

New Velindre Cancer Centre

Memorandum of Information



(Artist's impression)

TRANSFORMING CANCER SERVICES PROGRAMME

(South East Wales)

5 February 2020



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Ymddiriedolaeth GIG
Prifysgol Felindre
Velindre University
NHS Trust

NEW VELINDRE CANCER CENTRE

PROJECT MEMORANDUM OF INFORMATION



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1 Purpose of Document

- 1.1 The purpose of this document is to inform any interested organisations of the Authority's proposed plans to procure a New Velindre Cancer Centre (nVCC).
- 1.2 The document sets out the following:
 - Information about Velindre University NHS Trust
 - An Overview of the Transforming Cancer Services (TCS) Programme
 - Details of the proposed nVCC (our Project), including the market engagement process, design vision, procurement process, Mutual Investment Model and contract structure and key commercial principles.

2 About the Procuring Authority

- 2.1 The Authority is a statutory NHS Wales body. The organisation has two main divisions which provide specialist cancer and blood services. Velindre Cancer Centre provides tertiary cancer care across South and Mid Wales and the Welsh Blood Service which is a national service / all Wales Service. In addition to these main divisions the Authority also hosts a number of external bodies, including:
 - NHS Wales Shared Services Partnership (NWSSP)
 - NHS Wales Informatics Service (NWIS)

The aim of the Authority is to deliver high quality, care and excellence to our patients and donors and to place them at the very heart of the organisation.

3 About Velindre Cancer Centre

- 3.1 The current Velindre Cancer Centre ("**VCC**") is a specialist cancer treatment centre located on the perimeter of Cardiff (close to the M4, junction 32).
- 3.2 VCC provides services to over 1.5 million people across South East Wales and beyond. Each year over 5,000 new referrals are treated and around 50,000 outpatients, supported by a team of 670 dedicated staff. VCC's aim is to provide patients and their families with the best possible care and treatment.
- 3.3 Patients referred to VCC come under the care of Clinical and Medical Oncologists. Oncologists specialise in the non-surgical treatment of cancer. The VCC is the main centre for these services, however outpatient clinics and other chemotherapy services are provided at other sites. Currently, over 4,000 courses

of radiotherapy are delivered per annum and this is expected to increase by 2% per annum.

4 Overview of the Transforming Cancer Services Programme (TCS)

- 4.1 The Authority, its commissioners and voluntary sector partners are all working together to transform the way in which cancer services are delivered across South East Wales with a number of clear but important aims:
- To reduce the incidence of cancer, and
 - To improve the quality of life and survival rates of people with cancer
- 4.2 The Authority is looking to improve the services that it provides and to improve the facilities that the services are provided from. This includes the development of a range of cancer facilities in the following areas:
- A new Velindre Cancer Centre to be built in Whitchurch, Cardiff which will deliver the majority of highly complex specialist treatments
 - A Radiotherapy Satellite Centre in North Gwent
 - The development of the cancer facilities within local communities
- 4.3 The TCS Programme, after extensive engagement with patients, carers and the wider Health Economy has developed a Clinical Model describing how it intends to deliver services in the future, details of which can be found in **Appendix A**.
- 4.4 The future aspirations of the Authority, in terms of how and where it delivers its services, will need to be complemented by this procurement and included in its scope.

5 Our Project

- 5.1 The new Velindre Cancer Centre will be situated on a greenfield site close to the M4 motorway in Whitchurch, north Cardiff. The development is a key commitment within the Welsh Government's 'Programme for Government' and is one of three pathfinder projects for the Welsh Government's innovative Mutual Investment Model ("**MIM**") programme to support investment in capital infrastructure in Wales.
- 5.2 Our ambition is to deliver a world-class facility that will provide unrivalled care for cancer patients from across the region and provide an international focal point for research and development, with an emphasis on expanding clinical trials. The new Velindre Cancer Centre will be a purpose built state-of-the-art facility of exceptional design quality in a setting which will contribute fundamentally to patient well-being,

health, and healing. The centre will provide the following critical services for patients across South East Wales:

- Radiotherapy;
- Systemic Anti-Cancer Therapies (SACTs);
- Inpatient services;
- Ambulatory Care;
- Outpatient services;
- Pharmacy;
- Diagnostics (specialist radiology);
- Radiology and Nuclear Medicine;
- Specialist Palliative Care;
- Acute Oncology Service ("AOS");
- Living with the Impact of Cancer services;
- Education and Learning; and
- Research, Development and Innovation.

6 Market Engagement Process

- 6.1 The purpose of the market engagement exercise is to provide an opportunity for prospective bidders to engage with us on the structure and the key commercial terms of the Project. Engagement will take the form of a confidential two hour meeting with our Project Team, along with representation from the Welsh Government.
- 6.2 This Memorandum of Information is intended to provide an overview of the Project and the key commercial terms, in order to ensure transparency and fairness and to facilitate the engagement.
- 6.3 The contact details that are supplied will not be published. It is not anticipated that participants in the engagement process will present any written submissions, however, where this is the case and participants want some or all of the information provided to be treated as (i) confidential; or (ii) commercially sensitive and not published, please note that on the communication and include the information in a separate annex. However, please be aware that, under the Freedom of Information Act 2000, there is a statutory Code of Practice with which public authorities must comply and which deals with, among other things, obligations of confidence and the test of prejudice to commercial interests. In view of this it would be helpful if you could explain to us why you regard the information you have provided to have been provided 'in confidence', or why disclosure of the information would prejudice

your commercial interests. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. The decision as to whether or not to disclose information in response to a request under the Freedom of Information Act rests solely with the Authority.

