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Bwrdd Iechyd Prifysgol
Cwm Taf Morgannwg
University Health Board

Produced on behalf of Cwm Taf Morgannwg UHB by

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Outline Business Case for Llantrisant Health Park Community Diagnostic Hub

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Summary sheet

Llantrisant Health Centre OUTLINE BUSINESS CASE (OBC) – HIGH VALUE (OVER £2 MILLION VALUE OF PROCUREMENT)	
SRO	Paul Mears, CEO Cwm Taf Morgannwg University Health Board
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Appendices

Appendix Ref	Appendix Name
Appendix 1	Strategic Overview Case
Appendix 2	Demand & Capacity Findings
Appendix 3	National Endoscopy Programme Identification of Potential Areas for Regional Centres
Appendix 4	NHS Wales Clinical Skills and Simulation Academy Proposal
Appendix 5	Capital Quantified Risk Register
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Appendix 10	Comprehensive Investment Appraisal (CIA) Model
Appendix 11	Phase 1 Infrastructure Programme

Glossary

ABUHB	Aneurin Bevan University Health Board	ISP	Independent Service Provider
BAU	Business As Usual	MMC	Modern Methods of Construction
BCR	Benefit Cost Ratio	NEC	New Engineering Contract
BfW	Building for Wales	NPC	Net Present Cost
BIM	Building Information Modelling	NPSV	Net Present Social Value
BREEAM	Building Research Establishment Environmental Assessment Method	NWSSP – SES	NHS Wales Shared Services Partnership - Specialist Estates Services
CDE	Common Data Environment	NZC	Net Zero Carbon
CDH	Community Diagnostic Hub	BJC	Business Justification Case
CIA	Comprehensive Investment Appraisal	OBC	Outline Business Case
CIA	Comprehensive Investment Appraisal	PM	Project Manager / Programme Manager / Project Management
CSF	Critical success factor	PSC	Professional Services Contract
CTMUHB	Cwm Taf University Health Board	PWF	Preferred Way Forward
C&VUHB	Cardiff and Vale University Health Board	RPA	Risk Potential Assessment
DHSC	Department of Health and Social Care	SAB	SuDS Approval Body
FBC	Full Business Case	SCP	Supply Chain Partner
GiRFT	Get it Right First Time	SO	Spending Objective
HB	Health Board	SOC	Strategic Outline Case
IIB	Infrastructure Investment Board (Welsh Government strategic committee)	SRO	Senior Responsible Officer
		WG	Welsh Government

1 Executive summary

1.1 Structure and introduction

The purpose of this outline business case (OBC) is to outline key objectives, current plans for investment and seek approval for funding of **£2.177M** from Welsh Government to proceed from OBC approval to full business case (FBC) approval for the Phase 1 of the Llantrisant Health Park (LHP) Programme which comprises the Community Diagnostic Hub (CDH) and site wide infrastructure works to prepare for later phases.

The project is being led by the LHP Project Team at Cwm Taf Morgannwg University Health Board (CTMUHB) in partnership with Aneurin Bevan University Health Board (ABUHB) and Cardiff and Vale University Health Board (C&VUHB). Health Boards in South East Wales have committed to active collaboration where this delivers added value to clinical service delivery, access, and sustainability, as it does for this scheme.

This OBC supports the first priority, to improve access to regional Community Diagnostic services including Radiology and Endoscopy. Business cases for later phases of this development including Orthopaedic Surgery with supporting ward accommodation and Day Surgery will be prepared as later phases in the programme.

The structure of the OBC is outlined in the table below.

Case	Section / Purpose	Description
Strategic	2 Strategic Context	Provides an overview of current services and explains how the project is strategically placed to contribute to the delivery of organisational goals.
	3 Case for Change	Establishes the case for change by outlining the spending objectives, existing arrangements and business needs.
	4 Potential Scope and Services	Identifies the potential scope of the project in terms of the operational capabilities and service changes required to satisfy the identified business needs.
	5 Benefits and Risks	Identifies the benefits, risks, constraints and dependencies for the project.
Economic	6 Options Identification and Appraisal	Explores the preferred way forward by agreeing critical success factors (CSFs), determining the longlist of options, and undertaking a SWOT analysis to identify a shortlist of options.
	7 Economic Appraisal	Appraises the economic costs, benefits and risks for the short-listed options and concludes which option represents the best value for money.
Commercial	8 Procurement Route, Scope and Contractual Details	Outlines: • the procurement strategy and routes that have been agreed. • the scope of the procurement • the contractual arrangements of the potential deal to deliver the recommended solution for the project.
Finance	9 Financial Appraisal	Sets out the forecast financial implications of the preferred option.
Management	10 Management Arrangements	Sets out the arrangements put in place to manage the project to successful delivery.

1.2 Background and context

During autumn 2022, Cwm Taf Morgannwg University Health Board (CTMUHB) became aware of the intention of British Airways Avionics Engineering (BAAE) to sell the long leasehold on their former engineering site in Llantrisant. The site was vacant, as BAAE had relocated their service provision to St Athan during early 2022 (but remained as tenants of the site).

The total site covers over 20 acres with a developed area that comprised three separate buildings totalling over 10,300sqm and includes on site parking for around 300 cars. The site has the potential capacity and infrastructure for a wide range of clinical services. There is also an area of cleared ground that is available for further on-site development.

In December 2022 CTMUHB submitted a case to Welsh Government (WG) to request funding for the purchase of the site, which was to be known as Llantrisant Health Park (LHP). This case set out the initial development aims and aspirations and was approved by CTMUHB Board. WG approved the purchase and released £8M funding for the purchase of the site on the condition that the development was for a regional health facility for the South East Wales Region. The purchase completed in February 2023.

The vision for LHP is to establish a standalone site for high-volume, low-complexity surgical and diagnostic procedures to address capacity shortfalls, meet future demand challenges and support consolidation of services where this will add value to participating health boards. LHP will also act as an enabler for further regional service reconfiguration. The development of a dedicated facility for planned care, separated from emergency care, was a key commitment in the Welsh Government's recovery document, *Our Programme for transforming and modernising Planned Care and reducing waiting lists in Wales* (April 2022).

The need to introduce diagnostic and treatment capacity to the South East Wales region has never been greater. Since the COVID-19 pandemic, waiting lists have increased to their highest ever levels and Health Boards have struggled to address this within existing capacity and working practices. Set alongside this is the increasing aging population and acute medicine pressures which indicate that a significant change to current practice and how we use our existing infrastructure is essential if performance and access to treatment is to be improved.

LHP offers the region a unique opportunity to deliver new ring-fenced elective capacity, encompassing innovative developments and state of the art practice. The site will provide efficient and proven effective models of care to deliver increased diagnostic and treatment facilities across the region.

The CDH proposal incorporates:

- **Imaging capacity** – incorporating MRI, CT and ultrasound as part of a Community Diagnostic Hub (CDH). The unit will also have the capability to deliver plain film X ray
- **Endoscopy capacity** – elective and screening services to increase capacity across the region and address the projected six suite shortfall across the region by 2027/28 and to introduce a training academy to respond to workforce shortfalls.
- **Training capacity** - working with HEIW, the scheme offers a diagnostic training academy space which links into existing endoscopy suites and provides a base for the endoscopy training academy as well as resources and facilities to support the wider diagnostic training facilities.

This OBC seeks approval to progress to Full Business Case (FBC) for phase 1 of the LHP Programme. To develop a CDH and undertake site infrastructure works to mitigate impact on the operational CDH during later phases of construction,

As well as phase 1, the LHP Programme consists of the following phases which will be subject to separate business cases:

- **Phase 2 - High-volume, low-complexity orthopaedic inpatient unit** - providing capacity for up to six theatres to deliver arthroplasty (knees and hips) surgery for patients meeting the criteria for treatment without critical care support. An inpatient unit adjacent to the theatres will accommodate patients requiring an overnight stay.
- **Phase 3 - Multi-modality day surgery unit** – principally focused on addressing the significant shortfall in dedicated day surgery capacity across CTMUHB, it will be a dedicated and fully efficient centre of excellence that reduces wait times.

Whilst capital funding will be applied for all phases to design and build the units, the plan for the CDH is that the service will be provided by an independent service provider (ISP) under a managed service contract for an initial 7 year term, which can be extended for up to 3 years on a year by year basis. The ISP will equip and staff the unit. The procurement for the ISP is currently ongoing with a preferred supplier proposed to be selected by the end of September and an appointed confirmed by the end of October.

CTMUHB is the lead party in the procurement and will be the contracting party for the managed service contract with the ISP. The OBC is based on the fact that there is agreement that both C&VUHB and ABUHB will contract for endoscopy services only from the CDH in line with the outputs from the regional planning exercise recently undertaken. The imaging provision initially will be contracted for CTMUHB for their patients only. ABUHB has stated that it may look to commission imaging services from LHP in the future.

It is recognised that Health Boards have obligations in respect of public engagement and consultation when introducing significant service changes, and these will have some application when progressing a model of regionally based provision of elective and diagnostic services.

The principle of patients travelling further to access more timely care has been tested in a regional context with a recent engagement exercise for cataract surgery, when positive feedback was received from both public and Llais. Close contact with Llais will be maintained as the LHP plans progress, to ensure that the required arrangements are in place and that any concerns / issues arising are addressed and mitigated as appropriate.

1.3 Vision and spending objectives

The vision of the LHP programme is to create a standalone site for high volume low complexity surgery and diagnostics that guarantees uninterrupted, effective, efficient services, which address both current capacity shortfalls and offers opportunity to meet future demand growth. Phase 1 will deliver the diagnostic element of the programme and enable the future phases on the site.

The spending objectives listed in the table below were agreed by members of the LHP Programme Board in September 2024 as overriding programme objectives which have been adapted to apply directly to this phase 1.

Ref	Theme	Spending objective	Benefit
SO1	Meet population needs	The delivery of an elective high volume low acuity model of care for the South East Wales Region on a phased basis. The first phase to focus on diagnostics and endoscopy. A second and third phase to focus on orthopaedics and day surgery respectively. Phase 1 services to be operational during the 2027/28 financial year. Future phases to consider further regional services such as pathology.	• Right-sized to meet current and future demand • Improves access to range of services • Centre of Excellence with efficient service delivery models and improved patient outcomes and increased throughput • Able to flex for the future
SO2	Maximise capacity	To maximise clinical capacity on the LHP site. To ensure that the maximum amount of available space is directed towards direct service delivery with supporting services managed from the neighbouring Royal Glamorgan site.	• Creates opportunities for centralisation of skillsets; centre of excellence • Enables greater collaboration regionally • Creates opportunity for one stop diagnostics, improved use of resources and appointments
SO3	Innovation and standardisation	To facilitate and support the use of innovative design and delivery solutions in both clinical and non-clinical services. To implement standardised protocols and practices to promote efficient service delivery offering improved value for money and addressing the modifiable drivers of increased cost against English Tariff, excluding those aspects driven by Welsh Policy.	• Standardisation of consumables, with financial savings • Standardisation of best practice/policies; efficiencies, increased throughput, reduction of wait lists
SO4	Enable training / development of future workforce	To enable increased training and development of secondary care staff including accommodating more medical trainees and students.	• Accommodates placements for students (allowing role development and succession planning) • Improved workforce retention and recruitment
SO5	LHP Models of Care and Workforce Models	During phase 1 to ensure that the managed service provider delivers compliant and innovative models of care and workforce models, following the initial terms to develop innovative and new models of care to bring the CDH back into NHS management and control. In Phases 2 and 3 to develop a new model of care and workforce models to support the delivery of the core services, the models will support efficient delivery of services	• Environment / ways of working that support staff welfare and wellbeing • Improved skills and job satisfaction • Improved patient outcomes • Multi-disciplinary working

Ref	Theme	Spending objective	Benefit
SO6	Sustainable estate	To deliver a sustainable infrastructure on the site maximising decarbonisation and net zero opportunities.	- Complies with relevant standards; NZC, BREEAM excellent and energy performance - Opportunities for future additional service provision for South East Wales. - Opportunities for further regional reconfiguration and enabling of service and or estate rationalisation.

1.4 Case for change

NHS diagnostic services remain under significant pressure despite concerted endeavours of health boards to increase capacity and improve access to reduce waiting times.

The *Diagnostics Recovery and Transformation Strategy for Wales 2022-2025* sets out the plan to improve, transform and redesign diagnostic pathways in Wales. This national strategy seeks to deliver on the following aims:

- Improving outcomes and reducing pressure on secondary care.
- Addressing unmet care need that has been exacerbated by COVID-19.
- Enabling people to live longer, healthier lives at home.
- Identifying treatments earlier in disease which enables intervention and care management more rapidly.
- Creating a sustainable and intelligent integrated health system which reduces inequality.
- Making Wales a great place to live and work.

The South East Wales Regional Diagnostics plan for Community Diagnostic Hubs aligns with this strategy and its aims through the intention to seek both a rapid expansion of diagnostic service access and the delivery of new models of care with a focus on providing centres of excellence which will attract and retain the required workforce. Alongside this the Hub will align with GiRFT and JAG principles in promoting best practice.

