



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Bae Abertawe
Swansea Bay University
Health Board



Meeting Date	27 January 2022	Agenda Item	5.1
Report Title	Provision of replacement Linear Accelerator [Linacc D] Singleton Hospital		
Report Author	Richard Clayfield: Deputy Head of Procurement Ryan Lewis, Head of Radiotherapy Physics Services Ian MacDonald, Assistant Director of Finance		
Report Sponsor	Andrew Ward: Senior Programme Manager Specialist Diagnostic and Therapies Equipment (Specialist Estates Services, NHS Wales Shared Service Partnership) Darren Griffiths, Director of Finance and Performance		
Presented by	Darren Griffiths, Director of Finance and Performance		
Freedom of Information	Open		
Purpose of the Report	<p>To provide an update to the Health Board on the further work undertaken to develop the detailed elements of the business model (capital and revenue) in respect of the procurement of a replacement Linear accelerator treatment machine for Singleton Hospital.</p> <p>The requirement for this further report was agreed at the November 2021 Board after the Board agreed the early procurement of the Linacc itself from capital funding becoming available in 2021/22 ahead of the planned purchase in 2022/23. This proposal was put to the Board by Welsh Government as part of their risk assessment of the 2022/23 national capital plan in the context of available capital slippage in 2021/22</p>		
Key Issues	<p>At its meeting in November 2021 the Board approved the purchase of the replacement Linear Accelerator (Linacc D) from capital funding which has become available via the national replacement programme into 2021/22 ahead of its planned procurement in 2022/23.</p> <p>Given scarcity of capital and potential further limiting of national funds in 2022/23 the Board considered the matter and agreed to procure the Linacc through a compliant procurement route via the NHS Supply Chain</p> <p>The detailed capital works costs and revenue model had been under development at this time but as the equipment replacement was scheduled in to financial year 2022/23</p>		

	<p>the full case was unavailable for consideration by the Board at the time of the need to make the decision to commission the Linacc itself.</p> <p>The Board considered that Linaccs are clinically critical items of treatment equipment and any unreliability or imaging issues can lead to treatment delays with the resultant delay may then also lead to patient consequences which should be avoided if possible. It also considered that replacement of Linacc D was already planned for 2022/23 and making the decision to purchase it from available funding was a low risk decision given confirmed availability of capital funding to complete the installation and commissioning of the machine and given clinical support for the replacement.</p> <p>This report updates the Board on the work carried out since the end of November 2021 to further develop the business case and to advise the Board that the business case to include the tendered building works costs, will be brought to the Health Board in Q1 2022/23.</p>			
Specific Action Required <i>(please choose one only)</i>	Information	Discussion	Assurance	Approval
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recommendations	<p>Members are asked to:</p> <ul style="list-style-type: none"> • NOTE the work undertaken to date to develop the case; and • NOTE that the business case, to include tendered building works will come before the Board in Quarter 1 2022/23 • APPROVE commitment of £4.25m for the totality of the scheme across 2021/22 and 2022/23 to be funded from Welsh Government • APPROVE that the benefits realisation be further scrutinised by 31st March 2022 for consideration by the CEO • APPROVE that the potential maximum revenue cost to the Health Board of £81k per annum be funded through the 2022/23 allocation but that this be further challenged by the Service Group Director and the Director of Finance to reduce the cost further. 			

PROVISION OF REPLACEMENT LINEAR ACCELERATOR [LINACC D] TREATMENT MACHINE FOR SINGLETON HOSPITAL

1. INTRODUCTION

This paper provides an update to the Health Board on the further work undertaken to develop the detailed elements of the business model (capital and revenue) in respect of the procurement of a replacement Linear accelerator treatment machine for Singleton Hospital.

The requirement for this further report was agreed at the November 2021 Board after the Board agreed the early procurement of the Linacc itself from capital funding becoming available in 2021/22 ahead of the planned purchase in 2022/23. This proposal was put to the Board by Welsh Government as part of their risk assessment of the 2022/23 national capital plan in the context of available capital slippage in 2021/22.

2. BACKGROUND

There are four Linear Accelerators in the West Wales Cancer Centre at Singleton Hospital. Under normal working conditions, the recommended working life of the equipment is ten years from its date of entry into clinical use. Linacc D was commissioned in 2009 and has therefore exceeded its recommended life. The Health Board has received notification that the main control elements of the machine are now out of manufacturer support, and is unable to support the latest complex technologies. As the Linacc D is 13 years' old there are no options for extending the life. The only other option would be outsourcing, which would be clinically and operationally unsustainable. Replacement is therefore considered the only viable option.

