asset condition and performance • Effective Use of Resources: Including the delivery of efficiency savings
Time-bound	Upon commissioning of the facilities
Spending Objective 3: Flexibility / Resilience	
Specific	<p>To provide an infrastructure sufficiently flexible so that the appropriate capacity can be provided in the future to support the delivery of high quality education, research, technological developments and innovation.</p> <p>To sustain and grow service delivery in line with NHS service requirements.</p>
Measurable	<p>Evidenced by:</p> <ul style="list-style-type: none"> • Providing sufficiently flexible infrastructure to ensure future technologies and innovations can be implemented • Modern WBS laboratories (integrated, efficient, minimising duplication of waste) • Introduction of increased space for clinical elements which may enable developments in areas such as plasma and advanced therapies (apheresis for example)
Achievable	<p>Providing functionally suitable and modernised facilities with sufficient flexibility to meet the demands both now and in the future whilst maximising the use of innovative technology. Ensuring the quality, care and excellence in the services provided by VUNHST and the WBS remains.</p>
Relevant	<p>This objective will ensure access to facilities is optimised with:</p> <ul style="list-style-type: none"> • Provision of fit for future/ quality accommodation compliant to necessary education, research and development opportunities <p>The objective is aligned with the NHS Infrastructure Investment Guidance objectives and criteria. In particular:</p> <ul style="list-style-type: none"> • Health gain: Improving patient outcomes and providing opportunities to access the latest advances in services through research and innovation • Clinical and Skills Sustainability: Supporting the delivery of safe, sustainable and accessible education, training and research
Time-bound	Upon commissioning of the facilities
Spending Objective 4: To deliver the carbon reduction requirements set by WG	
Specific	To provide facilities that can offer the opportunity to maximise energy efficiencies and utilise low carbon alternatives where possible
Measurable	<p>Evidenced by:</p> <ul style="list-style-type: none"> • Reduction in emissions and energy consumption

Achievable	By providing infrastructure specified to modern standards and in line with best practice in regard to the green agenda and move towards zero carbonisation
Relevant	Supports the delivery of Welsh Government target of carbon neutral for all public sector buildings by 2050 through maximising energy efficiency through the use of appropriate technologies
Time-bound	One year after commissioning the facilities
Spending Objective 5: Workforce	
Specific	To provide modern blood and transplant facilities that support and contribute to the recruitment, retention and the well-being of staff by creating a high quality, flexible and integrated environmental design
Measurable	Evidenced by: <ul style="list-style-type: none"> • Improved staff working environment • Recruitment and retention statistics • Output from staff survey
Achievable	Providing flexible, fit for future facilities that support and contributes to the well-being of staff
Relevant	The objective is aligned with the NHS Infrastructure Investment Guidance objectives and criteria. In particular: <ul style="list-style-type: none"> • Health gain: Improving patient outcomes via quality care • Clinical and Skills Sustainability: Supporting the delivery of safe, sustainable services, and facilitating high standards of patient care through the recruitment and retention of highly skilled staff • Effective Use of Resources: Reduction in time spent recruiting and training new staff
Time-bound	One year after commissioning the facilities

Table 1: Project Spending Objectives

These project spending objectives fully align with the strategic objectives as set out by the Trust / WBS and provide the basis of appraising the potential options as identified later in this document along with post-project evaluation.

2.5 Existing Arrangements

2.5.1 Location and Infrastructure

The Talbot Green main facility is located near Llantrisant, adjacent to the Welsh Wound Innovation Centre (WWIC). The existing site layout consists of the main building that accommodates all laboratory and clinical services along with associated staff and support accommodation. The facility sits within an attractive and well landscaped setting with both staff and visitor parking located to the north, adjacent to the main entrance. A secure loading bay and delivery yard is located to the rear or south of the building. A separate garage building for the storing and on-going maintenance of the WBS fleet of vehicles forms the southern boundary of the loading bay area.

The main building in Llantrisant is in a primary strategic location to support the WBS however, the facility is around 25 years old and there are significant problems and issues with the electrical and mechanical infrastructure.

The existing mechanical and electrical infrastructure does not comply with Welsh Health Technical Memorandum (WHTM) and Welsh Health Building Notes (WHBN) design guidance, which raises concerns around the security of the infrastructure and the ability to withstand utility outages. This is primarily due to single points of failure in the current system.

The lack of duplex systems means that the maintenance and replacement of plant and equipment result in a disruption in power supplies and, in turn, disruption to the delivery of services.

The following images show the boundary of the site and the existing main entrance to the facility:



Figure 7: Site Boundaries of the Talbot Green Headquarters



Figure 8: Existing Main Entrance

2.5.2 Laboratory Services

The WBS has two principal laboratory capacities that cover Transfusion & Transplantation and Immunogenetics:

Transfusion Laboratory Services

These provide donor, patient and antenatal testing including a reference service and quality assurance (QA) associated laboratory services. The laboratories comprise of:

- The Automated Testing (AT) laboratories consisting of the Automated Serology Laboratory responsible for blood grouping and red cell antibody screening and the Microbiology Laboratory which screens for infectious disease markers and bacterial contamination in platelets
- Red Cell Immunohaematology (RCI) Laboratory: the primary activities of the RCI Laboratory are to provide reference antibody screening and crossmatching for patients with complex antibody profiles requiring transfusion. In addition, they test and monitor antibodies which can cause haemolytic disease of the new-born and measure foetal maternal haemorrhage to determine anti-D prophylaxis treatment
- Manufacturing and Distribution (M&D), these laboratories are concerned with the manufacture and storage of blood components from whole blood donations, and the distribution of blood components, commercial blood derived (e.g. Immunoglobulin) and some non-blood derived (e.g. recombinant) medicines to hospitals throughout Wales

Transplantation Services

The transplantation services support transplantation and immunogenetic testing. It is made up of:

- The Welsh Histocompatibility and Immunogenetics (H&I) Service (WHAIS) providing laboratory testing required to support haematopoietic stem cell and organ transplantation programmes. In addition, the laboratory provides genetic testing for a

number of human leukocyte antigens (HLA) and immune-related genes to support disease diagnosis and management and plays a role in the investigation of transfusion-related reactions. The work involved in the support of transplantation programmes includes HLA typing patients and donors, assessing the closeness of the match and helping to select the most appropriate donor for a particular patient. The laboratory also performs HLA antibody screening and crossmatching, to ensure that there are no antibodies in the recipient which could reject the transplant

- The Welsh Bone Marrow Donor Registry (WBMDR), which oversees the recruitment, HLA typing, donor searching and haematopoietic stem cell donation procurement for patients. The Registry consists of HLA typed volunteer donors, which can be searched to find a match for patients requiring a stem cell transplant. The service is provided in the UK and internationally for patients around the world
- The UK National External Quality Assessment Service (NEQAS) for Histocompatibility and Immunogenetics (H&I), which provides a specialist external quality assessment (EQA) service for laboratories around the world supporting organ transplantation. EQA monitors laboratory test performance using 'blind' samples analysed as if they were patient samples to ensure testing is comparable, safe and clinically useful to a patient no matter where the testing is performed

2.5.3 Challenges facing the WBS

The provision of blood supplies to the NHS in Wales is fundamental to patient care.

In addition to the general challenges facing the NHS, such as an ageing population which is living longer with increasing co-morbidities, the specific challenges facing the WBS are outlined below:

- Meeting demand and delivering a prudent supply chain:
 - People are living longer than ever before with more chronic and complex conditions – blood components are currently used as part of the care for a range of conditions with over 50% used in people aged over 70
- Maintaining an engaged healthy donor panel in the context of increasing regulatory requirements:
 - An ageing population additionally impacts upon donations of blood, as those who become too old or unfit to donate are not necessarily replaced by younger donors
 - Different lifestyles, increased foreign travel, emerging diseases and changing social responsibility impact upon blood supply with increasing numbers of donors having to be turned down and fewer regular donors from the younger age group
- Keeping pace with medical, scientific and technological advances in clinical, blood and transplant services
- Addressing the capacity and capability gaps within the organisation to ensure it is 'Fit-for-the-Future'
- The ability to attract, recruit and retain a workforce with the skills and capabilities for the future
- Improving the standard of facilities ensuring donors and users receive the same quality and experience wherever the location
- Limitations on service expansion as a result of current infrastructure limitations at Talbot Green

- Risk to business continuity at Talbot Green as a result of multiple single points of failure which in the event of a catastrophic failure is likely to significantly impact on service delivery and loss of product

2.6 Service Needs

Because of the significant challenges and infrastructure issues discussed above, Consilium SG Consultant Engineers were appointed during development of the TGI Programme Business Case to undertake a resilience analysis and made recommendations for the upgrade and planned replacement of the following systems at the WBS Headquarters at Talbot Green in Llantrisant to include:

- Mechanical infrastructure including main heating, cooling and ventilation plant
- Electrical infrastructure including mains electrical distribution systems

2.6.1 Mechanical Infrastructure

2.6.1.1 *Ventilation*

The existing ventilation plant serving the majority of the WBS, has reached the end of its serviceable life and does not meet the recommended standard set out in WHTM 03-01 Specialised Ventilation for Healthcare Premises.

Furthermore, the existing ventilation systems have no form of temperature control with respect to summertime temperatures, therefore warm, uncontrolled air is delivered to spaces which require temperature control for compliance purposes.