Radiology

Radiology forms part of the 26 week **referral to treatment time** target (RTT) and 62 day single cancer pathway target, from suspicion to first definitive treatment. It is also anticipated that with increased capacity and significantly reduced waiting times there will further opportunity to gain efficiencies across the health system by developing clinical pathways that incorporate diagnostics at an earlier stage, aiming to reduce pressures on services and improve the patient experience.

Radiology demand and capacity modelling has focused on the CTMUHB position only. The current waiting times are as set out below:

Date	Non Cardiac CT		Non-Cardiac MRI		Non Obstetric USS		Total	
	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks
Jan-24	1,716	966	1,765	1,166	2,685	3,427	6,166	5,559
Jun-25	2,154	994	1,964	33	3,483	1771	7,601	2,798

The number of patients waiting within CTMUHB has increased in the last 15 months. This is despite the use of non recurrent funding to provide interim and additional temporary capacity such as the siting of a mobile MR and CT on the LHP site. This has significantly reduced the over 8 week waits but has not reduced the total number of patients waiting.

When considering the actual imaging capacity within CTMUHB to projected demand there is a clear ongoing shortfall in capacity and without additional intervention waiting times will continue to increase. As part of the regional imaging planning processes, all organisations have been looking at whether they can maximise utilisation of existing assets by extending working days and hours.

Modality	Potential capacity	Forecast	2026/27	2027/28	2028/29	2029/30	2030/31
MRI	30,087	Demand	27,729	29,947	32,343	34,931	37,725
		Variance ¹	2,358	140	-2,256	-4,844	-7,638
CT	100,512	Demand	90,013	94,514	99,239	116,250	126,596
		Variance	10,499	5,998	1,273	-15,736	-26,084
Ultrasound	80,484	Demand	45,519	47,794	50,184	52,693	55,328
		Variance	34,965	32,690	30,300	27,791	25,156

By maximising capacity in the short term CTMUHB can continue to meet demand in all modalities until the end of 2027/28. From 28/29 shortfalls in MRI and CT start to become apparent. LHP is due to open in late summer 2027/28 so will be in place to meet the shortfalls within CTM. However this does not account for CTMs ability to be able to recruit suitable workforce or the level of resource required to secure this level of service. Whilst MRI and CT capacity can be increased to mitigate demand growth additional capacity will still be required from LHP.

On the face of it, CTMUHB has potential capacity to meet ultrasound demand over the next five years and beyond, however NOUS services are under extreme pressure on all sites within CTMUHB and are recognised as being a service under pressure nationally in Wales. Much is due to the high workforce input into this modality which leads to strains on the existing resource and sees higher levels of sickness and rest breaks generally required by sonographers.

The deliverability of the potential capacity levels for NOUS are not realisable due to two important drivers due to the high demand for obstetric scanning coming from the changes in the care pathways and the ergonomic challenges of the patient group which is resulting in increased sickness and RSI issues within the workforce and driving down productivity.

- Firstly, changes to antenatal care pathways are driving an increase in obstetric scanning and this must be prioritised over elective scanning, due to the shorter timescales.
- Secondly, due to the volume of obstetric scanning and ergonomic challenges of our patient group, we are seeing increased sickness driven by RSI issues which is further limiting the actual capacity.

The provision of a standalone service, provided by a workforce distinct to our obstetric services is critical to deliver NOUS waiting times and provide ringfenced service whilst existing capacity can be focused on achieving obstetric scanning demand. It is clear that alongside increases to existing asset hours of operation the services at LHP will be critical to deliver a sustainable diagnostic performance.

¹ Surplus / **shortfall**

Endoscopy

Despite significant work undertaken by the three health boards in the South East Wales region, the performance profile currently indicates a significant proportion of patients waiting more than the target waiting time of accessing diagnostic endoscopy within eight weeks. In August 2024 there were nearly 8,000 patients waiting more than eight weeks for a diagnostic endoscopy, although this position has improved because of additional non-recurrent funding.

The demand and capacity model developed by the National Endoscopy Programme for Wales (NEP), has identified a recurrent shortfall in capacity. This demand is driven by increasing symptomatic demand coupled with the phased extension of the age range for Bowel Screening. The outcomes of this modelling work confirmed a six-room shortfall in the South Wales region by 2027/28 and recommended the introduction of a JAG compliant standalone regional endoscopy unit.

Regional planning teams have developed integrated plans to address the resultant capacity shortfall of six rooms. Local plans and capacity increases will meet some of the demand leaving a four-room operational shortfall to be met by LHP from 2027/28. In addition, there is a desire to create at least one training room which would equate to a requirement of five rooms at LHP. The current design incorporates six endoscopy rooms and associated supporting space. This provides a sustainable and resilient approach to the development; it enables the absorption of future growth or changes in screening requirements by Public Health Wales as well as offering training opportunities and resilience in case of down time in any room.

This OBC focuses on the delivery and resources associated with the LHP site only. Any further resources required to support local plans will be developed further through the regional planning process.

1.5 Economic Case

1.5.1 Clinical service delivery options

In determining the case to support regional CDHs in South East Wales, the Regional Diagnostic Board led an exercise to consider how HB could deliver improved performance in diagnostics. The criteria agreed for the option appraisal were:

- Strategic viability (does it fit with the local and regional plans?)
- Does this option meet the service demand requirements?
- Will this deliver sustainable diagnostic services?
- Clinical viability (can the option deliver the procedures included in the service specification?)
- Operational viability (can this be operational within project timeframes?)
- Workforce viability: does this option:
 - ♦ Support sustainable workforce?
 - ♦ Deliver on national strategy?
 - ♦ Facilitate training?
 - ♦ Have implications for existing workforce?
- Estates viability (would this option facilitate the appropriate spaces, e.g. clinic rooms and outpatients space?)
- Financial viability (are the revenue and capital costs reasonable?)
- Geographic suitability / accessibility.

In the first instance regional HBs developed an options longlist for improvement of access to regional diagnostic services against the evaluation criteria.

During 2023, this long list was reviewed collaboratively through the clinical and operational leads group against an agreed set of criteria and subsequently tested by each health board prior to consideration by project and programme boards.

The options considered by the regional Project Board are set out below.

Option 1	Do nothing - Health boards would continue to provide services as per current arrangements.
Option 1a	Different approach to the use of existing services in each health board, and work toward collaboration through shared processes. Health board expansion of internal capacity and/or other forms of regional working.
Option 2	Independent Community Diagnostic Hubs (CDH) – each health board operating their own CDH with no cross-border treatments.
Option 3	Regional Community Diagnostic Hubs – a minimum of one per health board, delivering cross-border diagnostic treatment.
Option 4	A single Regional Radiology Diagnostic centre , located on one site, serving all three health boards.
Option 5	Combined approach - Regional Diagnostic Centre/community diagnostic hubs.
Option 6	Community Diagnostic Hub with Mobile Units – as option 3 but with mobile units attached to reach outlying communities through community diagnostic clinics.

Assessment by the clinical and operational leads resulted in a short-list of model options for consideration by the Project Board. The shortlist included three options:

- **1a** – different approach to the use of existing services
- **3** – Community diagnostic hubs (CDH) with a minimum of one per health board area, and
- **6** – Community diagnostic hubs with the option of mobile units.

The Project Board considered these options formally on 23 January 2024 and confirmed the acceptability of both **Option 3** and **Option 6** with the preferred option of development of a community diagnostic hub model for the region, which may incorporate mobile units, as required.

1.5.2 Site and infrastructure delivery options

The purpose of the Options Analysis is to identify and appraise the options for the delivery of project and to recommend the option that is most likely to offer best value for money.

However, in this instance this section will not undertake a traditional options appraisal using the business case framework, which is an approach that has been agreed with colleagues in the Capital and Estates team in Welsh Government (WG).

This is due to the fact the purchase of the LHP site was approved and funded by WG in December 2022 on the condition the funding was used to develop the site as part of a regional approach to the delivery of services. Therefore, consideration of alternative site options is not relevant.

The services included at this business case stage are the same as those included in the original case for the purchase of the site, with some small changes to the numbers of the same, in line with demand and capacity modelling provided in Section 3 of this case.

As a result, this section will not consider alternative options for service change with the scope and scale having been proven in the sections above. In addition, following WG approvals, design work has already progressed beyond the traditional stage for an OBC, with WG approval to proceed to RIBA 3 given in December 2024.

The RIBA 2 design work was subject to scrutiny by Shared Services Specialist Estates and considered only the **preferred new build infrastructure option**. Scrutiny on the RIBA 2 phase closed on 18 December and approval to proceed to RIBA 3 was given on that date. In addition funding has been provided for the demolition of the buildings on the site which is due to complete in September 2025. As a result, there is no scope to further consider infrastructure and build options.

Finally, a main contractor for completion of the design phase was appointed on 28 March 2025. The tender process demonstrated a modular form of MMC was preferred and WG approval to enter into the design contract was received on 14 March 2025. As a result, the build methodology has also been fully determined. Therefore, the economic appraisal in following sections will focus on the delivery options for the CDH only in terms of the scope of the agreement with the third party provider.

1.5.3 Summary of Phase 1 service delivery options

Whilst the decision has been made to appoint an independent service provider to deliver the model in the CDH, there are options about the extent to which this can be delivered by the partner. As a result, this has been the focus of a more detailed option appraisal with the key options being:

Components	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Building	ISP Design and Build (Costs captured through revenue costs)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)
General Building Equipment	ISP Design and Build (Costs captured through revenue costs)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)
Specific Service Delivery Equipment – First 10 Years after completion of LHP	ISP provide and maintain (Costs captured through revenue costs)	ISP provide and maintain (Costs captured through revenue costs)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)
Specific Service Delivery Equipment – After 10 years	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)
Service Delivery (Staffing) – First 10 Years after completion of LHP	ISP Staffing	ISP Staffing	ISP Staffing	NHS Staffing
Service Delivery (Staffing) – After 10 Years	NHS Staffing	NHS Staffing	NHS Staffing	NHS Staffing
Lifecycle Costs – First 10 Years after completion of LHP	N/A	Building Lifecycle Costs	Building Lifecycle Costs	Building Lifecycle Costs

Components	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Lifecycle Costs – After 10 years	NHS (WG Capital Funding) buys building buy back at net book value after 10 years. Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs

1.5.4 Economic Appraisal

An economic appraisal was prepared, in line with HM Treasury Green Book guidance, to evaluate the whole life costs, benefits and risks of the shortlisted options in order to identify the option that is most likely to offer best public value for money.

The results of the economic appraisal demonstrate that the preferred way forward offers value for public money.

Option 2 (preferred option), which utilises a traditional capital for the build of phase 1 of the LHP (the Community Diagnostics Hub portion), with an ISP providing the service provision equipment and delivering the service via a managed service contract for up to 10 years before the service becomes inhouse and run by the Health Boards, (7 years initial contract with up to 3 1 year extensions on the same), will require capital investment of £109.1m and ongoing revenue costs of £7.5m (excluding depreciation) for the initial 10 year period of the managed services contract, reducing to £5.4m after the end of the contract. Based on estimated costs and benefits, it is anticipated that this option will deliver an incremental Net Present Social Value (NPSV) of £38.9m and a Benefit Cost Ratio (BCR) of 1.13. It should be noted that this relates to the capital and revenue element of CDH only, to realise regional plans for diagnostic, additional revenue investment is also required on other UHB sites.

This represents £1.13 of incremental benefit delivered for every £1.00 of incremental whole life cost, because of the quantifiable benefits that it has been possible to state in monetary values at this point in time, including:

- **Improved patient outcomes from earlier diagnosis:** Delivery of the CDC will address CTMUHB Diagnostic Imaging and regional Endoscopy capacity shortfalls and ensure future demand can be met. This will have a direct impact on waiting times for patients and support the cancer pathway by enabling earlier diagnosis, more targeted interventions and improved monitoring. This will lead directly to delivering better patient outcomes, specifically contributing to improved cancer survival rates.
- **Improved patient outcomes from earlier diagnosis (non-cancer related):** Delivery of a significant increase in additional Endoscopy capacity should lead to earlier and increased diagnosis for patients with health issues other than cancer such as hypertension, which will lead to better patient outcomes and help contribute to reduced mortality related to those health issues.

In addition to this, there are other quantifiable benefits which it has not yet been possible to state in monetary values given the information that is available at this time. These will be explored further at FBC-stage and, it is expected, will further strengthen the BCR. These include:

- **Release of elective diagnostic capacity at Acute sites, which can be used for urgent and emergency care patients/pathways:** The capacity provided at LHP for more elective diagnostic tests will free up Acute sites to use their diagnostic capacity for non-elective scans/tests, which reduce delays for urgent and emergency patients.
- **Improved predictability and confidence in booking scans and tests:** The centralised elective centre with co-located services provides a 'one-stop' shop clinic with greater predictability of care which in turn means that scans and tests can be booked with more confidence leading to improved utilisation of the service.
- **Impact of a more sustainable estate:** The delivery of appropriately designed and compliant facilities provides opportunities to contribute to CTMUHB's environmentally sustainable goals and national strategies around decarbonisation and optimising energy efficiency. The transformed model of care with its standardised pathway is likely to make it easier to implement and maintain sustainability programmes that CTMUHB has instituted in other areas, such as reducing waste and single use products.

