Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

Cyfarfod Cyhoeddus y Bwrdd/ Public Board Meeting

DYDDIAD Y CYFARFOD: **DATE OF MEETING:**	30 July 2026
TEITL YR ADRODDIAD: **TITLE OF REPORT:**	Additional 5th Linear Accelerator (Linac Radiotherapy Treatment machine) Business Justification Case
CYFARWYDDWR ARWEINIOL: **LEAD DIRECTOR:**	Lee Davies, Executive Director of Strategy and Planning
SWYDDOG ADRODD: **REPORTING OFFICER:**	Anne Simpson, Head of Strategic Commissioning Richard Jenkins, Assistant Finance Director Commissioning, Business Intelligence and Value

Pwrpas yr Adroddiad (dewiswch fel yn addas) **Purpose of the Report** (select as appropriate)
Ar Gyfer Penderfyniad/For Decision

ADRODDIAD SCAA
SBAR REPORT

Sefyllfa / Situation

This paper presents the full Business Justification Case (BJC) for a fifth linear accelerator (LINAC) at the South West Wales Cancer Centre (SWWCC), together with the CT simulation (CT-Sim) capacity needed to use it safely and effectively. The Board is asked to support the case and formally approve Hywel Dda University Health Board's share of the recurrent cost.

The full-year recurrent cost across both health boards is £2.774 million, reported as £2.8 million. Hywel Dda's 50% share is £1.387 million, reported as £1.4 million. This is not a new £1.4 million pressure.

Of the £1.387 million Hywel Dda share, circa £1.0 million was agreed in principle and is already reflected in the current financial plan. The residual recurrent pressure is £0.387 million, reported as circa £0.4 million.

The £0.387 million residual is Hywel Dda's share of two changes since the indicative May 2025 position: a £0.268 million pay and non-pay refresh for the fifth LINAC across both boards, and £0.506 million for CT-Sim expansion. The CT-Sim element is not a separate discretionary addition. It is required to convert the fifth machine into additional treatment capacity.

The capital requirement is £6.832 million. Swansea Bay University Health Board leads the capital case and will seek funding from Welsh Government. Hywel Dda is not being asked to fund this capital sum.

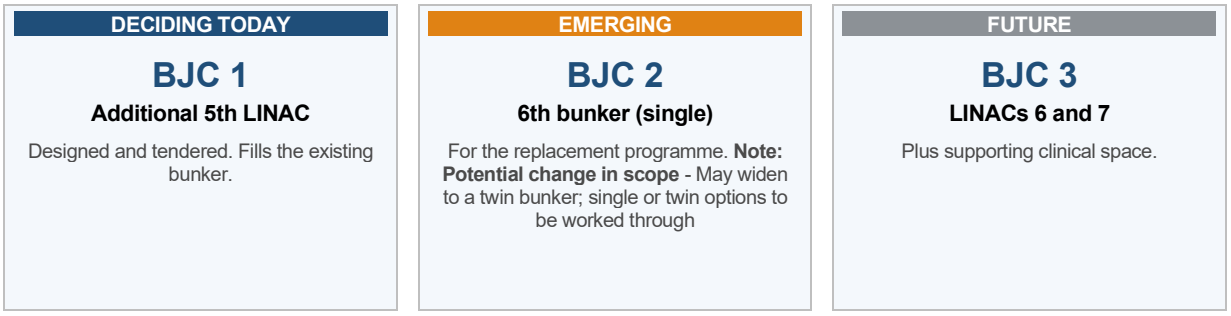
HDdUHB share: £1.4m (half of the £2.8m total)

£1.0m already agreed in principle (in plan)	**£0.4m** Increase/Movement

Today's decision relates to BJC1, the fifth LINAC and enabling CT-Sim capacity. The options for a future single or twin bunker (BJC2), and for sixth and seventh LINACs (BJC3), are noted for context only and will return through separate business cases. They should not delay the immediate decision.

Cefndir / Background

Swansea Bay University Health Board and Hywel Dda University Health Board approved the South-West Wales Cancer Centre Strategic Programme in 2023. Welsh Government subsequently agreed that the programme should progress through three linked business cases.



Discussions are ongoing regarding the approach to BJC 2, including consideration of single versus twin bunker configurations, along with the provision of associated clinical space at Singleton Hospital and their respective implications for the scope of BJC3, future capacity and service sustainability.

However, the fifth LINAC is a defined and deliverable first step.

The immediate case is supported by:

- rising demand that already exceeds the capacity of four machines;
- sustained delays for patients waiting for radiotherapy;
- the need for greater resilience during breakdowns, maintenance and replacement; and
- the additional machine and planning time required for adaptive radiotherapy and other complex treatments.

Why this matters

The SWWCC serves approximately 0.9 million people across Swansea Bay, Hywel Dda and parts of Powys. The four current machines provide 32,525 treatment slots a year. The recent demand model indicates demand of about 42,659 slots by 2027/28. A fifth machine adds about 8,131 slots, making it the minimum immediate intervention rather than the whole long-term solution.

The access evidence is clear. For scheduled radiotherapy in May 2026, the average wait was 27 days. Only 7% of patients were treated within 14 days against an 80% measure, and 14% within 21 days against a 100% measure. Overall, 86% were outside the target time.

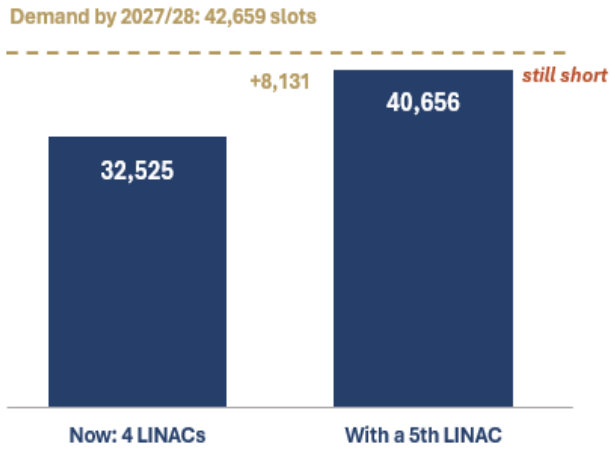
The present capacity constraint therefore means:

- patients wait longer for curative and palliative treatment;
- staff have less flexibility to absorb breakdowns and deliver complex treatment safely;
- the service remains exposed to backlogs and additional outsourcing pressure; and
- further infrastructure will still be required for replacement and later growth.

Asesiad / Assessment

DEMAND

Demand now exceeds available capacity. The fifth LINAC is required in 2027/28, with CT-Sim capacity mobilised in advance. Current modelling also indicates the need for further machine and bunker capacity later in the decade. Those later choices are separate decisions.



Slots a year. Each machine provides about 8,131 slots, above the 7,500 all-Wales planning level.

INDICATIVE TIMELINE

Subject to timely approvals, including Welsh Government approval anticipated in October 2026, installation and clinical commissioning are expected to begin in the final quarter of 2026/27. The fifth LINAC is expected to become operational in the first half of 2027/28.

FINANCIAL IMPLICATIONS

1. **Capital cost (for awareness): £6.832 million**

- The design and tender are complete at Royal Institute of British Architects Stage 4.
- The appointed cost adviser has reviewed the tendered sum as representing good value.
- The procurement route is compliant and the cost includes a 4.99% risk contingency. The case excludes optimism bias.

2. **Recurrent revenue: £1.387 million Hywel Dda full-year share of the £2.774 million total**

5th LINAC & CT SIM expansion costs (all figures £'000)

	5th LINAC Cost	5th LINAC HD Share	CT-SIM Cost	CT-SIM HD Share	Total Cost	Total HD Share
2026/27	69	34.5	105	52.5	174	**87**
2027/28	1,991	995.5	506	253	2,497	**1,248.5**
2028/29	2,248	1,124	506	253	2,754	**1,377**
2029/30	2,268	1,134	506	253	2,774	**1,387**

The full-year recurrent requirement comprises:

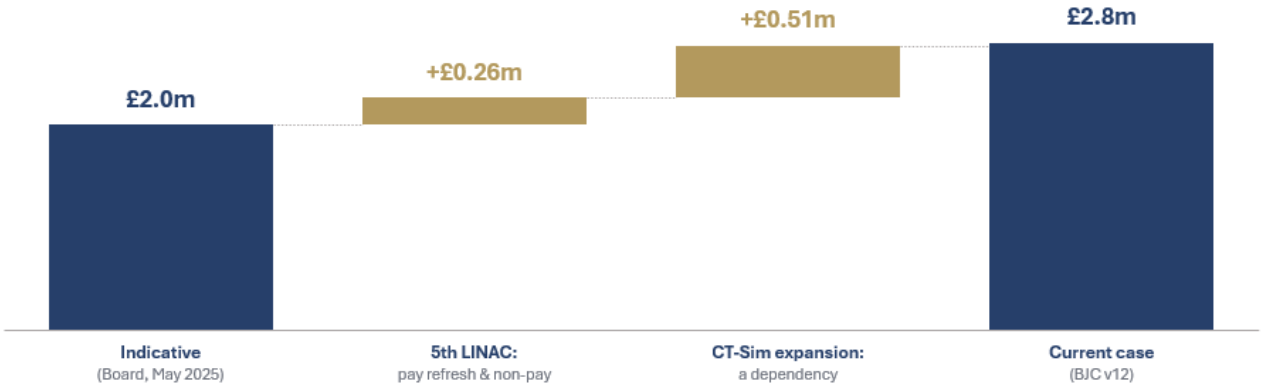
- Fifth LINAC: £2.268 million across both boards, including the unchanged 21.30 whole-time equivalent (WTE) operating team.
- CT-Sim expansion: £0.506 million across both boards and 5.25 additional WTE, increasing utilisation from 34.5% to 60%, with an interim 38% in 2026/27.

CT-Sim is an essential step in radiotherapy planning. Without the additional scanning and planning capacity, the fifth LINAC cannot deliver the intended increase in patient throughput.

- Set-up costs of up to £0.174 million fall in 2026/27. Hywel Dda's £0.087 million share is already held in the plan.

Why the recurrent cost has changed since May 2025

The original £2.0 million was an indicative figure for the fifth LINAC. The final case is £2.774 million. The movement is £0.268 million for refreshed fifth-LINAC pay and non-pay costs and £0.506 million for the enabling CT-Sim expansion. Hywel Dda incurs half of the £0.774 million movement, which is £0.387 million. This is the residual recurrent pressure requiring a decision.



Affordability

Hywel Dda's full-year recurrent contribution as previously stated is £1.387 million.

Circa £1.0 million is already reflected in the current financial plan. The remaining £0.387 million will need to be addressed through the financial planning process for 2027/28. In the absence of offsetting action, it would increase the planned deficit or the savings requirement. However, for assurance, the commissioning team continues to challenge and ensure all resources are being fully utilised, where any opportunity is identified, the appropriate mechanisms and considerations are utilised.

Swansea Bay agreed the funding source for its own share at its Executive Board on 24 June 2026, with this also approved by the Formal Executive Team (FET) and Strategy and Planning Committee (SPC) in June 2026.

Value for Money

The proposal utilises an existing empty bunker and is based on a completed tender. The business case also notes that, for a defined group of patients where clinically appropriate, complex radiotherapy costs about £3,000, compared with about £9,000 for axillary surgery. This is a pathway-specific illustration, not a whole-case savings estimate.

BJC2 and BJC3: separate future decisions

BJC2 and BJC3 are not being approved through this paper. They are included only because the fifth LINAC sits within a longer programme of machine replacement and capacity growth. Further, the commissioning team wants to ensure that the Board are fully sighted on where we are currently, whilst highlighting the on-going requirements.

BJC2 was originally scoped as a single bunker to accommodate the rolling LINAC replacement programme. However, the scope of BJC2 may now widen to include a twin bunker option. The associated options and choices will need to be worked through and developed in detail, prior to a decision being reached.

This is linked to the modelled requirement for a 7 LINAC service by 2030/31. Whilst a satellite centre within Hywel Dda remains a key strategic aspiration for the Health Board, delivery is currently estimated to take about 5 to 5.5 years, even under an optimistic timetable, and no Hywel Dda site has yet been identified. Consequently, the delivery timescales for a satellite centre do not align with the projected requirement for additional LINAC capacity.

Consideration of a twin bunker option could, therefore, provide the additional resilience and future capacity headroom required whilst longer term satellite centre plans are progressed. A twin bunker would, however, take longer to deliver than a single bunker and the option chosen may affect the LINAC replacement schedule.

A spare bunker is also needed to protect capacity during future machine replacements. Without one, a replacement could reduce treatment capacity by about 20% to 25% for approximately 12 months. The BJC2 options should, therefore, progress at speed and return through the agreed governance route.

Approval of BJC1 does not approve a twin bunker or further operating LINACs. Those choices, costs and benefits will require separate Board decisions.

APPENDICES

Appendix 1: Business Justification Case for the Installation of a Fifth Linear Accelerator at the South West Wales Cancer Centre (SWWCC), Singleton Hospital, version 12.
Appendix 2: Time to Radiotherapy Benchmarking across Wales.
Appendix 3: Swansea Bay Radiotherapy Monthly Report, May 2026.
Appendix 4: Swansea Bay Integrated Impact Assessment.
Appendix 5: Swansea Bay Quality Impact Assessment Tool for the fifth LINAC.

Argymhelliad / Recommendation

The Board is asked to:

- **APPROVE** the Business Justification Case for the fifth LINAC and the enabling expansion of CT-Sim capacity.
- **APPROVE** Hywel Dda's full-year recurrent contribution of £1.387 million (reported as £1.4 million), noting that circa £1.0 million is already reflected in the current planning position and £0.387 million (circa £0.4 million) is the residual recurrent pressure.
- **SUPPORT** the £6.832 million capital case led by Swansea Bay and funded by Welsh Government, noting that this is not a capital funding request to Hywel Dda.
- **NOTE** the risk to timely access, patient experience, service resilience and cost if the fifth LINAC is delayed.
- **NOTE** that the single or twin bunker choice in BJC2, and any later sixth or seventh LINAC, are not approved by this decision and will return separately.
- **SUPPORT** continued development of the BJC2 options through the agreed governance route.

Amcanion: (rhaid cwblhau) **Objectives: (must be completed)**	
Cyfeirnod Cofrestr Risg Datix, Teitl a Sgôr Risg Cyfredol: Datix Risk Register Reference and Score:	Datix 2599 (score 20), Datix 89 (score 16) and Datix 2593 (score 16). Titles, controls and mitigations are set out in Appendix 1.
Parthau Ansawdd: Domains of Quality Quality and Engagement Act (sharepoint.com)	Safe, timely, effective, efficient, equitable and person-centred care.
Galluogwyr Ansawdd: Enablers of Quality: Quality and Engagement Act (sharepoint.com)	Whole-systems approach; leadership; workforce; information; learning, improvement and research.
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable.
Nodau Cynllunio 2026/27 Planning Goals 2026/27	1. Healthy, Thriving Teams 5. People First, Digital Always 6. Safe, Timely, High Quality Care 8. Fit for Purpose, Modern Facilities and Services
Hypergyswllt i Amcanion Llesiant HDdUHB 2026 Hyperlink to HDdUHB Well-being Objectives 2026	All HDdUHB Well-being Objectives apply, with the principal contribution being improved access to timely and equitable cancer treatment.
Model Cymdeithasol ar gyfer Iechyd a Llesiant: (wedi'i gwblhau ar gyfer newid strategol a/neu newidiadau sylweddol i wasanaethau) A Social Model for Health and Wellbeing: (*complete for strategic change and/or significant service changes)*	Applicable. The proposal supports timely and equitable regional access. The social, equality and well-being impacts are addressed in Appendix 4.
Gwybodaeth Ychwanegol: **Further Information:**	
Ar sail tystiolaeth: Evidence Base:	Business Justification Case and Appendices 2 to 5.
Rhestr Termau: Glossary of Terms:	BJC: Business Justification Case. LINAC: linear accelerator. CT-Sim: computed tomography simulation. WTE: whole-time equivalent.
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y cyfarfod hwn: Parties / Committees consulted prior to this meeting:	HDdUHB: Board paper, May 2025; Executive Team, 3 June 2026; Strategy and Planning Committee, 25 June 2026.

	SBUHB: Executive Board, 24 June 2026 (case supported); Performance and Finance Committee, 28 July 2026; Board, 30 July 2026.

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Welsh Government capital funding of £6.832 million is sought through Swansea Bay. Hywel Dda's full-year recurrent contribution is £1.387 million. Circa £1.0 million is already in the current plan. The residual recurrent pressure is £0.387 million.
Ansawdd / Gofal Claf: Quality / Patient Care:	The Quality Impact Assessment identifies material risk in continuing with current capacity. In May 2026, the average scheduled wait was 27 days and 86% of patients were outside the target time. The proposal is expected to improve access, resilience and the ability to deliver modern treatment. See Appendix 5.
Gweithlu: Workforce:	The fifth LINAC requires 21.30 additional WTE. CT-Sim expansion requires a further 5.25 WTE. Delivery depends on timely recruitment, training and competency development; the workforce model is included in Appendix 1.
Tegwch Iechyd: Health Equity:	The Integrated Impact Assessment identifies an expected positive impact on equitable access by reducing delays and the need for some patients to travel outside South West Wales. No adverse impact on protected groups has been identified. See Appendix 4.
Risg: Risk:	The principal recorded risks concern loss of capacity following equipment failure (Datix 2599, score 20), breaches of radiotherapy access standards (Datix 89, score 16) and the Radiotherapy Physics space constraint (Datix 2593, score 16). Delivery risk includes approval, recruitment and programme timing.
Cyfreithiol: Legal:	No specific legal issue prevents the decision. Delivery remains subject to radiotherapy regulation, compliant procurement, equality duties and Welsh Language Standards.
Enw Da: Reputational:	There is reputational risk if sustained access and resilience pressures are not addressed. The decision should continue to rest on clinical need, affordability and deliverability.
Gyfrinachedd: Privacy:	No patient-identifiable information is included in this paper.
Cydraddoldeb: Equality:	An Integrated Impact Assessment has been completed. It identifies no adverse impact on protected groups and an expected positive impact through improved regional access and reduced travel for some patients. See Appendix 4.

Installation of a 5th Linear Accelerator at the South West Wales Cancer Centre, Singleton Hospital

Version 12

Document control sheet

Client	Swansea Bay University Health Board (SBUHB)
Document Title	Installation of a 5th Linear Accelerator at the South West Wales Cancer Centre, Singleton Hospital
Version	12
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Author	Shannon Mason, Deputy Capital Business Planning Manager
Date	14.07.2026
Further copies from	**Email: Shannon.Mason@wales.nhs.uk** **quoting reference and author**

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1 The Strategic Case

1.1 Introduction

This fully tendered business case seeks Welsh Government (WGov) support of £6.832m (including non-recoverable VAT) for strategic capital investment to provide a 5th Linear Accelerator (Linac) within the South West Wales Cancer Centre (SWWCC). The new Linac will be commissioned in the current void bunker at Singleton Hospital.

Swansea Bay University Health Board (SBUHB) and Hywel Dda University Health Board (HDdUHB) jointly developed a Strategic Programme Case (SPC) for the SWWCC to support regional non-surgical oncology services, including radiotherapy and outpatient services. The SPC, approved by both health boards in 2023, outlines the planned development of regional service models and joint business cases.
Under the SWWCC Regional Strategic Programme, two groups were established in 2024/25 to take forward key strategic deliverables, including the Radiotherapy Modernisation Group. The main priorities are:

- Implementing a 5th Linac in the current empty bunker at Singleton Hospital
- Developing a 6th bunker at Singleton to maintain capacity during the planned equipment replacement programme
- Exploring options for developing a 6th and 7th working Linac, either at the Hywel Dda Satellite Centre or within Swansea Bay, based on radiotherapy modelling

Following the Health Board's approval in July 2025 to approach Welsh Government for a Business Case Scoping discussion regarding the Linac 5 machine and Linac 6 bunker, agreement was reached with Welsh Government in October 2025 to proceed with the development of three Business Justification Cases (BJCs) as outlined below:

- **BJC 1:** This case supports the introduction of an additional 5th linac within the SWWCC. The proposal has been fully designed and tendered. Following investment and completion of the necessary works, this will result in no remaining spare bunker capacity.