It is recommended that the air handling units (AHUs) are replaced with new WHTM 03-01 compliant units, with the ability to control summertime air temperatures. By the very nature of complying with WHTM 03-01, the units would also meet the guidelines of WHBN 00-07, by providing robustness and redundancy in the form of twin fan arrangements, heat recovery for energy efficiency and improved maintainability with the correct access arrangements and instrumentation.

The ventilation philosophy will remain the same, which is that the ventilation plant is used to provide the necessary air change rate or fresh air rate for occupant comfort only, the temperature control of the individual spaces is to be provided by alternative, more efficient methods. This will be the most efficient way of providing environmental control.

2.6.1.2 *Heating and Cooling*

Cooling and air conditioning to the WBS is delivered by a vast range of split type refrigeration systems, which appear to have been added on an individual basis and not part of any heat recovery system. Within the majority of the rooms which have split refrigeration units, there are also radiators or radiant panels. This presents a scenario where both systems can, if activated, fight against each other for temperature control, which is a common occurrence.

To ensure accurate and efficient control of the summertime air temperatures in the ventilation systems, it is recommended that a central chilled water plant is provided to deliver chilled water, which will ensure the air temperature leaving the AHU's during the summertime is constant throughout the building.

It is proposed that the ground source heat pump is used in its reverse cycle, to act as the lead cooling plant, supported by two air cooled chillers, rated at 200kW each, during the peak summer months. By providing a central cooling system for the ventilation, separate to the variable refrigerant flow (VRF) systems, it provides redundancy in the control of indoor temperatures.

Air source heat pumps should be installed to provide localised control of heating and cooling in laboratories and controlled spaces. This will provide localised control of required temperatures.

To ensure the cooling and heating systems are controlled effectively and efficiently, it is recommended that an upgrade of the central Building Management System (BMS) is included. This will include new motor control centre panels (MCCP) within the major plant rooms and an upgrade of the head-end software.

To support the temperature control within controlled spaces, additional space temperature sensors should be provided. This will provide improved monitoring of critical spaces.

Additional energy metering (for mechanical and electrical systems) will need to be provided to inform usage and assist with overall energy monitoring and targeting programs.

2.6.2 Electrical Infrastructure

The existing electrical infrastructure within the WBS Headquarters building in general (generator and bulk tank excluded) appears to be at the end of its serviceable life including the main low voltage (LV) switchboards, the street LV switchboards and most distribution boards.

Based on the anticipated future growth of the site (Transplantation Services) plus year on year growth, the available maximum demand will be exceeded, and the Western Power Distribution (WPD) transformer will not be enough to support these loads.

In order to provide an approximate 15-year typical growth profile a 1MVA (double the existing) will be required.

The existing electrical infrastructure does not provide the required resilience for the business risk as defined by HTM 06-01 Electrical Services Supply & Distribution. Furthermore, there are no spare ways available on the main LV switchboard and street LV switchboards, and the protective devices are no longer supported by the manufacturer. Any extensions or major works at the WBS building are not feasible until the electrical distribution is completely overhauled.

The conclusion is that a wholesale replacement of the WBS Headquarters substation to provide dual primary and secondary supplies with dual distribution (A+B) is required. This consists of 2 transformers, 2 generators, new bulk tank, 2 main LV switchboards, A+B street LV Switchboards and strategically positioned dual distribution boards situated throughout the building. New switch rooms will also be required within the energy centre and in the building for electrical plant.

2.6.3 Decarbonisation

To implement decarbonisation, Welsh Government has put in place binding legislation, strategies, and ambitions to drive carbon reduction activity in Wales.

The NHS Wales Decarbonisation Strategic Delivery Plan (2025) sets out initiatives and targets for the decarbonisation of NHS Wales that will be assessed and reviewed in 2030. Taking swift action over the coming years is critical to ensuring the targets within this strategy are adhered to. This project therefore recognises these targets and will proactively work to assist these goals whilst recognising the facilities requirement for increased resilience throughout the mechanical and electrical infrastructure.

2.6.4 Laboratory Modernisation Infrastructure

The laboratory modernisation and utilisation agenda is aligned to the major developments in science, infrastructure, technology and informatics required to improve the interconnectivity and automation of laboratory processes, which in turn will create a more prudent and sustainable supply chain.

The aim of this phase of the project is to support and enhance the current infrastructure of the WBS laboratories, and where possible enable their function and utilisation to be more efficient, future-proofed, as well as sufficiently flexible to accommodate new developments including additional processes, tests, equipment and ensure staff are able to comply with GMP standards in the future.



Figure 9: Advantages of providing Laboratory Modernisation

2.6.5 Summary of the Service Need

Without the implementation of the necessary infrastructure works highlighted above and the possibility of a newly constructed energy centre, there is an ever present increased risk to business continuity for the All Wales Blood Service as a result of multiple single points of failure which in the event of a catastrophic failure is likely to significantly impact on service delivery and loss of product creating huge consequences across the entire Welsh Healthcare System.

By continuing with the status quo, the service is likely to experience:

- Incremental rises in service disruption resulting in rises in imported blood products (importing one week's worth of products which has a cost premium of circa £300k)
- Disruption to stock maintenance resulting in increases in losses of bulk buying benefits leading to wider costs for both the WBS and wider NHS Wales
- Inability to meet future growth demand which again will led to a rise in costly imported product and a less resilient supply chain

It is of paramount importance therefore that the service continues to deliver high quality, safe and effective transfusion, transplantation, diagnostic and medicine delivery services which meet all regulatory standards with the critical changes to the current infrastructure being required to ensure ongoing compliance, quality and resilience, without which there is no service and patient safety may be compromised. It is also crucial to acknowledge that Wales cannot rely on importing blood products from other nations and this option moving forward is not viable or sustainable.

2.7 Potential Business Scope and Key Service Requirements

This section describes the potential scope for this project in relation to the spending objectives and business/ service needs.

In line with Welsh Government guidance, the scope has been assessed against a continuum of need ranging from:

- A minimum – essential or core requirements/outcomes
- An intermediate – essential and desirable requirements/outcomes
- A maximum – essential, desirable and optional requirements/outcomes

	Core	Desirable	Optional
Potential Scope	<ul style="list-style-type: none"> Facilities that comply fully with Mechanical and Electrical WHTM's, meets standards for legislation and regulation including MHRA, UKAS, ISO Provides a physical structure to enable the modernisation of laboratory accommodation 	Core plus – <ul style="list-style-type: none"> Introduction of high priority/ high value carbon initiatives, to assist in efficiency methods 	Core, desirable plus – <ul style="list-style-type: none"> Introduction of innovative technologies
Key Requirement	Facilities that meet demand and compliance with current standards and provide improved operational efficiencies	Facilities that meet demand and compliance with current standards and provide improved operational efficiencies with selective decarbonisation technology implementation with proven benefits	Facilities that meet demand and compliance with current standards, provide improved operational efficiencies with full decarbonisation and innovative technology implementation

Table 2: Potential Business Scope and Key Service Requirements

2.7.1 Decarbonisation Measures

The following table shows in detail the list of suggested interventions regarding decarbonisation measures for the project and indicates which has been included within the desirable scope as set out above and which are within the optional scope set out above:

Suggested Intervention	Wider Benefits
Included within Desirable Scope:	
Increased insulation	Increase thermal insulation to building, thus reducing heat losses and boiler plant size. 50% betterment over building regulation values expected.
Infiltration rates	Building regs require a maximum of 10 for the air leakage rates from a new building. The lower this figure, the less energy is lost from the inside of the building to outside. Normal and good practice to have 5 or lower. Air tightness (particularly in live buildings) can be difficult to achieve; however, some improvement may be possible to a limited extent when replacing windows, insulation and some building elements.
Lighting design	High efficiency luminaires utilising LED technology. Can provide energy savings in excess of 50% over traditional lamp sources. Ongoing gradual replacement of older light sources with OLED luminaires already underway - will reduce energy consumption.
Air source heat pumps	Use refrigerant based heat pump systems similar to that used for air conditioning units. Deliver more heat energy than the electrical energy they consume. Coefficient performance of 4 or above, these are an efficient use of energy. Require less capital.