LHP will also deliver various non-financial benefits which while they cannot be quantified in monetary terms are equally important to the delivery of local, regional and national policy. These include:

- **Additional Imaging and Endoscopy capacity leading to reduced waiting times:** The additional capacity at LHP will allow the Health Boards to meet the NHS Wales target that no patient is waiting more than 8 weeks for imaging or endoscopy tests.
- **Help to meet 'Straight to Test Guidance':** The additional capacity provided at LHP will assist with meeting 'Straight to Test Guidance', allowing an increase in the number of direct referrals from GPs to radiology. It will also allow for improved regional sustainability and provide contingency for other sites across the region.
- **Increased number of and improved clinical pathways:** Due to LHP being a centralised elective centre and a "one-stop" clinic, it will lend itself to developing and delivering more and improved clinical pathways. These pathways and improved ways of working could be used as an exemplar and then also be rolled out across the region.
- **Reduced health inequalities:** Reduction in waiting times and ease of access supports equality of access.
- **Community Benefits:** The contractor has agreed to implementing several community benefits, including hiring local, providing volunteering and donations to local organisations, investing in people learning and using Welsh and investing in the local supply chain.
- **Improved patient experience:** As well as reduced waiting times patient experience is enhanced by the modern fit for purpose facilities and the ease of access the location of LHP offers, with its good road links and parking. Having a centralised elective centre with co-located services provides the convenience of a **one-stop shop** clinic with greater predictability of care.
- **Increased staff satisfaction:** The improved training pathway and increased training opportunities, along with the modern fit for purpose facilities and a consolidated service model that enables more effective ways of working, contributes to staff satisfaction and creates an attractive place to work which will support recruitment and retention of highly trained health professionals in the long term.
- **Develop a skilled endoscopy workforce:** Delivery of the Skills Academy in partnership with HEIW will provide significant opportunities to increase the number of training places available in the region and help to build a skilled and sustainable endoscopy workforce.
- **Increased compliance:** The dedicated CDC will ensure that the Health Boards have capacity across the region to ensure alignment with GiRFT principles and continue to achieve JAG accreditation. Modern fit for purpose facilities that are compliant with WHBNs and HTNs, achieve BREEAM rating of Excellent.

- **Future proofing:** The site also provides a level of future proofing by providing expansion space that offers opportunities for other future developments.
- **Opportunities for future transformation:** The additional capacity offered by LHP provides opportunities to transform and reconfigure core local services and deliver things differently in the future. Further to this the robust and in-depth data/reporting the service at LHP will provide to the Health Boards will greatly inform future decisions. The successful delivery of a regional centre will also provide proof of concept as the basis for the development of any future regional pathways and will have a positive reputational effect.

The results of the options appraisal (excluding BAU) are presented in the table below.

Element	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Initial capital investment	£0m	£109.1m	£119.7m	£119.7m
Incremental NPSV	-£10.8m	£39.9m	£24.9m	£16.5m
Benefit Cost Ratio	0.97	1.13	1.08	1.05
Key benefits	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option
Key risks	• Unable to secure a service provider who would be willing to provide the service • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales • Significant risks around handover of the building at the end of the managed service contract period, including higher than expected handover costs and that the building would not fully meet the Health Boards requirements.	• Significant initial capital outlay • Unable to secure revenue funding	• Significant initial capital outlay • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales	• Significant initial capital outlay • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales • Unable to recruit sufficient staff to enable delivery of the model in the short term

It should be noted that this assessment is based on an initial assessment of benefits and risks and further work is required to quantify these more fully. As outlined above, it is anticipated that this is likely to further strengthen the BCR and value for money case as the scheme progresses to FBC stage.

1.6 Commercial Case

To maintain momentum within the programme, the main contractor was appointed during RIBA 3 for continued development of the design and construction elements. This ensures the contractor is involved in the more detailed design incorporating the latest technology and identifying programme opportunities. The appointment was made via the Crown Commercial Services Framework which offered the opportunity to tender for both traditional and modern methods of construction. WG approved the appointment which was made in March 2025.

In addition, the contractor will be critical for SAB and planning applications to ensure that the approved design does not require further planning amendments, which could delay the programme.

WG also approved early site wide demolitions in January 2025. These have been delivered by a contractor appointed under the Crown Commercial Framework. Works commenced on 14 April and are due to complete by 20 September 2025.

WG have approved funding for the whole programme up to the end of RIBA 3 and have recently approved a further £2.828M to support the completion of a phased RIBA 1 OBC and to commence RIBA 4 works (which will include the redesign necessary for Phase 1 to be fully standalone. This funding will cover works up to OBC approval, but further funding of £2.177M will be required to complete RIBA 4 on OBC approval.

Should a decision be made not to complete RIBA 4 following the outcome of this business case then there is a risk of a contractor claim against the Health Board under the PSC contract.

The phased approach will increase design stage fees over and above those in the original tender however this will be covered more in the Phase 2 OBC. Tendered fees will cover Phase 1.

1.6.1 Independent Service Provider (ISP) procurement

CTMUHB, acting on behalf of the three Health Boards in South East Wales is currently undertaking a procurement exercise to appoint a prime contractor to act as a design partner and contributor to the pathway redesign currently being scoped out for diagnostic services to provide one imaging CDH with the option to flex to one further CDH over the course of the contract. In addition, the CDH will also have at the same location, an ISP staffed Endoscopy Suite comprising of up to four rooms co-located with an NHS staffed two room Endoscopy Training Academy. The endoscopy suite requirements will be designed and fitted out to meet JAG accreditation standards.

There will be a co-located training academy which will include an endoscopy theatre. It is expected that the fitting out of the academy training rooms, and delivery of activity will be facilitated by NHS organisations through collaborative work with Health Education and Improvement Wales.

The Regional Radiology Project Board and the Regional Diagnostics Programme Board endorsed the use of competitive dialogue to test the market potential to support the development of a regional diagnostic centre and associated community diagnostic hubs, one of which will be on the LHP site. The competitive dialogue procedure is flexible and allows the Procurement Evaluation team to discuss proposed solutions with bidders to understand advantages and disadvantages.

The recommended option is to develop a regional endoscopy centre through a traditional NHS capital build proposal and to seek the equipment and delivery of the centre activity through contract with a commercial partner.

To drive this strategy, further competitive dialogue will need to be completed to understand financial implications and other non-financial risks. The current procurement programme leads to the appointment of the ISP by the end of October 2025.

1.7 Financial Case

The financial analysis demonstrates that delivery of the preferred way forward is affordable providing that Welsh Government capital funding can be secured, and agreement reached with commissioners about revenue funding requirements.

1.7.1 Capital affordability

The cost plan prepared by CTMUHB's Cost Advisors, based on RIBA 3a design, estimates that delivery of LHP will result in capital investment requirements of £110.0m in total, including expenditure incurred to date. It is anticipated that this will be funded by Welsh Government as follows:

Funding of £18.1m had been received to date from WG for:

- Site purchase - £8.0m
- RIBA 2 fees - £3.1m
- RIBA 3 fees - £3.5m
- Demolition - £0.7m
- RIBA 4 fees - £2.8m.

This includes funding of £2.828m which has been approved in August 2025 to support the Phase 1 OBC redesign and the commencement of RIBA 4 works to support the FBC being completed for November boards.

Further funding of £2.771M is sought from this OBC to enable the Health Board to deliver an FBC and continue progress through RIBA 4 and 5 stages to be ready to commence with on-site works on FBC approval.

This forms part of the total additional funding of £91.9m which will be required to deliver the Phase 1 CDH and supporting site wide infrastructure works following approval of the FBC.

1.7.2 Revenue affordability

Work undertaken to date by the programme team and finance leads estimates that provision of services at LHP will incur recurring revenue costs of £9.3m for contracted out services for MRI, CT, NOUS, and Endoscopy.

It is expected that the contract value will be reduced through the agreement of a tariff discount in return for the ISP's use of land and buildings. This has been estimated for the purposes of the OBC at £1.9m per year.

These indicative costs are based on high level assumptions at this stage and will be firmed up at FBC stage once more detailed information is available and the preferred ISP partner has been identified following the final stage of the tender.

This therefore results in a recurring revenue funding requirement of £7.5m. This has been allocated across the three Health Boards, based on projected activity assumptions which have been identified at this time, which equates to the following:

- CTMUHB £6.0m p.a. (£4.8m after the proposed tariff discount)
- C&VUHB £2.7m p.a. (£2.2m after the proposed tariff discount)
- ABUHB £0.7m p.a. (£0.5m after the proposed tariff discount).

These requirements reflect each Health Boards current position to commission the following services from LHP. ABUHB half an endoscopy room, Cardiff and Vale UHB 1.7 endoscopy rooms and CTMUHB will commission endoscopy and imaging services comprising CT, MRI and ultrasound.

For both ABUHB and C&VUHB their commissioning intentions for endoscopy reflect the outcomes from the regional endoscopy planning exercise that has been undertaken. Part of the planning identified several measures to meet un-met demand in endoscopy services and it should be noted

that the revenue contributions contained in this case only reflect the costs of services provided at LHP. Health Boards will incur further revenue costs in delivering additional diagnostic activity and these will be covered in separate business cases.

It should be noted that these cost and activity levels remain subject to change during the procurement and contracting process and should activity levels being commissioned change as will costs.

1.8 Management Case

The overall LHP project has been and will continue to be managed to PRINCE2 project management standards with the LHP Project Team leading on delivery. The project governance and reporting structure for the CDH phase will be the same and is outlined in the management case, showing all key workstreams, task and finish groups, with boards and teams where approvals and decisions are made.

A project programme has been developed to control and track the progress and delivery of the project and resulting outcomes. The key milestones for the infrastructure programme are summarised below.

Milestone	Start	Completion
Confirm Scope and Develop OBC	14/07/2025	31/08/2025
Draft OBC Submitted to WG	05/09/2025	05/09/2025
HB OBC Approval	08/09/2025	15/10/2025
WG OBC Review and Approval	04/09/2025	16/10/2025
Planning Application	11/07/2025	15/10/2025
RIBA 4 and FBC Prep	28/07/2025	20/11/2025
HB FBC Approval and WG Submission	27/11/2025	27/11/2025
Scrutiny and WG FBC Approval	28/11/2025	23/01/2026
Contractor Mobilisation	23/01/2026	26/02/2026
Construction	01/03/2026	30/06/2027
Supplier Fit out of CDH	01/07/2027	31/08/2027
Commissioning	01/09/2027	31/10/2027

The milestones for the ISP procurement are shown in the following table, it is assumed that on appointment the provider will join the Infrastructure design team and work alongside the main contractor in the finalisation of the programme. It is possible this could lead to further programme efficiencies in the fitout and commissioning phases which will be clarified as the programme progresses.

Milestone	Start	Completion
ISP Tender Issue	18/08/2025	18/08/2025
ISP Tender Period	18/08/2025	19/09/2025
ISP Tender Evaluation	22/09/2025	03/10/2025
HB ISP Approval	06/10/2025	06/10/2025

WG ISP Procurement Approval	06/10/2025	16/10/2025
Intent to Award and Standstill Period	17/10/2025	31/10/2025
ISP Provider Appointment	31/10/2025	31/10/2025

Within the PRINCE2 governance, the PMO is classed as part of the Assurance function.

Programme

- Review of upcoming programme activity and milestones with LHP Technical PM and Project Director to determine outputs required by workstreams.
- Create lookahead programme highlighting key programme deliverables over coming weeks/months for dissemination to workstreams.
- Track workstream output and performance toward achieving programme deliverables and feed progress into monthly reporting – PMO drumbeat.

Risk

- Review of risk with LHP Technical PM and Project Director to review and update risk register based on workstream risks.
- Track workstream risks and feed into project reporting – PMO drumbeat.

Key Performance Indicators (KPIs)

- Work with LHP Project Director to determine workstream KPIs.
- Track workstream KPIs and feed into project reporting – PMO drumbeat.

Reporting

- Work with PMO governance lead to integrate programme, risk and KPI updates into monthly drumbeat reporting.
- Provide updates to LHP Design Team Meeting and Programme Board.

1.9 Summary recommendation and requirements

The works funded so far have delivered interim mobile capacity on the site alongside the site wide building demolition works. All other work has been focused on the design of the total Health Park to end of RIBA Stage 3 and commencement of RIBA Stage 4 Design Works for Phase 1 CDH and supporting side wide infrastructure.

The recommended option is to proceed to construct the CDH and carry out the site wide infrastructure. The construction to be led by MTX as main contractor and the buildings to be of modular construction. The service will be procured by an Independent Service Provider (ISP) who will deliver the imaging and endoscopy services as well as equip the unit.

Capital Spend to date is £18.1m. This represents total costs to date and includes the site purchase and site wide RIBA 1, 2 and 3 works.

The LHP Programme is seeking urgent approval of this business case and the release of funding of £2.771m for completion of the RIBA 4 and 5 design stage of the CDH to avoid delay to the programme. This funding forms part of the total funding ask within this OBC of £91.9m to deliver the total Phase 1 OBC works.