- 6.4 The Authority will process your personal data for the purposes of coordinating the market engagement meetings and contacting you regarding arrangements. Your personal data may be disclosed to our professional advisers, who will be subject to a duty of confidence. Our lawful basis for processing your personal data will be the performance of a task in the public interest. More information about how we may process your personal data, including information about your rights, can be provided upon request.

7 Design Vision

- 7.1 Our Design Brief for the Project is rooted in long-standing and successful architectural principles. Firmness, Commodity and Delight are the essential elements of all successful architectural design. They are the elements that we have used to construct the design brief and are broken down as follows:

Firmness – a building which is strong and long-lasting

- Resilient
- Green
- Practical

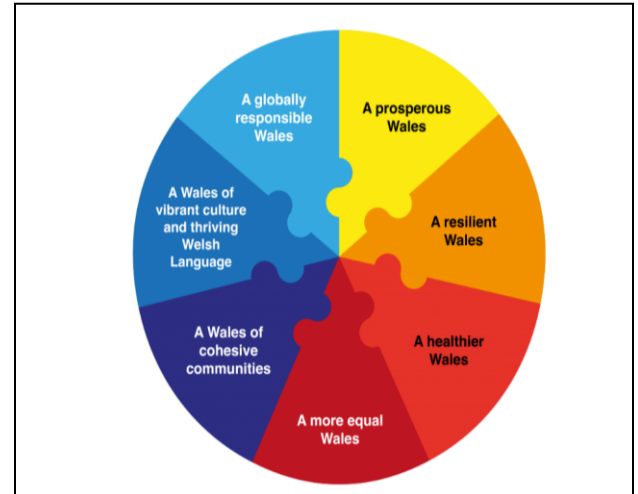
Commodity – a building which functions well as a cancer centre

- Efficient
- Flexible
- Digital
- Velindre Way

Delight – a building that makes people feel good

- Patients
- Staff
- Public

7.2 This Design Brief provides the basis on which we will evaluate the designs submitted by bidders. Underpinning the Design Brief, and indeed everything we do, is the Well-being of Future Generations (Wales) Act 2015. We require the new building to contribute to the seven goals (see diagram) set out in the Act and we expect it to be designed, built and maintained in accordance with the Sustainable Development Principle, i.e. the five ways of working described in the Act.



7.3 The brief is clear, affordable and accompanied by an outline reference design (together with a critique of its strengths and weaknesses). As is standard for procurements of this nature, the Authority will not assume any design risk for design solutions developed and presented by bidders.

7.4 To meet the requirements of the brief, the design should provide for the next generations of patients and their needs. It should consider the needs of the staff, visitors, families and carers who will use the facility and it should facilitate interaction between them at all levels. To support the Design Brief, there is additional information available upon request.

8 Procurement Process

8.1 The Project will be procured using the competitive dialogue procedure. The aim of the competitive dialogue procedure is to enable the Authority to "identify the solution or solutions which are capable of meeting its needs". Accordingly, the Authority will commence dialogue with the shortlisted economic operators ("**Participants**"), and will continue the competitive dialogue procedure until the Authority can identify one or more solutions capable of meeting the Authority's needs.

8.2 Publication of the contract notice is anticipated in May or June 2020. Following publication of the contract notice, the competitive dialogue procedure for the procurement of the Project will be structured in the following successive stages:

- prequalification and shortlisting on the basis of economic and financial standing and technical and professional ability to deliver the Project;
- Invitation to Participate in Dialogue issued to three (3) shortlisted economic operators, if sufficient compliant prequalification responses are received;
- commencement of dialogue with the Participants;
- submission of Draft Final Tenders with feedback on those Draft Final Tenders being provided by the Authority;
- close dialogue (when the Authority has identified one or more solutions capable of meeting the Authority's needs);
- Invitation to Submit Final Tenders issued to the Participants;
- submission and evaluation of Final Tenders, culminating in selection of the most economically advantageous Final Tender; and
- Financial Close, standstill and contract award.

8.3 It is anticipated the dialogue period will be 9-12 months. The Authority expects to hold a number of meetings with Participants to discuss and clarify the Authority's requirements during that period. The dialogue programme is currently under finalisation and the dates for these meetings shall be arranged at times which the Authority considers appropriate points in the dialogue process. The Authority will field a multi-disciplinary Competitive Dialogue team consisting of clinical, operational, commercial and legal representation.