Suggested Intervention	Wider Benefits
Photovoltaic panels	External rail mounted panels mounted on the roof which converts sun's energy directly into electricity. Ideal solution for building with high electrical demand, as supply 'free' electricity. Excess generation able to be exported to grid or stored in batteries. Installations are silent and relatively maintenance free.
Included within Optional Scope (in addition to the Desirable Scope):	
Water saving technology	Use of dual flush toilets with reduced water requirements. These elements could be replaced in a phased maintenance/replacement program as part of general facilities update.
Heating control	Individual thermostatic control to all heaters. Not in scope of programme. Heating system amended to ASHP and VRF. Very limited number of radiators left on site.
Wind turbines	Electric generation from wind turbines units. Due to 'valley nature' and surrounding trees and the lock recorded wind speeds, considered better carbon value for capital options. Cost based on 10kw wind turbine.
Natural daylight	Increased levels of glazing, potentially reducing impact on artificial light providing better well-being of its occupants. When combined with efficient lighting controls, can result in high levels of energy savings. Increasing natural light in existing building (i.e. adding more windows) very disruptive.
Natural ventilation	Building orientation, location, use and special layout can have a major effect upon whether natural ventilation can be used. If correctly addressed, natural ventilation provides a free source of fresh air. Openable windows may be considered but will not be appropriate in all areas e.g. labs.
Ground source heat pumps	These systems are buried in the surrounding area to provide a constant temperature water supply (need to be coupled to central heating system). Large area of surrounding land required. Ground source cooling is also possible; however, this technology reduces the effectiveness of heating water and hot water generation deemed to have better impact in both sustainability and cost.
Solar hot water heating panels	Could be positioned on roof and used to pre-heat primary water supply. Back up hot water generation source would be required to ensure desired temperatures are always reached, along with a considerable amount of roof space which would require maintenance access.
Rainwater harvesting	Rainwater from roof collected in underground storage cylinder, before being filtered, treated and pumped to tanks.
Biomass boiler	Biomass boilers burn wood pallets/chippings to produce heat energy which can serve heating and hot water services. Can reduce the CO2 output of a building but require a steady fuel source, ideally within 50-mile radius or CO2 reductions cancelled out by fuel delivery pollution. Additional plant space for biomass boiler and its fuel storage required.
Combined heat and power	A CHP system using natural gas engine to generate both heat and electricity (2:1 ratio). To ensure maximum efficiency, heating load must be consistent throughout the year (e.g. swimming pools) and not just for heating in winter months. Recent changes to building assessment models and carbon factors associated with gas/electricity shows popularity is reducing. Fuel duty increases also considered.

Suggested Intervention	Wider Benefits
Water Source Heat Pumps	These systems are buried in the adjacent river area to provide a constant temperature water supply (need to be coupled to central heating system). There would be a requirement to provide a pipework system from the Energy Centre to the adjacent river, create an area/dam containment for the pipework, and undertake extensive Hydrological modelling to support an application with NRW/Planning Authority. The Ecological implications would be a significant challenge to overcome, and as such this option has been discounted.

Table 3: Suggested Decarbonisation Measures within Limitations of Scope

2.7.2 Laboratory Modernisation Infrastructure

Work to scope the infrastructure requirements for any potential laboratory modernisation opportunities from an efficiency point of view was undertaken during development of the PBC which drew on best practice examples from other blood and transport services, such as the Scottish National Blood Transfusion Service (SNBTS). As a result of this scope of works, a feasibility study was produced that looked at the different functions of the laboratories and how the technical infrastructure could be reconfigured to best support service delivery, taking into consideration safety, capacity, regulatory compliance, efficiency, effectiveness and sustainability. The outputs from the feasibility study and the technical briefing process are considered later within this business case.

2.8 Main Benefits

This section describes the main outcomes and benefits associated with the achievement of the project spending objectives by category, beneficiary and class. The benefits outlined below include those to be realised throughout the project phases.

Benefits are classed as follows:

- CRB – cash releasing benefits (e.g. avoided costs)
- Non CRB – non cash releasing benefits (e.g. staff time saved)
- QB – quantifiable benefits (e.g. achievement of targets)
- Non-QB – non-quantifiable or qualitative benefits (e.g. improvement in staff morale)

Spending Objective	Main Benefits	Beneficiary	Benefit Category
1: Quality and Safety of Services	A facility that is compliant with WHTM and WHBN	VUNHST/ WBS Wider public sector	QB
	A facility that meets standards for legislation and regulation	VUNHST/ WBS Wider public sector	QB
2: Provision of Fit for Purpose M&E Infrastructure at TG	Supports continued delivery of services by reducing potential single points of failure (resilience in the service and facilities are key to patient outcomes across NHS Wales)	VUNHST/ WBS Wider public sector Wider societal economy	QB
	Replacement of life-expired assets (plant and equipment)	VUNHST/ WBS Wider public sector	QB
	Reduction in backlog maintenance	VUNHST/ WBS	QB
3: Flexibility / Resilience	A facility which provides the infrastructure to promote resilience and flexibility in relation to future service requirements	VUNHST/ WBS Wider public sector Wider societal economy	Non-QB
	A facility that has the infrastructure to be digitally smart. Enhancements need to support long-term scalability and reliability for WBS	VUNHST/ WBS Wider public sector Wider societal economy	QB
	Ability to sustain and grow service delivery in line with NHS service requirements. Opportunities to increase development and future proof service	VUNHST/ WBS Wider public sector Wider societal economy	QB
	A modern WBS with increased automation that supports opportunities to develop a service that is integrated, efficient, maximises the use of innovative technology and minimises duplication and waste	VUNHST/ WBS Wider public sector Wider societal economy	Non-QB Non CRB
4: To deliver the carbon reduction requirements set by WG	A facility that provides a reduction in carbon emissions through applying decarbonisation efficiencies	VUNHST/ WBS Wider public sector Wider societal economy	QB
	A facility that provides a reduction in energy consumption	VUNHST/ WBS Wider public sector Wider societal economy	QB
5: Workforce	A fit for purpose facility will have the ability to attract, recruit and retain a workforce with the skills and capabilities for the future	VUNHST/ WBS Wider public sector Wider societal economy	Non-QB
	Provision of a facility that supports and contributes to the well-being of staff, donors and visitors through building/environmental design	VUNHST/ WBS Wider public sector Wider societal economy	Non-QB

Table 4: Main Benefits

In aiming to deliver these benefits, this project will look to provide functionally suitable facilities with fit for the future infrastructure that can ensure resilience whilst continuing to offer a safe, high quality, accessible and sustainable blood service that ultimately responds effectively to the needs of patients, donors and staff, together with the services provided in relation to the broader needs of Welsh communities.

The outline arrangements for the realisation of benefits are detailed within the Management Case section of this business case.

2.9 Main Risks

Identifying, mitigating and managing the key risks is crucial to successful delivery of the project. These can include:

- Organisational Risks: Risks that remain 100% with the Trust / WBS and include political and reputational risks
- Service Risks: Risks associated with the design, build, financing and operational phases of the project and may be shared across organisations
- External Risks: Risks that affect all society and are not always directly connected to the project, these can be unpredictable and random in nature

The table below provides a summary of the key risks that might affect the delivery of the project along with their counter measures:

Risk Description	Counter Measures / Mitigation
Risk of interruption to service delivery (product loss / digital risk)	Daily liaison with Estates and WBS staff during design and construction. Specialist advisors to provide continued resilience and survey updates. Robust phasing strategy to be put in place
Design does not meet all regulatory requirements, or project fails to deliver long term needs of developing services	Full stakeholder input is key, and all aspects of the design will be signed off by the relevant parties before progression to construction
Financial sustainability risk that the cost plan will increase due to external market factors	Continued liaison with appointed expert Cost Advisors, all costs to be within cost plan and review of market factors during lifespan of project
Failure to proceed due to Contractor bankruptcy	Appointment of established Contractor via robust tender process in line with NHSWSSP procurement
Risk of anticipated benefits are not realised on completion of project	Robust arrangements in place for benefits realisation with strong support from service and project leads with regards to realistic targets and outcomes
The recommendations outlined in the Infected Blood Inquiry will not be considered within the project timescales	The WBS and VUNHST have been fully committed to the findings of the IBI (report published May 2024) and continue to support all works going forward in relation to the lessons learned and recommendations. The service and wider Trust will continue to monitor and respond accordingly whilst accommodation planning and ensure provision of enhanced safety measures / training opportunities for patient blood management
Any required external planning consents not approved (ecology, sustainability etc)	Planning consultant appointed within design team and close liaison will be continued with external authorities throughout the process
Financial sustainability risk of additional costs due to delayed government approval	Continue active engagement with Welsh Government
Impact of global political issues - issue with delivery delays; costs of fuel, oil for generator	Early procurement and approval of long-lead items

Table 5: Main Risks

There are potentially many other risks and issues associated with the successful delivery of the project that must be managed through the arrangements established to manage the scheme. The risk management strategy for this project is referenced further within the Management Case of this document along with the associated risk register which provides a red, amber, green (RAG) status.

As outlined earlier within the case for change, without the necessary works outlined within this business case, the biggest risk is the failure to maintain vital blood and tissue supplies to NHS Wales due to current estate and infrastructure limitations which may have severe consequences on patient safety. Timely and quality delivery is of paramount importance with the potential need for complex and costly arrangements being sought and procured from

alternative providers in the near future should this project not be supported, with reliance on importation not being a sustainable solution.

2.10 Constraints

This project is subject to the following constraints:

- Redesigned models to be delivered within available revenue resources
- Physical works will need to be delivered in order to have the least possible impact on current demand for blood and blood products (demand for blood and blood products will need to continue throughout implementation of construction)
- Facilities that are compliant with WHTM and WHBN and meet standards for all legislation and regulation authorities
- External planning authority constraints where necessary

2.11 Dependencies

The project is subject to the following dependencies that will be carefully monitored and managed throughout the lifespan of the scheme:

- Availability of additional accommodation where necessary to support phasing
- Availability of Trust technical and project management resource
- Approval by Welsh Government
- Funding from Welsh Government
- Subject Matter Expertise in relation to estates, laboratories and renewables
- Continued engagement with key stakeholders to ensure the consistency with the wider WBS programmes and recommendations from other national directives.

EQIA Template & Action Plan

All policies and decisions that affect people are assessed to identify ways to reduce discrimination and to make Wales fairer. I confirm that an assessment has been undertaken and the relevant actions are highlighted below.