Strategic Case

2 Strategic context

2.1 Introduction

This section of the business case outlines the strategic context for the proposal to develop the regional Llantrisant Health Park (LHP) by explaining how the programme is strategically placed to support delivery of services across the three Health Boards in the South East Wales Region, Aneurin Bevan (ABUHB), Cardiff and Vale (C&VUHB) and Cwm Taf Morgannwg (CTMUHB).

The section will:

- Provide a summary of the Programme progress to date
- Provide an overview of the organisations working in partnership to successfully deliver the project.
- Outline how the project will contribute to achieving our business strategies and aims.
- Describe how the project aligns with other relevant local and national strategies.
- Describe the geographical context and local health needs.

2.2 LHP programme context and background

The LHP site was acquired in February 2023 by CTMUHB for £7.8m capital funding provided by Welsh Government. The site is located directly adjacent to the Royal Glamorgan hospital and extends over 20 acres. At the time of purchase the site included two storeys separate buildings totalling over 10,300sqm. The layout of the site already supported car parking for over 299 and separate front and rear access roads to the buildings.

As well as the existing buildings, there is a further developable area on the site for an additional building. The case for purchase described how the site was ideally suited to provide a high volume low complexity diagnostic and elective treatment centre with benefits for the whole South East Wales region. At the time of purchase the proposed scope of services to be provided at LHP were:

- **A Community Diagnostic Hub** comprising:
 - ♦ Diagnostic Imaging – CT, MRI and Ultrasound
 - ♦ Regional Endoscopy services
 - ♦ Plain Film X Ray
- **A Surgical Hub** comprising
 - ♦ Up to 6 orthopaedic theatres for high volume low complexity works
 - ♦ Up to 64 beds to support the orthopaedic theatres
 - ♦ A self-contained day surgery unit containing up to 6 theatres.

Immediately following the purchase of the site, a design team and internal programme team were appointed to commence site master-planning and design development. During this time, a successful early termination of the lease to the incumbent tenant was agreed giving CTMUHB full access to the site from October 2023. This access facilitated detailed and intrusive survey work to be undertaken which identified several limitations to the existing buildings impacting on their ability for use as healthcare premises.

At their request, a Strategic Overview Document was submitted to Welsh Government in September 2024 which gave a detailed overview of the programme and included a comprehensive option appraisal to identify the optimal way forward for the site infrastructure. The preferred option was the demolition of the existing buildings and replacement with modular buildings which delivers the quickest and most value for money solution. This can be found in Appendix 1.

This approach was formally considered by Welsh Government alongside the completed RIBA 2 design works at the Infrastructure Investment Board in November 2024.

Following this meeting, approval was given to proceed to RIBA 3 design stage and in January 2025 approval was given to demolish the buildings on the site in a separate advance works package. Demolition works commenced on 14 April and are due to complete by mid-September.

A condition of the approval to continue design work was that a business case was delivered at the completion of the RIBA Stage 3 of the development.

At this point, it was still assumed that the development would proceed under a single business case route but with phased completions with the CDH completing ahead of the surgical hub. , Alongside the capital design works there is an ongoing procurement exercise to identify a preferred partner to deliver the managed service contract for the CDH at LHP. This position changed in July with confirmation from WG that they would prefer to receive individual business cases for the separate phases of development. The revised delivery structure is as set below,

- Phase 1: CDH comprising MRI, CT, non-obstetric ultrasound, plain film x-ray capability and endoscopy including a regional endoscopy training centre of excellence. This business case also includes the wider site infrastructure required to facilitate later developments.
- Phase 2: surgical Hub comprising six orthopaedic theatres and supporting wards.
- Phase 3: six-day surgery theatres with supported space with full scope to be determined.

This outline business case has been prepared to seek outline approval for the **Phase 1 – CDH and wider infrastructure enabling works**.

The aims of the diagnostic regional solution outlined in this business case are:

- to enact a collaborative regional approach to recovery and delivery of sustainable radiology services
- to provide shared regional capacity for radiology
- to support the implementation of the new pathways that will enhance services
- to demonstrate optimal utilisation of our assets and resources across the region
- to address current waiting list backlogs and create sustainable capacity
- to reduce clinical risk on an equitable basis across the region
- to provide services that are accessible to the population of the region in line with the findings of Professor Sir Mike Richards' Independent Review of Diagnostic Services for NHS England².

Health Boards in South East Wales have committed to active collaboration where this delivers added value to clinical service delivery, access, and sustainability. Health Board planning teams (joined by clinical, operational, and other colleagues where beneficial) continue to meet on a regular basis to agree common approaches to strategic challenges, progress ongoing regional collaborative programmes, share experience / best practice and to consider future opportunities for closer working to mutual benefit.

Collaborative planning has involved each UHB leading a formal programme, with ABUHB overseeing ophthalmology and cancer, C&VUHB overseeing orthopaedics and stroke and CTMUHB overseeing diagnostics (consisting of endoscopy, pathology, and community diagnostic hubs).

² Diagnostics: Recovery and Renewal – Report of the Independent Review of Diagnostic Services for NHS England

2.3 Individual organisation overview

The LHP programme is being led by the LHP Project Team at CTMUHB in partnership with ABUHB and C&VUHB as part of the South East Wales regional network.

An overview of the main organisations who will collaborate to implement the changes and oversee services delivered from the new facilities is provided below.

2.3.1 Cwm Taf Morgannwg University Health Board

Established in 2009, CTMUHB (previously known as Cwm Taf UHB) provides primary, community, hospital and mental health services to the 450,000 people living in the County Boroughs of Bridgend, Merthyr Tydfil and Rhondda Cynon Taf. The UHB employs approximately 12,000 staff and has an annual budget of approximately £1.3 billion.

CTMUHB is located between the Wales capital, Cardiff, to the south, the coastal town of Porthcawl to the west, and the Brecon Beacons National Park to the north. Hospital sites include:

- Prince Charles Hospital
- Princess of Wales Hospital
- Royal Glamorgan Hospital
- Ysbyty Cwm Cynon
- Ysbyty Cwm Rhondda
- Ysbyty George Thomas
- Cefn Yr Afon
- Dewi Sant Health Park
- Glanrhyd Hospital
- Pontypridd Cottage Hospital
- Keir Hardy University Health Park
- Maestag Community Hospital
- Merthyr Renal Dialysis Unit
- Pinewood House

The proposed Llantrisant Health Park is situated close to the Royal Glamorgan Hospital.

2.3.2 Cardiff and Vale University Health Board

C&VUHB is one of the largest NHS organisations in Europe, employing approximately 17,000 staff and spend around £1.4 bn every year on providing health and wellbeing services to a population of around 472,400 people living in Cardiff and the Vale of Glamorgan. The UHB also serves a wider population across South and Mid Wales for a range of specialities.

The UHB is structured and designed into eight Clinical Boards, which cover the four main service areas. The eight Clinical Boards were created in June 2013 and have focussed on providing strong leadership in clinical areas, resulting in the acceleration of operational decision-making, greatly enhancing the outcomes for patients in their care. The Boards are held to account via the Executive Directors, and a process of scrutiny is ensured through monthly performance boards and a robust authorisation process. Hospital sites include

- University Hospital Wales
- University Hospital Llandough
- Noah's Ark Children's Hospital for Wales
- Barry Hospital
- St David's Hospital
- Hafan y Coed Mental Health Unit
- Cardiff Royal Infirmary
- University Dental Hospital

2.3.3 Aneurin Bevan University Health Board

ABUHB was established in October 2009 and serves the areas of Blaenau Gwent, Caerphilly, Monmouthshire, Newport, Torfaen and South Powys.

The UHB employs over 14,000 staff, two thirds of whom are involved in direct patient care and has an annual budget of approximately £1.7bn. There are more than 250 consultants in a total of over 1000 hospital and general practice doctors, 6,000 nurses, midwives, allied professionals and community workers. Hospital sites include acute sites:

- Grange University Hospital
- Royal Gwent Hospital
- Nevill Hall Hospital
- Ysbyty Ystrad Fawr

and a number of community hospitals and facilities, including:

- Rhymney Integrated Health and Social Care Centre
- County Hospital
- St Woolos Hospital
- Chepstow Community Hospital
- Monnow Vale Integrated Health and Social Care Centre

2.4 Regional overview

The Regional Portfolio is made up of three main programmes: Orthopaedics, Diagnostics and Ophthalmology. The three UHBs in South East Wales work together regionally adopting the following regional working principles:

- To reduce unwarranted variation and inequality in health outcomes, access to services and experience at a regional population level.
- To improve resilience.
- To make effective use of capacity and capability in whichever organisation it sits.
- To create critical mass for effective high quality care delivery when and where it makes sense to do so accepting that may not reside in every organisation.
- Take all opportunities to use the evidence base and best practice to improve quality, efficiency, productivity and use of finite resources.
- To enable clinical leaders, and others, to work together, lead together and learn together.
- Distributed leadership approach collaboration with benign intent, honesty, transparency and integrity in order to build trusting and effective relationships.
- To agree approaches to engagement and communications together.
- To avoid leaving anyone behind and learn from the past and progress in an open, honest and humble way.

The Regional Diagnostics Programme was initiated with the intended aim of developing and implementing both short and medium to long-term service changes which will provide more timely access to diagnostics in a sustainable way. The three health boards are committed to regional working, where clinically appropriate, through the Regional Portfolio Board.

The Regional Diagnostics Programme comprises three projects: radiology, endoscopy and pathology.

The Regional Endoscopy project was initiated with the aim of achieving the following:-

- A single regional service model philosophy across a range of sites, with appropriate differentiation of procedures undertaken at each facility where indicated – as determined by D&C data and providing capacity to support bowel screening activity if / as appropriate
- A single service team philosophy, with common roles, responsibilities, standard operating procedures, skill mix and staff rewards (banding etc.), together with a philosophy of learning and sharing of best practice at all levels of the service.
- Professional Joint Accreditation Group (JAG) accreditation across all facilities (actual or equivalent)
- Movement towards management of a shared waiting list and addressing the longest waiters on a regional basis
- Collaborative approach to training arrangements, working with HEIW via an academy model
- IM&T systems to enable the sharing of data, including e-referral, reporting and onward referral and appropriate interface with FIT testing results.
- Enhanced shared understanding of demand and capacity data, with common approaches and definitions.

The regional endoscopy planning has been informed by the following guidance and policy documents.

- Our programme for transforming and modernising planned care and reducing waiting lists in Wales, Welsh Government (2022)
- Diagnostics Recovery and Transformation Strategy for Wales (2022-2025)
- Independent Review of Diagnostics Services (Professor Sir Mike Richards) (2020)

Regional partners have worked together to develop overarching regional plans for endoscopy and imaging identify the demand and capacity plans and regional solutions to address. The following sections discuss the outcomes of this work.

2.5 NHS Wales business strategy and aims

This OBC illustrates how LHP will support a key priority to improve access to Diagnostic and Endoscopy services, and provides the infrastructure required for provision of these much-needed regional services.

The proposals are aligned with the national strategic context, supporting a broad range of national strategies and policies, including:

- The NHS Wales Planning Framework 2023-2026
- National Clinical Framework: A Learning Health and Care System (2021)
- The Parliamentary Review of Health and Social Care in Wales. Final Report. (January 2018)
- A Healthier Wales: Our Plan for Health and Social Care (June 2018)
- The Wellbeing of Future Generations (Wales) Act 2015
- Prudent Healthcare: Securing Health and Wellbeing for Future Generations
- Informed Health and Care: A Digital Health and Care Strategy for Wales (2015)
- NHS Wales Decarbonisation Strategic Delivery Plan 2021-2030.

The Diagnostics Recovery and Transformation Strategy for Wales 2022-2025 sets out the plan to improve, transform and redesign diagnostic pathways in Wales. Diagnostic services are a fundamental aspect of modern healthcare delivery. Clinical pathways cannot function properly without sufficient capacity to turnaround diagnostic tests, procedures and reports in a timely manner.

Large backlogs of diagnostic procedures hold the NHS back from making improvements in referral to treatment times, impair screening pathway effectiveness, result in poor patient experience, and have the potential to result in harms and poorer outcomes.

The Diagnostics Strategy outlines the need to:

Rapidly create additional diagnostic capacity	Move to a combined approach to diagnostics as a whole	Provide directional national NHS leadership, through the Diagnostics Board, as part of the NHS Executive	Expedite transformation in diagnostic service models
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This national strategy seeks to deliver on the following aims:

- Improving outcomes and reducing pressure on secondary care
- Addressing unmet care need that has been exacerbated by COVID-19
- Enabling people to live longer, healthier lives at home
- Identifying treatments earlier in disease which enables intervention and care management more rapidly
- Creating a sustainable and intelligent integrated health system which reduces inequality
- Making Wales a great place to live and work.

The South East Wales Regional Diagnostics plan for Community Diagnostic Hubs aligns with this strategy and its aims through the intention to seek both a rapid expansion of diagnostic service access and the delivery of new models of care with a focus on providing centres of excellence which will attract and retain the required workforce.