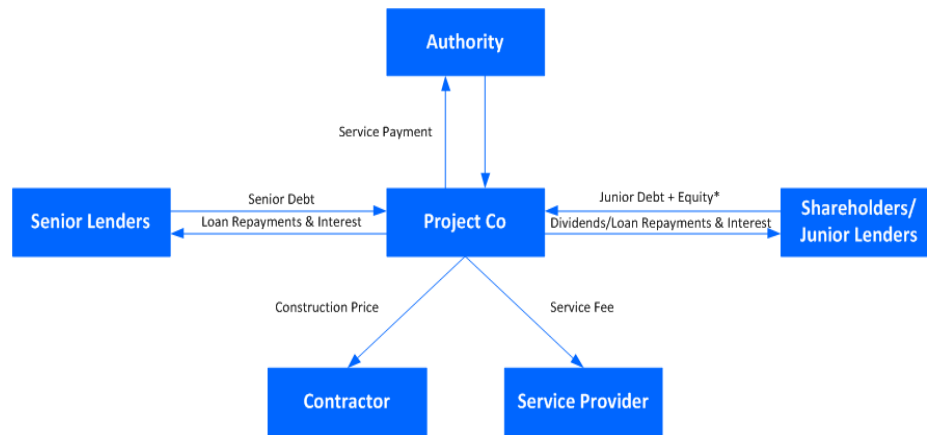
8.4 Bids will be sought on a "fully funded" basis.

9 The Mutual Investment Model and Contracting Structure

9.1 MIM provides for a procurement and contracting approach that builds upon the learning and knowledge of other UK PPP models but is tailored to meet the specific needs of the Welsh Government's infrastructure programme, Welsh Government policy, Welsh Government equity participation and Council Regulation (EC) 549/13 on the European system of national and regional accounts in the European Union, together with related Statistical Treatment Guidance. The Welsh Government's approach has generally been to:

- promote maximum value for money through commercially reasonable risk transfer that fits with Welsh policy and statistical treatment guidance; and
- minimise transaction costs by using UK precedent and standard project agreements, adjusted as appropriate to reflect the above principles.

9.2 A summary of the MIM contract structure and associated payments is provided in the schematic below.



* Equity payments are payable by Shareholders in accordance with the Shareholders' Agreement.

9.3 MIM is based on traditional PPP structures but with the following core principles embedded:

- an emphasis on wider community benefits;
- enhanced stakeholder involvement;
- potential for public sector equity investment;
- a presumption of no soft services;
- proper and ongoing scrutiny of the operations of Project Co and stringent performance monitoring; and
- consistency of approach across sectors, to the extent appropriate.

9.4 Further information on the MIM can be obtained at <https://gov.wales/mutual-investment-model-infrastructure-investment>. These documents are subject to central policy updates from time to time.

9.5 The terms of the Project Co Shareholders' Agreement are based on the published MIM Shareholders' Agreement, save that there is no provision for third party equity funding competitions. It is proposed that the public/private equity shareholding will be:

- WGCo - 15 to 20% shares; and
- Developer(s) - 80 to 85% shares.

10 Key Project Specific Commercial Principles

The Project has developed its Project Agreement based on the MIM Standard Form (Accommodation) but there are key project specific commercial principles that are relevant to the new Velindre Cancer Centre.

Site and Title Risk

- 10.1 The Project Agreement is drafted on the basis that the site (as shown in **Appendix D**) has been selected by the Authority, so the Authority generally retains title risk. The Authority grants Project Co a licence to access the site and specified access routes to carry out the Project operations, subject only to specific "Reserved Rights" and "Title Conditions". These are matters that the Authority has uncovered in its title review or are conditions attached to third party easements and that the Authority considers Project Co best placed to manage. For example, the Authority has entered into a third party easement with Asda for the use of an access through the Asda estate. It is expected that Project Co will manage delivery of the Project operations in compliance with construction traffic management conditions and that it will develop a solution which accommodates such restrictions within its construction programme and price.

Planning Permission

- 10.2 The Authority submitted its outline planning application (reference 17/01735/MJR) on 12 July 2017 and Cardiff City Council has granted outline planning permission to the Authority for a new 32,393m² VCC on the site shown at Appendix D. Detailed planning permission has also been granted for an access road and bridge from the Asda store at Coryton; and for an emergency access road and bridge from the Hollybush Estate. The outline planning consent for the development is subject to conditions and a section 106 legal agreement dated 27 March 2018.

Enabling Works

- 10.3 The Authority is currently procuring works to secure access to the site and to secure utility connections up to the boundary of the site. The Project Agreement has been drafted on the assumption that all of these enabling works will be complete in sufficient time prior to Financial Close to allow Project Co and the funders' technical advisers to satisfy themselves on the adequacy of such works. The enabling works comprise:

- Utilities and service connections;

- Invasive species treatment and management works within and outwith the boundary of the site (these works will be open to inspection by the Successful Participant prior to financial close and will not be an Authority risk).
- Access works, being:
 - primary access works: construction of and improvements to the access route through the Asda estate and construction of a bridge over the County Council of the City and Council of Cardiff's land, crossing the disused railway corridor linking the Asda car park to the site (including a section of highway in the meadow area);
 - secondary access: construction of a single span bridge linking the site to the Hollybush estate over the County Council of the City and Council of Cardiff's land, primarily for emergency use only; and
 - temporary construction access from the south, using an existing access through the Cardiff & Vale University Health Board's land.