Timely replacement is critical to a safe and effective service, particularly in light of a sustained Covid-19 Cancer recovery phase, and an anticipated increase in demand for Radiotherapy services. Swansea Bay University Health Board (SBUHB) has a requirement to replace the ageing linear accelerators in the radiotherapy department at Singleton hospital, this is the next unit to be replaced in the modernisation of the existing service.

The replacement of Linacc D forms part of the Health Board's planned replacement programme of major diagnostic and treatment equipment in the Cancer Centre. Welsh Government capital funding was provided last year for the replacement of the CT-SIM and this year for the replacement of Linacc C and the two ageing Gamma Cameras, all of which are due for installation this year.

The original replacement plan for Linacc D was included in our capital plan for Welsh Government support in 2022/23. Although the building works and installation will still take place in 2022/23, Welsh Government requested NHS Wales to assist with the management of the national capital position due to surplus capital resources this year and for Swansea Bay UHB to bring forward the purchase of the Linacc D equipment to this financial year. This would also have the benefit of accelerating the replacement programme, as works could commence following clinical commissioning of the current Linacc C replacement in July 2022. The estimated costs for the full programme of

capital works and equipment replacement is £4.250m. The Board approved the purchase of the Linacc ahead of the development of the detail of the business case to optimise the use of funding and accelerate the timeframe for the replacement to become operational. It also considered that replacement of Linacc D was already planned for 2022/23 and making the decision to purchase it from available funding was a low risk decision given confirmed availability of capital funding to complete the installation and commissioning of the machine and given clinical support for the replacement.

Welsh Government has provision in its 2022/23 capital programme to support the enabling works and commissioning of the team and the bring forward of the purchase of the Linacc reduces the risk of pressure on this balance given competing national priorities in 2022/23.

For operational reasons there is only one supplier that can be utilised to provide a matched facility to allow for a resilient and clinical safe service in the Cancer Centre; the selected machine is to be supplied in line with the other units already in situ. The governance and risk section in this paper below notes the compliant procurement route to purchase the Linacc.

The paper to the Board in November made the justification for the clinical and service need for the replacement and these points are set out below to remind the board of the consideration made at that time.

Replacing the Linear Accelerator will:

- Ensure that patients are receiving Radiotherapy treatment, which utilises the most modern, safe, effective and up to date technology, receive the most appropriate Radiotherapy treatment for their needs; across the whole of South West Wales
- The current machine is unmatched to any other machine in the cancer centre, as it has no Surface Guided gating ability, and any patient treated on that machine is therefore at risk of having treatment interrupted due to any unplanned machine downtime. Surface Guided radiotherapy allows the dedicated use of deep inspiration breath-hold, which reduces toxicity of treatment, and supports the reduction of patient visits for breast treatments from 15 to 5, so is therefore seen as an essential element of a safe excellent service. Further Hypofractionation for other treatment sites will be supported with this replacement linear accelerator and its associated 2D and 3D imaging capabilities

Timely replacement is critical to a safe and effective service, particularly in light of a sustained Covid-19 Cancer recovery phase, and an anticipated increase in demand for Radiotherapy services.

- Improve the reliability, resulting in less disruption for patients during their treatment; and reducing costs to the service. This is particularly important in readiness for the anticipated covid surge and prolonged recovery

- Assist SBUHB in complying with the National Cancer Standards and relevant time to radiotherapy waiting times. The requirement to reduce time to radiotherapy for radical patients from 21 days to 14 days over the next year will be more likely to be met with the most modern infrastructure
- Provide more complex treatments, contributing to the South West Wales Cancer Centre's continued provision of world class healthcare, including volumetric arc therapy and specialist commissioned services like Stereotactic Lung (SABR) and oligometastatic treatments
- Support SBUHB and the wider region in offering access to the most modern clinical trials, and other research opportunities
- Offer synergies with other specialised commissioned services, for example, connecting treatments to PET imaging at the cancer centre

3. GOVERNANCE AND RISK ISSUES

A Framework exists with NHS Supply Chain (NHSSC) which enables Authorities to utilise the “mini-competition” process. This framework was used to derive best value for the UHB using the purchasing power of NHS England to add value.

4. FINANCIAL IMPLICATIONS

The capital project will receive full capital funding support of £4.250m from Welsh Government over 2021/22 and 2022/23. The system will have a 24-month warranty.

As the installation will not take place until 2022/23, NHS Wales Specialist Estates Services have arranged with the manufacturer to store the fully assembled equipment over the 2021/22 financial year-end. At this point the Health Board will take full legal ownership of the scanners through a NHS Wales vesting certificate. Warranties on the scanners will only commence on installation. There will be no financial risk to the Health Board's Capital Resource Limit should the supplier be unable to meet the scheduled completion timescales for inclusion in the 2021/22 accounts, as Welsh Government have agreed to indemnify the Health Board.