Further support for new models of delivery was set out in Professor Sir Mike Richards' ***Independent Review of Diagnostics Services*** (October 2020); it highlighted the need for investment in equipment, facilities and workforce, and proposed a model of community diagnostic hubs established away from acute hospital sites.

The review sets out a vision for diagnostic hubs to provide a consistent approach to support health checks for people in deprived areas and potentially detect health issues that can be treated to prevent the conditions worsening. This model also aligns with national strategy through providing services away from acute sites, thereby improving access and reducing pressure on acute sites.

The Richards' report made a total of 24 recommendations, and the key elements are summarised in seven points here.

- **Diagnostic equipment and facilities should be expanded and upgraded as soon as possible.** High-quality data on imaging facilities already existed on which estimates of numbers of machines could be made. For other diagnostic modalities (e.g. endoscopy and physiological sciences) where national data are not available, baseline surveys should be undertaken.
- **The diagnostic workforce should be expanded substantially across all modalities,** with new roles being developed and training academies being established.

- **New service delivery models with new pathways to diagnosis should be established.** These should separate emergency/acute and elective diagnostics, wherever possible, to improve efficiency and reduce delays for patients. Community Diagnostic Hubs (CDH) should be rapidly established.
- **Improving connectivity and digitisation** should be prioritised across all aspects of diagnostics.
- **Innovative approaches to diagnostics should be evaluated** as quickly as possible and then implemented across the NHS. These are likely to include the use of artificial intelligence (AI) to assist human reporting in imaging, pathology and endoscopy. The use of new diagnostic technologies that can be used in patients' homes should be expanded, building on learning from home testing for COVID-19.
- Clinical and managerial leadership should be put in place for all diagnostic disciplines at national, regional and local/system/network levels.
- **Standardised data should be collected across all diagnostic modalities** to drive operational performance, support business planning and to inform service improvement.

The Richards' Report noted that **the key aims of Community Diagnostic Hubs are to:**

improve population health outcomes	improve productivity and efficiency	deliver a better, more personalised diagnostic experience for patients
increase diagnostic capacity	contribute to reducing health inequalities	promote primary/community and secondary integration

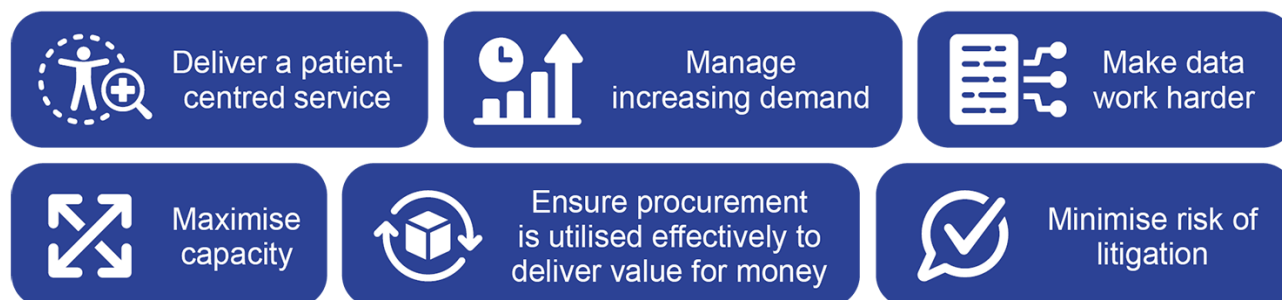
This model of Community Diagnostic Hub (CDH) provision has broad support from professional bodies such as the British Medical Association (BMA) Wales who advocated for increased access to diagnostics, in their letter to Welsh Government in May 2021.

It is also anticipated that CDHs will contribute to improve staff satisfaction, making every contact count, research and innovation and net zero carbon emissions. They should also act as anchor institutions for the populations they serve.

2.5.1 Getting it Right First Time (GiRFT)

The GiRFT Report considers the challenges of a post-COVID 19 Radiology service across the UK, with demand having increased between 2013 and 2019 by 22% with an expectation that this growth will continue.

The report captures a detailed account of the challenges faced by Radiology services and makes a number of recommendations to:



The report identifies a positive vision for change, of making radiology more patient-centric. That includes faster access to imaging, but also seeking to make services more convenient and accessible, and improving the physical environment of radiology departments.

This business case and the long term plans of the South East Wales region acknowledge and align with the points raised in the report and recommendations outlined.

The focus of the region's work is on both delivery of sustainable services through a range of means and seeking to better manage demand through alternative pathways.

2.5.2 Strategy for Developing a Regional Workforce Model for Wales

During 2021/22 Health Education and Improvement Wales (HEIW) supported the Imaging Workforce and Education Group (IWEG) and the National Imaging Programme to develop the *Building the NHS Wales Imaging Workforce Model – Strategy for Developing a Radiology Workforce for Wales*.

The Strategy sets out several recommendations to support and facilitate the development of a strong, resilient, and sustainable Radiology workforce for the future. These recommendations require both a national and local approach to implementation to ensure that the benefits are realised for both patients and staff. This includes developing plans for the recruitment of staff at a local level and identifying scope for workforce transformation opportunities.

3 Case For Change

3.1 Introduction

This section of the business case establishes the case for change for the development of the CDH by providing a clear understanding of:

- The spending objectives (what the proposals seek to achieve)
- Existing arrangements (what is currently happening)
- Business needs (what is required to close the gap between existing arrangements and what is required in the future).

3.2 Spending objectives for the LHP Programme

The main aim of the overarching LHP programme is to deliver high-volume low-complexity care away from crowded DGH sites; which will provide both additional capacity to meet ongoing increasing demand and free up existing resources to better meet emergency and unplanned care pressures. In turn, this should reduce patient wait times and facilitate earlier discharges on DGH sites across the region.

For Phase 1, the aim of this project is to deliver a Community Diagnostic Hub that is right-sized to meet the current and future needs of the local population, relieves pressures on existing DGH sites, supports the integration of primary, community and social care services, complies with regulatory standards and is suitable for the delivery of twenty first century healthcare.

The spending objectives listed in the table below were agreed by members at LHP Programme Board in September 2024 for the programme as applicable to all phases including phase 1 – CDH and Supporting Infrastructure.

Table 1 - Spending objectives

Ref	Theme	Spending objective	Benefit
SO1	Meet population needs	The delivery of an elective high volume low acuity model of care for the South East Wales Region on a phased basis. The first phase to focus on diagnostics and endoscopy. A second and third phase to focus on orthopaedics and day surgery respectively. Phase 1 services to be operational during the 2027/28 financial year. Future phases to consider further regional services such as pathology.	• Right-sized to meet current and future demand • Improves access to range of services • Centre of Excellence with efficient service delivery models and improved patient outcomes and increased throughput • Able to flex for the future
SO2	Maximise capacity	To maximise clinical capacity on the LHP site. To ensure that the maximum amount of available space is directed towards direct service delivery with supporting services managed from the neighbouring Royal Glamorgan site.	• Creates opportunities for centralisation of skillsets; centre of excellence • Enables greater collaboration regionally • Creates opportunity for one stop diagnostics, improved use of resources and appointments

Ref	Theme	Spending objective	Benefit
SO3	Innovation and standardisation	To facilitate and support the use of innovative design and delivery solutions in both clinical and non-clinical services. To implement standardised protocols and practices to promote efficient service delivery offering improved value for money and addressing the modifiable drivers of increased cost against English Tariff, excluding those aspects driven by Welsh Policy.	• Standardisation of consumables, with financial savings • Standardisation of best practice/policies; efficiencies, increased throughput, reduction of wait lists
SO4	Enable training / development of future workforce	To enable increased training and development of secondary care staff including accommodating more medical trainees and students.	• Accommodates placements for students (allowing role development and succession planning) • Improved workforce retention and recruitment
SO5	LHP Models of Care and Workforce Models	During phase 1 to ensure that the managed service provider delivers compliant and innovative models of care and workforce models, following the initial terms to develop innovative and new models of care to bring the CDH back into NHS management and control. . In Phases 2 and 3 to develop a new model of care and workforce models to support the delivery of the core services, the models will support efficient delivery of services	• Environment / ways of working that support staff welfare and wellbeing • Improved skills and job satisfaction • Improved patient outcomes • Multi-disciplinary working
SO6	Sustainable estate	To deliver a sustainable infrastructure on the site maximising decarbonisation and net zero opportunities.	• Complies with relevant standards; NZC, BREEAM excellent and energy performance • Opportunities for future additional service provision for South East Wales. • Opportunities for further regional reconfiguration and enabling of service and or estate rationalisation.

3.3 Existing arrangements

3.3.1 Radiology

Radiology is an important diagnostic test for a wide range of clinical conditions and is a key stage in many cancer and non-cancer pathways. Within Wales, the Welsh Government target for diagnostic tests (including radiology), is a maximum waiting time of eight weeks. Waiting times for radiology also form part of the 26-week referral to treatment time target (RTT) and 62 day single cancer pathway target, from suspicion to first definitive treatment. Many inpatients also require radiology as a diagnostic test, with waiting times, therefore, impacting patient outcomes and experience including length of stay and overall hospital efficiency.

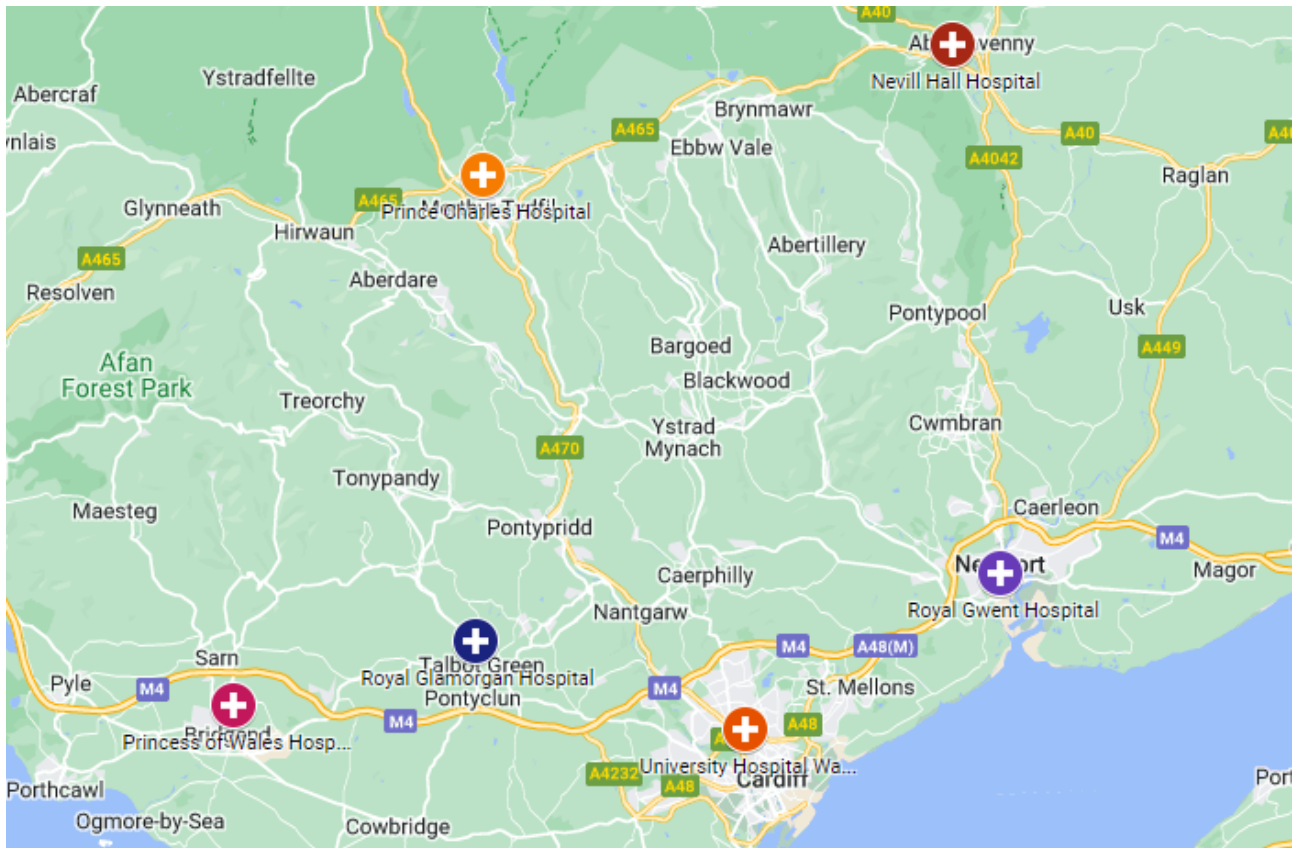
Current service provision for the region is delivered for each of the health boards' populations within each health board's geographic footprint. Patients from each health board currently access diagnostics in other health boards as part of agreed patient flows for specific service pathways but not commonly purely for diagnostics tests.

Additional capacity is delivered through a range of means including internal additional capacity using NHS clinicians (commonly referred to as waiting list initiatives) and in-sourcing.