Site Condition

- 10.4 The Authority has procured a robust and warrantable package of surveys, which will be available for review by economic operators within a "Site Pack". The information available includes a summary of those surveys commissioned, their status and whether or not they are warrantable to Project Co/senior funders. This approach is designed to increase the efficiency of the procurement.
- 10.5 The only issue that the Authority considers requires project specific treatment on the basis of the survey reports received to date is the treatment of invasive species plants. The Authority has undertaken an invasive species survey which will be issued to Participants so that they may understand the extent of invasive species better. Himalayan balsam and giant hogweed are both found within the site and Japanese knotweed, wall cotoneaster and rhododendron have also been identified outside of the site boundary. The Authority commissioned the enabling works described above in order to mitigate against programme risk. However, following the enabling works, the Authority expects the risk associated with invasive species and delivery of the Project operations to sit with Project Co. In accordance with the MIM hard FM model, the Authority will assume all soft landscaping responsibilities throughout the duration of the operational term, however Participants will ultimately be responsible for the risk of invasive species affecting the Project operations and will be expected to manage and mitigate those risks through their construction works methodologies, for example 'root barriers' around hard landscaped areas.

- 10.6 Participants will be expected to manage the risk of the ecological and environmental constraints associated with the site, including matters identified in the surveys contained within the Site Pack. Participants will also need to refer to the conditions imposed by the planning authority, particularly the constraints within the ecotone (of a minimum of 15m width) along the edge of the Glamorgan Canal / Long Wood SSSI.
- 10.7 There are no existing buildings on the site.

Equipment Responsibilities

- 10.8 Responsibility for the specification, selection, procurement, installation, commissioning, maintenance, replacement, decommissioning and disposal of equipment is one of the core elements of the Project requiring project specific treatment within the Project Agreement. In broad terms, the Authority will be responsible for the specification, selection, procurement, installation, commissioning, maintenance, replacement, decommissioning and disposal of radiotherapy treatment machines, meaning there will be a high degree of interface and co-operation required between Project Co and the Authority during the commissioning and handover phase of the construction works. However, the Authority expects Project Co to install other 'big ticket' clinical equipment. The equipment responsibilities matrix is attached at **Appendix C**.
- 10.9 A baseline phasing solution has been adopted to reflect the final reference design and associated clinical equipment commissioning requirements (e.g. to accommodate the commissioning of radiotherapy treatment machines in pairs). However, the phasing strategy will be developed on a Participant specific basis and Participants will be invited to explore the optimal solution that achieves the core clinical and policy objectives described within the procurement documents, as a key evaluation point.

Community Benefits

- 10.10 Community Benefits will be part of the Authority's requirements for the Project. There will be a group of core baseline Community Benefits which Participants will be required to provide on a pass/fail basis. Both enhancements to the core baseline Community Benefits and the creation of additional, non-core, Community Benefits will be actively encouraged and will be evaluated by the Authority. Community Benefits will cover the following broad areas:
- recruitment and training of economically inactive people;

- opening up opportunities for small organisations, such as SME, third sector organisations and supported factories & businesses (materials and local sourcing);
- making a positive impact on the environment; and
- contributing to the local community in terms of education, regeneration & community engagement.

Energy Efficiency

10.11 The Authority is keen to engage on its approach to energy efficiency. The broad principles the Authority anticipates adopting are included in **Appendix B**.

11 General information / Clauses

Disclaimer

11.1 Neither the Authority nor its advisors will accept any liability for its accuracy, adequacy or completeness. No express or implied warranty is given relating to the information contained in this document.

General Information

11.2 This Memorandum of Information (“**MOI**”) will be available to all parties who respond to the prior information notice and published by Velindre University NHS Trust (the “**Authority**”, “**we**” or “**us**”) for the procurement of a new Velindre Cancer Centre (nVCC) and attending the market engagement meetings.

11.3 In summary, the Authority's requirements relate to the procurement of a contract for the design, build, finance and maintenance of a new cancer care centre using the Welsh Government’s Mutual Investment Model (the “**Project**” or “**Velindre Cancer Centre MIM Project**”). See sections 6-10 of this MOI for further information.

11.4 This MOI provides outline information in relation to the Project that the Authority proposes to undertake.

11.5 **This MOI is issued in relation to the Project and is provided to organisations who have expressed an interest in response to the PIN and attending the market engagement meetings, only and may not be disclosed, copied, reproduced, distributed or passed by them to any other person at any time (save for the purpose of taking legal, financial or other advice provided that an undertaking is obtained from such persons to keep the MOI confidential).**

- 11.6 No information contained in the MOI, or in any communication made between the Authority and any participating organisation in connection with the Project and the Authority's requirement shall be relied upon as constituting a contract, agreement or representation that any contract shall be offered or subsequently concluded.
- 11.7 Copyright in and to this MOI document rests with the procuring authority and its appointed advisors. This document and any attachments or ancillary documents may not either in whole or in part be copied, reproduced, distributed or otherwise made available to any other third party without the prior written consent of the Authority except in relation to the preparation of a response to this document. All documentation supplied by the Authority in relation to this project is, and shall remain the property of the Authority and must be returned on demand, without any copies being retained.
- 11.8 The Authority will not reimburse, and shall not under any circumstances whatsoever be responsible for, any costs, charges or expenses incurred by organisations in relation to the MOI or the Project.
- 11.9 In accordance with the obligations and duties placed upon public authorities by the Freedom of Information Act 2000 (the "**FoIA**"), all information submitted to the Authority may be disclosed in response to a request made pursuant to the FoIA. In respect of any information submitted by participating organisations that it considers to be commercially sensitive the organisation should: clearly identify such information as commercially sensitive; explain the potential implications of disclosure of such information; and provide an estimate of the period of time during which the participating organisations believes that such information will remain commercially sensitive. Where a participating organisation identifies information as commercially sensitive, the Authority will endeavour to maintain confidentiality. Participating organisations should note however that even where information is identified as commercially sensitive, the Authority might be required to disclose such information in accordance with the FoIA. Accordingly, the Authority cannot guarantee that any information marked 'commercially sensitive' will not be disclosed.
- 11.10 The laws of England and Wales (as applied in Wales) are applicable to the MOI, the Project, and the process referred to herein. The courts of England and Wales sitting in Cardiff will have exclusive jurisdiction to hear and decide any suit, action or proceedings, and to settle any disputes, which may arise out of or in connection with the MOI or the Project.