Name of Policy	WBS Futures – Talbot Green Infrastructure		
Manager	Sarah Richards, Head of Planning & Performance Services		
Date of meeting with OD Manager – ED&I			
Date of submission	April 2026 – Outline Business Case Stage		
Date of next review	On commencement of Full Business Case Stage		
These changes will affect:	Staff: <input checked="" type="checkbox"/>	Donors: <input checked="" type="checkbox"/>	Both: <input checked="" type="checkbox"/>

1.1	What is the policy or decision that you are conducting an EQIA for?	<p>The decision to carry out the Talbot Green infrastructure programme as agreed in the WBS Futures Programme Brief.</p> <p>The programme sets out the investment, help and support required to provide the technical infrastructure, systems and expertise to deliver a sustainable and futureproofed service and to enable our strategic objectives to be delivered, which are:</p> <ul style="list-style-type: none"> ▪ Maintaining excellence in core service delivery and planning our future ▪ Developing an increasing prudent and sustainable supply chain ▪ Meet the needs of an evolving transplant service ▪ Digitally enabled to deliver in the modern world ▪ Implementing effective clinical systems to support improved outcomes ▪ Be known for our strength in research, development and innovation ▪ Clinical engagement and demand planning ▪ Be active in the establishment of Advanced Therapeutic Medicines (ATMPs) in the NHS
1.2	Who owns it?	Head of Planning & Performance Services
1.3	What is the aim of the change(s)?	<p>To modernise the laboratories within Talbot Green and ensure the resilience of the infrastructure for the longer term.</p> <p>The programme will aim to address several critical issues within the facilities and infrastructure:</p>



		<p>Mechanical Infrastructure and Ventilation: The current ventilation systems are outdated, no longer compliant with healthcare standards, and lack adequate temperature control. Replacing these with new, compliant units will improve air quality, energy efficiency, and maintainability.</p> <p>Heating and Cooling Systems: The existing cooling and heating systems are inefficient and often work against each other. By centralising these systems and upgrading the management controls, we will achieve more consistent temperature control and energy efficiency.</p> <p>Electrical Infrastructure: The current electrical systems are at the end of their serviceable life and lack the resilience required for future growth. A complete overhaul, including new substations and dual power supplies, is necessary to support our operations and future expansion.</p> <p>Laboratory Modernisation: We need to modernise our laboratories to align with advancements in science and technology. This will improve efficiency, compliance, and the ability to accommodate new processes and equipment, ensuring our laboratories remain future proof.</p> <p>Energy Centre: A new energy centre will be created to support the upgraded mechanical and electrical infrastructure, ensuring continued operation and providing the flexibility to extend our facilities in the future.</p> <p>Decarbonisation: We aim to significantly reduce our carbon footprint by integrating low and zero carbon technologies, such as solar photovoltaics, air source heat pumps, and ground source heat pumps, into our infrastructure upgrades.</p> <p>The comprehensive programme of works is essential for ensuring that all facilities are compliant, resilient, efficient, and sustainable, positioning us for future growth and innovation.</p>
1.4	Who is affected most by the change?	Staff predominately but there may be some impact on donors with enhanced facilities provided in a new location.
1.5	How does this topic fit into the wider context of the organisation?	<p>Develop and implement an energy efficient, sustainable, SMART estate at Talbot Green site that will facilitate a future service delivery model.</p> <p>This fits in with SP6 Sustainable services that deliver the greatest value to our communities.</p> <p>There are multiple national drivers and influencing factors also that the organisation needs to be in alignment with:</p>

		<ul style="list-style-type: none"> ▪ A building that is compliant with WHTM and WHBN and meet standards for legislation and regulation including MHRA, UKAS, ISO. ▪ A building that ensures it has mechanical and electrical infrastructure that is fit for purpose and provides resilience commensurate with the strategic importance of the building and is able to support the continued provision of blood and blood products to hospitals across Wales both now and in the future. ▪ Organisation contribution to zero carbon emissions through maximising efficiencies of innovative technologies such as solar photovoltaics, water turbine, biomass boilers, ground source heat pump etc. ▪ A modern blood and transplant laboratory with increased automation that supports opportunities to develop a service that is integrated, efficient, maximises the use of innovative technology and minimises duplication and waste. ▪ Provision of a facility that supports and contributes to the well-being of laboratory staff by creating an environment that meets best practice and which provides state of the art equipment. ▪ A requirement to address the recommendations within the infected blood inquiry.
1.6	Who is undertaking the EQIA	John Lewis, Project Manager Suzanne Jones, Project Manager Sarah Richards, Head of Planning & Performance Services Jason Hoskins, Assistant Director of Estates, Environment & Capital Development
1.7	When will you start and end the EQIA?	This EQIA has been worked up to support submission of OBC in April 2026 and will complete on submission of the FBC in 2026.
2.1	What data is available to help inform the EQIA?	Appendix A – Design Brief Appendix B – WBS Futures Talbot Green Infrastructure – Communications and Engagement Plan
2.2	What information is still needed?	Further detail will be provided at the next stage of the design process.
2.3	How will missing data be collected?	Consultations held prior to the development of the Full Business Case.
2.4	What is considered relevant information and data?	All outputs from any staff or donor engagement and the design teams.

3 - Equality Impact Assessment Template

Questions for you to think about for each of the protected characteristic groups:

- What are the possible impact outcomes?
- What type of impact does the change create?

Protected Characteristic	Potential Impact [Please tick column(s)]			Details	Recommendations
	Positive	Negative	None		
Age Younger people Middle age people Older people Other...	X			All ages – accessible facilities delivered from fit for purpose accommodation	Develop facilities in line with WHTM/ WHBN guidance to include regulatory implications of design ensuring full compliance with mandatory standards
Disability Physical Learning needs Neurodiversity Sensory Loss Mental Health issue Other...	X			Potential for increased number of WC provision for disabled users. Provision of changing places room for access to the public or donors'. To be agreed at FBC stage.	Develop facilities in line with WHTM/ WHBN guidance to include regulatory implications of design ensuring full compliance with mandatory standards Ensure staff, donors and visitors are able to communicate in language or format appropriate to need.
Gender re-assignment Would this affect those in/post- transition differently?			X	No impact identified at this time	Develop facilities line with Trust / WBS policy
Marriage or civil partnership Are single people affected differently?			X	No impact identified at this time	

<i>Are married people or civil partners treated differently?</i>					
Pregnancy or Maternity <i>Whilst pregnant</i> <i>On maternity leave</i> <i>Returning to work</i> <i>Other...</i>	X			Staff hub will include the provision of a breastfeeding room	Support to be given to managers on how to support staff whilst pregnant or on maternity leave in accordance with Trust / WBS policy
Race <i>Colour</i> <i>Nationality</i> <i>Ethnic group</i> <i>National origins</i> <i>Other...</i>			X	No impact identified at this time	Ensure staff, donors and visitors are able to communicate in language or format appropriate to need.
Religion <i>Affects one religious group more?</i> <i>Clashes with religious holidays?</i> <i>What about groups with no religion?</i>	X			A designated space within the staff hub for a prayer room has been outlined.	
Sex/Gender <i>Does it only apply to men / women?</i> <i>Could this affect one group more than the other?</i>			X	No impact identified at this time	
Sexual Orientation			X	No impact identified at this time	

<p><i>Would this affect any group from LGBTQ+ communities differently?</i></p>					
<p>Socio Economic Duty <i>Low income / no income groups?</i></p> <p><i>Rural locations affected differently?</i></p> <p><i>Those with caring responsibilities?</i></p>			X	No impact identified at this time	
<p>Welsh Language <i>Will everything be available bilingually?</i></p> <p><i>How many staff might need to know Welsh?</i></p> <p><i>1. Does the subject treat the Welsh language less favourably than the English language?</i></p> <p><i>2. Have you considered the Cultural opportunities / Promotion of the project? E.g. literature / Visual art representing Welsh artists</i></p>	X			<p>Bilingual provision is central to the considerations of this project and wider programme.</p> <p>Bilingual access through signage, donor information and cultural relevance have been discussed.</p> <p>The Trust will adhere to all relevant Welsh Language Standards. The Welsh language will not be treated less favourably than the English language and this will be demonstrated through signage, patient and visitor information etc.</p>	<p>Ensure staff, donors and visitors are able to communicate in language or format appropriate to need.</p> <p>All public documents to be made available in Welsh</p>

<p>3. Are you assured that all aspects of this project / policy etc has considered the needs of Welsh speakers?</p> <p>If yes, identify the specifics If no, state what should be included.</p>					
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4.1	<p>You will need to evidence and recommend one of four policy implementation options:</p> <ol style="list-style-type: none"> 1. No major change 2. Adjust the policy 3. Continue the policy 4. Stop and remove the policy 	<p>3. Continue the policy - to carry out the Talbot Green Infrastructure programme in line with the design brief and levels of engagement laid out in the communications and engagement plan.</p>
4.2	<p>If the change will be implemented regardless of the presence of a negative impact, you must be able to evidence: The implementation was necessary to carry out specific functions, there is no way of achieving the aims of the policy that has less negative impact and the means employed to achieve the aims of the policy are necessary and appropriate</p>	n/a
4.3	<p>Could be policy be implemented in a different way to avoid negative impact?</p>	n/a
4.4	<p>How will this change promote equality of access and equality of opportunity?</p>	<p>Equality of Access is addressed above.</p> <p>There is also an extensive 'Community Benefits' programme in place with the BAM Construction which specifies how BAM will provide employment and engagement opportunities for underrepresented groups during the Construction phase</p>
4.5	<p>Is it possible to implement a different policy which achieves practice aims but avoids adverse impact?</p>	<p>No, retaining the current Talbot Green Infrastructure is not a feasible solution for the longer term as demonstrated in the Outline Business Case, and previously submitted Programme Business Case</p>
5.1	<p>What do you have so far?</p>	<p>There is a positive impact from the development of the programme with protected characteristics having been considered throughout the design.</p>