Location of existing Imaging services

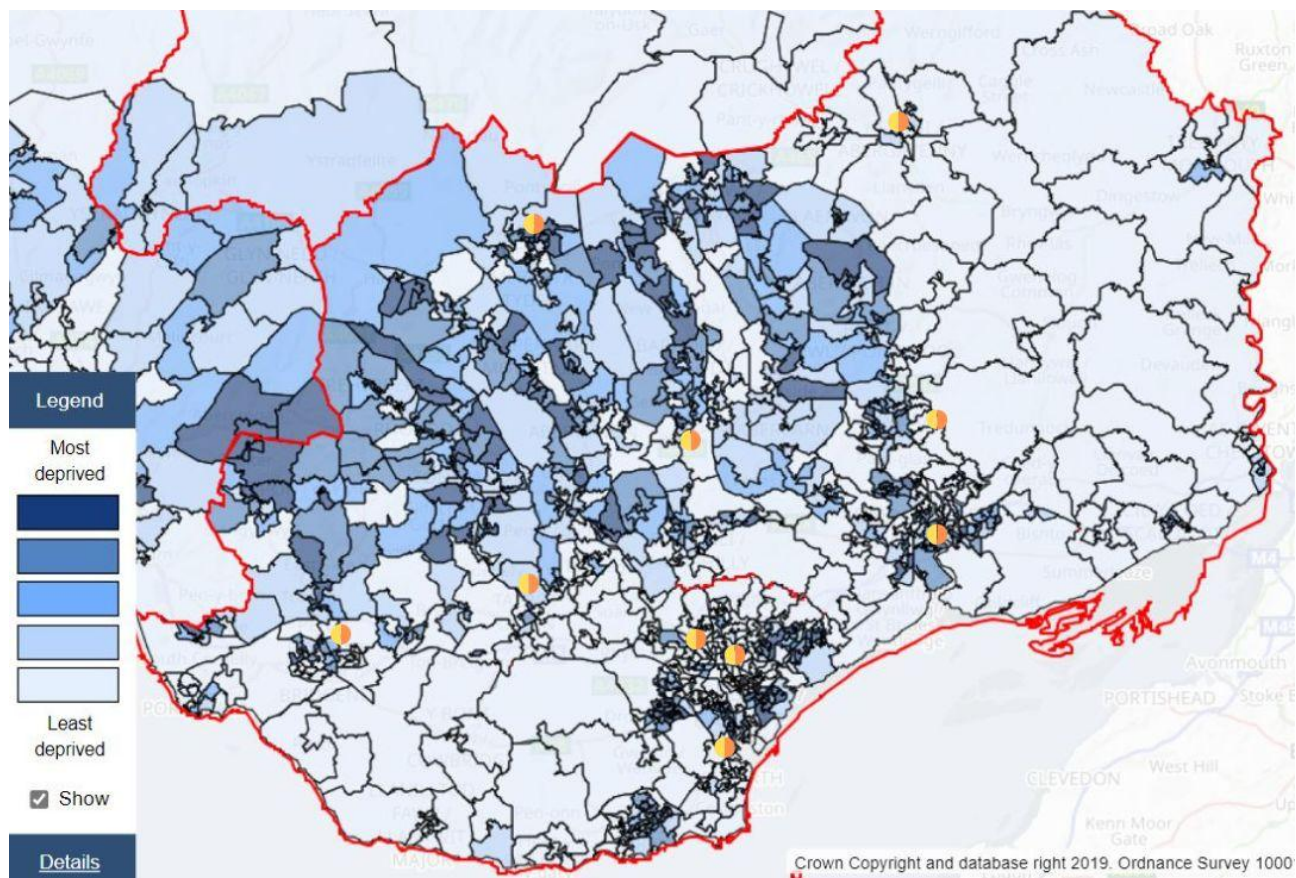
The South East Wales region comprises a large geographic area with varying ease of access for residents in discrete areas within the region due to road network and public transport options.

Figure 1 - District general hospital sites and the associated travel infrastructure



Given the agreed aim of ensuring access to residents living in areas of deprivation, the existing diagnostic infrastructure has been mapped against the Welsh Index of Multiple Deprivation (WIMD). The map below shows the location of CT and MRI facilities across the region.

Figure 2 - Location of CT and MRI facilities across the region (yellow and orange)



There is work underway being led by the regional imaging group to review service provision and create updated demand, and capacity modelling across the region. This will be used to develop a regional plan for imaging to address waiting times across the region. This is due to be completed shortly, however underpinning assumptions around demand and capacity have been used in completing this business case.

At this moment, only CTMUHB has confirmed an intention to commission imaging services from LHP. Cardiff and Vale and Aneurin Bevan University Health Boards have confirmed that they do not intend to commission services from LHP in the short term. Aneurin Bevan has indicated that it may consider doing so in the future, but there is no confirmed timeline for this. As this business case is focused on LHP only CTMUHB demand and capacity modelling will be included for the remainder of the case as they are the only confirmed contracting party.

The latest current imaging provision for CTMUHB is set out in the table below

Table 2 - Current delivery CTMUHB Imaging provision by site

Site	Modality	Days per week	Hours		Annual Capacity (Visits)
			From	To	
RGH	MRI 1	7	07.30	20.00	7,497
	MRI 2	5	07.30	20.00	5,187
	CT 1	7	08.00	20.00	16,752
	CT 2		09.00	17.00	7,350
	NOUS 4.5 rooms	5	09.00	17.00	14,994

Site	Modality	Days per week	Hours		Annual Capacity (Visits)
			From	To	
POW	MRI	5	07.30	20.30	5,434
	CT 1	7	08.00	20.00	16,752
	CT 2	7	09.00	17.00	7,350
	NOUS 4 rooms	5	09.00	17.00	13,314
PCH	MRI	7	07.00	19.30	1,476
	CT 1	7	08.00	20.00	16,752
	CT 2	5	09.00	17.00	7,350
	NOUS 4 rooms	5	09.00	17.00	13,314

In summary the total activity per modality based on patient visits is as set out below. These capacity figures have been derived by CTMUHB based on an average length of visit, days and hours of opening and includes accounting for planned downtime. The detail behind these calculations is included as appendix 2

Table 3 - CTMUHB summary Imaging capacity by modality

Modality	RGH	POWH	PCH	Total
MRI	12,684	5,434	7,476	25,594
CT	24,102	24,102	24,102	72,306
NOUS	14,994	13,314	13,314	41,622

3.3.2 Endoscopy

Endoscopy procedures are currently carried out from a range of sites across the three health boards. The table below sets out the permanent capacity arrangements in place across the region:

Table 4 - Endoscopy facilities, operating hours, days, sessions

Facility	No. rooms	Operating hours	Days / sessions	Procedures per year (ave.)
Aneurin Bevan UHB				
Grange University Hospital (weekends - inpatient / emergency on call only)	1	0800-1800	9 sessions gastro 1 session respiratory 5 days inpatients 7 days emergencies	1,956
Nevill Hall Hospital	2	0800-1800	5 days per week	5,392 (364 of which WG additional funds)
Royal Gwent Hospital	2	0800-1800	5 days per week	12,718 (902 WG)
	2		7 days per week	
Ysbyty Ystrad Fawr	2	0800-1800	5 days per week	5,845 (259 WG)

Facility	No. rooms	Operating hours	Days / sessions	Procedures per year (ave.)
Cwm Taf Morgannwg UHB				
Royal Glamorgan Hospital		0900-1700	5 days per week	7,435
Prince Charles Hospital		0900-1700	5 days per week	5,257
Princess of Wales Hospital		0830-1630	5 days per week	2,276
Cardiff and Vale UHB				
University Hospital Llandough (UHL)**	6	0900-1600	5 days per week 2 sessions	12,638
University Hospital Wales (UHW)	2	0900-1600	5 days per week 2 sessions	4,536

* Although C&VUHB have eight rooms there is only a nursing capacity to run seven rooms and endoscopists to run six rooms. Currently 7 rooms are run with the support of an initiative with Medinet.

** Utilisation at UHL was relatively low during this period. Room 6 only became operational in Q4, and Room 5 faced ongoing staffing constraints which limited its use throughout the year.

Detailed demand and capacity modelling has been undertaken by the National Endoscopy Programme for Wales (NEP), which has identified a recurrent shortfall in capacity. This demand is driven by increasing symptomatic demand coupled with the phased extension of the age range for Bowel Screening. This modelling concluded that there would be a six rooms shortfall in the South East Wales region by 2027/28 and has also recommended the establishment of regional endoscopy centres across Wales to support meeting a national shortfall in capacity against demand. This plan is included as Appendix 3 to this document and identifies an area outside of Cardiff for the facility in South East Wales. LHP would be an idea location for the same.

The regional diagnostic group have led on the development of the regional endoscopy plan based on work undertaken by NEP. The outcomes of this work are set out in the sections below but will focus on the whole region as both C&VUHB and ABUHB have included LHP additional capacity in their plans.

Whilst there are differences in the activity being undertaken across HB and sites, the group have confirmed that it is not possible to increase activity across all sites. This is due to workforce and estate constraints and there are recognised benefits to economies of scale of having larger consolidated units. This has supported the argument for the endoscopy service at LHP being regional provision.

3.4 Business need

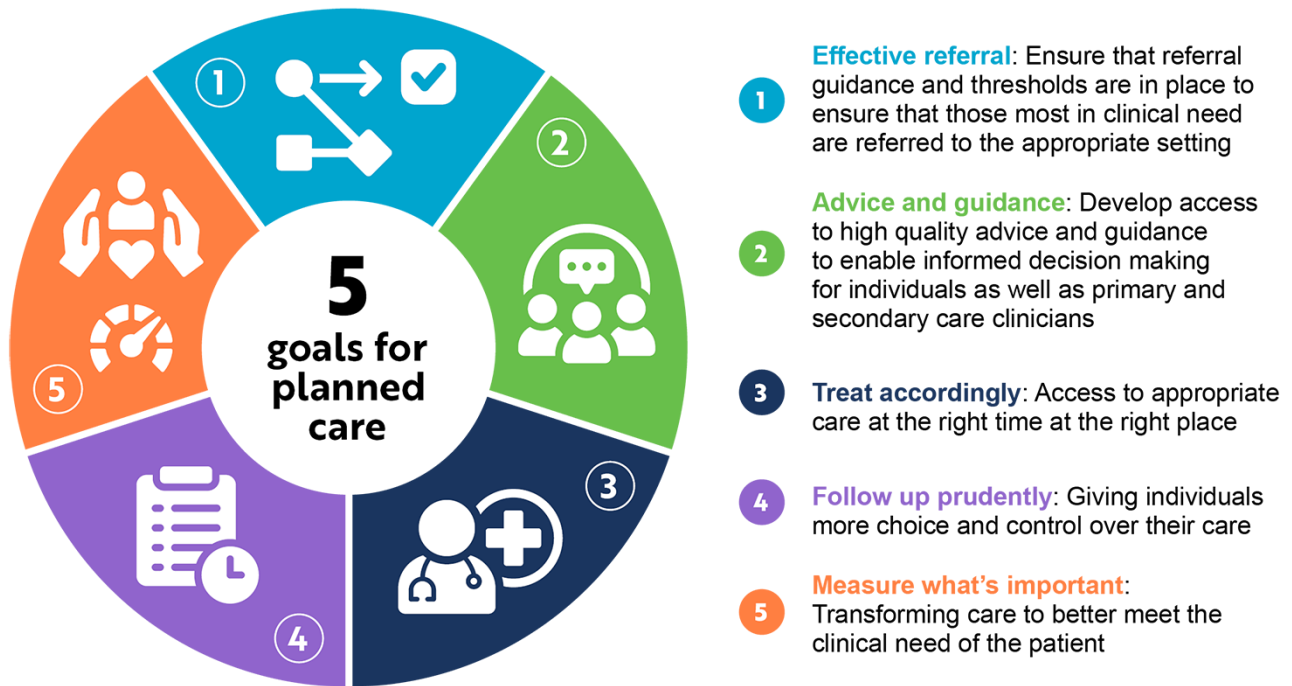
The vision is to create a standalone site for diagnostics that guarantees uninterrupted, effective and efficient services that address both current capacity shortfalls and offers opportunity to meet future demand growth. The vision is to provide patient centred care away from an acute hospital setting which also supports emergency care pathways by preserving capacity for unplanned and urgent procedures on DGH sites.

The need to significantly increase diagnostic and treatment capacity in Wales was set out in the Welsh Government Programme for Transforming and Modernising Planned Care and Reducing Waiting Lists in Wales which was published in April 2022.

The plan set a clear direction for Health Boards to recover the backlog of elective activity that has developed during the COVID-19 pandemic as well as responding to the increasing demand for diagnostic and surgical services due to demographic change and the challenge of health inequalities evident in many parts of Wales.

The plan has five main goals, which are underpinned by seven priorities to support and influence recovery planning and investment decisions as set out below.