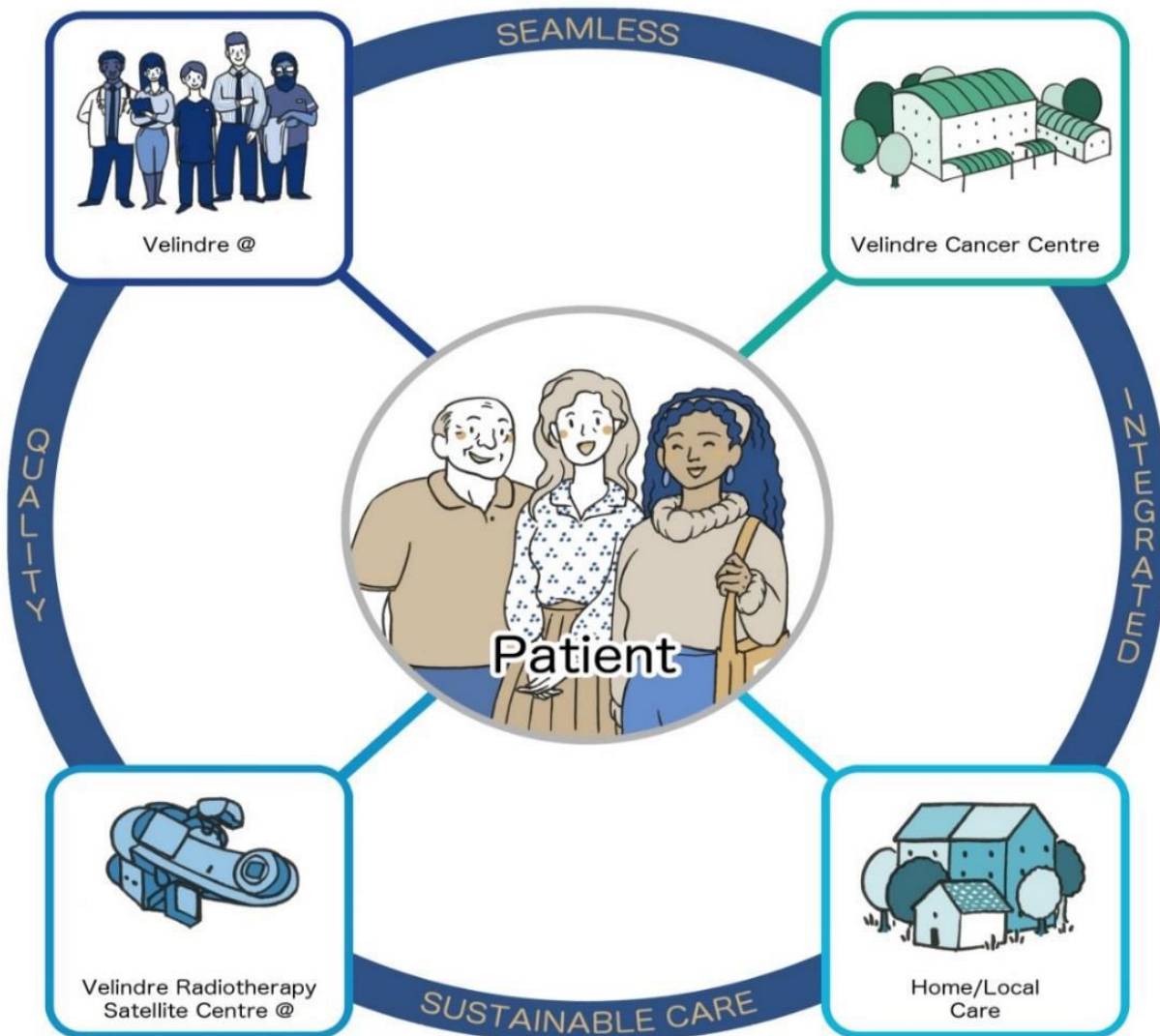
12 Glossary

| | |
|--------|----------------------------------------|
| FoIA | Freedom of Information Act |
| ITSFT | Invitation to Submit Final Tenders |
| ITPD | Invitation to Participate in Dialogue |
| LHB | Local Health Board |
| MIM | Mutual Investment Model |
| MOI | Memorandum of Information |
| NHS | National Health Service |
| nVCC | New Velindre Cancer Centre |
| NWIS | NHS Wales Informatics Service |
| NWSSP | NHS Wales Shared Services Partnership |
| OJEU | Official Journal of the European Union |
| PDF | Portable Document Format |
| PIN | Prior Information Notice |
| PQQ | Pre-Qualifying Questionnaire |
| TCS | Transforming Cancer Services |
| VCC | Velindre Cancer Centre |
| VUNHST | Velindre University NHS Trust |

Appendix A – Clinical model explained

The TCS Programme aims to deliver improved outcomes and benefits to the population of South East Wales.