- **BJC2:** This case will support enabling works for the development of works for a 6th spare bunker in Singleton Hospital. This is required to facilitate the planned linac replacement schedule (shown below) which aligns with the national requirements set out in the Service Specification for External Beam Radiotherapy Services in Wales (approved by all Health Boards and NHS Trusts on 31 July 2025). There is a potential change in scope to the previously outlined BJC2, to include a twin (7th) bunker. This report is also highlighting the potential change in scope regarding BJC2, however, at this stage the associated options and choices will need to be developed in detail prior to a decision being reached.

- **BJC 3:** Subject to confirmation of the appropriate business case format, this case will support the future development of Linacs 6 and 7, including the provision of associated clinical space, with the location to be determined. The scope of works and outturn costs are subject to agreement on the preferred site and build solution.

Currently, discussions are ongoing regarding the approach to BJC2, including consideration of single versus twin bunker configurations, including the provision of associated clinical space at Singleton Hospital and their respective implications for the scope of BJC3, future capacity and service sustainability. BJC2 was originally scoped as a single bunker to support the rolling replacement programme (as outlined in the table below). However, a recent critical path analysis indicates that delivery of a satellite centre would take approximately 5–5.5 years, even under an optimistic timeline This is based on the current position that no suitable site has yet been identified on the Hywel Dda University Health Board estate.

As a result, this timeline does not align with the projected requirement for additional LINAC capacity, specifically the 6th Linac (2029/30) and a potential 7th Linac (2030/31). Given that BJC2 is already planned as a single bunker, there is a strong logistical case for considering an expansion of scope to a twin bunker at this stage, rather than revisiting construction at a later date. This approach would provide greater resilience and create additional capacity headroom for future demand.

The future Linac replacement programme depends on the availability of a spare bunker (BJC2). Without one, replacements could still go ahead, but this would result in approximately 12 months of reduced capacity (20-25%), offsetting the benefits of adding a fifth Linac. In practical terms, while the number of machines available will potentially reduce to 4 during a replacement (until such time bunker comes online), maintaining the capacity of 5 linacs would be require a range of mitigating actions such as significant workforce replanning, service redesign and optimisation of available resources. However, these measures would represent a temporary interim solution and would not be sustainable in the longer term. It is therefore critical to move at pace with the options for BJC2.

There is a risk to the future delivery of the linac replacement programme, which will be influenced by the selected bunker option. The construction and fit-out requirements differ between a single and twin bunker, with the twin bunker option taking longer to deliver. There is also some overlap with when additional linac capacity is needed, creating an added dependency. As a result, the chosen option and any associated delays may impact the replacement schedule. The options and choices will need to be worked through and developed in detail prior to a decision being reached. The associated options will need to be fully explored and developed in detail before any final decision is made.

The planned Linac replacement programme for SWWCC's existing Linacs is based on a lifespan of 10 years as follows:

Linac	Installed	Accepted	Clinical	Ideal Replacement Date	Latest Replacement Date
Lin1	Jul 2017	Sep 2017	Mar 2018	Jul 2027	Mar 2028
Lin2	Mar 2019	Jun 2019	Mar 2020	Mar 2029	Mar 2030
Lin3	Jan 2022	Feb 2022	Jul 2022	Jan 2032	Jul 2032
Lin4	Jan 2023	Feb 2023	Aug 2023	Jan 2033	Aug 2033

The immediate priority is securing funding for the additional 5th Linac, which is required to be operational by mid-2027.

Investment in additional Linac capacity will:

- Support planned demand
- Address backlogs in the radiotherapy treatment pathway
- Support SBUHB in meeting the Welsh Government's "Time to Radiotherapy" measure
- Enable delivery of adaptive Radiotherapy, Stereotactic Radiosurgery (SRS) and more complex treatments, contributing to SWWCC's provision of world-class cancer care

1.2 Background

The South West Wales Cancer Centre (SWWCC) based at Singleton Hospital in Swansea, serves nearly one-third of Wales' population and provides the majority of non-surgical oncology services in South West Wales. As one of only three cancer centres in the country, it plays a central role in delivering high-quality cancer care.

Radiotherapy is a core component of curative (radical) and palliative cancer treatment, used alone or with other modalities in approximately 50% of radical cancer cases. Access rates in Wales remain lower than elsewhere in the UK. At SWWCC, radiotherapy is delivered entirely via Linear Accelerators (Linacs), with 70–80% of capacity dedicated to curative treatment.

Demand for radiotherapy continues to rise due to an ageing population and increasing use of adaptive and complex techniques. Recognising this, SBUHB and HDdUHB jointly approved a 10-year Strategic Plan for Cancer (SPC) in 2023, with sustainable delivery of radiotherapy services identified as a core component. The investment in a 5th Linac is therefore critical to meeting this strategic commitment.

1.3 Recommendation

This business case supports the development of an additional 5th Linac Accelerator at the South West Wales Cancer Centre at Singleton Hospital. The Health Boards' estimate that construction work could start in Q4 26/27 to support operational delivery in Q2 27/28.

We recommend that the Welsh Government approve this project.

Signed and Dated: ……

Gareth Blandford, Senior Responsible Officer,

Associate Service Group Director, NPTSSG Directors, Swansea Bay University Health Board

2 Strategic Context

2.1 Introduction

This section outlines the strategic context for this investment.

2.2 Service Detail

Radiotherapy (RT) is a core cancer treatment, aimed at achieving cure while preserving quality of life. It works by using radiation to destroy cancer cells and can be used in the early stages of disease, once cancer has begun to spread and for palliation in later stage disease. Around 50% of all cancer patients require radiotherapy at some point in their treatment, and this is expected to rise to 60% over the next few years.

The SWWCC, currently operates four Linear Accelerators (Linacs) and one void 'decant' bunker, which is crucial for enabling equipment replacement without reducing treatment capacity. Radiotherapy is delivered in small units called 'fractions', but advances such as 'hypofractionation' allow fewer visits with equivalent patient outcomes. This innovation delayed the need for a 5th Linac at the SWWCC for over five years

However, more complex treatments—such as Stereotactic Body RT (SABR) and hypofractionated RT—require significantly more Linac time, typically 2–3 × 30-minute slots per attendance. As a result, 'slots' have become a more accurate way to measure activity than fractions or attendances. Currently, on average, 1 fraction = 1 attendance = 1.01 slots, with 11.04 slots required for a full radiotherapy course per patient.

Demand is now exceeding available capacity, meaning a new (5th) Linac will be required by 2027, with an additional void bunker needed by 2027/28. This rising demand is being driven by two main factors: **overall growth in ageing population and the increasing use of adaptive radiotherapy.**

Demand, Capacity and Adaptive Radiotherapy

The four existing linacs at the SWWCC have a combined capacity 32,525 slots per year, averaging 8,131 slots per Linac. Before Covid-19, demand had surpassed this capacity, highlighting the need for a 5th Linac machine. In 2018 and 2019, two prostate patient cohorts were outsourced to the Rutherford Cancer Centre to manage the pressure, at an approximate cost £6,000 per patient.

Based on updated modelling, and using 8,131 slots per Linac, the 5th Linac is now projected to be operational in 2027/28 due to programme slippage. A business case for the 6th void bunker is being developed to ensure operational functionality during equipment replacement. Further modelling indicates that an additional Linac will be required approximately every two years thereafter, reaching a total of seven operational Linacs 2030/31. Alongside, a replacement programme for existing linacs reaching end of life age.

Future Linacs Timeline	Activity	Year 0 24/25	Year 1 25/26	Year 2 26/27	Year 3 27/28	Year 4 28/29	Year 5 29/30	Year 6 30/31
Total Demand	Slots	32,141	34,067	35,195	42,659	48,435	54,170	57,887
Current SWWCC Activity (4 Linacs)								
Current Average Activity per Linac (32,525/4)	Slots	8,131	8,131	8,131	8,131	8,131	8,131	8,131
Number of Linacs Required	**Slots**	**4.0**	**4.2**	**4.3**	**5.2**	**6.0**	**6.7**	**7.1**
Number of Linacs Timeline		**4 Linacs**			**5 Linacs**		**6 Linacs**	**7 Linacs**

Adaptive radiotherapy is a key driving factor for demand. This advanced treatment adjusts the radiotherapy plan in real time to account for changes in a patient's anatomy or tumour. Unlike standard

radiotherapy, which follows a fixed treatment plan, adaptive radiotherapy continually updates dose delivery and targeting to improve accuracy and effectiveness. As the most complex form of radiotherapy, it requires daily adaptation, substantially increasing demand on Linac capacity.

For comparison, Velindre NHS Trust serves a population of around 1.5 million and has 10 Linacs (including two new satellite Linacs at Nevill Hall, operational from June 2025). The SWWCC serves around 0.9 million with four Linacs, while North Wales, serving approximately 0.6 million, also has four Linacs.

Interdependencies

The expansion of Linac capacity, including a fifth machine, depends on aligned CT-Sim and treatment planning capacity to ensure effective radiotherapy delivery. A second CT-Sim was approved in 2024 and is currently funded to 34.5%. To support full operation of the fifth Linac, provision must increase to 60% (per annum). Further detail is set out in the Finance Case. These interdependencies support the development of Singleton Hospital as a centre of excellence, improving outcomes and reducing health inequalities in Wales.

2.3 National Context

This business case supports best practice and aims to deliver improved patient flows and a more equitable cancer service for the populations of Swansea Bay and Hywel Dda University Health Boards (UHBs). It aligns with national and local guidance, mandatory requirements, and strategic priorities, including:

- SBUHB Clinical Services Plan 2019–2024
- Regional Clinical Services Plan, agreed by the South West Wales Joint Regional Planning and Delivery Committee (October 2019)
- A Healthier Wales: Our Plan for Health and Social Care (2018)
- Hywel Dda UHB Transforming Clinical Services (TCS) Programme
- SBUHB Cancer Service Improvement Plan 2019–2024
- SBUHB Annual Plan 2019/20
- SBUHB Site Development Control Plan for Singleton Hospital
- Wellbeing and Future Generations (Wales) Act 2015
- NICE guidance and Royal College of Radiologists best practice
- Cancer Delivery Plan for Wales 2016–2020, including SBUHB's Single Cancer Pathway Action Plan and the South West Wales Non-Surgical Oncology Strategy
- Service Specification of External Beam Radiotherapy Services for the NHS in Wales (2024)
- A Cancer Improvement Plan for Wales (2023-2026)
- The Welsh Government Quality Statement for Cancer (2022)

SBUHB and HDUHB support the development of the business case, which 'fits' with SBUHB's *Organisational Strategy: Better Health, Better Care, Better Lives (2019 – 2030*), *Clinical Services Plan (2019-2024)* and Annual Plan. Which aligns with HDdUHB's 'A Healthier Mid and West Wales' Strategy, Clinical Services Plan and Annual Plan

It supports The Well-Being and Future Generations Act (2015) by:

- Improving the wellbeing of the population Wales by providing access to modern, safe and fully compliant radiotherapy infrastructure.
- Investing in advanced radiotherapy technology to improve patient outcomes and enable staff to work more efficiently.
- Supporting a more sustainable cancer service model by addressing current and future demand and optimising regional capacity.
- Promoting equity of access to timely, high-quality cancer care across SBUHB, HDDUHB and surrounding regions.

The **5th Linac proposal** forms part of SBUHB's longer-term replacement programme for equipment at, or approaching, the end of its operational life

2.4 Local Health Board

This section outlines the strategic context for the additional Linac in the South West Wales Cancer Centre at Singleton Hospital.

Swansea Bay University Health Board

SBUHB serves a population of 390,000 across Swansea and Neath Port Talbot, with an annual budget of approximately £1.8 billion and a workforce of 14,000 staff, 70% of whom provide direct patient care.

SBUHB operates three acute hospital sites (Singleton, Morriston, Neath Port Talbot) and an Acute Mental Health Inpatient Unit at Cefn Coed Hospital. Low and medium secure mental health units are located at Glanrhyd Hospital, Bridgend. The Health Board also provides forensic mental health services for South Wales, community-based mental health and learning disability services, and regional non-surgical specialist cancer services, covering all of Hywel Dda and parts of Powys. Tertiary services, such as Burns and Plastic Surgery, are provided to Wales and the South West of England.

Hywel Dda University Health Board

HDDUHB serves a population of 384,000 people across Carmarthenshire, Ceredigion, Pembrokeshire, and bordering counties. The Health Board operates four major hospitals, has a budget exceeding £1.4bn and employed 9,891 staff, 70% of whom are involved in direct patient care. The region is sparsely populated, with 47.9% of residents in Carmarthenshire, 20.7% in Ceredigion, and 31.4% in Pembrokeshire.

Regional Service Provision

The SWWCC also serves populations in Bridgend and South Powys (133,800 people). SBUHB's vision is to be a centre of excellence, offering excellent healthcare, teaching and research organisation

Part B - The Case for Change

The investment will provide an additional, 5th Linac Accelerator in the currently empty bunker at Singleton Hospital to meet rising demand for radiotherapy treatment for cancer patients across South West Wales. The bunker will be upgraded and configured to accommodate a modern, safe Linac, ensuring a secure environment for staff to deliver treatment. This investment will increase patient capacity, enhance service resilience and reduce the potential for outsourced radiotherapy treatments.

2.5 Spend Objectives

The key spend objectives supports SBU's business needs by increasing capacity to radiotherapy treatment. These objectives align with NHS Infrastructure Investment Guidance objectives and criteria. In particular, they align with SBU's strategic response to access pressures as set out in "*Changing for the Future*" which references Morriston and Singleton Hospitals' roles as a centre of excellence.

This project's key spend objectives are as follows:

Figure – Spend Objectives

Spend Objective 1	The additional 5th Linac will provide **increased radiotherapy treatment capacity** at the SWWCC and support the implementation of a clinical adaptive radiotherapy service, to meet the needs of patient demand. Installation and clinical commissioning to be complete by May 2027.
Spend Objective 2	To improve the **quality of service**. This will be evidenced by; improved patient outcomes and meeting forecast changes in demand and current demand.

Spend Objective 3	To improve **clinical efficiencies** by providing additional and reliable Linac capacity, reducing disruption for patients during their treatment.
Spend Objective 4	To improve **access to complex cancer treatments** for patient, enabling patients with the greatest health needs to have access to modern, high quality cancer treatments, addressing inequalities across South West Wales.
Spend Objective 5	To improve **economies** by optimising local care and reducing the need for outsourced radiotherapy treatment.

All the above to be achieved 12-18 months following the handover of the 5th Linac Accelerator, subject to funding and planning approvals. Please see **Appendix C – Benefits Realisation and Appendix E Spend Objectives.** There are no potential dis-benefits.

Problems with Status Quo

The 5th Linac is required to meet growing demand. Investment in the 5th Lin Acc within SBUHB will ensure the continuity of clinical treatment, capacity, and ensure access to modern and enhanced technologies.

The SWWCC currently operations four Linacs to deliver radiotherapy services for a population of approximately 0.9million patients across Swansea Bay, Hywel Dda and parts of Powys. The current provision is inadequate to deal with the patient population and growing demand driven by increasing cancer incidence and ageing population. Access times for radiotherapy are not consistently meeting national metrics, particularly for schedule and urgent symptom control cases.

The capacity shortfall has a range of negative impacts on both patients and staff, including:

- Delayed access to curative or palliative radiotherapy, affecting patient outcomes and overall wellbeing.
- Increased operational pressures on staff, with reduced flexibility to deliver complex treatments with safe and effective timelines.
- Potential bottlenecks in the treatment workflows
- Limited ability to meet future demand, with the current modelling indicating the need for a 5th Linac in 2027/2028, with an additional linac and void bunker to ensure continuity during equipment replacement by 2028/2029

Without investment in the 5th Linac and associated future void bunkers, the SWWCC will continue to face treatment backlogs, reduced service resilience and inequitable access to cancer care. This will compromise the Health Boards ability to deliver Welsh Government targets, the Single Cancer Pathway and strategic objectives for delivering safe, modern and sustainable radiotherapy across the region.

The SWWCC currently has 3 quality related risks on the Health Board risk register, relating to service delivery, investment in the additional linac will helpt o reduce the severity of some of the risks:

- **Datix ID no. 89** (risk rating 16) relates to Clinical Risk of target breaches in the provision of radical radiotherapy treatment.
- **Datix ID no. 2599** (risk rating 20) relates to limited resilience within the SWWCC due to the over reliance on current scanners. Failure of key ewquipment could result in 25% reduction in treatment capacity, or in the case of CT failure, a complete inabiity to deliver radiotherapy.
- **Datix ID no. 2593** (risk rating 15) is specific to Radiotherapy Physics outgrowing its current space, with increased staff levels and patient capacity the department is finding it difficult to provide a sustainable service.

Figure - Service Issues

	Service Issue	Mitigation
Quality	Limited capacity constrains delivery of advanced treatments; aging equipment may affect treatment precision and safety	Investment in 5th Linac and ongoing replacement programme; implement robust maintenance and staff training for advanced techniques
Patient Experience	Longer waiting times; scheduling inflexibility; travel burden for rural patients	Increase Linac capacity; reduce Time to Radiotherapy, flexible scheduling; regional coordination of referrals; communication with patients on treatment timelines
Future Needs	Rising demand due to population growth and advanced treatment modalities; need for further Linacs by 2030/31	Long-term workforce and infrastructure planning; phased implementation of 6th and 7th Linacs; horizon scanning for new technologies
Research	Limited capacity restricts clinical research and trial participation; older equipment limits innovation	Modern Linac with advanced capabilities to enable research; partnership with universities and research networks; dedicated research slots within schedule
Reliability	Dependence on four Linacs increases risk of service disruption.	Redundant Linac capacity via 5th machine; contingency plans; ongoing equipment monitoring and replacement strategy
Access	Delays in treatment; some patients may miss national targets; rural populations affected	Increase treatment slots; implement hypofractionation to optimize capacity; coordinate regional referrals; develop outreach solutions
Hospital/Staff Benefits	Staff stress due to workload; limited training opportunities; recruitment/retention challenges	Modern facilities improve workflow; training for advanced techniques; career development pathways; improve working environment and operational efficiency
Maintenance Considerations	Aging Linacs require more maintenance, disrupting service delivery and patient treatment.	Install a 5th Linac, with plans to invest in an additional dedicated void bunker for uninterrupted service; proactive maintenance schedule; contingency planning for downtime

2.6 Business Needs

The key business needs are as follows:

- **Improve Clinical Outcomes**: The current Linac provision is insufficient for the growing, aging population and acuity of the patient. Due to the age of the existing Linacs, breakdowns are becoming more frequent which can impact of patient care and deliverability of radiotherapy treatment.
- **Improve Patient Experience:** At the SWWWC, patient experience is a key focus throughout the radiotherapy journey. From the first planning appointment, patients receive careful support to ensure treatment is safe, accurate and as comfortable as possible. Radiographers guide patients through positioning, scans and marking, and provide a 'First Day Chat' to answer questions and ease concerns. The additional Linac would not only increase treatment capacity but also strengthen the patient experience by making the radiotherapy journey smoother, more predictable, and less stressful. Singleton Hospital's commitment to patient-centred care ensures that each individual is supported before, during, and after treatment, enhancing both clinical outcomes and overall satisfaction.

- **Capacity & Compliance with Best Practice:** The current Linac provision is not currently meeting performance metrics against Time to Radiotherapy, without investment, the position will continue to deteriorate.

- **Trained and Supported Workforce**: The investment in an additional Linac will require increased workforce to enable the expansion of radiotherapy capacity to support the timely delivery of safe and effective treatment to cancer patients. The new linac will require a proportionate uplift in radiotherapy, physics, dosimetry and support staff to ensure safe and sustainable operation.

The expansion will reduce operational pressure and support-maintained compliance with radiotherapy quality and safety standards. Overall, the development will strengthen service resilience, improve efficiency, and support a sustainable workforce model. The current staffing model which facilitates 4 Linacs (current baseline) is as follows:

Figure - Current Staffing Model

Current Baseline: 4 Linacs			
Department	Description	Pay band	WTE
Medical Physics	Healthcare Scientists	7	3.8
		8a	2.7
		8b	1
	Medical Physics Experts	8c	1.80
		8d	0.40
Radiotherapy	Radiographer	8b	1.5
	Radiographer	8a	4.8
		7	8
		6	9
		5	11
	Registered Nurse	5	2.80
	Radiography Support	3	5.65
		2	1
Oncology	Consultant	Consultant	4
Total WTE			67.45

2.7 Future Workforce & Workforce Training

To ensure deliverability of a 5th Linac, a future proofed workforce needs to be in place. Any additional workforce requirements are included in the revenue affordability section of the business case.