Figure 3 - Welsh Government programme for transforming and modernising planned care goals and priorities



The seven priorities are:

- 1 Transformation of outpatients**
- 2 Prioritisation of diagnostic services**
- 3 Focus on early diagnosis and treatment of suspected cancer patients**
- 4 Implementing a fair and equitable approach to patient prioritisation to minimise health inequalities**
- 5 Elimination of long waits at all stages of the pathway**
- 6 Building sustainable planned care capacity across the care pathway**
- 7 Provision of appropriate information and support to people**

The LHP programme aligns with planned care recovery programmes across with the region in the development of long-term additional capacity to support the delivery of efficient and effective solutions to support all three Health Boards to eliminate long waits and reduce overall waits within the patient pathway in terms of access to diagnostic services. This is in addition to each Health Board fully utilising existing assets as it is recognised that both are needed to ensure efficient diagnostic care for the region.

The ability to create bespoke capacity to maximise patient flow and increase efficiency and innovation in service delivery offers additional benefits to the region from investment in the programme. These include standardisation of patient pathways and clinical practices which should increase efficiency and improve patient outcomes, consolidation of services on LHP will release space on existing sites and act as a key enabler for future regional reconfiguration and transformation and the opportunity to standardise procurements thus achieving greater revenue savings on high volume items.

3.5 Increasing demand for services

All Health Boards in the region are operating waiting lists for endoscopy and for CTMUHB there are waiting lists for all imaging modalities. The following sections set out the CTMUHB demand and capacity for imaging and the regional demand and capacity for endoscopy services.

3.5.1 Radiology

The regional imaging group initially reviewed service provision, demand, and capacity to support the 2023 regional procurement to appoint an independent service provider (ISP), the procurement of which remains ongoing and will be discussed in later sections. This work is being updated following Judith Paget's letter, of 27 January 2025, which requested an integrated regional imaging plan to developed by the three Health Boards.

The refreshed demand and capacity information for the regional plan remains under development and will be presented to regional boards and WG under separate cover. The modelling for CTMUHB included in this OBC has taken the outputs from the work completed to date and ensured a consistent approach to data application and assumptions.

In the first instance an overview of current waiting times for patients within CTMUHB is as set out below and compared to the 2024 figures included in the submitted strategic overview document.

Table 4 - Current waiting times (CTM)

Date	Non Cardiac CT		Non-Cardiac MRI		Non Obstetric USS		Total	
	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks
Jan-24	1,716	966	1,765	1,166	2,685	3,427	6,166	5,559
Jun-25	2,154	994	1,964	33	3,483	1771	7,601	2,798

Table 6 illustrates that there has been an overall increase in the number of patients waiting for scans across all disciplines with CT also seeing an increase in patients waiting over 8 weeks despite the presence of mobile imaging on the LHP site during 2024. Non recurrent additional capacity alongside some improvements in productivity have seen a fall in the over 8 week waits for MRI and ultrasound but these are now starting to increase again and are expected to continue to do so.

These waits can be explained when the latest demand and capacity data is considered. The location and operating hours of the current equipment with CTMUHB has already been detailed in Table 2 above, and has informed the capacity element of the demand and capacity modelling set out below (Table 6). Demand is based on information from CTMUHB with uplifts being based on outputs from modelling undertaken by Cardiff and Vale UHB and shared with the regional programme. The baseline 2025/26 Activity has been used as year one data as set out below:

Table 5 - Demand and capacity forecast / gap analysis

Modality	Actual capacity	Demand 25/26	Gap 25/26
MRI	25,594	25,675	-81
CT	72,306	82,657	-10,351
NOUS	41,622	43,351	-1,729

This clearly illustrates a shortfall in capacity in 2025/26 requiring non recurrent measures to be introduced and resourced at a premium cost to meet the level of demand based on an 8-week target. No improvements on this time can be offered and non-recurrent measures at a premium will be required to bring performance in line with targets.

When demand growth is considered then the position clearly worsens with the table below setting out the position for the next 5 years. The demand increases are 8% for MRI, 8.9% for CT and 5% for ultrasound. This has been projected forward over a 5 year plan period with 2025/26 demand data contained in Table 5 above being used as the baseline year 0.

Table 6 - Imaging demand and capacity analysis

Modality	Current capacity	Forecast	2026/27	2027/28	2028/29	2029/30	2030/31
MRI	25,594	Demand	27,729	29,947	32,343	34,931	37,725
		Variance ³	-2,135	-4,353	-6,749	-9,337	-12,131
CT	72,306	Demand	90,013	98,025	106,749	116,250	126,596
		Variance	-17,707	-25,719	-34,443	-43,944	-54,490
Ultrasound	41,622	Demand	45,519	47,794	50,184	52,693	55,328
		Variance	-3,897	-6,172	-8,562	-11,071	-13,706

There are several assumptions within the figures provided, namely that one CT on each DGH site is used as “hot capacity” and, whilst they are operated over 24 hours, the capacity outside the normal operating hours of 08.00 and 20.00 has been excluded, as this is demand-led and not operating at the same levels of efficiency.

There is a clear and significant gap in CT provision based on current capacity, which equates to in excess of one CT operating over 12 hours by 2026/27. Both MRI and NOUS are also showing year on year capacity shortfalls under the current model.

When considering the shortfall in actual capacity against demand, consideration has been given to whether utilisation of current assets has been maximised. There are some not insignificant issues with increasing capacity for imaging and there are existing pressures on workforce for both scanning and reporting. To deliver increased capacity it will be essential to secure workforce from the private sector to support the same. Despite this an exercise looking at the potential capacity increases that could be introduced has been developed.

³ Surplus / **shortfall**

Table 7 - CTMUHB current v potential delivery capacity

Site	Modality	Current delivery model			Potential delivery model			Capacity increase
		Days/wk	Hours/day	Capacity ⁴	Days/wk	Hours/day	Capacity	
RGH	MRI 1	7	12	7,497	7	12	7,497	0
	MRI 2	5	12	5,187	7	12	7,371	2,184
	CT 1	7	12	16,752	7	12	16,752	0
	CT 2	5	7.5	7,350	7	12	16,752	9,402
	NOUS 4.5 rooms	5	7.17	14,994	6	7.5	34,764	19,770
POW	MRI	5	12.5	5,434	7	12.5	7,722	2,288
	CT 1	7	12	16,752	7	12	16,752	0
	CT 2	5	7.5	7,350	7	12	16,752	9,402
	NOUS rooms	5	7.17	13,314	6	7.5	22,860	9,546
PCH	MRI	7	12	7,476	7	12	7,497	21
	CT 1	7	12	16,752	7	12	16,752	0
	CT 2	5	7.5	7,350	7	12	16,752	9,402
	NOUS rooms	5	7.17	13,314	6	7.5	22,860	9,546

Some of the key changes in capacity concern the move of the second MRI at RGH to a 7 day 12 hour working option with staffing required to be sourced to support the same. For CT all second machines on sites have been increased to seven- day and 12-hour working for elective patients. With NOUS the increased capacity modelling assumes that a further two rooms at RGH can be resourced and operated alongside the 4.5 rooms already in operation. In addition, it is assumed that 50% of the rooms on each site will operate a seven-day working model. For NOUS, hours of operation have not been increased due to the high level of manual intervention required in this modality

There are obviously a considerable number of risks around assuming the availability of this capacity, most notably around workforce availability and cost but also all consumable and supporting costs associated with this capacity increase. However, when the capacity increase is modelled against the demand levels mentioned above it can be seen that shortfalls in imaging capacity can be met in the immediate term.

Table 8 – Potential Demand v capacity based on Increased use of Existing Assets

Modality	Potential capacity	Forecast	2026/27	2027/28	2028/29	2029/30	2030/31
MRI	30,087	Demand	27,729	29,947	32,343	34,931	37,725
		Variance ⁵	2,358	140	-2,256	-4,844	-7,638
CT	100,512	Demand	90,013	94,514	99,239	116,250	126,596
		Variance	10,499	5,998	1,273	-15,736	-26,084
Ultrasound	80,484	Demand	45,519	47,794	50,184	52,693	55,328
		Variance	34,965	32,690	30,300	27,791	25,156

⁴ Number of annual visits

⁵ Surplus / **shortfall**

By maximising capacity in the short term CTMUHB can continue to meet demand in all modalities until the end of 2027/28. From 28/29 shortfalls in MRI and CT start to become apparent. LHP is due to open in late summer 2027/28 so will be in place to meet the shortfalls within CTM.

On the face of it, CTMUHB has potential capacity to meet ultrasound demand over the next five years and beyond, however NOUS services are under extreme pressure on all sites within CTMUHB and are recognised as being a service under pressure nationally in Wales. Much is due to the high workforce input into this modality which leads to strains on the existing resource and sees higher levels of sickness and rest breaks generally required by sonographers.

The potential capacity relates to a desktop increase in operational hours and rooms reflecting the actual physical capacity, but for NOUS this is not realisable due to two important drivers:

- Firstly, changes to antenatal care pathways are driving an increase in obstetric scanning and this must be prioritised over elective scanning, due to the shorter timescales.
- Secondly, due to the volume of obstetric scanning and ergonomic challenges of our patient group, we are seeing increased sickness driven by RSI issues which is further limiting the actual capacity.

This makes the provision of a standalone service, provided by a workforce distinct to our obstetric services critical to deliver waiting times and provide ringfenced service whilst existing capacity can be focused on achieving obstetric scanning demand.

In addition, covering sudden and unplanned absences is almost impossible with a high level of very short term list cancellations taking place. Unlike CT and MRI where services can still run albeit at a possible lower throughput, a loss of staff in NOUS can lose a list for at least a day whilst cover is attempted to be found. In reality, this makes achieving the level of performance to meet the potential capacity numbers in ultrasound almost impossible.

To deliver these levels of capacity in house bestows a high level of financial and service risk on CTMUHB with no capacity to cover sickness. In addition, it is likely that any additional capacity realised will have to be diverted to support obstetric scanning. The delivery of services at a premium (agency or private sector rate) can be prohibitive and extremely difficult to secure regularly which explains why these levels of capacity have not been achieved.

The reality is that to meet growing demand levels, an increase in existing capacity on standalone ringfenced site will be required in NOUS to provide a sustainable future focussed service.

It should also be noted that the above tables consider growth in demand associated with population growth and changes, however additional demand associated with the straight to test cancer pathway has not been factored into this model, neither has the opportunity to create a shorter than eight-week pathway to imaging and diagnostic service. There are also expected to be increased pressures from programmes such as lung health screening which will put further as yet unmodelled pressure on imaging services.

Within CTMUHB there are a further number of emerging pressures that have not been factored into the demand figures above but will service to further increase pressures on imaging services over the next 12-24 months. These include:

- Plans to repatriate the Cauda Equina Pathway OOHs back from C&VUHB.
- There are plans in SBUHB to repatriate all CTMUHB activity in Cardiac MR and CT back to CTMUHB from Neath Port Talbot Hospital. The POW MRI will not cope with demand of MR Cardiac as only one session a month can be accommodated. An additional scanner will be needed to support this activity or activity transferred to LHP to enable additional session to take place at POWH.

- There are also plans for SBUHB to transfer all CTMUHB Maxillofacial services back and this will further increase demand on US and CT. Cone Beam CT will be a new service in PCH however the US demand will need to be met from somewhere.
- MCAT – physio service at NPT will be repatriated in near future resulting increased MSK requests for MR, US and X-Ray.

Radiology forms a critical part of the 26-week referral to treatment time target (RTT) and 62-day single cancer pathway target, from suspicion to first definitive treatment. As a result it is also anticipated that with increased capacity and significantly reduced waiting times increased radiology capacity will be required to deliver efficiencies across the health system by developing clinical pathways that incorporate diagnostics at an earlier stage, aiming to reduce pressures on services and improve the patient experience. A fundamental principle of this work is equity of access across the region, to ensure that these benefits are realised evenly to all patients and communities. Increased radiology capacity plays a key role in supporting accelerated pathways to treatment.

Additional permanent capacity can support Radiology services across South East Wales to consistently deliver within the required timeframes to provide a good patient experience, support inpatient flows, expedite cancer and referral to treatment pathways and increase compliance with component waiting times targets. To create permanent capacity will provide a better value for money solution than short term temporary investments.

3.5.2 Endoscopy

Despite significant work undertaken by the three health boards in the South East Wales region, the performance profile currently indicates a significant proportion of patients waiting more than the target waiting time of accessing diagnostic endoscopy within eight weeks.

In August 2024 there were nearly 8,000 patients waiting more than 8 weeks for a diagnostic endoscopy, although this position improved during 2024/25 because of additional non-recurrent funding.

Table 9 - Endoscopy position at August 2024

Health Board	Colonoscopy		Gastroscopy		Sigmoidoscopy		Total	
	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks	<8 weeks	>8 weeks
AB	758	1,000	763	282	408	328	1,929	1,610
C&V	476	1,788	412	2,864	178	1,246	1,066	5,898
CTM	677	113	454	106	245	34	1,376	253
Total	1,911	2,901	1,629	3,252	831	1,608	4,371	7,761

The regular demand and capacity assessments facilitated for NHS Wales organisations by the National Endoscopy Programme (part of the NHS Wales Executive) have evidenced sustained growth in demand. This growth is evident for both symptomatic cases and for screening activity, due to the expansion of the Bowel Screening Wales programme to incorporate people aged between 51 and 55 years.

The impact of the growth in screening demand is set out by health board below and equates to a requirement for an extra 10 screening lists (one theatre) per week by 2027-2028.