Our Service Model: How Tertiary Cancer Services will be delivered at home, closer to home and in a specialist Cancer Centre



The service model seeks to promote a new relationship which works in partnership with people to identify realistic goals, to design and deliver services around patients' needs and to achieve this in a truly sustainable way. This requires the whole system of public and voluntary sector services to work together better, across traditional boundaries within

the resources available. There will need to be integration (from public health to primary and community to hospital and social care), whether working as public employees, independent practitioners or not-for-profit organisations to achieve the best possible outcomes aligned with patients' values and priorities.

This will require patients to be empowered so that they can make informed decisions about their treatment and will necessitate staff working in new and different ways. It will require fundamental changes in the way in which the whole system operates. Optimising information technology, quality improvement systems, patient involvement, education and embracing innovative approaches to healthcare will all be essential to achieve high levels of service quality in a sustainable way.

The patient will be central, within an integrated network of services organised around them. The organising principle seeks to 'pull' high quality care towards the patient that is accessible in their preferred place to support them achieving their personal goals during treatment and when living with the impact of cancer. This includes all aspects of clinical care and support and also appropriate research opportunities that patients may wish to participate in.

The model builds on our current provision of services both at VCC and South East Wales, but improves this through strategic planning, design and delivery of this new clinical service model. It is based on a range of evidenced based pathways and the provision of seamless care which will require all organisations to work together to provide patients with all the care, support and information they require at the earliest opportunity in their journey. To facilitate the successful implementation and delivery of the service model investment is required to support delivery from the following locations.

Home/Local Care: Patients will be able to receive care at their place of residence or in their local community (e.g. via primary care facilities, mobile services, 3rd sector services). Services delivered in this setting include outpatient reviews, some ambulatory care and some Systemic Anti-Cancer Therapy (SACT) chemotherapy delivery. Education and information provision will also be accessible locally. Technology and collaboration with local/community teams will be important in delivering these (e.g. telemedicine, web-information provision).

It aims to increase the provision of our services via home/local care to at least 10% of outpatient/SACT activity (from 5% currently). It is not known what the optimal proportion of home based care is for our patients. Once developed and evaluated, it would be sought to increase this proportion beyond 10% where beneficial. Whilst more convenient for many patients and in some cases more efficient, some aspects of home/local care will be less efficient than hospital based services.

Health Boards: A range of cancer care occurs within the LHBs, with a significant proportion of patients having all their care delivered by the LHB team. This needs to be seamlessly planned with the non-surgical aspects of the pathway, as patient care can move from one team to another. The Velindre@ Outreach facilities and collaborative

working will support this, but in addition to that, Velindre clinical staff will deliver planned support to LHB inpatients and local AOS.

It is expected that as more patients have their care delivered locally to them, acute problems will be managed increasingly within LHB settings. This already occurs, but the proportion of patients managed locally will increase. To support this, Velindre teams will be present in LHBs working closely with fellow clinicians and professionals, to see patients and guide investigations/treatment. Experience suggests that this can improve patient experience, quality of care and reduce length of stay, benefitting the people affected by cancer and LHB teams jointly.

Velindre@: These facilities will provide SACT, outpatient services, education and information provision and ambulatory care procedures within LHBs. They will not have inpatient beds – if admission is needed this will be via LHB teams/facilities, supported by oncology teams, or via VCC. They will be planned jointly with LHB teams, supporting collaborative working and helping to meet the needs of LHB and Velindre commissioned parts of the care pathway. This joint working will generate additional opportunities for benefits to patients beyond the scope of the clinical service model (for example, opportunities to support earlier diagnosis or links with surgical oncology or haematology teams within LHBs). These local centres of excellence will improve efficiency, experience and access by collaboratively developing planned and delivered services within each LHB. With planning, a move can be made from a variable, poorly planned service to a high quality, sustainable service to deliver care without the need for as many patients to travel to the main Cancer Centre in Whitchurch.

Velindre Radiotherapy Satellite Centre@: This will provide radiotherapy treatment for approximately 20% of our patients (provided by 2 new linear accelerators). This means better access for patients, reduced travel for patients and less use of transport services. It will mean that some patients from one LHB population may have access to their radiotherapy from within another LHB catchment population. This will mean that fewer patients need to travel to VCC for their radiotherapy. However, it should be noted that not all radiotherapy treatments will be available at the satellite facility at the day of opening, although it is envisaged that a full range of radiotherapy treatments will be introduced over time in a phased manner.

nVCC: The Cancer Centre will provide specialist and complex cancer treatment including SACT, radiotherapy (including brachytherapy and unsealed sources) and specialist palliative care, inpatient facilities (being open for admission 24 hours/day, 7 days/week), a specialist oncology assessment unit and outpatient services, radiology and nuclear medicine. Due to its geographical location (i.e. within the Cardiff and Vale University Health Board area) it will also form part of the system providing local care to patients for whom it forms the nearest non-surgical cancer facility. Patients will only have to travel to VCC if their care cannot be delivered more locally. It will also host the Collaborative Centre for Learning, Education and Innovation – a system resource for VCC and the region, supporting clinical care throughout South East Wales via links with Velindre@ facilities.