The range of staff to be employed for the additional Linac and Adaptive Radiotherapy includes the following:

Figure - Additional Staff Requirements

Additional Staff: Linac 5			
Department	Description	Pay band	WTE
Medical Physics	Dosimetrist / Engineers	Band 7	2.20
	Dosimetrist	Band 6	0.80
	Dosimetrist	Band 5	1.00
	Healthcare Scientist	Band 7 (+B6)	1.80
	Medical Physics Experts	Band 8a	1.00
Radiotherapy	Radiographer	Band 8b	1.00
	Radiographer	Band 8a	1.00
	Radiographer	Band 7	2.00
	Radiographer	Band 6	2.00
	Radiographer	Band 5	3.00
	Radiography Support	Band 4	1.00

	Radiography Support	Band 3	1.00
	Radiographer - Palliative	Band 7	1.50
	Radiographer	Band 8b	1.00
Oncology	Oncology	Consultant	1.00
Total			21.30

2.8 Workforce Plan

SBUHB Radiotherapy and Radiotherapy Physics teams have developed a workforce strategy to support the delivery of modern radiotherapy services across South West Wales. The Health Board does not anticipate any staffing challenges for the 5th Linac and is proactively implementing strategies to provide alternative routes to registration and training for advanced and consultant radiographers. SBUHB is also working closely with Health Education and Improvement Wales (HEIW) to secure funded training opportunities for staff across all levels of the radiotherapy workforce.

Details of the Radiotherapy Services and Radiotherapy Physics Workforce Plans can be found in Appendix K – Workforce Model

2.9 Digital Strategy

The Radiotherapy Physics Team at the South West Wales Cancer Centre leads the digital aspects (infrastructure and software) of radiotherapy services across the region. The department operates a fully paperless service, supported by secure remote access systems that enable clinical and technical innovation and collaboration across NHS Wales sites, including Betsi Cadwallader University Health Board, Hywel Dda University Health Board and Velindre Trust. This digital infrastructure supports resilience, multidisciplinary working and equitable access to specialist expertise.

Investment in a fifth Linac strengthens alignment with the organisation's Linac programme and embeds AI-enabled functionality within core treatment systems. Enhanced imaging and online and offline adaptive radiotherapy capabilities support efficient treatment optimisation and highly personalised care at each session. Adaptive functionality may reduce additional appointments, improve patient experience and outcomes and reduce time spent in hospital.

The investment will also standardise system architecture across machines, improving interoperability, flexibility and digital continuity. Patients can therefore be transferred between linacs during peak demand or maintenance, minimising disruption and strengthening business continuity.

The Radiotherapy Department is paperless and applies digital transformation through operational dashboards that monitor activity, patient pathways and capacity. Real-time reporting enables proactive pathway redesign, performance management and continuous improvement. Integration of the new linac will enhance data capture, reporting and strategic oversight.

Overall, the proposal advances the Health Board's digital strategy by improving interoperability, enabling adaptive care, strengthening regional collaboration and supporting data driven service improvement to optimise patient outcomes.

2.10 Artificial Intelligence (AI)

AI functionality is integrated within the Linac platform and supports multiple aspects of the radiotherapy pathway. The system is designed to enhance flexibility and precision through AI-based decision support and remote access capabilities, providing clinical teams with tools to support accurate and adaptable treatment delivery.

AI-enhanced imaging, in combination with both online and offline adaptive capabilities, enables treatment to be reviewed and adapted where appropriate. This supports the delivery of highly personalised radiotherapy for patients at each treatment session, reflecting anatomical or clinical changes over the course of treatment.

In addition, AI tools within the linac platform support efficient workflow management and predictive maintenance, helping to anticipate potential equipment faults and reduce unplanned downtime. This contributes to service resilience, operational efficiency, and continuity of patient care.

Over the lifespan of the linear accelerator, further AI-enabled software add-ons may be introduced to support ongoing advances in adaptive radiotherapy and technological innovation. This ensures the system remains aligned with future developments in cancer treatment and continues to support improvements in patient outcomes.

2.11 Potential Service Scope

The potential service scope framework options for this project are as follows:

Figure - South West Wales' Service Scope Framework Options

Option 1 - Business As Usual	Option 2 - Do Minimum
Maintain the status quo of 4 Linacs	Install an additional 5th Linac in the empty bunker at Singleton Hospital

2.12 Main Outcomes and Benefits

The main potential outcomes benefits are classified in terms of cash releasing benefits (CRBs), non-cash releasing benefits (NCRBs), quantifiable or quantitative benefits (QBs), and non-quantifiable or qualitative benefits (NQBs) as follows:

Figure – Main Benefits

Description of Benefit	Beneficiary	Target Improvement
Health Gain		
Improved health outcomes and enhanced patient pathways	Patients Staff Health Boards NHS Wales	Increased capacity to meet some patient demand. The Health Board will then require additional Linacs to continue the development of the SWWCC and improvement of Linac Demand and Capacity.
Additional Linac capacity and new technology will support highly complex cancer cases through Stereotactic Radiosurgery (SRS) and Adaptive Radiotherapy		Reduced Time to Radiotherapy and the number of patients receiving adaptive radiotherapy
Clinical Skills and Sustainability		
Enhanced clinical staff capacity and skills sustainability by expanding facilities and training on advanced radiotherapy technologies with the new Linac	Patients Staff Health Boards NHS Wales	Increase staff training on adaptive radiotherapy techniques by up to 40% within 12-months of the additional Linac being operational.
Supports Radiotherapy and Radiotherapy Physics workforce plans by attracting newly qualified and highly experienced RT professionals		This will be measured through the number of training courses attended, number of trainees/junior staff undertaking formal qualifications and increased training plans through Elekta.

Equity		
Improve equity of access across South West Wales to ensure high quality cancer treatment and treatment planning services.	Patients Staff Health Boards NHS Wales	This investment supports the implementation of Stereotactic Radiosurgery (SRS) and Adaptive Radiotherapy to provide equity of patients across Wales. The additional capacity will increase service delivery and support patient demand.
Investment will reduce inconsistency in service due to machine breakdowns and reduce some reliance on out-sourced patient care.		Reduction in appointment delays and rescheduling due to equipment breakdowns, alongside decreased reliance on out-of-area outsourced cancer treatment, delivering a cost avoidance of £5,938 per patient.
VfM		
An additional Linac will deliver modern, resilient radiotherapy services that optimise clinical outcomes and operational efficiencies.	Patients Staff Health Boards NHS Wales	Post commissioning and operational metrics will reflect improvements in efficiency, reduced service disruptions and the reduction of outsourced care.

See Appendix C – Benefits Realisation for detailed information.

2.13 Main Risks

The main business and service risks associated with the potential scope options for this project together with their counter measures, are detailed in **Appendix A Estates Annexe A7**.. The main risks are as follows:

Figure – Main Risks

Risk	Probability	Impact	Score	Mitigation
Strategic / Planning / Financial				
Limited resilience within the South West Wales Cancer Centre due to the over reliance on current scanners. Failure of key equipment could result in 25% reduction in treatment capacity. (Datix ID 2599)	5	5	20	Production of a Business Justification Case to seek investment to support additional 5th Linac capacity by 2027, together with a secondary business case to support an operational 6th and 7th bunker.
Clinical risk of target breaches in the provision of radical radiotherapy due to demand and capacity issues (Datix ID No. 89)	4	4	16	Develop a Business Justification Case to seek investment to support additional capacity to manage patient demand and reduce RT Treatment breaches. Radiotherapy teams to regularly review breaches and report back through relevant RT Groups.
Radiotherapy Physics is outgrowing its current space; with increased staff levels and patient capacity the department is finding it difficult to provide a sustainable service (Datix ID 2593)	4	4	16	Alternative space must be sought for support and storage. Whilst this is not feasible within the project scope for Linac 5 this will be reviewed for future developments within the SWWCC.
Failure to secure Welsh Government capital funding, poses a critical threat to patient outcomes. This will manifest as increased treatment delays and interruptions, directly compromising patient health and the ability to meet national cancer standards, while also leading to reduced operation capacity, heightened workforce pressure, and significant financial reputational repercussions.	3	5	15	SBUHB to develop a business justification case to seek Capital Investment of the additional Linac Machine and maintain regular dialogue with key stakeholders. Finance Business Partners to report regularly to Project Board re. revenue implication Radiotherapy Clinical Teams to report on patient risk and time to

				radiotherapy data.
Increases to the Schedule of Accommodation (SoA) during the design stage impacting capital affordability, and/or further increases during delivery resulting in costs exceeding the approved business case value.	3	4	12	The project must be delivered within the agreed scope. The Project Director will manage and approve any requests for change.
Capital Costs – Exceeding the anticipated budget	3	3	9	Appoint a Cost Advisor to review costs on a regular basis.
Revenue affordability - Affordability of revenue model is over/under estimated	3	3	9	Finance lead reports regularly to Project Board.
Construction Phase				
Working within live environment	3	3	9	Clear segregation/Project managed user group meetings
General disruption due to construction activity	3	3	9	Stakeholder engagement with users
Construction noise, adjacent buildings: general acoustics	3	3	9	Constant Review

2.14 Constraints and Dependencies

The key project constraints are as follows:

Figure - Constraints and Dependencies

Constraint	**Mitigation**
The solution must be integrated, fit for purpose, make best use of the available space at preferred site.	Appoint an expert design team to inform feasibility and detailed design development and sign-off plans with management / Clinical lead.
The solution must be delivered on a timely basis.	Engage with Welsh Government to ensure timely support for funding and work with a reputable constructor to work up a design solution & construction timetable, that fits as closely as possible, with the clients' expectations.
The solution must be delivered within project budget.	Work with expert design team / reputable constructor to design a fully compliant product, which meets the clients brief as cost effectively as possible.
The solution should provide value for money and be affordable in capital & revenue terms.	Ensure the business case includes robust revenue and capital affordability proposals, which represent good use of public monies, is endorsed by the Health Board/key stakeholders, and in due course secures Welsh Government approval.
The solution should support clinical needs and improve the patient experience.	The solution must meet the clinical brief and align with the Health Board's strategic direction and best practice.
Dependency	**Mitigation**
The solution must be supported by a fully trained and resourced workforce.	Develop a Workforce Plan to support the new facility.
Continued support for the agreed Primary Care model of care.	Project supports Health Board's Clinical Services Plan and is endorsed by the Health Board.
The solution must be fully supported by external partners to secure capital investment	Develop working relationships with key stakeholders ensuring project alignment and support throughout the project life cycle.

3 The Economic Case

3.1 Introduction

In accordance with the Capital Investment Manual and requirements of HMT's *The Green Book* (2020), this section of the business case demonstrates the wide range of options that have been considered in response to the potential scope identified in this business case.

3.2 Critical Success Factors

The following Critical Success Factors (CSFs) formed the basis for informing evaluation of the project's potential options. Please see below:

Figure – Critical Success Factors (CSFs)

Critical Success Factor		How well the option satisfies the CSF
CSF1	Strategic fit and business needs	Meets the agreed spending objectives, business needs and service requirements; Provides holistic 'fit' and synergy with other national, regional and local strategies, and; 'Fits' with national programmes and local projects.
CSF2	Compliance	The solution must comply with best practice and support improved 'Time to Radiotherapy' targets.
CSF3	Benefits Optimisation	Optimises benefits through effective use of resource and value for money
CSF4	Potential achievability	Is likely to be deliverable on a timely basis to avoid disruption to clinical services and patient outcomes; must ensure available skills required for successful delivery
CSF5	Potential affordability	The organisations (SBU and HDU) ability to fund the required level of expenditure; the revenue consequences associated with the proposed investment
CSF6	Potential Acceptability	The investment must utilise proven technology that ensures reliable delivery and is supported by an established supplier with the capability to provide installation, maintenance, training and technical support. This must be acceptable to clinicians and patients

3.3 Framework Option Appraisal

This section of the business case explains the process for the project's framework options, within the context of its own population's business and clinical needs, and local service drivers. In accordance with HM Treasury's *Green Book* 2020 (A Guide to Investment Appraisal in the Public Sector) and Better Business Case guidance the solution proposed in this case is based on the following five categories of choice:

- Service Scope – potential service and geographical coverage (the 'what')
- Service/Technical Solution - potential services and technical solutions (the 'how')
- Service Delivery – potential options for delivering the required services (the 'who')
- Implementation Solution - timing and phasing of local delivery (the 'when')
- Finance Solution - funding of the investment

The Project Board's members reviewed the spend objectives, CSFs and agreed framework options and developed local framework options at a Workshop on the 26th of March 2026. A list of participants is attached in **Appendix F – Framework Workshop**.

Members completed a hi-level SWOT-style analysis of the long list options. An option scored 'x' if it failed to deliver on an SO or CSF, '~' if it partially delivered, and '✓' if it fully delivered as follows:

Key:	X Not Achieved	~ Partially achieved	✓ Fully achieved

Options 'scored' multiples of '✓' if an option optimally delivered on an updated Spend Objective or CSF. The pros and cons for each long list option were recorded to provide an audit trail, and the options were be ranked in order of achievement, indicating the 'preferred' solution and 'do less' or 'do more ambitious' solutions as appropriate. Summary of Long List Framework Options

The Board members agreed the framework options as follows:

Figure – Service Scope Options

Business As Usual	Do Minimum
SWWCC to continue service delivery with the current Linac infrastructure and service delivery.	Investment in an additional Linac Accelerator to support current and future demand and capacity
Discount	Preferred

The technical solutions identified potential options for delivering the preferred service scope option. They were agreed as follows:

Figure – Service/Technical Solutions Options

Business As Usual	Do Less	Do Minimum	Do Minimum / Preferred	Do Maximum
SWWCC to continue service delivery with the current Linac infrastructure and service delivery. The service has poor resilience due to aging equipment and is unable to meet South West Wale Linac Radiotherapy needs. BAU is not meeting current performance metrics and would further deteriorate performance targets	Outsource to an adjacent Health Board or Private Sector Provider .	Invest in an additional Linac Accelerator at Hwyel Dda University Health Board	Invest in an additional 5th Linac Accelerator at the SWWCC, Singleton Hospital	Invest in an additional 5th Linac Accelerator at the SWWCC, Singleton Hospital with additional clinical and support space
Discounted	Discounted	Discounted	Preferred	Do Maximum

Due to the requirement for a fifth linac, additional CT simulation (CT SIM) support and capacity will be needed to ensure its effective operation. Further information can be found in the Finance Case.

The service delivery options identified the potential timescales options for delivering the preferred scope, preferred technical solution. They were agreed as follows:

Figure – Delivery Options

Business As Usual	Do Maximum
NHS Delivery	Non-NHS Delivery
Preferred	Discounted

The implementation options identified the means for delivering the preferred service solution, technical solution and delivery solution. They were agreed as follows:

Figure – Implementation Solutions Options

Do Minimum	Maximum
Phased Delivery	Not Phased
Discounted	Preferred

The funding options identified the funding solutions for delivering the preferred service solution, technical solution implementation solution and delivery option. They were agreed as follows:

Figure – Funding Options

Do Minimum	Intermediate/Do Maximum
Capital Funding	Private / Public Partnership Funding
Preferred	Discounted

The long list of local framework options are summarised below:

Figure – Summary of the Long List Options

Framework Options	BAU Option 1	Option 2	Option 3	Option 4	Option 5
Service Scope	Business as usual	Provide a more resilient Linac Programme and Service Model for the SWWCC, ensuring there is improved capacity to meet the future needs of Radiotherapy requirements.			
	Discount	Preferred			
Service Technical Solution		Outsource to an adjacent Health Board or Public Sector provider	Invest in an additional Linac Accelerator at SWWCC	Invest in an additional Linac Accelerator at HDUHB	Invest in an additional Linac Accelerator at SWWCC with additional clinical and storage space
		Discount	Preferred	Preferred	Do Maximum
Service Delivery		Non-NHS Delivery	NHS Delivery		
		Discount	Preferred		
Implementation Solution		Non-Phased	Phased Delivery		
		Discount	Preferred		
Funding Solution		Private/Public Partnership Funding Option	Capital Funding Solution		
		Discount	Preferred		

Figure - Framework Options Overview

Potential Service Scoping Options	SC Option 1	SC Option 2	SC Option 3	SC Option 4	SC Option 5
	Business as Usual (BAU) no change to the SWWCC Linac Provision	Outsource to an adjacent Health Board or Private Sector Provider	Invest in an additional Linac Accelerator at SWWCC	Invest in an additional Linac Accelerator at HDUHB	Invest in an additional Linac Accelerator with additional clinical and support space
Spend Objectives:					
1. Provide increased radiotherapy and adaptive radiotherapy treatment capacity to meet patient demand by 2027/28	X	X	✓	✓	x
2. To improve the quality of service. This will be evidenced by; improved patient outcomes, meeting current and forecast changes in demand that is suitable for patient need.	X	X	✓	x	✓
3. To improve clinical efficiencies by providing additional and reliable Linac capacity, reducing disruption for patients during their treatment.	X	X	✓	✓	✓
4. To improve access to complex cancer treatments for patient, enabling patients with the greatest health needs to have access to modern, high quality cancer treatments, addressing inequalities across Southwest Wales.	X	X	✓	✓	✓
5. To improve economies by optimising local care and reducing the need for outsourced radiotherapy treatment	x	X	✓	✓	✓
Critical Success Factors:					
1.Strategic Fit & Business Needs	x	x	✓	✓	✓
2. Benefits Optimisation	x	x	✓	✓	x
3.Compliance	x	✓	✓	✓	✓
4. Potential Achievability	x	✓	✓	x	x
5. Potential Affordability	✓	x	✓	✓	x
6. Supplier Capacity & Capability	x	x	✓	✓	✓
Summary:	**Discount (Retain a baseline comparator)**	**Discount**	**Preferred**	**Discount**	**Discount**

Please see **Appendix D – Option Appraisal** for details of the Long List appraisal process and the rationale for accepting or rejecting local framework options.

3.4 Summary of Short List Options

The Board members identified the following four shortlisted local options to be taken forward for detailed financial analysis:

Figure – Summary of the Short List Options

Options	Reason for Acceptance or Rejection for Further Conbsideration	Finding
Option 1: Business as Usual	**Fails** to deliver required Spend Objectives and Critical Success Factors.	Discounted (retained as Baseline Comaprator)
Option 3: Additional 5th Linac at South West Wales Cancer Centre	Delivers all the required Spend Objectives and Critical Success Factors.	Preferred Option

Business as Usual:

The current radiotherapy service lacks sufficient resilience to meet the existing and growing demand for Linac radiotherapy treatment across South West Wales. Performance against the All-Wales Radiotherapy Quality Metrics, including the 14-day treatment targets and Reducing Time to Radiotherapy (RT) measures, is currently and consistently below the required standard and is expected to deteriorate further without investment in an additional Linac. In the medium term, the position presents a significant clinical risk, driven by increasing demand for cancer treatment associated with an ageing population, and advancements in techniques. Limited treatment capacity will lead to further delays in treatment and could negatively influence patient outcomes, with some cases leading to loss of life.

Maintaining the current "Business as Usual / Do Nothing" position would not have an immediate impact on the Health Board's revenue position for Linac treatment. However, longer-term financial pressures are likely to arise as a result of insufficient capacity. These include the increased need to outsource cancer treatments, i.e., utilising Velindre Cancer Centre, which often results in a suboptimal patient experience, at an estimated minimum cost of the 5th Linac revenue cost.

In addition, limited capacity reduces opportunities to improve patient pathways by using axillary radiotherapy as an alternative to axillary surgery. Axillary surgery costs approximately £9,000 per patient, compared with approximately £3,000 for complex radiotherapy supported by technical input. This presents a potential opportunity to improve services, whilst also achieving cost efficiencies. The approach is supported by a position statement from the Wales Cancer Network and the Clinica Oncology Sub-Committee of the Welsh Scientific Advisory Committee, which was formally ratified on 13 January 2025.

Consequently, while the revenue implications associated with the current preferred option would require investment in the short term, comparable or greater financial pressures could materialise in future years under the 'Do Nothing' scenario due to the ageing population and increasing demand for cancer care services across Wales.

The Preferred Option:

If investment is approved to support the additional Linac, the Health Board will significantly improve its projected demand and capacity position by 2027/28. Radiotherapy performance metrics from May 2026 demonstrated an average patient wait time of **27 days,** with **86%** of patients treated outside of the target timeframe. Investment in an additional Linac would reduce Time to Radiotherapy delays and deliver

clear, measurable improvements in patient care, evidence by an increased number of patients receiving Radiotherapy and Adaptive Radiotherapy Treatment.