5.2	Have any themes emerged?	The provision of protected spaces for breast feeding mothers and religious space for prayer has been a requirement of the programme.
5.3	What do people have to say about our work?	The outputs of the benefits within the OBC outline both the qualitative and quantitative benefits of the work. We are continuing to engage with wider workforce where further ideas may come.
5.4	How will you consult widely on your topic?	As outlined in Appendix B
5.5	Who will you consult with?	As outlined in Appendix B
5.6	How long will the consultation stage last?	As outlined in Appendix B
6.1	The action plan must appropriately evidence the decision for one of the following policy options: 1. No major change 2. Adjust the policy 3. Continue the policy 4. Stop and remove the policy	3. Continue the Policy
6.2	What will you do with the comments or information you have gathered from your consultations?	Comments have fed back to the design team throughout the 1:200 and will be for the 1:50 designs through consultation meetings with the relevant work areas. The comments from the drop in sessions have been fed back to the design team
6.3	How did the consultation help guide new policy?	The flow of the laboratory spaces during the 1:200's was influenced based on the feedback by the heads of departments.
6.4	Will you make any changes to the draft report you produced?	No

7.1	Confirm actions	Action 1 - Ongoing monitoring of stakeholder feedback through regular focus groups.
8.1	Establish timetable for reviewing actions and refreshing the assessment	Post OBC and Prior FBC submission

Equality Impact Assessment – Action Plan



Action Plan

These actions will reduce discrimination and make Wales fairer:

	Action	Criterion	By When	Resource implications
1	Ongoing monitoring of stakeholder feedback through regular focus groups.	Stakeholder feedback is sought and reviewed through the established mechanisms for the Programme.	Ongoing	WBS Communications, WBS Futures Comms and Engagement Group
2				
3				

Strategic Alignment

Future Generations Act Wellbeing Objectives		Links to Objective
1	A prosperous Wales	<input checked="" type="checkbox"/>
2	A resilient Wales	<input checked="" type="checkbox"/>
3	A healthier Wales	<input checked="" type="checkbox"/>
4	A more equal Wales	<input checked="" type="checkbox"/>
5	A Wales of more cohesive communities	<input checked="" type="checkbox"/>
6	A Wales of vibrant culture and thriving Welsh language	<input checked="" type="checkbox"/>
7	A globally responsible Wales	<input checked="" type="checkbox"/>

Double-click to add your signature below: <small>27/04/2026</small>	Double-click to add signature below: <small>27/04/2026</small>
 X Sarah Richards Lead Officer	 X Michelle Fowler Equality & Diversity Manager
Signed by: Suzanne Jones	Signed by: Michelle Fowler (mi120281)

Attachments

1. The policy concerned
2. Data used in completing the assessment
3. Details of consultation undertaken
4. Final version of the assessment template

Return to OD Manager – Equality, Diversity and Inclusion:

VUNHST.Equality&Diversity@wales.nhs.uk

Last updated: april 21, 2026

Welsh Blood Service, Llantrisant

Mechanical and Electrical Services Infrastructure Works
Project Brief

Issue No.10 – 6th January 2022

The scope of the mechanical and electrical services works that are to be included within the forthcoming Outline Business Case (OBC) proposals are based upon the following document and associated supporting information;

Consilium Consulting Engineers
WBS HEADQUARTERS: INFRASTRUCTURE FEASIBILITY & RESILIENCE ANALYSIS
PART 1: SUMMARY
Rev. 02 Dated 26th November 2019

The anticipated work scope includes for the work associated with both resilience and sustainability but does not include the identified office and laboratory refurbishment works.

The anticipated work scope and Client Brief for development to OBC stage is as follows;

1.0 Mechanical Services

- 1.1 Provide new Air Source Heat Pumps (ASHP) or Ground Source Heat Pumps (GSHP) as the primary heating and cooling source.
- 1.2 Retain the existing gas fired modular boilers as the secondary heat source. Consider the replacement of the existing gas fired modular boilers with new dual fuel (gas/oil) boilers as the secondary heat source.

Note – as the gas/dual fuel boilers will be operating as the secondary heat source to be used when the primary heat source fails, there will be minimal operating hours and hence low carbon emissions from this plant.

- 1.3 New heat pumps or chillers will be utilised to provide cooling to the relevant areas. These additional heat pumps / chillers will both supplement the ASHP/GSHP and provide resilience in the event of primary ASHP/GSHP plant failure.

Note – alternative chiller configuration and refrigerant types to be investigated.

Both of these options (heat pumps/chillers) are viable solutions to providing cooling to the ventilation system. However the use of heat pumps offers the opportunity to generate low grade heat which could be utilised in the AHU's to pre heat the air.

The operation of this building would typically lend itself to cooling during the summer months, heating during the winter months, and potentially utilising free cooling during spring and autumn seasons. Thus the heat pump system would either be in heating or cooling modes, allowing chillers to “trim”, rather than the base load. This will be investigated and detailed during the design process. The use of each technology will be modelled to demonstrate which has the better impact on Carbon reduction.

- 1.4 Replace the existing air handling units with new air handling units in order to supply the minimum fresh air/minimum air change rates to the occupied spaces.
- 1.5 Replace the existing ventilation ductwork systems to accommodate the new ventilation rates and relocated ventilation plant.

Note – due to the increased ventilation rates requested to serve the laboratories and associated areas, the existing ventilation system is under sized. It would be like turning on the hose pipe with your thumb blocking the hole, resulting in excessive velocities and pressure losses, and excessive noise.

Note – large areas of the building are currently naturally ventilated, with no guaranteed ventilation rate. Switching to a mechanical system will result in excessive velocities etc, as above.

1.6 Provide new chilled water pipework to the new air handling units in order to cool the minimum fresh air provision when required.

1.7 Low temperature hot water (LTHW) pipework to serve the new air handling units in order to heat the minimum fresh air provision when required.

New LTHW pipework and convectors within circulation and WCs type areas.

1.8 Consider the available options for the generation of domestic hot water as an integral element of the plant resilience and sustainability review.

1.9 Provide N+1 resilience on all pumps, fans, motors, etc in order to eliminate single points of failure, as far as is practicable, throughout the building services systems.

1.10 Upgrade the existing Building Management System (BMS) in order to replace obsolete equipment and control the new plant arrangement. Replace system components, equipment and infrastructure as appropriate.

2.0 Electrical Services

2.1 Review risk assessment and details within the Consilium Consulting Engineers feasibility report, implement this in schematic and layout form. Review initial proposals with the Electrical Safety Group (Shared Engineering Services), as WHTM Guidelines, to ensure the level of resilience proposed is as envisaged.

At this stage (OBC), we have made assumptions based on general guidance given within the Consilium Consulting Engineers feasibility report, however these can be tailored after review with Shared Engineering Services

2.2 Liaise with WPD to provide two new power supplies (if possible) sized for future building loads and additional spare capacity).

2.3 Provide two transformers as part of the electrical resilience infrastructure

2.4 Provide new main switch gear and outgoing sub mains cabling. Providing N+1 redundancy throughout.

2.5 Provide a new sub distribution with the appropriate change over devices within the building.

2.6 Provide new meters and metering system on all new switchgear which would be interfaced with the new BMS.

2.7 Final distribution boards and associated sub main cabling, final circuitry accessories, etc within the main building will be redesigned to serve the modernised areas.

Circuitry retained where possible, new installed where required. All will be design tested to latest amendment of BS 7671

2.8 Provide new electrical services to plant (external buildings) affected by the infrastructure works.

- 2.9 Repurpose and make good electrical services affected by the modernisation works, whilst noting that this may include provision of new and efficient electrical services to these affected areas.
- 2.10 Provide new power supplies to the mechanical items noted above. Investigate and provide proposals for back-up power supplies, including back-up generators and UPS units.
- 2.11 Feasibility study of low and zero carbon fuel and back up equipment. (Bio Fuel/Diesel/Gas/Hydrogen etc)
- 2.12 Provide renewable photovoltaic electricity generation to assist with Carbon reduction targets and interface between this and the building/storage etc.
- 2.13 Provide active and passive EV Fleet charging facilities, and ensure easy charge management system is facilitated.
- 2.14 Provide Public/Staff EV charging facilities for 10% of the current number of front car parking spaces.
- 2.15 The Consilium Consulting Engineers feasibility report refers to work associated with improving the space temperature control within the existing laboratories and offices by the provision of new laboratory air handling units and VRF heating and cooling solutions for the office spaces.

These proposals will be developed and included within space and load calculations

3.0 Clarifications

- 3.1 The Consilium Consulting Engineers feasibility report refers to all new plant and systems being fully compliant with HTM's/WHTM's.

As this building is not a clinical facility (albeit a critical healthcare support facility), consideration to be given to designing the new services systems in the spirit of the HTM's/WHTM's but not necessarily fully compliant in all areas.