One of the key delivery locations is a new Velindre Cancer Centre (nVCC), located in Whitchurch, Cardiff.

Appendix B – Energy Principles

1. **Construction Phase & Design and Construction Energy Target**

- 1.1 Completion Testing: Authority's Construction Requirements and Section 7 of Schedule 6 (Thermal and Energy Efficiency Testing Procedure), Appendix B of Schedule 10 (Outline Commissioning Programme)
 - 1.1.1 Project Co's design of the Facilities is required to comply with BREEAM 2014 "Excellent" as a minimum standard.
 - 1.1.2 Verification and completion testing is required before the Works are signed off by the Independent Tester as being compliant with the energy efficiency requirements contained in Project Co's Proposals and the Authority's Construction Requirements. In order to obtain the Certificate of Practical Completion, the Independent Tester must be satisfied that the Facilities demonstrate compliance with the "Energy Performance Requirements" (which will essentially be the greater of a BREEAM (2014) Excellent level of performance for credit ENE 01 Reduction of CO₂ emissions and the commitments bid by Project Co in the Compliance Energy Model) and the Thermal Performance Requirements. Compliance with the Energy Performance Requirements is verified using the "As Built Compliance Energy Model", which shall be consistent with the information contained in the Compliance Energy Model developed at bid stage. The Thermal Performance Requirements (e.g. minimum and maximum room temperatures as set out in the Authority's Construction Requirements) are verified against the "As Built Thermal Model".
- 1.2 Post Completion Testing/Measurement and Verification Plan: Clauses 17.23-17.31 and Section 7 of Schedule 6 (Thermal and Energy Efficiency Testing Procedure)
 - 1.2.1 The Authority has set a net target of 275kWh/m² in respect of the design and construction of the Facilities (the "Design and Construction Energy Target"). However, bidders are invited to bid the Design and Construction Energy Target in their Project Co Proposals and will be evaluated on their response. The target will be populated in the contract documentation at financial close, based on dialogue with the successful Participant. It is not expected that this figure will be lower than the Authority's target but pass/fail evaluation criteria will not be applied to target setting. What is being tested is the annual kWh usage target of regulated energy systems (i.e. Group 1a Equipment, fixed building systems, plant and infrastructure but not small power and medical equipment). However, the actual regulated energy consumption figures will be measured and assessed using an assumed unregulated energy consumption figure. This is intended to better

test the “skin” of the building as well as the kit, without being unduly impacted by user interface.

- 1.2.2 Energy consumption for the first two full years of operation following the Initial Date (being 12 months after the final commissioning end date for the final Phase) will be used to determine whether the Facilities have achieved the Design and Construction Energy Target. If those two years (termed the “Monitoring Period”) are not ‘average’ (i.e. within +/- 3% of the 20 year heating degree-day average for the locality) then the monitoring period is extended until the first two average years (or 24 rolling months) are found in a 5 year period. If the “Verified Energy Performance” of the Facilities is such that the Design and Construction Energy Target is not met during the Monitoring Period then the Authority has the option of:

1.2.2.1 requiring Project Co to rectify the cause of the failure at its own expense such that the Design and Construction Energy Target can be met (and to obtain compensation in respect of the additional energy costs incurred during the Monitoring Period and up to the date of rectification); or

1.2.2.2 claiming compensation in respect of the additional energy costs incurred by the Authority as a result of failure to meet the Design and Construction Energy Target for the remainder of the Project Term, through adjustments to the Monthly Service Payment under the Payment Mechanism.

The Authority’s default position should be for Project Co to rectify any fault such that the Design & Construction Energy Target can then be achieved. However, if the failure is marginal or there are practical reasons why rectification is not appropriate then the Authority, acting reasonably, may consider accepting compensation rather than insisting on rectification.

- 1.2.3 As part of the testing process during the Monitoring Period, the Independent Tester shall develop and provide a Measurement and Verification Report in accordance with the requirements for testing set out in the agreed Measurement and Verification Plan (the “M&V Plan”). The M&V Plan is developed by a Certified Measurement and Verification Professional on behalf of Project Co as part of their response to the M&V Plan Specification contained in the Authority's Construction Requirements (based in turn on the requirements of the International Performance Measurement and Verification Protocol). The agreed M&V Plan is included in Section 7 of Schedule 6 (Thermal & Energy Efficiency Testing Procedure). This approach is intended to employ a sophisticated analysis of data and avoid dispute on, for example, user impacts (a common issue on operational projects).