The proposal will also reduce expenditure associated with outsourced commissioned care and support a reduction in surgical interventions through the increased use of radiotherapy pathways. In addition, an extra Linac would strengthen service resilience and continuity, particularly during periods of machine breakdown or maintenance, which contribute to fragmented patient pathways.

The additional capacity would reduce the number of rearranged or delayed appointments, lessen resilience on outsourced cancer treatments, and support the delivery of safer, high quality patient outcomes. Overall, this option provides an essential balance of clinical benefit, operational resilience and long-term service sustainability.

Please see **Appendix D – Option Appraisal** for details of the shorting appraisal process and for details of the preferred location option apparaisal process (workshop held on the 27th March 2026).

3.5 Economic Appraisal of the Shortlisted Options

The economic appraisal evaluates the costs, benefits and risks of the shortlisted options and identifies the option that is most likely to offer the best VfM in accordance with HM Treasury Green Book and WGov business case guidance.

Capital Costs

The project's capital cost estimate from RIBA stage 3 (design feasibility) was prepared by the Health Boards' Cost Advisor, AECOM. The selected contractor has since provided fully tendered costs, reflecting RIBA Stage 4 (a fully developed design and tender package). These costs have been reviewed and scrutinised by the Cost Advisor, who has produced a report confirming that the project represents good value for money and that the submitted costs are in line with current market rates and conditions.

Planning contingency was estimated by AECOM at 4.99% of works, non-works, equipment and fees. The capital costs for each shortlisted option are as follows:

Figure – Capital Requirements (£000 excl VAT)

	Preferred
Works Costs	351
Fees	88
Non-Works Costs	124
Equipment Costs	5,116
Planning Contingency	28
Total	5,708

The key assumptions underlying the development of the capital costs are:

- Capital Cost includes works, non-works, abnormals allowances, equipment costs and risk contingency, which is assessed at 4.99%.
- VAT has been excluded from this section of the case.
- The Business as Usual option (Option 1) was retained as the baseline comparator.
- This business case excludes Optimism Bias and a Comprehensive Investment Appraisal (CIA) model.

Recurring Revenue Costs

The baseline and indicative future recurring revenue cost for each shortlisted option are as follows:

Figure – Revenue Implications (£000 above baseline excl VAT)

Costings (NB. pay based on top of scale 2026/27 pay scales)	26/27	27/28	28/29	29/30	30/31
5th Linacc					
Pay Costs - Medical Physics	69	476	508	508	508
Pay Costs - Radiotherapy	0	899	899	899	899
Pay Costs - Oncology Consultants	0	166	191	191	191
Total Pay Costs	**69**	**1,541**	**1,598**	**1,598**	**1,598**
Non Pay - Medical Physics & Radiotherapy *	0	156	310	330	330
Non Pay - New Adaptive RT	0	260	300	300	300
Total Non Pay Costs	**0**	**415**	**610**	**630**	**630**
Facilities Management Costs	**0**	**34**	**40**	**40**	**40**
Total 5th Linacc Costs	**69**	**1,991**	**2,248**	**2,268**	**2,268**
**CT Sim ** **					
Pay Costs - Medical Physics	51	154	154	154	154
Pay Costs - Radiotherapy	51	163	163	163	163
Pay Costs - Oncology Consultants	0	96	96	96	96
Total Pay Costs	**103**	**413**	**413**	**413**	**413**
Direct Non-Pay Costs	2	68	68	68	68
Medical Physics Artificial Intelligence Software Subscription	0	25	25	25	25
Total Non Pay Costs	**2**	**93**	**93**	**93**	**93**
Facilities Management Costs	**0**	**0**	**0**	**0**	**0**
Total CT Sim Additional Capacity Costs	**105**	**506**	**506**	**506**	**506**
Total Cost	**174**	**2,497**	**2,754**	**2,774**	**2,774**

* No Service Maintenance Contract & Support costs in 1st Year due to warranty

** CT Sim costs from funded capacity of 34.5% up to capped capacity of 60%

Given only one Option (Option 3 – Additional Linac to be Installed at Singleton Hospital) was taken forward for further evaluation a CIA (Comprehensive Investment Appraisal) economic appraisal was not undertaken.

3.6 Risk Appraisal

The key risks associated with the preferred option at this stage have been assessed by an independent Cost Advisor with Project Team members using WG guidance methodology for business cases. The scheme risk register reflects an assessment of the pre-construction risks and informs this project's 'knowns' & 'unknowns' at this point in time.

Risks have been apportioned to either the Health Board or private sector and mitigating strategies have been identified in the Risk Register. The risk appraisal was undertaken using the Welsh Government's risk methodology for business cases. It included the following distinct elements:

- Identifying the risks and definitions for assessing options.
- Assessing the impact and likelihood for each option against these categories.
- Calculating the risk score.

The range of scales used to quantify the risk for impact and likelihood was: Low = 2; Medium = 3; High = 5

Likelihood					
	5	10	15	20	25
	4	8	12	16	20
	3	6	9	12	15
	2	4	6	8	10
	1	2	3	4	5
	Impact				

The Preferred Option

The preferred option was confirmed as Option 3 to purchase and install an additional 5th Linear Accelerator. This development is within the existing, empty bunker at Singleton Hospital.

The consultants have utilised an equivalent of Autodesk AutoCAD 2D design and the associated drawings were formally approved by the Project Board on 23 March 2026 (refer to Appendix A – Estates Annexe 5 for drawing details).

The scope of this contract includes key deliverables such as enabling works, infrastructure services and connections, and the remodelling and refurbishment of the existing empty treatment and control room, to accommodate an additional Linear Accelerator to support the radiotherapy service provision. It also encompasses a carefully managed transition process to ensure that clinical operations remain uninterrupted during the decommissioning of the existing empty linac bunker, execution of the main construction works, and subsequent commissioning phases. In addition, the Design Team will be responsible for ensuring full compliance with clinical and IM&T requirements, maintaining compatibility with existing systems where necessary.

The design does not incorporate specific decarbonisation measures; however, the scheme adopts a low-intervention approach, retaining existing walls, linings and building systems wherever possible. The air handling unit intended to serve the new Linac was commissioned in 2022 and remain in good condition, supporting ongoing energy efficiency. Further efficiencies are achieved through the introduction of LED lighting. Finishes have been carefully selected to align with the existing building fabric, minimising material usage, limiting scope change and reducing overall design complexity.

4 The Commercial Case

4.1 Introduction

This section of the business case outlines the proposed 'deal' as outlined in the Economic Case. The business case is seeking to secure public funding from the WGov's 'All-Wales Capital Programme'.

4.2 Required Services

Provision of a development of a 5th Lin Acc within the South- West Wales Cancer Centre, which will be commissioned in an existing bunker at Singleton Hospital.

Procurement Route:

The Health Board will deliver the main works and commissioning services via Swansea Bay University Health Boards' Construction Framework, utilising the framework agreements 'rotation system'. This framework is a compliant route to market, developed in collaboration with NWSSP Procurement Services colleagues.

The design has been developed to RIBA Stage 4 (i.e. the design has detailed technical drawings, specifications, and schedules required for tendering and construction to support this application).

The contractor will not be formally awarded a contract until investment from Welsh Government is confirmed.

Specialist Equipment:

The Health Board, together with support from NWSSP Procurement Colleagues, propose to purchase the Linac Accelerator from Elekta. This will be procured via Direct Award against the NHS Supply Chain Framework for *'Radiotherapy Treatment Systems, Associated Options and Related Services' reference: 2021/S 000-007768*. It is not technically viable for the Health Board to consider a competitive tendering exercise due to machine interoperability with other Linacs within the SWWCC.

Elekta has been engaged to provide an initial budget quotation, alongside supporting information outlining how the organisation can contribute to NHS Wales' socio-economic objectives. This includes alignment with the Well-being of Future Generations (Wales) Act 2015, with a particular focus on decarbonisation initiatives and the delivery of wider social value outcomes.

Current anticipated lead times are approximately 12 weeks. However, it should be noted that both programme timescales and associated costs remain subject to change, reflecting ongoing uncertainty within the global political and economic climate. These external factors may impact supply chain logistics, material availability, and procurement timelines. Elekta, will be formally issued a contract following investment approval from Welsh Government.

4.3 Key Appointments & Contract Arrangements

The following key appointments have been made to support delivery of this project:

- Project Manager Services are provided by HLD Design.
- Architectural & Principal Design services are provided by HLD Design.
- Civils and Structural Engineering design services are provided by PHG Consulting Engineers Limited
- Health Board Cost Advisor services and business case support services are provided by AECOM.
- Mechanical & Electrical design services to support feasibility stage and enabling works was provided by AECOM.
- Other technical commissioning services are provided by SBUHB.

All wayfinding will be in accordance with Welsh Language Standards.

4.4 Required Facilities and Compliance

The Additional 5th Linac Accelerator installation will follow Welsh Health Building Note and Welsh Health Technical Memorandum guidance and statutory requirements.

4.5 Potential for Risk Management

A risk register has been compiled and costed relative to risks that apply over the whole of the project lifecycle at this stage (**Appendix A Estates Annexe A8**). The planning contingency has been assessed by an independent cost advisor. The planning contingency includes non-recoverable VAT. This assessment of risk and complies with NHS Wales Shared Services Partnership – Specialist Estates Services (NWSSP - SES) guidance at this planning stage.

4.6 Agreed Charging Mechanisms & Contracts

A collaborative working model is to be adopted. All charging mechanisms will be covered within the framework agreement.

AECOM, the Health Board's appointed Cost Advisor, confirms the scheme is fully tendered.

The design is reflective of RIBA work stage 4 and NEC 4 (Option A) will apply.

Contractors will invoice SBUHB Health Board in accordance with the Payment Mechanism. The agreed Payment Mechanism is 4 weekly assessments by the Health Board Cost Advisor with payment due within 14 days of the Assessment Date.

Arrangements and Change Control Procedures are referenced and managed as part of the model form contract. Change control is strictly managed by the Project Board, specifically by the project director, and any change in cost and scope must be approved by project board. Our independent Cost Advisor, AECOM, acts on Health Board's behalf to manage cost / commercial risk and to ensure mitigations are identified throughout the contract. The Cost Advisor reports directly to Project Board on a regular basis.

4.7 Agreed Contact Length

The main works' contract will cover approx. 17 weeks, subject to agreement with the Main Contractor.

4.8 Personnel Implications (including TUPE)

TUPE (Transfer of Undertaking and Protection of Employee) will not apply to this investment.

4.9 FRS5 - Accountancy Treatment

It is assumed that public funding will be allocated for this project and therefore capital will be included on the balance sheet.

4.10 Indicative Timescales

The indicative milestones are set out below:

Figure – Key indicative milestones

Activity	Due Date
Health Board endorses business case	July 2026
WGov approve business case	October 2026
Agree and Enter Contract / Order Machine	October 2026
Main Works	November 2026
Install Machine (subject to purchase lead times)	November 2026 – January 2027
Handover (subject to contractor's programme)	February 2027
Clinical Commissioning	March 2027
Technical Project Evaluation (approx. 3 months post-commissioning)	June 2027
Benefits Realisation (12 months post operational)	June 2027

5 Funding and Affordability

5.1 Introduction

The purpose of this section is to set out the indicative financial implications of the proposed investment (as set out in the Economic Case) and proposed Deal (as described in the Commercial Case).

5.2 Capital

The tendered capital cost of the project are as follows (**Appendix A Estates Annexe A2**):

Figure – Capital Requirements (£000 incl. non-recoverable VAT)

	Preferred
Works Costs	422
Fees	106
Non-Works Costs	149
Equipment Costs	6,139
Planning Contingency	34
Total	**6,850**
Less recoverable VAT	18
Base Project Cost	**6,832**

£000's	Prior Years	2026/27	Total
Capital Cost	34	6,797	6,832
Capital Funding	0	6,832	6,832

The above capital costs reflect Capital estimates prepared by the Health Boards appointed cost advisors, AECOM.

The key assumptions underlying the development of the capital costs are:

- Capital Cost includes works, non-works, abnormals allowances, equipment costs and risk contingency, which is assessed at 4.99%.
- VAT is at 20% except for the professional fee and other vat recoverable elements (see **Appendix A Estates Annexe A3**).
- VAT has been excluded from this section of the case.
- The Business as Usual option (Option 1) was retained as the baseline comparator.
- This business case excludes Optimism Bias and a Comprehensive Investment Appraisal (CIA) model.

5.3 Recurring Revenue Costs

The baseline and indicative future recurring revenue cost for the preferred option are as follows:

Figure – Revenue Implications (£000 above baseline incl non recoverable VAT)

Costings (NB. pay based on top of scale 2026/27 pay scales)	26/27	27/28	28/29	29/30	30/31
5th Linacc					
Pay Costs - Medical Physics	69	476	508	508	508
Pay Costs - Radiotherapy	0	899	899	899	899
Pay Costs - Oncology Consultants	0	166	191	191	191
Total Pay Costs	**69**	**1,541**	**1,598**	**1,598**	**1,598**
Non Pay - Medical Physics & Radiotherapy *	0	156	310	330	330
Non Pay - New Adaptive RT	0	260	300	300	300
Total Non Pay Costs	**0**	**415**	**610**	**630**	**630**
Facilities Management Costs	**0**	**34**	**40**	**40**	**40**
Total 5th Linacc Costs	**69**	**1,991**	**2,248**	**2,268**	**2,268**
**CT Sim ** **					
Pay Costs - Medical Physics	51	154	154	154	154
Pay Costs - Radiotherapy	51	163	163	163	163
Pay Costs - Oncology Consultants	0	96	96	96	96
Total Pay Costs	**103**	**413**	**413**	**413**	**413**
Direct Non-Pay Costs	2	68	68	68	68
Medical Physics Artificial Intelligence Software Subscription	0	25	25	25	25
Total Non Pay Costs	**2**	**93**	**93**	**93**	**93**
Facilities Management Costs	**0**	**0**	**0**	**0**	**0**
Total CT Sim Additional Capacity Costs	**105**	**506**	**506**	**506**	**506**
Total Cost	**174**	**2,497**	**2,754**	**2,774**	**2,774**

* No Service Maintenance Contract & Support costs in 1st Year due to warranty
** CT Sim costs from funded capacity of 34.5% up to capped capacity of 60%

The operational and workforce modelling underpinning the revenue implications of this Business Case considers the combined impact of introducing a 5th Linac, the implementation of adaptive radiotherapy, and the temporary reduction in treatment capacity associated with the retrofit of an existing Linac. The outputs of this modelling demonstrate that the 5th Linac will be substantially utilised from the point of clinical operation, subject to agreed operational constraints and workforce availability.

The modelling reflects current and projected treatment demand, the increased imaging and replanning activity inherent to adaptive radiotherapy delivery, and the requirement to maintain service continuity during planned periods of Linac downtime. Collectively, this confirms that the 5th Linac is essential to sustain throughput, manage transition risk, and maintain waiting time performance, rather than representing excess or contingency capacity.

For the purposes of this Business Case, the following phasing assumptions have been applied and reflected within the financial model:

- **Installation and Clinical Commissioning:** Linac installation and clinical commissioning activities are assumed to commence in Q4 2026/27, with associated non-recurrent costs reflected accordingly.
- **Workforce Training and Readiness:** Treatment radiographer training and competency development are assumed to take place in the early part of Q1 2027/28, recognising the lead-in time required for safe operation of new and adaptive radiotherapy technologies.
- **Operational Commencement:** Recurrent operational costs associated with the fifth Linac are assumed to commence in late Q1 2027/28, reflecting a phased transition from commissioning to full clinical activity.

These assumptions ensure that revenue costs are recognised only when operational benefit can be realised, thereby supporting value for money and affordability within the wider financial framework of the Business Case.

The proposed expansion of radiotherapy services, including the introduction of a 5th linear accelerator (Linac), is critically dependent on the availability of sufficient CT-Simulation (CT-Sim) and treatment planning capacity. CT-Sim is an essential prerequisite within the radiotherapy pathway, and any constraint at this stage would materially limit patient throughput, reduce the effective utilisation of Linac capacity, and undermine the delivery of anticipated clinical and operational benefits.

Approval for a second CT-Sim unit was granted in 2024. The associated CT-Sim Business Justification Case established the evidence base for the revenue requirements relating to CT-simulation that are included in request for investment. However, whilst capital funding has been secured, recurrent funding only supports 34.5% of the full operational capacity required for CT-simulation aligned to the existing four linacs. At this level of provision, CT simulation and treatment planning capacity would become a represent a critical constraint within the pathway and would be insufficient to safely and effectively support the introduction and operation of a 5th Linac.

To enable the full and sustainable utilisation of the 5thLinac, CT-Sim provision must increase to 60%, requiring additional recurrent funding. This uplift is necessary to ensure that simulation and treatment planning capacity remains aligned with treatment delivery capability, preventing extended waiting times and supporting safe clinical practice, including the introduction of adaptive radiotherapy.

The CT-Sim revenue model included within this Business Case has been updated from the original 2024 CT-Sim Business Case to reflect current assumptions and the revised programme timetable. The following updates have been incorporated:

- **Updated Pay Award Assumptions:** Staffing costs have been refreshed to reflect the 2026/27 pay award, replacing the previous assumption based on 2024/25 pay scales, ensuring that revenue estimates remain current and realistic. These should be updated to reflect any future agreed 27/28 pay award.
- **Revised Demand and Capacity Phasing:** The phasing of demand and capacity has been updated to align with the planned commissioning of the fifth Linac, in line with agreed project timelines. This includes the planned introduction of adaptive radiotherapy techniques, which

increase demand on CT-Sim and treatment planning capacity due to additional imaging, replanning, and verification activity.

- **Capacity Scope and Future Proofing:** For the purposes of this Business Case, CT-Sim operational capacity has been capped at 60% - with an initial increase to 38% in 26/27 to align capacity to demand. Any requirement for additional capacity beyond this level has been intentionally excluded and would be subject to separate consideration, aligned to future Linac expansion and/or the introduction of additional adaptive radiotherapy systems beyond machines 1 and 2. This case includes adaptive radiotherapy capability for two Linacs (one retrofit to an existing machine and one new installation).

These assumptions ensure that the revenue model is proportionate to the scope of the current proposal, deliverable within the planned timeframe, and avoids pre-emptive investment ahead of confirmed service expansion.

The recurrent revenue costs associated with this proposal will be shared equally between Hywel Dda University Health Board and Swansea Bay University Health Board, reflecting patient activity across both organisations. Cost sharing will be governed through an agreed financial commissioning mechanism, ensuring equity, transparency and alignment between cross-Health Board, regional arrangements.

This approach enables equitable distribution of costs in accordance with service utilisation, while providing assurance that the ongoing revenue implications are affordable, sustainable, and underpinned by robust governance arrangements.

5.4 Impact on the Balance Sheet and Impairment

The capital funded option for the purchase of 5th Linac Accelerator and associated refurbishment work will require additional non-cash funding for recurring depreciation (AME) and non-recurring impairment (AME)

Figure – Impact on the Balance Sheet and Impairment £000s

000's	2026/27	2027/28	2028/29	2029/30	2030/31
Depreciation (AME)		644	644	644	644
Impairment Initial Valuation (AME)	347				

The Health Board will engage the services of the District Valuer to provide a valuation of the scheme following completion**,** the final value attributed to the buildings will be on the Balance Sheet of the Health Board.

At this stage the estimated AME Impairment on the initial valuation of £0.347m will need to be taken through the Health Board's SOCNE in 2026/27. The Health Board would require funding from WGov and this will be included in the AME impairment funding submission to WGov in 2026/27.

The Health Board will require additional recurring depreciation of £0.644m from 2027/28.

A process of external audit for the project has already begun and will continue throughout the redevelopment and construction process.

5.5 Overall Affordability

The Health Board will require a capital investment of £6.832m (including recoverable VAT), alongside annual revenue expenditure of £2.8m (including VAT). This ongoing revenue cost will be shared equally between Hywel Dda University Health Board and Swansea Bay University Health Board.

6 The Management Case

6.1 Introduction

The section of the business case addresses the achievability of the project. The details are set out below.