This will reduce capital cost and also benefit the works programme.

- 3.2 The Consilium Consulting Engineers feasibility report refers to work associated with improving the space temperature control within the existing laboratories and offices by the provision of new laboratory air handling units and VRF heating and cooling solutions for the office spaces.

These proposals will be developed and included within the space and load calculations

- 3.3 The OBC proposals will take due cognisance of the sustainability issues that have been identified within the Consilium Consulting Engineers feasibility report and the conclusions contained therein, namely;

- Provision of ASHP or GSHP as the primary heating and cooling source
- Provision of Photovoltaic Panels to supplement the electricity supply

- 3.4 The following digital considerations/upgrades for the building have been identified;

- CCR rooms require A+B circuits
- CCR rooms require cooling (N+1 arrangement)
- Implement where appropriate smart measures as indicated within the issued (for guidance) Velindre Cancer Centre Radiotherapy Satellite Centre Digital Design Brief

Welsh Blood Service

WBS Futures - Talbot Green Infrastructure Communication & Engagement Plan



Version: 0.4

Document Author: John Lewis, Portfolio Project Manager

Date: September 2024

At a Glance



Key milestones throughout the life of the initiative.

Engagement Moments

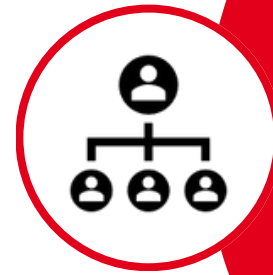


Audience

Who we will need to communicate and engage with.

Our key messages.

Messages



Resources

The people and teams who will support delivery of our communication and engagement plan.

The channels and products we will use.

Channels & Products



Monitoring, Evaluating & Measuring Success



How we will measure the effectiveness of our communication and engagement with our stakeholders.

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Background

The Welsh Blood Service launched its 5 year Strategy in August 2023. The Strategy – Blood and Transplant Services for the Future – sets out our vision of services in Wales for the next five years. WBS Futures has been established to be the vehicle to deliver our aspirations and to shape our services for the future by working in partnership with our staff, our donors and our customer hospitals and driving a culture of excellence.

The Programme Business Case (PBC) sets out a programme of strategic developments in relation to improvements in the infrastructure at Welsh Blood Service (WBS). These improvements will support the provision of high quality, safe, sustainable, efficient services and help to meet Good Manufacturing Practice (GMP) and recognised standards and regulations.

The programme sets out the investment, help and support required to provide the technical infrastructure, systems and expertise to deliver a sustainable and future-proofed service.

The WBS facility at Talbot Green (TG) plays a vital contribution in supporting the collection, supply and manufacturing of blood products across Wales. In addition, the service supports the solid organ and stem cell transplant programmes that run out of Cardiff & Vale University NHS Trust and runs the Welsh Bone Marrow Donor Registry.

Therefore, the continued provision of blood and other services from the WBS site in Talbot Green requires investment in the electrical and mechanical infrastructure and the modernisation of the laboratories in order to meet the strategic objectives.

This document outlines the communication and engagement plan for the WBS futures Talbot Green Infrastructure Programme. It is a live document that will be regularly reviewed and updated as the programme evolves.



Communication & Engagement Objectives

Communication and engagement are recognised as critical success factors for the WBS Futures Talbot Green Infrastructure and we have identified the following objectives for our plan.

Key stakeholders are identified on page 9. Key channels and products are identified on pages 10 & 11.

1

Ensure stakeholders are kept fully updated on developments as the programme progresses through OBC, FBC and the construction phases.

2

Ensure stakeholders are provided with two-way communication opportunities throughout the life of the initiative and/or at times of relevance to them.

3

Deliver the right messages to the right people at the right time.

4

Provide various channels of engagement so everyone has an opportunity to contribute and can experience the excitement felt of the future developments.

5

Develop our culture to ensure staff and donors feel part of an ongoing conversation shaping the future of the WBS and understand their role in delivery.

6

Be open and transparent at all times.

7

Focus on the facts and keep communication simple and clear, avoiding jargon.

Engagement Moments

The following have been identified as key milestones for the programme. These will be regularly reviewed and updated throughout the lifecycle of the programme.

Business Case Development - OBC/FBC - 2024-2026

Purpose: To raise awareness to the stakeholders of the upcoming developments.

- **Stakeholder Workshops:** Conduct workshops or focus groups with stakeholders to gather input on infrastructure priorities and requirements. These sessions should provide an opportunity for stakeholders to voice their concerns, share insights, and contribute to the development of the outline business case.
- **Progress Updates:** Provide regular progress updates to stakeholders through email newsletters, project briefings, and targeted communications. Highlight key milestones achieved during the outline business case development phase and address any emerging questions or concerns.

Construction Phase 2026-2028

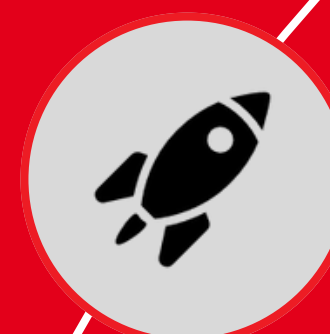
Purpose: Ongoing engagement with stakeholders

- **Comprehensive Communication Plan:** Develop a comprehensive communication plan for the construction phase, outlining key communication objectives, target audiences, messaging, and tactics. This plan should address how the project team will communicate construction-related activities, timelines, and impacts to stakeholders.
- **Project Signage and Notices:** Install project signage and distribute notices to inform the public about construction activities, timelines, and potential disruptions. Ensure that signage is clear, visible, and provides contact information for stakeholders to report issues or seek information.
- **Dedicated Helpline or Email Address:** Establish a dedicated helpline or email address for stakeholders to report construction-related issues, ask questions, or seek information. Ensure that inquiries are responded to promptly and that stakeholders receive timely updates on the resolution of their concerns.
- **Feedback Mechanisms:** Solicit feedback from stakeholders through surveys, focus groups, and other feedback mechanisms. Use this feedback to identify areas for improvement and address stakeholder concerns proactively.
- **Create excitement:** Create culture of excitement for future developments of the scheme through sharing plans and opportunities to engage with the key stakeholders.

Closure 2027 - 2028

Purpose: To celebrate our achievements

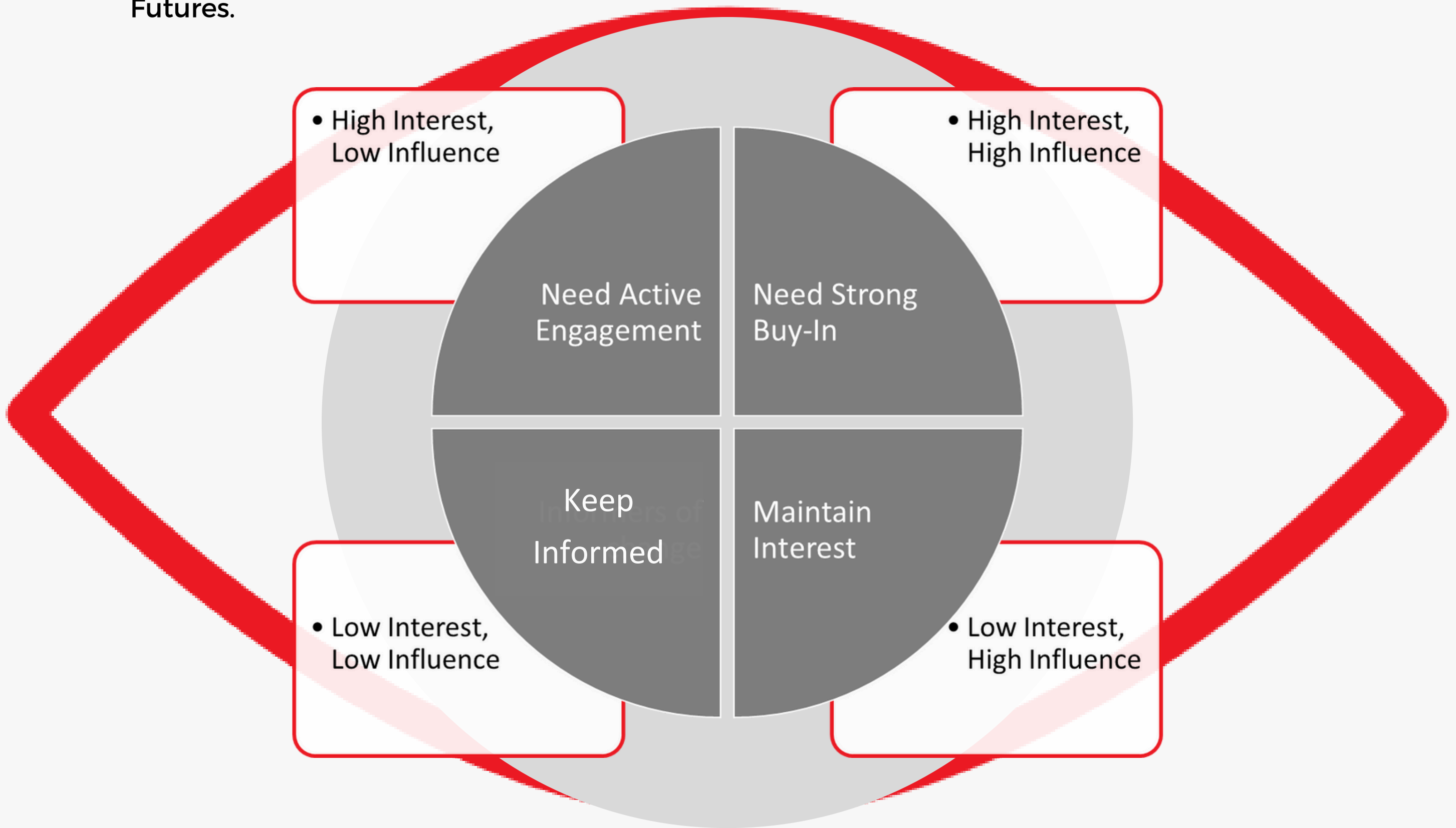
- Closure of the programme
- Celebrate our success
- Benefits achieved
- Lessons Learnt
- Case studies
- Success Stories



Audience

In order to convey the right message to the right people at the right time, key stakeholder groups have been identified and mapped according to their interest and their influence over WBS Futures.