2. Operational Term

2.1 Energy Cost: Paragraph 1 of Section 6 of Schedule 14 (Payment Mechanism) and Clauses 23.28-23.30

- 2.1.1 Project Co may include charges for Utilities (electricity, gas etc.) in the Monthly Service Payment, where costs are reasonably incurred and supported by invoices. These are referred to as PTCs or pass through costs.
- 2.1.2 Following the Monitoring Period, the “Annual Energy Target” shall be tested against actual consumption, on an annual basis.
- 2.1.3 The Annual Energy Target is the target volume of regulated energy consumption (measured in kWhs per annum) that Project Co must achieve during the Operational Term, broken down by fuel type as follows:
 - (i) Annual Energy Target of [Heating Fuel] = [***] kWh per annum
 - (ii) Annual Energy Target of Electricity = [***] kWh per annum

For the first 5 years, the Annual Energy Target will be the same as the Design and Construction Energy Target bid by Project Co, as adjusted to reflect any increase which the Authority is compensated for as a result of failure to meet the Design and Construction Energy Target. However, the Annual Energy Target will also be subject to review on a five yearly basis, using published degree-days data. Where it is evident that external factors impact achievement of the target, the Annual Energy Target shall be re-set. This review will be carried out by the Independent Tester (or another independent expert agreed by the parties) and must exclude the impact of degradation and lifecycle-related costs, which remain the responsibility of Project Co. The Annual Energy Target will not be adjusted as a result of Relief Events, Force Majeure or Excusing Causes. The independent expert analysis shall be carried out on a Good Industry Practice basis but shall not be a full Measurement and Verification process carried out by an M&V expert, for cost reasons. Project Co shall also be entitled to review the energy mix and Energy Management Plan at each five yearly review date. Any proposed change shall be treated as a Project Co Change and shall only be implemented where agreed by the Authority in accordance with the terms of Section 5 of Schedule 16 (Change Protocol).

- 2.1.4 The Annual Energy Target will be tested by fuel type. Actual consumption figures for each fuel type will be monitored and reported by Project Co in accordance with the Energy Management Plan (as set out in section 2.2. below). Regulated energy consumption for each fuel type will again be assessed using an assumed unregulated energy consumption figure. The annual review and analysis must be carried out in accordance with Good

Industry Practice but will not comprise a full Measurement and Verification process carried out by an M&V expert, for cost reasons.

- 2.1.5 Achievement of the Annual Energy Target shall be subject to a tolerance band of +/- 3% within which no pain share or gain share will be levied. Outwith the tolerance band, the cost of under and over consumption will be borne by or credited to Project Co and the Monthly Service Payment adjusted accordingly, through the Payment Mechanism. Where consumption is either 13% above or below the Annual Energy Target, this will trigger a further review by an independent expert, who will investigate the reasons for such an unusual deviation and allocate the costs or savings between the parties. Any Energy adjustments made under the pain share / gain share mechanism will be calculated using the average cost of Energy (Average Unit Cost), such average cost to include all fixed, standing charges and levies and to be calculated against the volume and mix of Energy (i.e. electricity and fossil fuel(s)) predicted by the Annual Energy Target.
- 2.2 Energy Management Plan: Service Level Specification and Section 7 of Schedule 14 (Payment Mechanism)
 - 2.2.1 The Services delivered by Project Co will include an Energy and Utilities management service which will require Project Co to monitor energy usage during the Operational Term (including regulated and un-regulated energy consumption) and to operate plant efficiently and in accordance with the Energy Management Plan. Project Co will be obliged to produce an Energy Management Plan within its method statements, including the methodology for sub-metering, data normalisation, reporting, how the energy design strategy shall be implemented and maintained during the Operational Term and the hierarchy of operation of Project Co's heat and power plant to ensure the efficient operation in line with design intent. For example, if a Combined Heat and Power (CHP) plant is proposed in the design to provide lead thermal power, the Energy Management Plan will set out the conditions that this energy efficient plant will operate under.
 - 2.2.2 The detailed reports will be used to inform compliance with the Annual Energy Target and the hierarchy of operation of Project Co's heat and power plant against Project Co's design intent and carbon emission modelling. However, failure to comply with the Energy Management Plan will result solely in Performance Failures related to specific Performance Standards in the Service Level Specification, which will in turn give rise to Payment Mechanism deductions. Any impact on energy cost as a result of fuel type usage will be dealt with through the Annual Energy Target calculations.

Appendix C - Equipment Responsibilities Matrix

| Group | Initial Specification and Selection | Initial Procure | Initial Installation/Fix | Initial Commission (training if required) | Maintain | Refresh Specification and Selection | Refresh Procure/ Replace | Refresh Installation/Fix | Refresh Commissioning (training if required) | Refresh De- commissioning | Refresh Disposal |
|-------|-------------------------------------|-----------------|----------------------------------------|-------------------------------------------|-------------|-------------------------------------|--------------------------|----------------------------------------|----------------------------------------------|---------------------------|------------------|
| 1a | Authority | Project Co | Project Co | Project Co | Project Co | Authority | Project Co | Project Co | Project Co | Project Co | Project Co |
| 1b | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co | Project Co |
| 2a | Authority | Authority | Authority (through Equipment Supplier) | Authority (through Equipment Supplier) | Authority | Authority | Authority | Authority (through Equipment Supplier) | Authority (through Equipment Supplier) | Authority | Authority |
| 2b | Authority | Authority | Project Co | Authority | Authority | Authority | Authority | Project Co | Authority | Project Co | Authority |
| [2c] | [Authority] | [Authority] | [Project Co] | [Authority] | [Authority] | [Authority] | [Authority] | [Project Co] | [Authority] | [Project Co] | [Authority] |
| 3 | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority |
| 4 | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority | Authority |

Appendix D - Site Plan