6.2 Project Management Arrangements

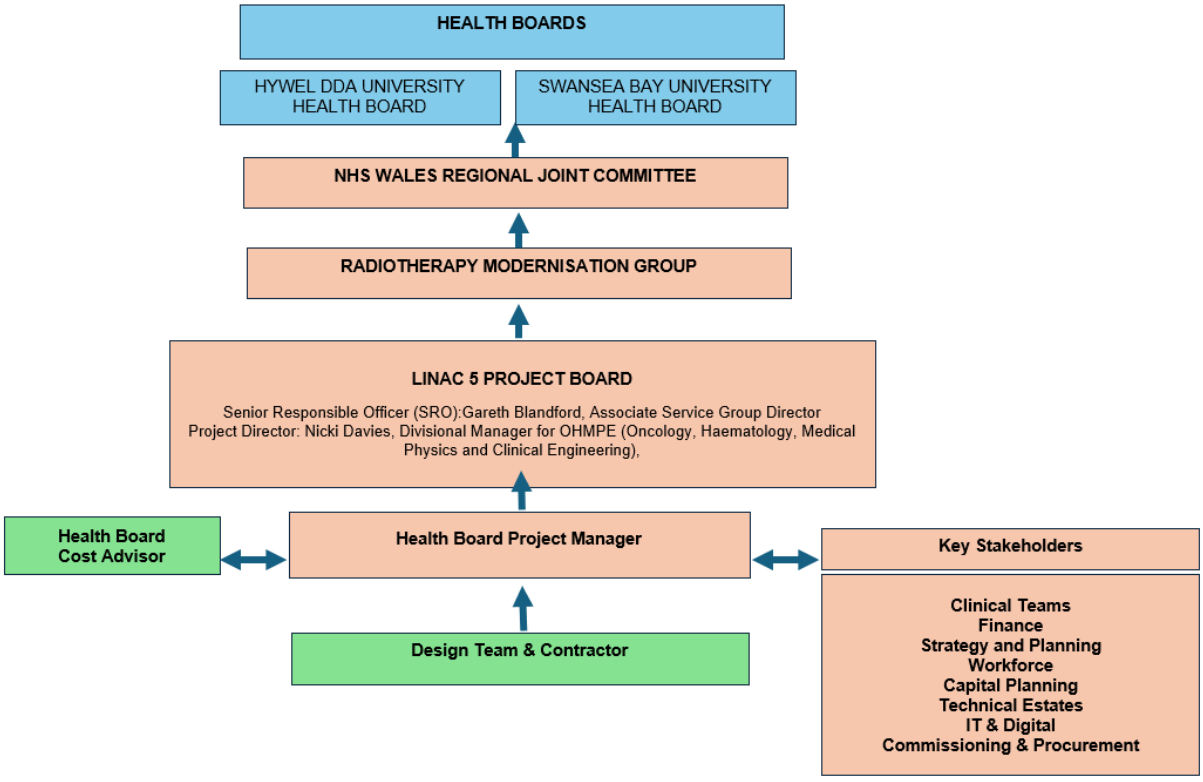
To ensure successful South West Wales project delivery, a robust project management reporting structure has been established. The structure is based on the PRINCE2 principles.

The Health Board's experience of developing and delivering complex projects in a Prince2 environment ensures diligent management and thorough clinical involvement throughout all parts of the development:

- The Senior Responsible Owner (SRO) for the project is Gareth Blandford, Associate Service Group Director, Neath Port Talbot and Singleton Service Group
- The Project Director is Nicki Davies, Divisional Manager for OHMPE (Oncology, Haematology, Medical Physics and Clinical Engineering), Neath Port Talbot and Singleton Service Group who has the authority and responsibility to manage delivery of the project on behalf of the key stakeholders. The Project Director reports via the Project Board to the SRO.
- The Project Manager, Danny Flynn, Capital Project Manager, will support the Project Director.

A summary Project Board & Project level management structure diagram is shown below for the Additional 5th Linac at Singleton Hospital.

Figure – Management Structure



6.3 Stakeholder Involvement

The key stakeholders involved in the development of this project and/or its future delivery are outlined within the Terms of Reference Appendix B.

6.4 Use of Special Advisers

Special Advisors will be appointed in accordance with the *Treasury Guidance: Use of Special Advisers*.

Figure – Special Advisors

Role	Advisor
Cost Advisor	AECOM
VAT Advisor	Ernst and Young

6.5 Project Bank Account

Project Bank Account requirements are typically assessed where construction works exceed £2m, as the works cost for this scheme falls below this threshold and the contract duration is less than 6 months, implementation is not considered necessary, in accordance with section 3.2 of the Welsh Public Procurement Policy Note (WPPN) 03/21.

6.6 AEDET (Achieving Excellence Design Evaluation Toolkit)

Due to the nature and scope of the proposed works, it was agreed in consultation with NWSSP-SES Colleagues that an AEDET assessment was not required on this occasion.

6.7 Building Research Establishment's Environmental Assessment Method (BREEAM)

As the proposed development is below 1,000m², the requirement to achieve BREEAM certification does not apply.

6.8 Planning Permissions and Statutory Approvals

The Health Board and appointed external consultants have undertaken engagement with relevant stakeholders, where appropriate, throughout the development of the scheme. As the project is limited to the refurbishment of existing accommodation and does not involve any material alteration to the building fabric or use, formal planning permission and statutory approvals have not been required at this stage.

No additional design development enhancements have been incorporated within the scope o the scheme, as such improvements would necessitate far more extensive refiguration works beyond the scope of the project. In the event that any approvals are subsequently identified these will be progressed following the appointment of the contractor, with all associated pre and post construction conditions managed accordingly.

6.9 Decarbonisation

The design does not incorporate specific decarbonisation measures; however, the scheme adopts a low-intervention approach, retaining existing walls, linings and building systems wherever possible. The air handling units intended to serve the new Linac were commissioned in 2022 and remain in good condition, supporting ongoing energy efficiency. Further efficiencies are achieved through the introduction of LED lighting. Finishes have been carefully selected to align with the existing building fabric, minimising material usage, limiting scope change and reducing overall design complexity.

6.10 Benefits Realisation

Please see SMART benefits in the detailed Benefits Realisation Register in **Appendix C**.

6.11 Community Benefits & Social Values

The proposed contractor has been asked (under the tender process) to produce project specific community benefits and social value (encompassing e.g. the well-being of the local community, inclusivity and equality, support of the Foundational Economy, and environmental impact of the project) plans, which align with the Wellbeing and Future Generations Act's requirements upon contract award.

6.12 Arrangements for Risk Management

A risk framework has been established which outlines the process for managing risk associated with developing this project, including a structure for identifying and mitigating operational and construction related risks. The risk register would use qualitative and quantitative measures to calculate the overall level of risk according to likelihood of any risk occurrence multiplied by the potential impact. The Steering Board will formally review the risk register at key stages of the project. A costed project risk register is attached at **Appendix A Estates Annexe A8**. Risks that score above 15 are automatically reported to the Project Board via the Highlight Report.

6.13 Audit & Assurance

Internal: A Health Board Integrated Impact Assessment (IIA) has been completed - see **Appendix I.**

External: A Risk Potential Assessments (RPA) has been carried out for this project. A copy is included in **Appendix H**. A Gateway review could be arranged, and Welsh Government would conduct post-submission of this BJC in accordance with Welsh Government Investment Guidance and as proportionate to this investment;

In accordance with the NHS Wales Infrastructure Investment Guidance (2018), the Health Board has sought input from NWSSP Audit and Assurance Services (Specialist Services Unit - NWSSP: A&A (SSu) to "assess the risk profile of the scheme and provide appropriate levels of review", as required. A fully resourced and costed audit plan has provisionally been developed, and fees appropriate to the scale of this investment, its proposed timeline for delivery and level of complexity are included in the Cost Form in **Estates Annexe - Appendix A2**. The plan is detailed in **Estates Annexe - Appendix A4**.

6.14 NHS Wales Gateway Assurance

A Risk Potential Assessments (RPA) has been carried out for this project. A copy is included in **Appendix H**. An Investment Decision (Stage 3) Gateway review could be arranged with WGov prior to submission of this business case to WGov in accordance with WGov Investment Guidance. Further Gateways could be completed according to Office of Government Commerce (OGC) guidelines following further evaluation, as required.

6.15 Project Arrangements / Lessons Learned

Post evaluations and lessons learned will be undertaken as appropriate to this investment, and in accordance with best practice and NHS guidance.

6.16 Contingency Plans

The Health Board identified two major categories of project failure: Failure to achieve business case approval to deliver the scheme; Failure of the main contractor/main supplier to deliver the Linac facility/equipment to quality and time.

The contingency plan for the project in the event of failure to achieve business case approval is for the Health Board to continue to revise its plans, working with WGov for an investment in a Linac Accelerator that is acceptable. In the event of main contractor failure, SBUHB would seek recompense in line with the agreed contractual arrangements and appoint another contractor/developer to complete the project.

Appendix A Estates Annexe A2 - Costs Forms & Equipment schedule

Appendix A Estates Annexe A3 - VAT Advice

Appendix A Estates Annexe A4 - Audit Plan

Appendix A Estates Annexe A5 - Drawings

Appendix A Estates Annexe A6 - Indicative Programme

Appendix A Estates Annexe A7 – Risk Register

Appendix A Estates Annexe A8 – Costed Risk Register – *to follow*

Appendix B - Terms of Reference

Appendix C - Benefits Realisation Register

Appendix D - Framework Option Appraisal

Appendix E – Spend Objectives

Appendix F – Framework Workshops

Appendix G – Project Execution Plan (PEP) – to follow

Appendix H – Risk Potential Impact Assessment (RPA)

Appendix I - Integrated Impact Assessment (IIA)

Appendix J - Workforce Plan

Appendix K – Quality Impact Assessment (QIA)

Appendix L: Radiotherapy Monthly Report – May 2026

Appendix M: Abbreviations

AEDET	Achieving Excellence Design Evaluation Toolkit
AME	Annually Managed Expenditure
BAU	Business as Usual
BIS PUBSEC	Business Innovation and Skills (Firm Price Index) Tender Price Index of Public Sector Building Non-Housing
BREEAM	Building Research Establishment Environmental Assessment
CIA	Comprehensive Investment Appraisal
CRBs	Cash Releasing Benefits
CSF	Critical Success Factor
CSP	(SB UHB's) Clinical Service Plan
CSS	Clinical Support Services
DECAG	Departmental Cost Allowance Guide
DGH	District General Hospital
DGM	Divisional General Manager
DoH	Department of Health
ECAG	Equipment Cost Allowance Guide
EQA	External Quality Assessment
FBC	Full Business Case
HB	Health Board
HBCA	Health Board Cost Adviser
HBPM	Health Board Project Manager
HDU	High Dependency Unit
HDUHB	Hywel Dda University Health Board
HIA	Health Impact Assessment
HMt	Her Majesty's Treasury
IMTP	Integrated Medium Term Plan
MDT	Multi-Disciplinary Team
NCRBs	Non Cash Releasing Benefits
NEC	New Engineering Contract
NICE	The National Institute for Health and Care Excellence
NWSSP SES	NHS Wales Shared Services Partnership – Specialist Estates Services
OBC	Outline Business Case
OCP	Organisational Change Policy
OGC	Office of Government Commerce
OOHs	Out of Hours
PEP	Project Execution Plan
PET	Positron Emission Tomography
PIA	Privacy Impact Assessment
PPE	Post Project Evaluation
QA	Quality Assurance
RIBA	Royal Institute of British Architects
RPA	Risk Potential Assessment
SB UHB	Swansea Bay University Health Board
SDCP	Site Development Control Plan
VfM	Value for Money
WGov	Welsh Government
(W)HBN	Welsh Health Building Note
(W)HTM	Welsh Health Technical Memorandum
WTE	Whole Time Equivalent

Time to Radiotherapy

Bench marking across Wales

lechyd gwell
Gofal gwell
Bywyd gwell

Better health
Better care
Better lives

GIG CYMRU NHS WALES

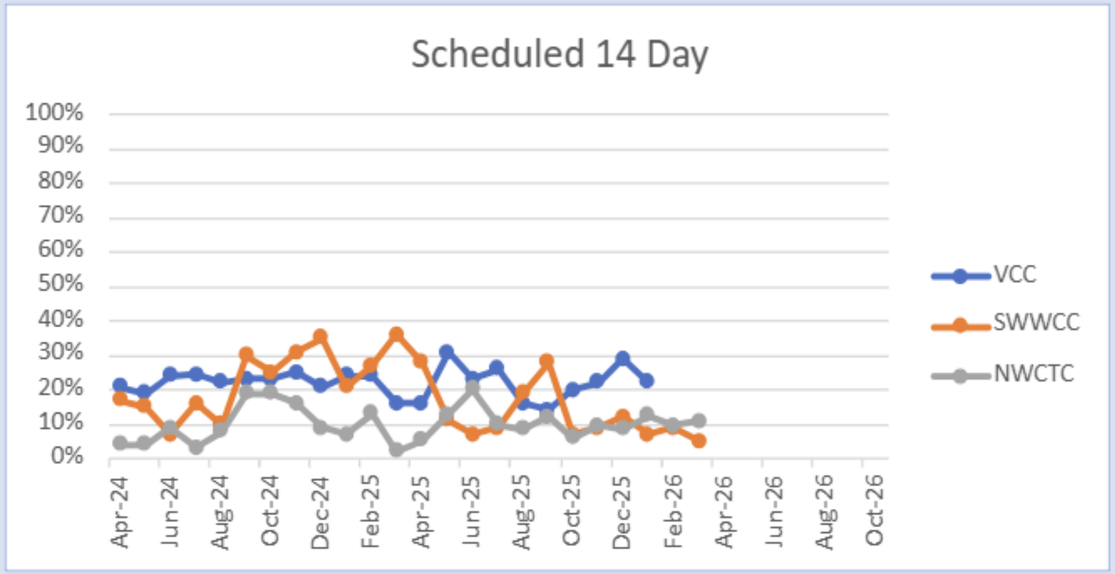
Bwrdd Iechyd Prifysgol
Bae Abertawe

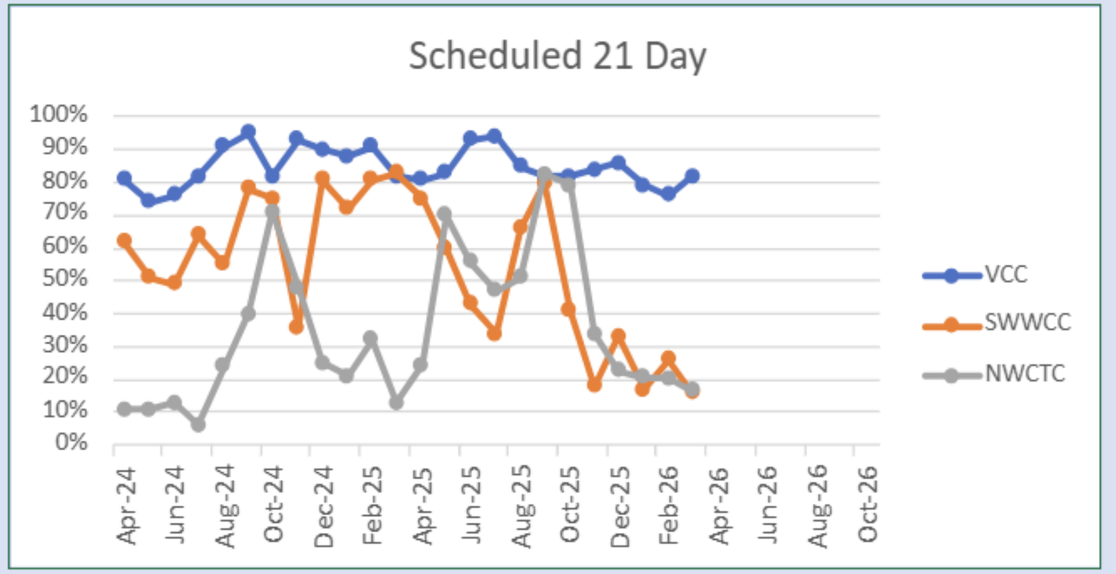
Swansea Bay University
Health Board

Pathway Performance

				Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26
VCC	Scheduled	14 days	80%	20%	22%	29%	22%		
VCC	Scheduled	21 days	100%	82%	84%	86%	79%	76%	82%
VCC	Urgent SC	2 days	80%	6%	14%	35%	18%	5%	
VCC	Urgent SC	7 days	100%	78%	75%	82%	71%	59%	69%
VCC	Emergency	1 day	80%	83%	82%	91%	83%	80%	100%
VCC	Emergency	2 days	100%	90%	100%	95%	100%	100%	100%
VCC	Elective Delay	7 days	80%	97%	98%	96%	95%	84%	89%
VCC	Elective Delay	14 days	100%	97%	100%	96%	95%	91%	90%
SWWCC	Scheduled	14 days	80%	7%	9%	12%	7%	9%	5%
SWWCC	Scheduled	21 days	100%	41%	18%	33%	17%	26%	16%
SWWCC	Urgent SC	2 days	80%	45%	29%	19%	36%	13%	24%
SWWCC	Urgent SC	7 days	100%	65%	74%	59%	76%	69%	47%
SWWCC	Emergency	1 day	80%	83%	100%	100%	92%	100%	100%
SWWCC	Emergency	2 days	100%	100%	100%	100%	92%	100%	100%
SWWCC	Elective Delay	7 days	80%	93%	98%	100%	99%	97%	96%
SWWCC	Elective Delay	14 days	100%	98%	100%	100%	100%	98%	97%
NWCTC	Scheduled	14 days	80%	6%	9%	9%	12%	10%	11%
NWCTC	Scheduled	21 days	100%	79%	34%	23%	21%	20%	17%
NWCTC	Urgent SC	2 days	80%	25%	28%	24%	23%	15%	9%
NWCTC	Urgent SC	7 days	100%	81%	84%	73%	88%	70%	61%
NWCTC	Emergency	1 day	80%	100%	100%	100%	100%	50%	100%
NWCTC	Emergency	2 days	100%	100%	100%	100%	100%	75%	100%
NWCTC	Elective Delay	7 days	80%	98%	100%	95%	100%	98%	100%
NWCTC	Elective Delay	14 days	100%	100%	100%	95%	100%	98%	100%

Scheduled Pathway Performance





GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol Bae Abertawe | Swansea Bay University Health Board

South West Wales Cancer Centre
Radiotherapy Performance

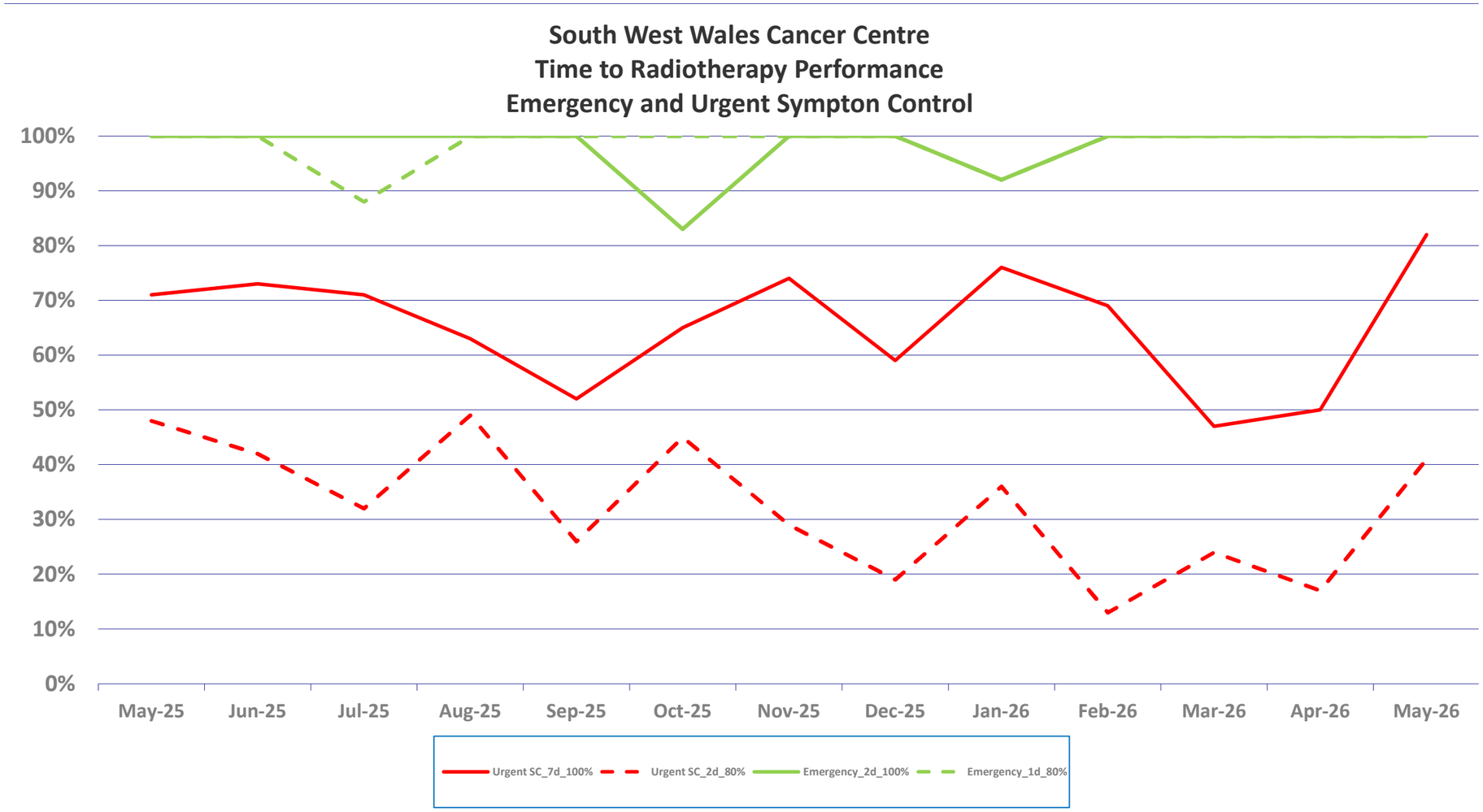
General Information

	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
Attendances	2185	2079	2039	2359	2157	1983
Exposures	3592	3192	3155	3741	3015	2813
Clinical Days	21	21	20	22	20	19