The diagram below illustrates the key stakeholder groups/audience and maps them according to their interest/influence. This will be regularly reviewed throughout the lifecycle of WBS Futures.



Need Active Engagement

Need Strong Buy-In

- Welsh Government
- Specialist Estates Services

Keep Informed

- Future Generations Commissioners Office
- Local Health Boards
- Donors in line with the social partnership act

Maintain Interest

- WBS SLT
- WBS Staff in line with the social partnership act.
- Trade Unions in line with the social partnership act.
- MHRA
- HTA
- VUNHST Board



Key Messages

During the initial launch stage of the programme we have developed the following key messages for our stakeholders. These will further develop and evolve as WBS Future progresses and will be regularly reviewed and updated.

1. **Commitment to Safety and Reliability:** We are dedicated to enhancing the infrastructure of WBS to ensure the safety and reliability of the blood supply for our communities.



2. **Transparency and Accountability:** We are committed to transparent decision-making processes and accountability in all stages of the infrastructure programme, from planning to construction.



3. **Stakeholder Impact Mitigation:** We understand the importance of minimising disruptions to our staff and donors during construction and are implementing measures to mitigate any potential impacts on daily life.

4. **Quality and Compliance:** Our infrastructure programme adheres to the highest standards of quality and compliance with regulatory requirements, ensuring the integrity of our operations. The programme will ensure it aligns with recommendations outlined in key documents such as the Infected Blood Inquiry.

5. **Stakeholder Collaboration:** We value input from all stakeholders and are committed to collaboration throughout the project lifecycle to address concerns, incorporate feedback, and achieve shared goals.

6. **Innovation and Efficiency:** We are leveraging innovative technologies and best practices to optimise the design and construction of our infrastructure, maximising efficiency and cost-effectiveness

7. **Long-Term Benefits:** The infrastructure programme will deliver long-term benefits to the blood establishment, enabling us to better serve our communities, improve operational efficiency, and advance our mission of saving lives.



8. We will regularly celebrate the good and maintain a culture of excitement for future developments.

Resources



The people and teams who will support the delivery of our Communication and Engagement Plan include:

COMMUNICATION & ENGAGEMENT GROUP

The group will ensure appropriate communication and engagement with all stakeholders in relation to the delivery of WBS Futures. It will support delivery of the Communication and Engagement Plan and make sure a regular drumbeat is maintained across all stakeholders. Terms of Reference are attached as Appendix 1.

WBS COMMUNICATION & ENGAGEMENT TEAM

The team will support delivery of the Communication and Engagement Plan and members of the team will be part of the core membership of the Communication & Engagement Group.

INNOVATION & IMPROVEMENT TEAM (IHUB)

The team will support identifying key messages and reporting progress. The WBS Future Project Managers are optional members of the Communication and Engagement Group.

WBS SENIOR LEADERSHIP TEAM (SLT)

The SLT will facilitate communication and engagement across the organisation and be a reliable source of information for colleagues. They will support delivery of the Communication and Engagement Plan and cascade information to their teams.

THE VUNHST EXECUTIVE TEAM

The Executive Team will facilitate communication and engagement across the organisation and be a reliable source of information for colleagues.

HEADS OF DEPARTMENTS

The Heads of Department will facilitate communication and engagement across their departments and be a reliable source of information for colleagues. They will support delivery of the Communication and Engagement Plan and cascade information to their teams. They will drive and stimulate both content and conversations.

OPERATIONAL LEADS & WORKSTREAM MEMBERS

The Operational Leads and Workstream members will identify key messages and report progress for their programmes/workstreams. They will drive and stimulate both content and conversations and are core members of the Communication and Engagement Group.

Communication Channels



A range of communication channels/approaches will be utilised to support the communication activity.

External (Donors, Wider public, Influencers, Other NHS bodies, National & International Orgs)	Internal
<ul style="list-style-type: none"> • Email • SMS • Telephone • Letter • PR • Print • Digital Assets • Website • Meetings • Social Media • Events • Partnerships • Local Engagement • Donor Survey • Specialist Estates Services touch points 	<ul style="list-style-type: none"> • Staff Briefings • FAQs • Email • WBS newsletter • Trust newsletter • Management Word of Mouth • Digital assets • Team Meetings • Staff intranet • Presentations / CPD • Visualisation screens • Screensavers • Print • Polls • Staff surveys

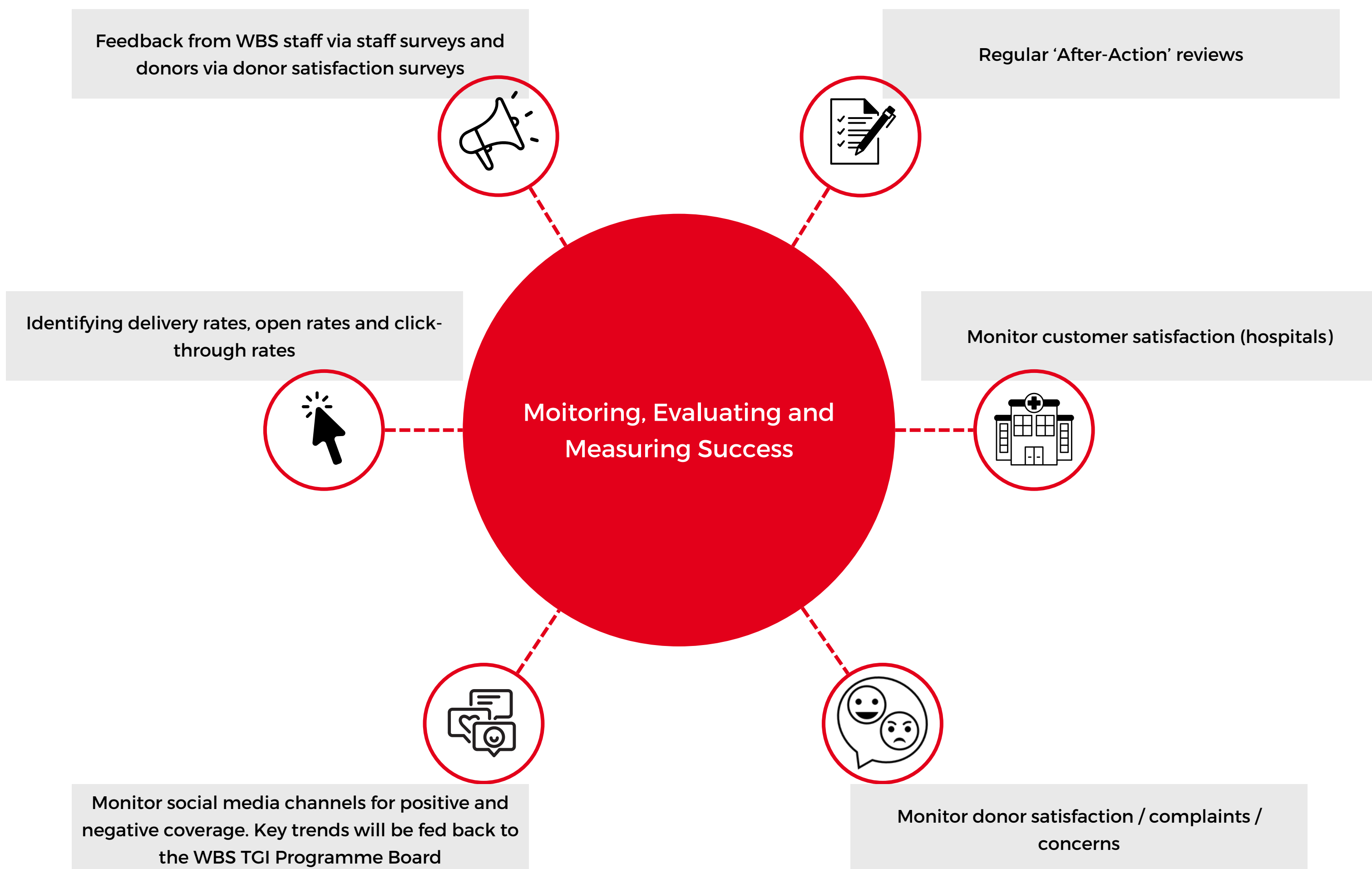
Monitoring, Evaluating and Measuring Success



The Communication & Engagement Plan will be continually monitored and evaluated to ensure that it is fit for purpose and adapted where necessary, in line with the needs of the TGI programme. This will ensure that best practice is adopted and any issues and risks regarding communication and engagement are effectively addressed and managed.