The full scope of works to decommission the existing machine and install the replacement is currently being agreed with the design experts. It is planned that this scope of works will be tendered and that the final business case to include the tendered building works costs, will be brought to the Health Board in Q1 2022/23.

The additional revenue costs for maintenance and staffing to operate the latest technology are estimated to be a maximum of £16k in 2022/23 and £156k on a recurring basis. As these costs form part of the normal LTA discussions with Hywel Dda and Powys Health Boards, the Swansea Bay share at 52% will reduce this to £8k in 2022/23 and £81k on a recurring basis. Further work is underway with the clinical team at Singleton to understand the benefits realisation and any opportunities to mitigate the additional financial cost as currently assessed. The Service Group Director and Director of Finance will review this work, in particular service efficiency

opportunities and potential for income generation. The table below provides a breakdown of the **current revenue cost assessment** for the Board's information.

	22/23	23/24	24/25	Recurrent
Pay *	16	76	88	88
Medical Physics:				
Scientist: 1 x Band 5	16	38	38	38
Oncology:				
0.1 x Consultant Staffing	0	9	12	12
Radiotherapy:				
1 x Band 5 Radiographer	0	29	38	38
Non-Pay	0	0	67	68
Maintenance / Service Contracts	0	0	67	68
Maintenance				
Total Costs	16	76	155	156
Health Board Funding Split:				
SBUHB (52%)	8	40	81	81
Hywel Dda (45 %)	7	34	70	70
Powys (3%)	0	2	5	5
Total	15	76	156	156

By way of contingency, funding set aside to develop cancer services in the Health Board (£1.5m recurrent from 2021/22 and a proposed further additional £1m in 2022/23) has sufficient headroom to cover any revenue cost that is unable to be addressed through the further scrutiny work underway.

5. RECOMMENDATION

Members are asked to:

- **NOTE** the work undertaken to date to develop the case; and
- **NOTE** that the business case, to include tendered building works will come before the Board in Quarter 1 2022/23
- **APPROVE** commitment of £4.25m for the totality of the scheme across 2021/22 and 2022/23 to be funded from Welsh Government
- **APPROVE** that the benefits realisation be further scrutinised by 31st March 2022 for consideration by the CEO
- **APPROVE** that the potential maximum revenue cost to the Health Board of £81k per annum be funded through the 2022/23 allocation but that this be

further challenged by the Service Group Director and the Director of Finance to reduce the cost further.

Governance and Assurance		
Link to Enabling Objectives (please choose)	Supporting better health and wellbeing by actively promoting and empowering people to live well in resilient communities	
	Partnerships for Improving Health and Wellbeing	<input checked="" type="checkbox"/>
	Co-Production and Health Literacy	<input type="checkbox"/>
	Digitally Enabled Health and Wellbeing	<input type="checkbox"/>
	Deliver better care through excellent health and care services achieving the outcomes that matter most to people	
	Best Value Outcomes and High Quality Care	<input checked="" type="checkbox"/>
	Partnerships for Care	<input type="checkbox"/>
	Excellent Staff	<input type="checkbox"/>
	Digitally Enabled Care	<input type="checkbox"/>
	Outstanding Research, Innovation, Education and Learning	<input type="checkbox"/>
Health and Care Standards		
(please choose)	Staying Healthy	<input checked="" type="checkbox"/>
	Safe Care	<input checked="" type="checkbox"/>
	Effective Care	<input checked="" type="checkbox"/>
	Dignified Care	<input checked="" type="checkbox"/>
	Timely Care	<input checked="" type="checkbox"/>
	Individual Care	<input checked="" type="checkbox"/>
	Staff and Resources	<input type="checkbox"/>
Quality, Safety and Patient Experience		
Provision of the replacement linear accelerator will <ul style="list-style-type: none"> • Ensure that patients are receiving treatment on modern, reliable systems in a timely manner appropriate for their conditions. • Ensure that treatment facilities do not hinder patient flows through the cancer pathway • Assist SBUHB in complying with the National Cancer Standards and relevant waiting times 		
Financial Implications		
Capital funding of £4.250m to be provided by Welsh Government. Additional net recurring revenue costs of £81k with the expectation these additional costs be further tested and any residual gap be prioritised from the internal cancer investment fund. The business case to include the tendered building works, will be taken through the Health Board in Q1 2022/23.		
Legal Implications (including equality and diversity assessment)		
There are no specific legal implications associated with this procurement.		
Staffing Implications		
All staffing covered off under the revenue funding		
Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)		
The following wellbeing goals will be met as a consequence of this acquisition: <ul style="list-style-type: none"> • A Healthier Wales • A More Equal Wales 		

An improvement in Healthcare service provision for all	
Report History	The Board received a report in November 2021 which recommended the purchase of the Linacc. This recommendation was approved
Appendices	n/a