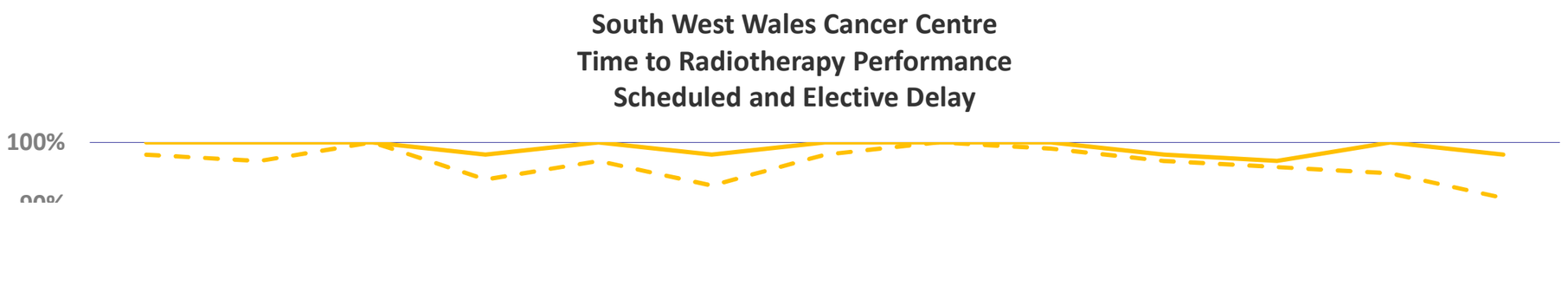
Time to Radiotherpay

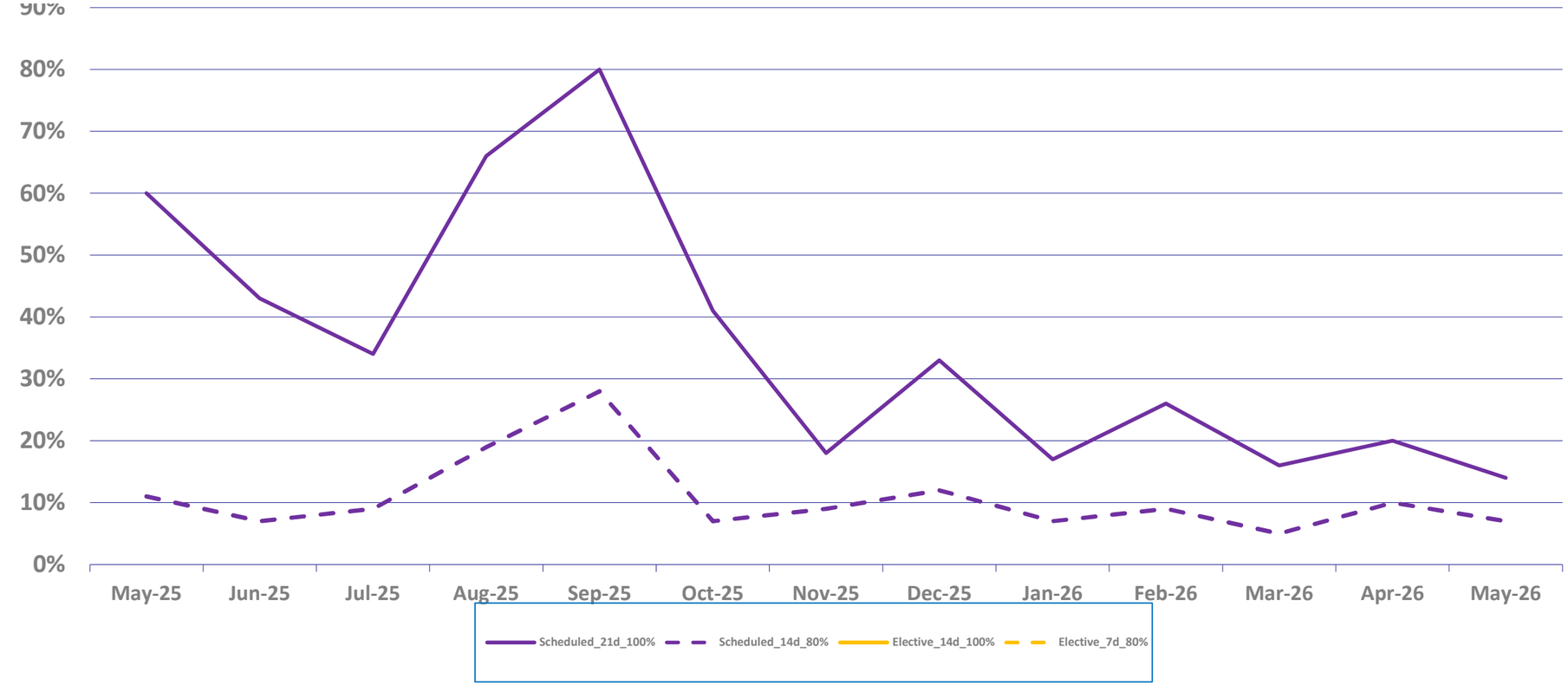
		Dec-25		Jan-26		Feb-26		Mar-26		Apr-26		May-26	
Scheduled	Number of treatments	99		75		85		105		99		94	
	Average Wait	24 Days		28 Days		26 Days		29 Days		26 Days		27 Days	
	% within 14 days (target 80%)	12	12%	5	7%	8	9%	5	5%	10	10%	7	7%
	% within 21 days (target 100%)	33	33%	13	17%	22	26%	17	16%	20	20%	13	14%
	% Out of Target	66	67%	62	83%	63	74%	88	84%	79	80%	81	86%
Urgent SC	Number of treatments	27		25		16		34		24		22	
	Average Wait	8 Days		6 Days		8 Days		7 Days		9 Days		4 Days	
	% within 2 days (target 80%)	5	19%	9	36%	2	13%	8	24%	4	17%	9	41%
	% within 7 days (target 100%)	16	59%	19	76%	11	69%	16	47%	12	50%	18	82%
	% Out of Target	11	41%	6	24%	5	31%	18	53%	12	50%	<5	18%
Emergency	Number of treatments	7		13		19		19		13		19	
	Average Wait	0 Days		1 Day		0 Days		0 Days		0 Days		0 Days	
	% within 1 day (target 80%)	7	100%	12	92%	19	100%	19	100%	13	100%	19	100%
	% within 2 days (target 100%)	7	100%	12	92%	19	100%	19	100%	13	100%	19	100%
	% Out of Target	0	0%	<5	8%	0	0%	0	0%	0	0%	0	0%
Elective Delay	Number of treatments	44		70		61		68		44		44	
	Average Wait	0 Days		1 Day		1 Day		1 Day		1 Day		2 Days	
	% within 7 days (target 80%)	44	100%	69	99%	59	97%	65	96%	42	95%	40	91%
	% within 14 days (target 100%)	44	100%	70	100%	60	98%	66	97%	44	100%	43	98%
	% Out of Target	0	0%	0	0%	<5	2%	<5	3%	0	0%	<5	2%

	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
Total number of new courses	**177**	**183**	**181**	**226**	**180**	**179**
Total treated in 21 days	104	121	118	138	99	85
% treated in 21 days	59%	66%	65%	61%	55%	47%

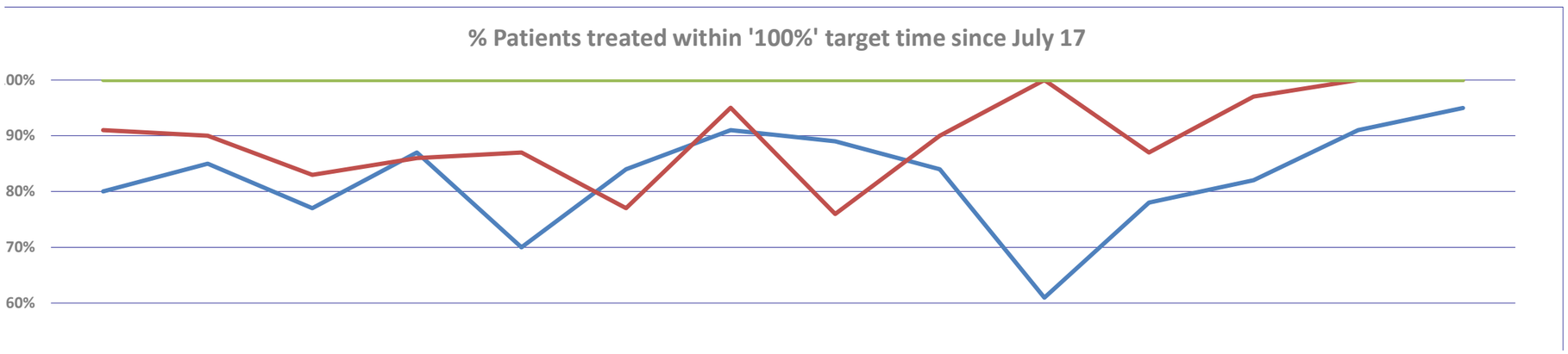


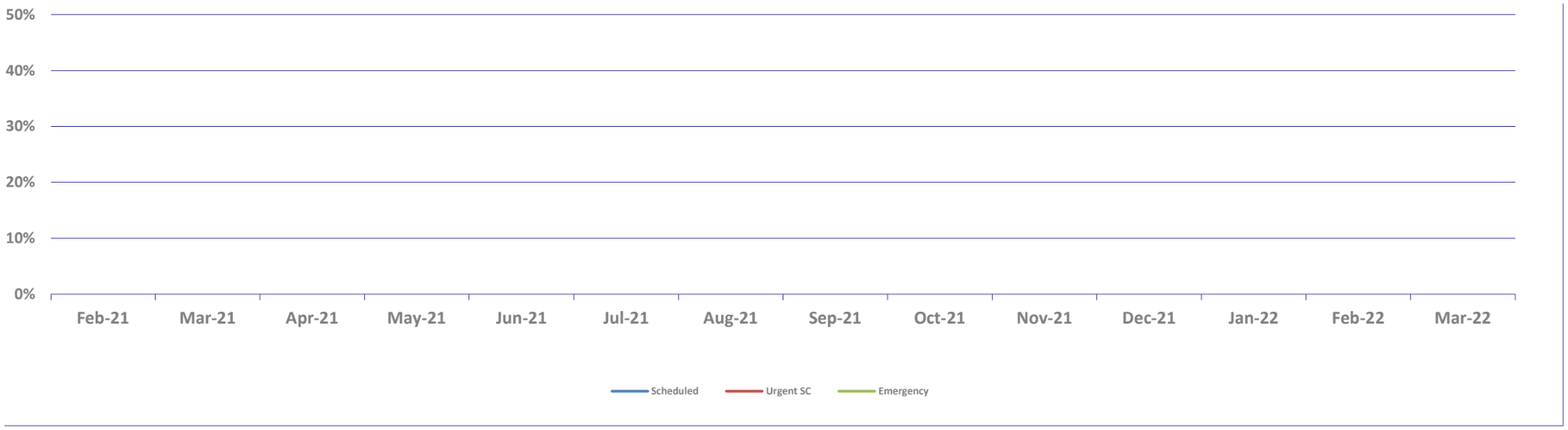
% pts within target													
Month	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
Urgent SC_7d_100%	71%	73%	71%	63%	52%	65%	74%	59%	76%	69%	47%	50%	82%
Urgent SC_2d_80%	48%	42%	32%	49%	26%	45%	29%	19%	36%	13%	24%	17%	41%
Emergency_2d_100%	100%	100%	100%	100%	100%	83%	100%	100%	92%	100%	100%	100%	100%
Emergency_1d_80%	100%	100%	88%	100%	100%	100%	100%	100%	92%	100%	100%	100%	100%





% pts within target													
Month	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
Scheduled_21d_100%	60%	43%	34%	66%	80%	41%	18%	33%	17%	26%	16%	20%	14%
Scheduled_14d_80%	11%	7%	9%	19%	28%	7%	9%	12%	7%	9%	5%	10%	7%
Elective_14d_100%	100%	100%	100%	98%	100%	98%	100%	100%	100%	98%	97%	100%	98%
Elective_7d_80%	98%	97%	100%	94%	97%	93%	98%	100%	99%	97%	96%	95%	91%





Month	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
Scheduled	80%	85%	77%	87%	70%	84%	91%	89%	84%	61%	78%	82%	91%	95%
Urgent SC	91%	90%	83%	86%	87%	77%	95%	76%	90%	100%	87%	97%	100%	100%
Emergency	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Scheduled	94%	88%	93%	98%	91%	85%	65%	82%	83%	82%	86%	81%	70%	81%
Urgent SC	96%	98%	100%	97%	85%	89%	68%	77%	70%	85%	69%	84%	70%	73%
Emergency	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24
Scheduled	63%	68%	83%	76%	42%	61%	77%	67%	81%	59%	62%	51%	49%	64%
Urgent SC	52%	90%	91%	78%	73%	77%	65%	85%	79%	82%	64%	49%	58%	75%
Emergency	100%	100%	100%	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	100%
	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
Scheduled	55%	78%	75%	86%	81%	72%	81%	83%	75%	60%	43%	34%	66%	80%
Urgent SC	70%	67%	74%	88%	88%	67%	68%	90%	75%	71%	73%	71%	63%	52%
Emergency	92%	100%	100%	96%	90%	100%	100%	91%	100%	100%	100%	100%	100%	100%
	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26						
Scheduled	41%	18%	33%	17%	26%	16%	20%	14%						
Urgent SC	65%	74%	59%	76%	69%	47%	50%	82%						
Emergency	100%	100%	100%	92%	100%	100%	100%	100%						

Integrated Impact Assessment (IIA) –

SECTION 1 – What is being proposed? In this section you will be asked to provide an overview of what is being assessed, to understand where this work sits within the organisation, the data that is being used to inform this work and how those most affected views will be taken into account	
1. Basic details	
Name of Project / Policy / Procedure / Strategy etc.	Investment of an additional 5th Linear Accelerator at the South West Wales Cancer Centre, Singleton Hospital
What is the purpose and aims? **Please provide a brief overall description that includes:** – **the aim** – **the objectives** – **how this will be achieved** – **how success will be measured** – **the time frame for achieving this** – **a brief description of its relevance to equality and intended beneficiaries.**	The investment will provide an additional, 5th Linear Accelerator in the currently empty bunker at Singleton Hospital to meet rising demand for radiotherapy treatment for cancer patients across South West Wales. The bunker will be upgraded and configured to accommodate a modern, safe Linac, ensuring a secure environment for staff to deliver treatment. This investment will increase patient capacity, enhance service resilience and reduce the potential for outsourced radiotherapy treatments. This project aligns with supporting people in managing their physical, mental and social health & wellbeing needs and builds upon the Health Boards' Clinical Service Plan to transform complex care, emotional wellbeing & mental health. The key spending objectives support business needs, and align with NHS Infrastructure Investment Guidance objectives and criteria and Welsh Governments' Learning Disability Strategic Action Plan (2022-2026) The key spend objectives supports SBU's business needs by increasing capacity to radiotherapy treatment. These objectives align with NHS Infrastructure Investment Guidance objectives and criteria. In particular, they align with SB U's strategic response to access pressures as set out in "*Changing for the Future*" which references Morriston and Singleton Hospitals' roles as a centre of excellence. This project's key spend objectives are as follows:

	Spend Objective 1	The additional 5th Linac will provide **increased radiotherapy treatment capacity** at the SWWCC and support the implementation of a clinical adaptive radiotherapy service, to meet the needs of patient demand. Installation and clinical commissioning to be complete by May 2027.
	Spend Objective 2	To improve the **quality of service**. This will be evidenced by; improved patient outcomes, and meeting forecast changes in demand and current demand which can be measured through radiotherapy metrics.
	Spend Objective 3	To improve **clinical efficiencies** by providing additional and reliable Linac capacity, reducing disruption for patients during their treatment.
	Spend Objective 4	To improve **access to complex cancer treatments** for patient, enabling patients with the greatest health needs to have access to modern, high quality cancer treatments, addressing inequalities across South West Wales.
	Spend Objective 5	To improve **economies** by optimising local care and reducing the need for outsourced radiotherapy treatment.
	All the above to be achieved 12-18 months following the handover of the 5th Linear Accelerator, subject to funding and planning approvals.	
Executive Director Sponsor	Gareth Blandford, Associate Service Group Director of Neath Port Talbot Singleton Hospital Service Group (NPTSSG)	
Lead Officers Completing the IIA	Nicki Davies, Interim Divisional Manager, OHMPCE Shannon Mason, Deputy Business Planning Manager, Capital Planning	
Date(s) IIA drafted and subsequently updated as part of an iterative process	Final Draft. 21.04.2026	

2. What will the change proposed affect?

Changes to be made	Tick relevant box	Brief description of how people will be affected by the proposed changes
New and revised policies, practices, or procedures	✓	The Business Case will support the development of a new, fit for purpose building for patients and staff. There is no requirement for revised policies, practices, or procedures at this time. The project has been developed with

		key national strategies and policies to support the future vision of Cancer Services.
Service review, re-organisation, or service changes/reductions, which affect the wider community, service users, carers and or staff	✓	The lack of capacity for the South West Wales region results in increased Time to Radiotherapy, patient travel, suboptimal experience and reduced survival rates. Capital investment from the Welsh Government will support an additional 5th Linear Accelerator to be implemented for the Cancer Centre, allowing the service to improve current and future demand capacity, enhancing patient care and experience and reducing reliance on private care.
Efficiency or saving proposals	✓	Capital investment from the Welsh Government will support an additional 5th Linear Accelerator to be implemented for the Cancer Centre, allowing the service to improve current and future demand capacity, enhancing patient care and experience and reducing reliance on private care.
Setting budget allocations for new financial year and strategic financial planning	✓	Radiotherapy and Radiotherapy Physics teams have fully engaged with their Finance Business Partner to review staffing models and revenue implications. The proposal, at present, has revenue consequences, but has been addressed verbally through various project groups and has been considered as part of the 'Financial' and 'Economic' case within the additional Linac Business Justification Case.
New project proposals affecting staff, communities, or accessibility to the built environment, e.g., new construction work or adaptations to existing buildings, moving to on-line services, changing location	✓	. The proposal will have a positive impact on patients, families and wider communities as the building will provide additional capacity for cancer care for South West Wales.
Large Scale Public Events	N/A	N/A
Local implementation of National Strategy/Plans/Legislation	✓	See below key national strategies and policies relating to the general vision for NHS Wales: See below key national strategies and policies relating to the general vision for NHS Wales and specifically, Cancer Services: • SBUHB Clinical Services Plan 2019–2024 • Regional Clinical Services Plan, agreed by the South West Wales Joint Regional Planning and Delivery Committee (October 2019) • A Healthier Wales: Our Plan for Health and Social Care (2018)

3.
- Impact Assessment (IIA)

		• Hywel Dda UHB Transforming Clinical Services (TCS) Programme • SBUHB Cancer Service Improvement Plan 2019–2024 • SBUHB Annual Plan 2019/20 • SBUHB Site Development Control Plan for Singleton Hospital • Wellbeing and Future Generations (Wales) Act 2015 • NICE guidance and Royal College of Radiologists best practice • Cancer Delivery Plan for Wales 2016–2020, including SBUHB's Single Cancer Pathway Action Plan and the South West Wales Non-Surgical Oncology Strategy • Service Specification of External Beam Radiotherapy Services for the NHS in Wales (2024) • A Cancer Improvement Plan for Wales (2023-2026) • The Welsh Government Quality Statement for Cancer (2022)
Strategic directive and intent, including those developed at Regional Partnership Boards and Public Services Board, which impact on a public body's functions	✓	Swansea Bay University Health Board are seeking support from Hywel Dda University Health Board and the Regional Joint Committee to proceed with the revenue implication and capital investment to support the Addiitonal Linac at Singleton Hospital.
Medium to long term plans (for example, corporate plans, development plans, service delivery and improvement plans)	✓	Investment will allow the South West Wales Cancer Centre to develop an improved service model for increased patient capacity and enhanced care in accordance with the Health Boards Clinical Service Plan.
Setting objectives (for example, well-being objectives, equality objectives, Welsh language strategy)	✓	The Health Board supports each of the WBFGA (2015) goals through its capital investments, which allows the organisation to embed the five ways of working into strategic projects. A fifth Linac will increase radiotherapy capacity at SWWCC, improving service quality, efficiency, and patient outcomes while meeting growing demand and enabling adaptive radiotherapy by May 2027. It will also enhance access to complex treatments, reduce inequalities across South West Wales, and lower costs by minimising outsourced care The Health Board has completed a 'Benefits Realisation' and 'Spend Objectives' workshop to support the investment which sets out objectives to

		support business needs and align with NHS Infrastructure Investment Guidance.
Major procurement and commissioning decisions	✓	The Health Board has liaised with NHS Wales Shared Services Partnership – Procurement Services for the appointment of the proposed main contractor. The Capital Planning Department have engaged the Project Board throughout the tender process, ensuring design decisions were appropriate for the patient group. Commissioning support provided by NWSSP-PS Capital Equipping Team and the Health Boards' Space Management and Commissioning Manager. The following key appointments will be made to ensure delivery of this project: - Main Contractor: T.Richard Jones (Ltd) - Architect and Principal Designer : HLDesign - Mechanical, Electrical and Public Engineering Services: AECOM - Cost Advisor : AECOM - Structural and Civil Engineering: PHG Consulting Limited
Decisions that affect the ability (including external partners) to offer Welsh language opportunities and services	N/A	Wales has specific legal requirements related to the Welsh language, such as the **Welsh Language Act 1993** and the **Welsh Language Standards** (under the **Welsh Language (Wales) Measure 2011**). These requirements will be adhered to as required throughout the Additional Linac scheme. There are no elements of the contract that would affect the ability to offer Welsh Language opportunities and services.
3. Co-production / Engagement / Consultation		
What data / information / intelligence are you using to inform this work?	The development of this project has been informed as a result of increased need for healthcare therapeutic cancer care and the inability to meet patient demand with the current number of Linacs within South West Wales region. The detail is informed by patient led data via the Radiotherapy Service, and has been shared via Radiotherapy Modernisation Groups, Joint Commission Committee Wales and Singleton Leaderhsip Team, in accordance with the Health Boards' Clinical Service Plans.	