The ability to measure and evaluate how stakeholders interact with the news, stories and information that we share with them is crucial because it will allow us to adapt and respond accordingly; what works well and what doesn't. We will take regular pulse and temperature checks through stakeholder engagement surveys to understand attitudes and tailor messages that are appropriate for each audience.

Methods of monitoring, evaluating and measuring success in order to prove the effectiveness of the communications and engagement include:



What does success look like?

Stakeholders will:

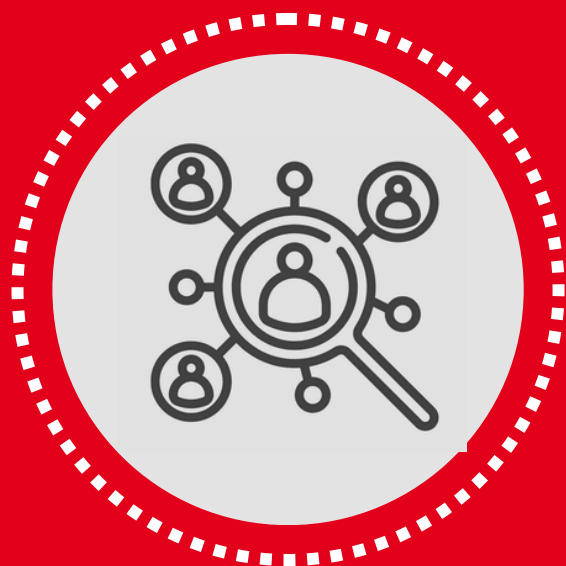


Have an understanding of the programme and how it will impact the way they work or interact with the service

Know where to go for information.



Know how to engage with the Programme.



Fully engage with the TGI Programme communication & engagement activity



Have actively participated in communication & engagement activities



Action Plan



The draft high level communication and engagement overview for the TGI Programme is outlined below. This will be regularly reviewed and updated by the TGI Programme Board.


	Activity Month 1	Activity Month 2	Activity Month 3
Q1 2024 -2025			
Q2 2024 -2025		Celebrate the Sign off of the outline floor plans	Inform the workforce of next stage planning and design
Q3 2024 -2025	Celebrate completion of Outline Business Case	Presentation of Business Case to Welsh Government	Site visit for Welsh Government colleagues
Q4 2024 -2025		Approval of OBC from Welsh Government	
Q1 2025 -2026	Inform workforce of development of the FBC		
Q2 2025 -2026			
Q3 2025 -2026			
Q4 2025 -2026		Approval of FBC from Welsh Government	Update on the start of the tender process for the construction phase
Q1 2026 -2027	New Energy Centre Goes Live	Phase 1 Decant	Phase 1 Construction
Q2 2026 -2027		Phase 2 - Decant	Phase 2 - Construction
Q3 2026 -2027			Phase 3 - Decant
Q4 2026 -2027	Phase 3 - Construction		Phase 4 - Decant
Q1 2027 -2028	Phase 4 - Construction		Phase 5 - Decant
Q2 2027 -2028	Phase 5 - Construction		Phase 6 - Decant
Q3 2027 -2028	Phase 6 - Construction		Phase 7 - Decant
Q4 2027 -2028	Phase 7 - Construction		
Q1 2028 -2029	Gather Feedback and Lessons	Celebrate Success	
Q2 2028 -2029			
Q3 2028 -2029			
Q4 2028 -2029			What benefits have been achieved so far





Quality-driven decision-making: Quality Impact Assessment

Title of proposal this Quality Impact Assessment (QIA) is supporting:	WBS Talbot Green Infrastructure Programme
Reference of proposal:	
Details of Board / Committee the paper is being presented to and when:	Presented to Strategic Development Committee Meeting on 27 th April 2026

Part 1: Health and Care Quality Standards assessment






1a: Briefly outline how this proposal or strategic decision impacts on the delivery of healthcare services (in line with STEEEP Quality Standards).

Quality Standard <i>Click each icon for its definition</i>	Overall Impact			Key points and rationale
	Positive (+1) / Neutral / Negative (-1)	Level of impact High (3) Medium (2) or Low (1)	Impact score (product of previous columns)	
	+1	3	+3	<p>The Talbot Green Infrastructure Programme addresses critical patient and service safety risks associated with ageing mechanical, electrical and laboratory infrastructure that is operating beyond end-of-life. The programme will significantly reduce the risk of catastrophic infrastructure failure, product loss, service interruption, and regulatory non-compliance.</p> <p>The redesigned laboratories will resolve known quality and safety issues identified through inspection (including separation of pre- and post-PCR activity, contamination control, storage and workflow), improving bio-safety, regulatory compliance, and patient protection across Wales.</p>

	+1	2	+2	<p>The programme enables timely diagnostic, transfusion, transplantation and medicine delivery services by removing infrastructure constraints that currently limit laboratory throughput, resilience and responsiveness. Modernised layouts and infrastructure will reduce delays caused by sub-optimal workflows, outages, and reactive maintenance, supporting timely patient care across NHS Wales.</p>
	+1	3	+3	<p>The TGI Programme underpins the effectiveness of the Welsh Blood Service as a national, highly specialised service. Investment will support modern clinical practice, advanced diagnostics, reference laboratory functions, and transplant services that are critical to patient outcomes.</p> <p>The proposed redevelopment supports current and future service models, digital enablement, and innovation while maintaining Wales' only facilities for a number of specialist laboratory services.</p>
	+1	3	+3	<p>The programme will deliver a more efficient estate through improved utilisation of laboratory space, replacement of inefficient plant, and delivery of a new energy centre that improves sustainability, resilience and running costs.</p> <p>The refreshed design enables more efficient workflows, better use of limited specialist workforce capacity, and improved asset performance, supporting long-term value for money.</p>
	+1	2	+2	<p>The redevelopment will ensure equitable access to safe and compliant blood and transplant services for all patients across Wales. Estate proposals incorporate inclusive design principles, improved accessibility, bilingual provision in line with Welsh Language Standards, and facilities that support equality, diversity and inclusion for staff, donors and visitors.</p>
	+1	3	+3	<p>Although not directly patient-facing, the TGI Programme supports person-centred care by safeguarding the continuity, safety and quality of critical services that patients rely on. Improved staff working environments, wellbeing facilities and modern laboratories positively influence staff experience and engagement, which in turn supports better patient outcomes.</p>

Overall impact	The TGI Programme delivers significant improvements across all six quality domains, with particularly high impact on safety, effectiveness and long-term resilience. Risks to quality are materially reduced by replacing failing infrastructure and modernising laboratories critical to patient care across Wales.
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1b: Briefly outline the amount of activity required to ensure successful implementation of the proposal or strategic decision (in line with enabling Quality Standards)

Quality Standard <i>Click each icon for its definition</i>	Amount of activity required High (3), Medium (2) or Low (1)	Key points and actions to achieve the changes required
	3	Continued executive sponsorship, programme governance, Trust Board and Welsh Government oversight
	2	Staff engagement, change management, workforce planning aligned to new facilities
	2	Embedding improvement, safety culture, engagement through change
	2	Data, digital enablement, reporting and assurance through programme controls
	2	Designing in learning, research capability and innovation
	3	Alignment with NHS Wales, transplant services, donors, hospitals, WG capital strategy

Overall amount of activity required	Delivery of the TGI Programme requires sustained leadership, coordinated programme management, workforce engagement and system-wide collaboration over multiple years, commensurate with the scale, complexity and criticality of the investment.
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Part 2: High-level consideration of risk

Considering responses on all twelve Health and Care Quality Standards in Part 1, what level of risk to **Quality overall** is this proposal or strategic decision? *Slide the arrow to indicate the level of risk (recognise this is subjective until full risk assessment undertaken)*



Level of risk to Quality of implementing this proposal	Low	Low/medium	Medium	Medium/high	High
Level of risk to Quality of NOT implementing this proposal	Low	Low/medium	Medium	Medium/high	High



Describe the main risks to Quality of implementing this proposal?
Describe the main risks to Quality of NOT implementing this proposal?

Key Risks to Quality of implementing this proposal (managed):

- Construction and transition risks
- Temporary disruption during change
- Dependence on robust programme and risk management

Key Risks to Quality of not implementing this proposal:

- Catastrophic infrastructure failure
- Product loss and service interruption
- Regulatory non-compliance
- Patient safety risks across NHS Wales
- Loss of national specialist capability

Part 3: Developing and signing off this Quality Impact Assessment

QIA completed by / on date	QIA operationally agreed by / on date	QIA clinically agreed by / on date
Sarah Richards, Head of Planning & Performance Services, 16/04/2026	Jason Hoskins, Assistant Director of Estates, Environment & Capital Development, 16/04/2026	Edwin Massey, Welsh Blood Service Medical Director, 17/04/2026

Executive clinical review and sign off (if required)

Clinical Executive 1 sign off / date	Clinical Executive 2 sign off / date	Clinical Executive 3 sign off / date
Dr Edwin Massey WBS Medical Director, 16/04/2026	Jacinta Abraham, Executive Medical Director, 19/04/2026	Gillian Knight, Executive Director of Nursing, Allied Health Professionals and Health Science, 19/04/2026