	Additionally, a project design team and project board have been established to guide the design and construction phases, ensuring that all perspectives are integrated. Internal and external consultancy will be engaged throughout the project to manage it effectively from construction through to handover, ensuring alignment with these frameworks and the successful delivery of the project
How will you co-produce / engage / consult to get the views of those affected, including people with protected characteristics to inform and develop the policy, procedure, strategy and or decision??	Regular feedback is obtained from patients via the HB system alongside more comprehensive Radiotherapy specific feedback. There is an opportunity to engage with patients at Maggies if this would be useful as this could independently facilitated.
How will you consider the views and opinions of those affected – internal and external stakeholders (staff, people with lived experience, carers etc) on the draft document?	Internal and external stakeholders have worked collaboratively with the Capital Planning Department to develop the draft Business Case. The development has taken place during workshops, project board and project design team meetings.
Provide details of the activities that have already taken place	Project Board Design Team Design Team Meetings – including internal staff engagement Benefits Realisation Workshop Spending Objectives Workshop Pros and Cons Workshop
What changes have been made as a result of the feedback received?	The case has been through various iterations ensuring that relevant changes have been made to strengthen the case for change.
If no co-production / engagement / consultation has taken place or is planned, what are the reasons for this?	N/A
What are the arrangements for engagement / communication as the policy / procedure / strategy is implemented?	The Capital Planning Department are submitting a Business Justification Case to seek approval from the Health Board, and investment from the Welsh Government. **The department is not implementing a policy, procedure or strategy.** However, if funding is approved the case will progress to construction and will be managed by the named contractors, external consultants and the Capital Planning Department, who will fully engage the Project Board on a monthly basis until such time the building is complete and handed over.

SECTION 2 – Understanding the Impact

It is important to understand the potential impact of what is being assessed on the organisation's statutory duty from a number of perspectives including: equality and human rights, biodiversity, Welsh language, Wellbeing of Future Generations Act. It is important to include data, intelligence etc to support how the impact assessment for each topic area has been arrived at. The impact on both staff and patients should be considered

Statutory Area	Specific Detail	What is the Impact?			Details of the impact of the proposal on the following. Where negative impacts are identified, what actions will be taken to minimise these?
		Positive	Negative	Neutral	
Protected Characteristics	**Children and Young People 0-18**			✓	The commissioning of an additional fifth linear accelerator (Linac) within the existing vacant bunker at Singleton Hospital's cancer centre will increase radiotherapy capacity, support current and future patient demand and improve clinical outcomes. Delivery of this project will reduce the number of patients requiring treatment outside the South West Wales region, thereby minimising the need for travel to centres such as Velindre, Bristol, or further afield. The Health Board will ensure that no individual is disadvantaged on the basis of protected characteristics, in accordance with the Equality Act and the Human Rights Act.
	Older People 50+	✓			
	Any other age group	✓			
	Future Generations (yet to be born)	✓			
	Disability	✓			
	Race (including refugees)	✓			
	Asylum seekers	✓			
	Gypsies & travellers	✓			
	Religion or (non-belief)	✓			
	Sex	✓			
	Sexual Orientation	✓			
	Gender reassignment	✓			
	Marriage & civil partnership	✓			
	Pregnancy and maternity	✓			
	Carers (inc. young carers)	✓			
	Veterans	✓			

Public Sector Equality Duty (PSED)	**To eliminate discrimination, harassment, and victimisation**	✓			The Health Board will not discriminate against any individual with protected characteristics in accordance with Equality Act and Human Rights act.
	To advance equality of opportunity between different groups	✓			
	To foster good relations between different groups	✓			
The Human Rights Act contains 15 rights, all of which NHS organisations have a duty. The 7 rights that are relevant to healthcare are listed. What impact does what is being assessed have on:	**Article 2: The Right to Life**	✓			The Health Board will not discriminate against any individual with protected characteristics in accordance with Equality Act and Human Rights act.
	Article 3: The Right not to be tortured or treated in an inhumane or degrading way	✓			
	Article 5: The Right to liberty	✓			
	Article 6: The Right to a fair trial	✓			
	Article 8: The Right to respect for private and family life	✓			
	Article 9: Freedom of thought, conscience and religion	✓			
	Article 14: Prohibition of discrimination	✓			
Socio-Economic Duty	**Community Cohesion**	✓			The Health Board will not discriminate against any individual with protected characteristics in accordance with Equality Act and Human Rights act.
	Social Exclusion	✓			
	Poverty	✓			

Biodiversity	**To maintain and enhance biodiversity**	N/A			The Health Board has appointed a qualified cohort of consultants; architects, mechanical and electrical engineers, civil and structural engineers and project managers, who have supported industry standard improvements where practicable. The promotion of ecosystems etc., is not applicable within this project scope, as the scheme sets to deliver a new, additional Linear accelerator in an existing vacant bunker within the Singleton Hospital.
	To promote the resilience of ecosystems, i.e., supporting protection of the wider environment, such as air quality, flood alleviation, etc.				
Welsh Language	**Will the proposal be delivered bilingually (Welsh & English)?**	✓			The business case has been produced in English, if and as required, the document can be translated.
	Will the proposal have an effect on opportunities for persons to use the Welsh language?	✓			The business case will not impact opportunities for patients or staff to use the Welsh language.
	Will the proposal increase or reduce the department/division's ability to deliver services through the medium of Welsh?	✓			The business case will not increase or reduce the organisations ability to deliver services through the medium of Welsh.
	Will the proposal treat the Welsh language no less favourably than the English language?	✓			The WBFGA (2015)sets the expectation for integrated planning beyond traditional health boundaries to improve social, economic environmental and cultural wellbeing of Wales. The business case has been developed to ensure that each of the goals have been supported. In accordance with the Welsh Language Act and A Wales of Vibrant Culture and Thriving Welsh Language, the proposal

					for investment will not treat Welsh less favourably than the English language.

4. Wellbeing of Future Generations Act (Wales) 2015 150623-guide-to-the-fg-act-en.pdf

How will the proposal maximise contributions to each of the seven national wellbeing goals?	Contribution to the Well-being Goals
– **A prosperous Wales** – **A resilient Wales** – **A healthier Wales** – **A more equal Wales** – **A Wales of cohesive communities** – **A Wales of vibrant culture and thriving Welsh language** – **A globally responsible Wales**	• **A Prosperous Wales** The proposal supports a more efficient and sustainable Radiotherapy and Radiotherapy Physics service at SBUHB by increasing radiotherapy capacity, reducing reliance on outsourced treatments, and optimising use of existing infrastructure. This will deliver better value for money, improve productivity, and support long-term financial sustainability within the Health Board. • **A Resilient Wales** By utilising an existing bunker, the project promotes sustainable use of available resource and infrastructure. Increased opportunity for capacity strengthens service resilience, ensuring continuity of excellent patient care and demand. Additional capability to perform adaptive radiotherapy promotes a skilled and sustainable service within SBUHB. • **A Healthier Wales** The investment will directly improve population health outcomes by increasing timely access to radiotherapy treatment, reducing delays and enabling the delivery of advanced techniques such as adaptive radiotherapy. It also supports patients' physical, mental and social wellbeing by reducing the burden of travel and disruption during treatment. • **A More Equal Wales** The proposal will reduce health inequalities by improving access to high quality cancer treatment for patients across South West Wales, particularly those with the greatest clinical need. . • **A Wales of Cohesive Communities**

	By enabling more patients to receive treatment, the additional linac in Singleton Hospital supports community connections and support networks for those receiving treatment in SWWCC, by reducing the social and emotional impact of travelling long distances for care. • **A Wales of Vibrant Culture and Thriving Welsh Language** The Welsh language will be fully supported, where required, as part of the project delivery and ongoing patient care. • **A Globally Responsible Wales** Potential reduction in patient travel and outsourced treatments will help lower the carbon footprint associated with care delivery.
Ways of working	**Details of how what is being assessed will support the ways of working**
Long-term – looking at least 10 years (and up to 25 years) ahead	The addition of a fifth Linac supports both current capacity requirements and future expansion, including planned replacement programmes and the potential introduction of further linear accelerators. This business case outlines the Health Board's strategic plans to increase Linac capacity within the cancer centre, alongside the longer-term development of a potential satellite facility.
Prevention – preventing problems occurring or getting worse	The South West Wales Cancer Centre (SWWCC) currently operates four linear accelerators, which are insufficient to meet existing patient demand. As these machines age, reliability and efficiency decline, with increased breakdowns leading to treatment delays and impacting the Health Board's ability to meet Time to Radiotherapy targets. Investment in an additional Linac will deliver measurable improvements in patient outcomes and performance against national targets. Without this capital investment, the service is likely to continue breaching required standards for timely care delivery.
Collaboration – working with other services, both internally and externally	The service work collaboratively with wider NHS Health Boards/Trusts, specifically HDUHB, Velindre Trust and Public Health Wales. Additionally, the service proactively engage with other public bodies, including the Regional Joint Committee, who oversee joint incentive projects/programmes between SBUHB and HDUHB.

Involvement – involving people at the earliest stage, ensuring they reflect the diversity of the population	Continued engagement with the Health Board and wider NHS Health Boards/Trusts, and Welsh Government from a strategic perspective.
Integration – making connections to maximise contribution to:	Through strategic partnerships and a focus on sustainability and inclusivity, the proposal for the new facility will make meaningful contributions to the goals of the Well-being of Future Generations (Wales) Act 2015, ensuring a lasting positive impact on individuals requiring cancer care.

SECTION 3 - The One Bay Way BEING A HIGH-QUALITY ORGANISATION
How does what is being assessed support the organisation with its 10-year vision to become a High-Quality Organisation and impact the Health and Care Quality Standards?

5. How with the proposal support the delivery of the One Bay Way?

Objective	What is the Impact?			Details of the impact of the proposal on the following. Where negative impacts are identified, what actions will be taken to minimise these?
	Positive	Negative	Neutral	
Objective 1 – Deliver the quality strategy principles.	✓			The investment in an additional Linac at SWWCC will significantly enhance radiotherapy capacity, improve reliability of service delivery, and support the introduction of advanced treatment techniques, including adaptive radiotherapy. It will strengthen compliance with national targets, reduce treatment delays, and improve overall clinical outcomes for patients across South West Wales. The proposal supports staff wellbeing by reducing service disruption and
Objective 2 – Create an environment where staff can flourish through our people promise	✓			
Objective 3 – Build the business and get the guidance to build compliance and competency	✓			
Objective 4 – Provide the leadership, culture and attitudes for a high-quality resource organisation	✓			

Objective 5 – Focus on quality improvement, capacity and capability	✓			enabling a more stable and efficient working environment. It strengthens organisational capability and compliance, while aligning with strategic transformation objectives and promoting a culture of continuous improvement. By increasing local (SWW) treatment capacity, the investment will reduce the need for patients to travel outside the region, improving continuity of care, patient experience, and equitable access to high-quality cancer services. Overall, it places patients at the centre of care delivery while enhancing capacity, efficiency, and service resilience. Overall, the proposal is able to demonstrate each of the objectives to support the delivery of the One Bay Way.
Objective 6 – Create the right environment with patients for integrated care.	✓			
Objective 7 – Centre our organisation on the patient or service users	✓			

6. How will this work support our Quality Ambitions?
nhswales365.sharepoint.com/sites/SBU_QualitySafetyAndImprovement/Shared Documents/Forms/AllItems.aspx?id=%2Fsites%2FSBU_QualitySafetyAndImprovement%2FShared Documents%2FStrategy Launch Event%2FApproved with Edit1 - Quality Strategy 2023%2Epdf&parent=%2Fsites%2FSBU_QualitySafetyAndImprovement%2FShared Documents%2FStrategy Launch Event&p=true&ga=1

Quality Ambition	Supporting Detail
Delivering safe and reliable care	

Becoming an organisation, our patients and communities are proud of	The development will help position the Health Board as an organisation that patients and communities can be proud of by improving local access to high-quality cancer services and reducing the need for patients to travel outside South West Wales. It will also contribute to a more positive patient experience and greater confidence in regional services. Staff will be supported through a more stable and efficient working environment, with reduced disruption from equipment downtime and improved capacity to deliver modern radiotherapy techniques, thereby supporting professional development and service delivery. Overall, the investment will secure high-quality, accessible radiotherapy services both now and in the future, increasing capacity to meet growing demand, enabling service modernisation, and ensuring long-term sustainability of local cancer care.
Empowered staff	
High quality accessible services now and in the future	

SECTION 4 – Summary of Impacts and Actions	
7. The positive, negative and neutral impacts of what is being assessed will be summarised here	
Likely Impacts	**Details of the likely impact/advantage/disadvantage and what action will be taken to reduce the inequality of the outcome.**
Positive/Advantage	The business case supports a range of advantages and benefits for patients, families and staff. The listed advantages are relevant to the spending objectives and critical success factors for the case: • Increases radiotherapy capacity for SWWCC • Deliverable within the required timeframe (operational by 2027/28) • Meets the scope outlined in Health Board Management Papers 2025 • Improves ability to meet national waiting time targets (TRT) • Strengthens resilience of the service through additional capacity and interoperability through software upgrades, reducing single point of failure. • Meets all SO's and CSFs.

	• This is the preferred option. If Capital investment is agreed for the additional linac, the Health Board will improve its current and projected Demand & Capacity issues by 2027/28. This option provides the best balance of deliverability, affordability and clinical benefit.
Negative/Disadvantage	N/A
No Impact	N/A

15.
- Impact Assessment (IIA)

Impact Assessment (IA) Tool & Guide on Completion

A. SUMMARY OF BUSINESS CASE/ PROPOSAL

Ref:	5th Linac
Name:	Russell Banner Nicki Davies Ryan Lewis Anna Iles Sophie Jenkins Ahmad Karimi Shannon Mason Ruth Tovey
Description:	Swansea Bay University Health Board (SBUHB) and Hywel Dda University Health Board (HDdUHB) jointly developed a Strategic Programme Case (SPC) for the SWWCC to support regional non-surgical oncology services, including radiotherapy and outpatient services. The SPC, approved by both health boards in 2023, outlines the planned development of regional service models and joint business cases. Following the Health Board's approval in July 2025 to approach WGov for a Business Case Scoping meeting regarding the Lin 5 machine and Lin 6 bunker, agreement was reached with WGov in October 2025 to proceed with the development of an additional 5th working machine in the SWWCC is outlined in the fully designed and tendered business case submitted to PFAG in May 2026 Demand has been exceeding capacity for a number of years, and detailed modelling has shown the South West Wales Cancer Centre will need to further extend Radiotherapy provision as follows

Future Linacs Timeline	Activity	Year 0 24/25	Year 1 25/26	Year 2 26/27	Year 3 27/28	Year 4 28/29	Year 5 29/30	Year 6 30/31
Total Demand	Slots	32,141	34,067	35,195	42,659	48,435	54,170	57,887
Current SWWCC Activity (4 Linacs)								
Current Average Activity per Linac (32,525/4)	Slots	8,131	8,131	8,131	8,131	8,131	8,131	8,131
Number of Linacs Required	**Slots**	**4.0**	**4.2**	**4.3**	**5.2**	**6.0**	**6.7**	**7.1**
Number of Linacs Timeline		**4 Linacs**			**5 Linacs**		**6 Linacs**	**7 Linacs**

The purpose of this QIA is to accompany the suite of documents prepared for the approval of the Business Justification Case (BJC) for the investment of a 5th Linear Accelerator (Linac) within the South West Wales Cancer Centre (SWWCC). The new Linac will be

commissioned in the current void bunker at Singleton Hospital, by May 2027/28.

The investment will provide an additional, 5th Linac in the empty bunker at Singleton Hospital to meet rising demand for radiotherapy treatment for cancer patients across South West Wales. The bunker will be upgraded and configured to accommodate a modern, safe Linac, ensuring a secure environment for staff to deliver treatment. This investment will increase patient capacity, enhance service resilience and reduce the potential for outsourced radiotherapy treatments.

This QIA is assessing the 'do nothing' scenario outlined in the business case, i.e. the Health Boards do not agree to the expansion to 5 clinical treatment machines/ support the recurrent revenue costs which are currently unfunded for both HBs. Failure to invest in this case will result in increased costs to SBU as patients not receiving timely Radiotherapy may need alternative unplanned care (surgery, chemotherapy, palliative).

FYE (£000s)

Note as the SWWCC offers a regional Radiotherapy service the costs are split 50/50 with HDdUHB.

Costings (NB. pay based on top of scale 2026/27 pay scales)	26/27	27/28	28/29	29/30	30/31
5th Linacc					
Pay Costs - Medical Physics	69	476	508	508	508
Pay Costs - Radiotherapy	0	899	899	899	899
Pay Costs - Oncology Consultants	0	166	191	191	191
Total Pay Costs	**69**	**1,541**	**1,598**	**1,598**	**1,598**
Non Pay - Medical Physics & Radiotherapy *	0	156	310	330	330
Non Pay - New Adaptive RT	0	260	300	300	300
Total Non Pay Costs	**0**	**415**	**610**	**630**	**630**
Facilities Management Costs	**0**	**34**	**40**	**40**	**40**
Total 5th Linacc Costs	**69**	**1,991**	**2,248**	**2,268**	**2,268**
CT Sim **					
Pay Costs - Medical Physics	51	154	154	154	154
Pay Costs - Radiotherapy	51	163	163	163	163
Pay Costs - Oncology Consultants	0	96	96	96	96
Total Pay Costs	**103**	**413**	**413**	**413**	**413**
Direct Non-Pay Costs	2	68	68	68	68
Medical Physics Artificial Intelligence Software Subscription	0	25	25	25	25
Total Non Pay Costs	**2**	**93**	**93**	**93**	**93**
Facilities Management Costs	**0**	**0**	**0**	**0**	**0**
Total CT Sim Additional Capacity Costs	**105**	**506**	**506**	**506**	**506**
Total Cost	**174**	**2,497**	**2,754**	**2,774**	**2,774**

Delivery Lead:	Gareth Blandford

B. IMPACT IDENTIFICATION

STEP 1: Use the **Assessment Matrix (Appendix B)** to assess which of the Impact Domains will be affected by this change. For each impact you have identified as being affected, record the Impact Score in the table below. Please also provide some narrative in the 'Impact Description' box to describe the possible impact (aligned to the impact domains you have identified).

Impact Matrix **Assessment Domain**	**Affected Domain?** **(Yes/ No)**	**Matrix Score** **(if yes)**
Impact on the safety of patients, staff or public (physical / psychological harm)	**Yes**	**Catastrophic (4)**
Quality / Equality / Complaints / Audit	**Yes**	**Catastrophic (4)**
Service Delivery / Business Interruption / Environmental Impact	**Yes**	**Minor (1)**
Human Resources / Organisational Development / Staffing / Competence	**Yes**	**Moderate (2)**
Statutory Duty / Inspections / PFI Contracting	**Yes**	**Major (3)**
Achievement of National Standards	**Yes**	**Catastrophic (4)**
Adverse Publicity / Reputation	**Yes**	**Major (3)**
	Total Score:	**21**

Probability of Occurrence

Assessment Score

	Negligible	Minor	Moderate	Major	Catastrophic
Rare	0	0	1	2	3
Unlikely	0	1	2	3	3
Possible	1	2	3	3	4
Likely	2	3	3	4	4
Certain	2	3	4	4	4

Impact Details / Comment

Please comment on the driver of the score for every domain in which you have responded yes.

Impact on the safety of patients, staff or public (physical / psychological harm)

The SWWCC Radiotherapy performance against national reporting metrics is, as of April 2026 (17% against a 100% 21-day) this means a catastrophic assessment of patient outcomes, triggering duty of candour, should this continue, as timely Radiotherapy is a key prognostic indicator.

Recent HIW Inspection and Improvement action plan required the Employer to develop a formal forward-looking replacement schedule for LINACs and other critical radiotherapy equipment to ensure phased replacement minimises service disruption and maintains safe and effective radiotherapy delivery.

Quality / Equality / Complaints / Audit

Colleagues in SE Wales at Velindre Cancer Centre (VCC) are performing at over 80% for the same metric, and therefore equity of care is unacceptable

The Radiotherapy service has BSI certified Quality Management system audits, as well as Health Inspectorate Wales Inspections (HIW) in relation to the provision of safe and effective care. These external reviews have highlighted the need for robust infrastructure planning and service development. The HIW improvement action plan further identified that specialist treatments, such as stereotactic radiosurgery (SRS), should be delivered within the SWWCC to ensure equitable access for patients. Approval of the 5th Linear Accelerator will provide the necessary equipment and capacity to support the development and delivery of these advanced radiotherapy techniques locally. ‘Do nothing approach’ will result in patients from SW will continuing to travel to VCC for this treatment.

Service Delivery/ Business Interruption / Environmental Impact

SWWCC clinical leaders have identified (and it is supported by modelling) infrastructure (capacity) is the key reason performance is unacceptable, therefore investment in a 5th Linac (treatment machine) and the associated workforce is the most significant solution for service delivery improvements.

Failure to approve the business case will make the existing capacity more susceptible to disruption particularly when replacements are needed (scheduled for 2028)

Human Resources / Organisational Development / Staffing / Competence

HR and organisational Development, through recruitment of the appropriate workforce to support the service expansion is essential. The SWWCC is not currently experiencing the same recruitment issues as much of the UK, support to ensure this situation continues is paramount. Ensuring access to modern infrastructure and the delivery of state-of-the-art radiotherapy techniques will be critical in maintaining the centre's reputation as a high-quality, forward-looking service and a desirable place to work. This will support workforce retention, attract skilled professionals, and enable the continued development of advanced practice roles aligned to service needs. The 'do nothing' approach risks the reputation of SWWCC, and brings a risk of recruitment challenges in the future.

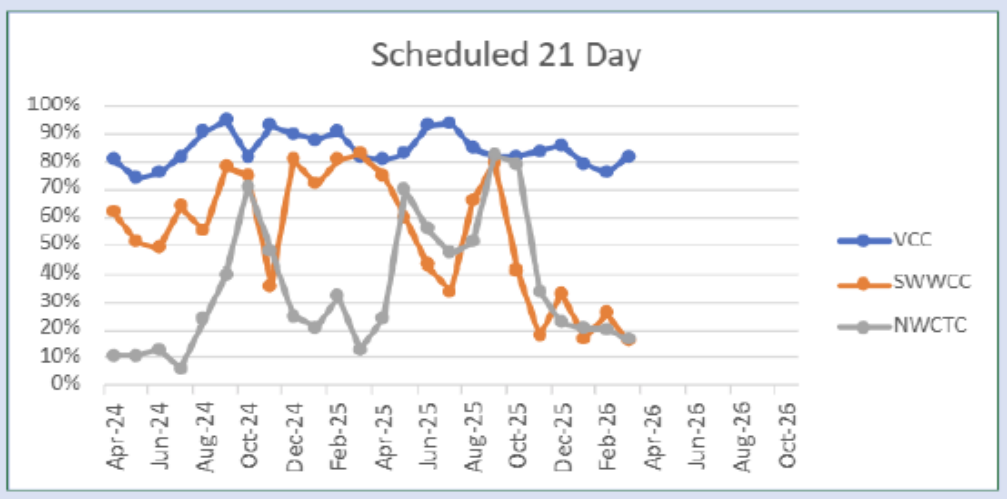
Statutory Duty / Inspections / PFI Contracting

There is a statutory duty alongside the Duty of Candour to inform patients of the inequity is service provision and their likely poorer outcomes due to local service provision performance.

Outsourcing is a costly option, which may only offer a very short-term response, and involve further patient travel, and poorer outcomes.

Achievement of National Standards

SWWCC is performing significantly poorer to national standards and other comparable regional services.



Adverse Publicity / Reputation

Were the situation of poor performance, along with the inequity, to continue, it would be reasonable to expect National Media coverage.

Positive Impacts that may arise: (This is based on securing approval to expand to 5 Linacs – to note, there are no positive impacts associated with the 'Do Nothing' scenario.)

Use the 5 x 5 Opportunity Matrix below this table to complete the Benefit Assessment

Opportunity / Positive Impact	Affected? (Yes/No)	Impact Score (if yes)
Impact on the safety of patients, staff or public (physical / psychological harm)	Yes	20
Quality / Equality / Complaints / Audit	Yes	20
Service Delivery / Business Interruption / Environmental Impact	Yes	9
Human Resources / Organisational Development / Staffing / Competence	Yes	12
Statutory Duty / Inspections / PFI Contracting	Yes	16
Achievement of National Standards	Yes	20
Adverse Publicity / Reputation	Yes	16
	Total Score:	113

If any of the Positive Impacts are **16 or above,** please provide details and actions that will be undertaken to realise / deliver these benefits.

Impact Description
Impact on the safety of patients, staff or public (physical / psychological harm); Quality / Equality / Complaints / Audit and Achievement of National Standards (all scored 20) The impact on patients; and the quality and equity of service provision would be enhanced to a safe and equitable standard with this investment. Capacity would start to match demand and infrastructure would cease to be the limiting factor in performance against national metrics. **Statutory Duty / Inspections / PFI Contracting and Adverse Publicity / Reputation (Scored 16)** The investment will allow an improvement in performance and remove the need to explain to patients the differential in treatment timeliness across South Wales, it would at the same time remove the need to look at PFI (outsourcing) options and allow the SWWCC reputation to be enhanced as providing the standard of care.

Opportunity Matrix

Probability of Occurrence

Size of improvement opportunity

	None	Little	Minor	Moderate	Major
Rare	0	0	1	2	3
Unlikely	0	1	2	3	3
Possible	1	2	3	3	4
Likely	2	3	3	4	4
Certain	2	3	4	4	4

Protected Characteristics Review

Use the 5 x 5 Risk Matrix below this table to complete the Risk Assessment

Equality Protected Characteristic	Affected? (Yes/No)	Overall risk assessment
Age	Yes	4
Disability	Yes	4
Gender Reassignment	Yes	4
Marriage & Civil Partnership	Yes	4
Pregnancy & Maternity	Yes	4
Race	Yes	4
Religion or Belief	Yes	4
Sex	Yes	4
Sexual Orientation	Yes	4
	Total Score:	36

Impact Description
The 'do-nothing' scenario disadvantages all patients, inclusive of protective characteristics, as this would continue to limit access to timely radiotherapy treatment across South West Wales. However, age is an important characteristic to note in this context, given cancer is strongly associated with an ageing population.

Risk Matrix

Size of Risk

Probability of Occurrence

	None	Little	Minor	Moderate	Major
Rare	0	0	1	2	3
Unlikely	0	1	2	3	3
Possible	1	2	3	3	4
Likely	2	3	3	4	4
Certain	2	3	4	4	4

C. CONTROLS AND ASSURANCES

STEP 3: Identify the existing controls that you have in place to ensure that Risk is kept to a minimum. Controls can include Policies, Processes, Procedures, Training etc. Record in the table below.

STEP 4: Identify the existing Assurance mechanisms in place which demonstrate the effectiveness of your controls. Assurances can include Business Intelligence Analysis, Reports etc. Record in the table below.

Existing Controls	Existing Assurances
• Local and National Quality Metric reporting • Analysis of lost capacity • Comparative national monitoring by COSC, mandated by Welsh government to monitor performance	• Monitoring of poor performance • Risk Register items • Dashboards for Business intelligence and identification of existing bottlenecks • HIW Improvement plan

D. FURTHER ACTIONS AND MONITORING

STEP 5: For schemes with a risk score of >2, identify the further action(s) which you will be taking to ensure that the risk is kept to a minimum. Record in the table below.

Action	Person Responsible	Due Date
It is difficult to mitigate the risk of identified within this QIA as additional capacity has been identified as the principal limiting factor. A business case has been developed to seek investment, both Capital and Revenue (to ensure the appropriate workforce) to move towards a reduction in the risks herein identified		

STEP 6: Identify the mechanisms that you will use to monitor the impact of this scheme:

Impact Monitoring Mechanism	Which applied (Y/N)	Which forum will review these? (if yes)
Safety Information, i.e. incident reporting, mortality, claims	**Y**	Yes, continue to monitor M&M board
Patient / Staff Experience Information, i.e. complaints, feedback (including external stakeholders), surveys	**Y**	Yes, continue to undertake patient and staff feedback, and escalate as required
Key Performance Indicators (which could confirm a positive or negative change)	**Y**	Continue to monitor, report within SBU, regionally with HDU and nationally via COSC and NHS W P&I
Media / Publicity / Reputation Monitoring		
Regulatory Compliance Monitoring / Assurance	**Y**	Continue to deliver HIW Improvement plan
Risk Register	**Y**	Continue to monitor and escalate existing

		significant risks (ID 89 and 2599). These risks are both currently scored at 20
Meeting / Group / Forum (please specify below)	**Y**	Radiotherapy Management Meeting SWWCC Radiotherapy Modernisation Group Performance Review (Cancer) Cancer Planning Improvement Group (CPIG) Clinical Oncology Sub-Committee (COSC-WSAC)
Financial / Activity Reporting	**Y**	5th Linac Project board to review financial implications of expansion case
Cumulative impact (i.e. the impact that this scheme may have alongside other schemes)	**Y**	Timely delivery of this scheme to allow the 6th and 7th bunkers and replacement of existing machines over the next 5 years to proceed as required
Other (please specify below)		

If a meeting / group / forum or 'other' has been selected, please specify:
There are a number of internal SBU meetings where Radiotherapy data is reported, these are the Radiotherapy Management meeting, the SWWCC Radiotherapy Modernisation Group (which has HDdUHB colleagues as members), Performance Review (Cancer) and Cancer Planning Improvement Group (CPIG). Clinical Oncology Sub-Committee of the Welsh Scientific Advisory Committee (COSC-WSAC) has a formal mandate from Welsh Government to monitor

Radiotherapy performance across Wales. There is inequity in performance within Wales currently.

E. IMPACT ON OTHER SERVICES

STEP 7: Have you identified in your impact assessment that the change will impact upon other services?

Have you identified that this change will have an impact on other services?			
Yes	**Yes**	**No**	

STEP 8: If you have answered yes to Step 7, what is the impact upon other services and what are those services? Complete the table below.

What is Impact on other services	Affected services	Outcome of discussion /support from affected services – Next steps
Many Cancer patients need adjuvant / combined Radiotherapy and Systemic Anti-Cancer Therapy (Chemotherapy), this may need to be limited	SACT	To be considered
Change of treatment planned as part of this service expansion moving some patients from Surgery to Radiotherapy	Surgery	This may need to be reassessed  COSC Position Statement - RT Capa
Unable to deliver the Stereotactic Ablative Radiotherapy Service (SABR), which is currently income generating	NHSW JCC	To meet with JCC at end of June

APPROVAL OF IMPACT ASSESSMENT - Overview (please see the IA APPENDIX B

IMPACT ASSESSMENT MATRIX (proposed indicative appetite identified

Impact Domains	Impact Score and Examples of Descriptions			
	Negligible	**Minor**	**Moderate**	**Major**
Impact on the safety of patients, staff or public (physical / psychological harm)	**Minimal injury requiring no/minimal intervention or treatment.** **No time off work**	Minor injury or illness, requiring minor intervention. Requiring time off work for >3 days Increase in length of hospital stay by 1-3 days	Moderate injury requiring professional intervention Requiring time off work for 4-14 days Increase in length of hospital stay by 4-15 days. RIDDOR/agency reportable incident An event which impacts on a small number of patients	Major injury leading to long-term incapacity/disability. Requiring time off work for >14 days Increase in length of hospital stay by >15 days. Mismanagement of patient care with long-term effects
Quality / Equality / Complaints / Audit	Peripheral element of treatment or service suboptimal Informal complaint/inquiry	**Overall treatment or service suboptimal:** **Formal complaint (stage 1)** **Local resolution** **Single failure to meet internal standards.** **Minor implications for patient safety if unresolved** **Reduced performance rating if unresolved**	Treatment or service has significantly reduced effectiveness Formal complaint (stage 2) complaint Local resolution (with potential to go to independent review) Repeated failure to meet internal standards. Major patient safety implications if findings are not acted on	Non-compliance with national standards with significant risk to patients if unresolved Multiple complaints/ independent review Low performance rating Critical report

Impact Domains	Impact Score and Examples of Descriptions				
	0	1	2	3	4
	Negligible	Minor	Moderate	Major	Catastroph
Service Delivery/ Business Interruption / Environmental Impact	Loss/interruption of >1 hour Minimal or no impact on the environment No impact on other services	Loss/interruption of >8 hours Minor impact on environment Impact on other services	**Loss/interruption of >1 day** **Moderate impact on environment** **Impact on services**	Loss/interruption of >1 week Major impact on environment Impact on all SBUHB	Permanent loss service or facili Catastrophic in on environmen Impact on servi external to the Organisation
Human Resources / Organisational Development / Staffing / Competence	Short-term low staffing level that temporarily reduces service quality (< 1 day)	**Low staffing level that reduces the service quality**	Late delivery of key objective/ service due to lack of staff Unsafe staffing level or competence (>1 day) Low staff morale Poor staff attendance for mandatory/key training	Uncertain delivery of key objective/service due to lack of staff Unsafe staffing level or competence (>5 days) Loss of key staff Very low staff morale No staff attending mandatory/ key training	Non-delivery of objective/servic to lack of staff Ongoing unsafe staffing levels c competence Loss of several staff No staff attend mandatory trai /key training on ongoing basis
Statutory Duty / Inspections / PFI Contracting	No or minimal impact or breech of guidance/ statutory duty	Breech of statutory legislation Reduced performance rating if unresolved	**Single breech in statutory duty** **Challenging external recommendations/ improvement notice**	Enforcement action Multiple breeches in statutory duty Improvement notices Low performance rating Critical report	Multiple breech statutory duty Prosecution Complete syste change require Zero performan rating Severely critica
Achievement of National Standards	**Meets Standards**	1 – 2 % below Standards	3 - 5% below Standards	6 - 10% below Standards	11+% below Standards
Adverse Publicity / Reputation	Rumors Potential for public concern	Local media coverage – short-term reduction in public confidence Elements of public expectation not being met	Local media coverage – long-term reduction in public confidence	**National media coverage with <3 days service well below reasonable public expectation**	National med coverage with days service w below reason public expect MP concerne (questions in House) Total loss of p confidence

F. FORM for detailed steps)

IMPACT ASSESSMENT REVIEW APPROVAL	
Exec Sponsor	
Delivery Lead	

APPENDIX B

IMPACT ASSESSMENT MATRIX (proposed indicative appetite identified in bold)					
Impact Domains	**Impact Score and Examples of Descriptions**				
	Negligible	**Minor**	**Moderate**	**Major**	**Catastrophic**
Impact on the safety of patients, staff or public (physical / psychological harm)	**Minimal injury requiring no/minimal intervention or treatment.** **No time off work**	Minor injury or illness, requiring minor intervention. Requiring time off work for >3 days Increase in length of hospital stay by 1-3 days	Moderate injury requiring professional intervention Requiring time off work for 4-14 days Increase in length of hospital stay by 4-15 days. RIDDOR/agency reportable incident An event which impacts on a small number of patients	Major injury leading to long-term incapacity/disability. Requiring time off work for >14 days Increase in length of hospital stay by >15 days. Mismanagement of patient care with long-term effects	Incident leading to death Multiple permanent injuries or irreversible health effects An event which impacts on a large number of patients
Quality / Equality / Complaints / Audit	Peripheral element of treatment or service suboptimal Informal complaint/inquiry	**Overall treatment or service suboptimal:** **Formal complaint (stage 1)**	Treatment or service has significantly reduced effectiveness Formal complaint (stage 2) complaint	Non-compliance with national standards with significant risk to patients if unresolved Multiple complaints/ independent review	Totally unacceptable level or quality of treatment/service Gross failure of patient safety if findings not acted on

		Local resolution **Single failure to meet internal standards.** **Minor implications for patient safety if unresolved** **Reduced performanc e rating if unresolved**	Local resolution (with potential to go to independent review) Repeated failure to meet internal standards. Major patient safety implications if findings are not acted on	Low performance rating Critical report	Inquest/ombudsma n inquiry Gross failure to meet national standards

Impact Domains	Impact Score and Examples of Descriptions				
	0	1	2	3	4
	Negligible	Minor	Moderate	Major	Catastrophic
Service Delivery/ Business Interruption / Environmental Impact	Loss/interruption of >1 hour Minimal or no impact on the environment No impact on other services	Loss/interruption of >8 hours Minor impact on environment Impact on other services	**Loss/interruption of >1 day** **Moderate impact on environment** **Impact on services**	Loss/interruption of >1 week Major impact on environment Impact on all SBUHB	Permanent loss of service or facility Catastrophic impact on environment Impact on services external to the Organisation
Human Resources / Organisational Development / Staffing / Competence	Short-term low staffing level that temporarily reduces service quality (< 1 day)	**Low staffing level that reduces the service quality**	Late delivery of key objective/ service due to lack of staff Unsafe staffing level or competence (>1 day) Low staff morale Poor staff attendance for mandatory/key training	Uncertain delivery of key objective/service due to lack of staff Unsafe staffing level or competence (>5 days) Loss of key staff Very low staff morale No staff attending mandatory/ key training	Non-delivery of key objective/service due to lack of staff Ongoing unsafe staffing levels or competence Loss of several key staff No staff attending mandatory training /key training on an ongoing basis
Statutory Duty / Inspections / PFI Contracting	No or minimal impact or breech of guidance/ statutory duty	Breech of statutory legislation Reduced performance rating if unresolved	**Single breech in statutory duty** **Challenging external recommendations/ improvement notice**	Enforcement action Multiple breeches in statutory duty Improvement notices Low performance rating Critical report	Multiple breeches in statutory duty Prosecution Complete systems change required. Zero performance rating Severely critical report
Achievement of National Standards	**Meets Standards**	1 – 2 % below Standards	3 - 5% below Standards	6 - 10% below Standards	11+% below Standards