Table 10 - Endoscopy screening demand increase

Procedure type	Year -1 Oct 23-Sep 24	Year 0 Oct 24-Sep 25	Year 1 Oct 25-Sep 26	Year 2 Oct 26-Sep 27	Year 3 Oct 27-Sep 28
Cwm Taf Morgannwg UHB					
Index procedures	828	1,112	1,112	1,112	1,112
Repeat procedures	196	264	264	264	264
Surveillance procedures	78	67	72	132	178
Total Procedures	1,102	1,443	1,448	1,508	1,554
*Lists per week	7	9	9	9	10
Cardiff and Vale UHB					
Index procedures	819	1,100	1,100	1,100	1,100
Repeat procedures	194	261	261	261	261
Surveillance procedures	60	72	88	131	176
Total Procedures	1,073	1,433	1,449	1,492	1,537
*Lists per week	7	9	9	9	10
Aneurin Bevan UHB					
Index procedures	1,116	1,499	1,499	1,499	1,499
Repeat procedures	264	355	355	355	355
Surveillance procedures	89	115	136	179	240
Total Procedures	1,470	1,969	1,990	2,033	2,094
*Lists per week	9	12	12	13	13

The National Endoscopy Programme (NEP) has facilitated several national demand and capacity assessments, with the autumn 2023 assessment of data identifying a total capacity gap (symptomatic and screening demand) across the south east Wales region (based on existing capacity) of approximately six rooms by 2027/28.

The NEP modelling is based on theatres operating on 10 sessions per week at 10 points per list. Further details of the demand and capacity exercise are included in Annex 1. A summary of the total demand increase for the south east Wales region is shown in the table below (based on points).

Table 11 - SE Wales total Endoscopy demand

Procedure type	2024-25	2025-26	2026-27	2027-28
Symptomatic (inc surveillance)	82,911	86,662	90,616	94,783
Screening	16,498	19,906	20,313	21,084
Total	99,409	106,568	110,929	115,867

3.6 Proposed service provision at LHP

To support decision making around clinical capacity and delivery of operational services, the regional demand and capacity modelling for the key services, covered in the previous section, has been analysed to support the right sizing of LHP to ensure it can meet both current and future demand. This will be covered in turn for each of the services.

3.6.1 Radiology

There is a drive within Wales to improve our cancer performance, this will be heavily reliant on diagnostics, in particular Radiology. Current pathways often rely on patients being referred into secondary care where they are reviewed, with relevant imaging then being requested. To expedite the diagnosis, the ability to send patients straight to test is required, as identified in the optimal Single Cancer Pathways produced by NHS Wales.

The current scanners on our acute hospital sites are busy with the acute and unpredictable inpatient demand. This will always limit the ability to completely maximise service provision in line with potential capacity modelling and be able to offer prompt access to the complex imaging required by these patients. The CDH will revolutionise the way we diagnose patients. We can follow the relevant Single Cancer Pathways, allowing our Primary Care colleagues direct access to the necessary imaging. In addition, by utilising Health Pathways, non-cancer referrals can be fast tracked to the CDH.

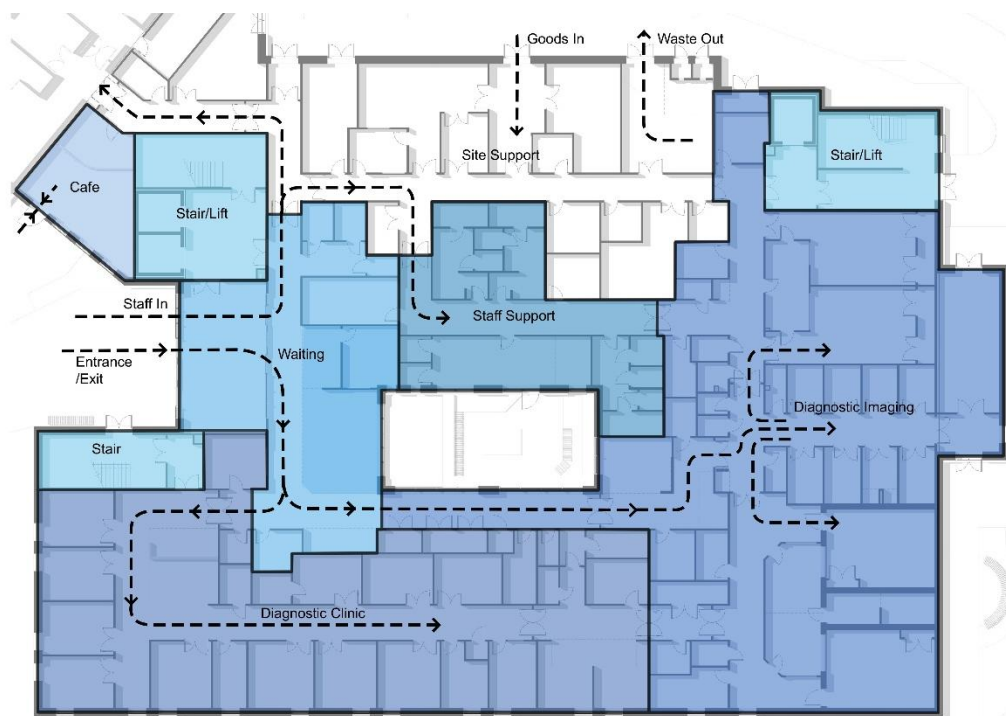
As a result of this, the direction for the infrastructure development has been to create the space to support the future growing demand and unknown increased screening and testing requirements. The proposed capacity will also be available to support regional partners should they determine that they cannot meet demand within their existing resources in the coming years.

The building has been designed to accommodate up to two MRI, two CT, three ultrasound and has the infrastructure in place to provide plain film x-ray. A suite of clinical and procedure rooms is included to support the provision of one stop clinics exploiting the adjacencies of the full range of diagnostic testing that will exist at LHP. These clinic spaces can focus on areas such as urology and lower GI which are two of CTMUHB's most challenged pathways for cancer performance. This gives the building a clear, cost effective and future focused approach to service delivery and ensures it can respond swiftly and effectively to changes or increases in commissioning arrangements, demand, screening requirements or be able to provide planned services away from emergency sites if required in the future.

This phased approach will enable rapid but stepped increases in diagnostic capacity, in line with the Diagnostics Recovery and Transformation Strategy alongside workforce planning and development to increase the NHS workforce, which will pave the way to potential future extension in operating hours of hospital-based diagnostic services, if required in future.

Currently, the proposed imaging provision at LHP will only be contracted by and provided for CTMUHB. The image below shows the current design for Diagnostics.

Figure 4 - Current Diagnostics layout plan



The CDH service provision is being procured from a third party provider, and the procurement remains ongoing at the time of writing this business case. The proposal is for an initial seven-year managed service contract with the provider supplying equipment and staffing to run and operate the imaging and endoscopy elements of the unit. The option appraisal to support this decision is set out in the economic case.

Recognising the need to step up services over time, the initial procurement documentation requests the provider to bid for the following contracted activity levels:

Table 12 - Diagnostic contracted activity

Year	MRI scans	CT scans	Non-obstetric U/S scan
Year 1 onwards	8,000	12,000	6,000

As this will be elective diagnostics and more HVLC work then it will be possible to undertake 8,000 scans on one MRI per year and the 12,000 CT scans would only require one CT. Therefore, it is expected that the initial contract with the provider would require one MR, one CT and two ultrasound rooms to be fitted out by them. The infrastructure offers an opportunity to step up capacity in a shortened timeframe should demand increase further or regional partners determine a need to commission radiology activity.

It is recognised that the discussion around the regional planning for imaging remains ongoing with the regional planning work due to complete shortly and present findings to their Boards. This will provide an overview of how all three organisations propose to meet their demand and capacity shortfalls within the WG confirmed position that capital funding will be directed towards LHP and not to other capital cases for the services within LHP.

The current pathway work with the service indicates that there are considerable benefits to the creation of a future proofed service by including two MRI and two CT alongside rooms for 3 NOUS in the design and infrastructure solution.

The business case proposes that the second MRI and CT rooms are included as shells within the building so that, as required, they can be equipped and utilised at a future date without disrupting flow and maximising design efficiencies. In addition, up to three ultrasound rooms will be included within the design alongside several procedure and clinical rooms. This will provide future flexibility to the CDH to expand and flex the services offered, including more multi-disciplinary one stop clinics utilising the existing imaging equipment alongside treatment spaces. This ensures the creation of a flexible, future focussed facility where one stop clinics utilising the on-site imaging technology can be delivered..

The proposed imaging design solution offers a regional solution if required in terms of the space and facilities built in. To attempt to create these spaces later will incur a premium cost, cause major disruption to the functioning unit and will compromise patient flow and efficiencies. To have a design which can incorporate demand growth and offer resilience and flexibility in its future usage is a unique opportunity within this programme. Capacity can also be managed to support Public Health screening requirements such as the lung screening programme or further other regional screening or diagnostic interventions. The capacity can also support major downtime across the region as required potentially reducing the need for expensive mobile hires for elective diagnostic procedures.

3.6.2 Endoscopy

The National Endoscopy programme (NEP) has facilitated several national demand and capacity assessments, using the Autumn 2023 data, identifying an expected gap across the South East Wales region of 6.3 rooms by 2027/28.

The following table summarises how the health board plans above impact on the original NEP capacity gap projection, together with the net recurrent requirement for a regional facility.

Table 13 - Endoscopy forecast capacity gap by 2027/28

	Rooms	Plan
NEP projected room gap 2027/8	6	
Net health board capacity requirements after individual plans		
ABUHB	0.5	Following 7/7 operating at Royal Gwent Hospital
C&VUHB	1.7	UHL operational model
CTMUHB	2	
Remaining gap to be addressed at regional facility	4.2	Four commissioned core rooms, supplemented by some academy activity and efficiency gains

The information supporting this has been shared in the section above and has also been presented to regional Boards to underpin the endoscopy model proposed for LHP. In addressing the shortfall in capacity, Health Boards have individual plans to mitigate the impact, and these plans are set out below as included in the overarching planning document produced in March 2025.

3.7 Regional Plans to bridge the gap between Capacity and Demand

The project undertook an option appraisal to identify options to meet the collective capacity gap. Key assumptions were that health boards would firstly work to fully utilise existing internal capacity, and then collaborate to address remaining capacity gaps, noting that workforce was a key constraint. On this basis, the appraisal identified a preferred option of the development of a regional endoscopy centre with a co-located regional training academy. The regional training academy is described further in section 3.7.4.

The subsequent site option appraisal identified Llantrisant Health Park (LHP) as the only suitable site within the south-east Wales region for a development of this nature and size.

Individual UHB plans (covering the interim period prior to the opening of a regional facility) are set out below. It should be noted that these plans will be pivotal in managing endoscopy demand in the South East Wales region alongside the infrastructure at LHP. The revenue funding to support these measures will need to be determined alongside the revenue requirements to fund LHP.

3.7.1 Aneurin Bevan University Health Board

ABUHB has reviewed its projected demand and capacity position, based on NEP assumptions of 5% core demand growth per annum and the published future commissioning intentions of Bowel Screening Wales. It is intended to move to full utilisation of the Royal Gwent Hospital endoscopy facility from April 2026, with all four theatres extended to seven days working from that date. Based on a 49-week per year operation (inclusive of backfill), this would deliver an additional 392 lists and enable the health board to maintain all relevant diagnostic targets until 2027/28, this will require additional revenue to deliver.

If the additional activity is delivered from April 2026, the resulting capacity gap in 2027-2028 is minimal, equating to approximately one list per week. From 2028-2029 the recurrent gap amounts to approximately five half-day sessions per week, or half a theatre. It is intended that this activity would be delivered through LHP (made up of screening and surveillance procedures), thereby enabling continued maintenance of all relevant diagnostic targets.

3.7.2 Cardiff and Vale University Health Board

C&VUHB has extended its capacity in University Hospital Llandough with two new theatres in 2024. The plan for the health board incorporates maximising the use of these theatres, noting workforce constraints have been a limiting factor.

The health board has undertaken a demand and capacity assessment and has identified a minimum requirement for 17 sessions or 1.7 theatres to be sourced from LHP from 2027/28. This activity will be a mix of both screening and surveillance procedures covering colonoscopy, flexi - sigmoidoscopy and gastroscopy (surveillance only).

3.7.3 Cwm Taf Morgannwg University Health Board

CTMUHB extended its internal capacity in 2024 with the opening of an additional endoscopy theatre at Prince Charles Hospital. During 2025, the Health Board experienced reduced capacity from the impact of the critical incident at Princess of Wales Hospital, however at the time of writing, works have been completed, and capacity has returned to previous levels. During the remainder of 2025-26 the Health Board will work towards the implementation of phase two of the internal endoscopy plan, which incorporates:

- Expansion to the substantive staffing of the third unit at Prince Charles Hospital

- Development of the trans-nasal endoscopy service. This will review the requirements for gastroscopy
- Implementation of manometry services.

Notwithstanding these developments, the Health Board will have a residual capacity gap equivalent to two theatres of activity from 2027/28 onwards.

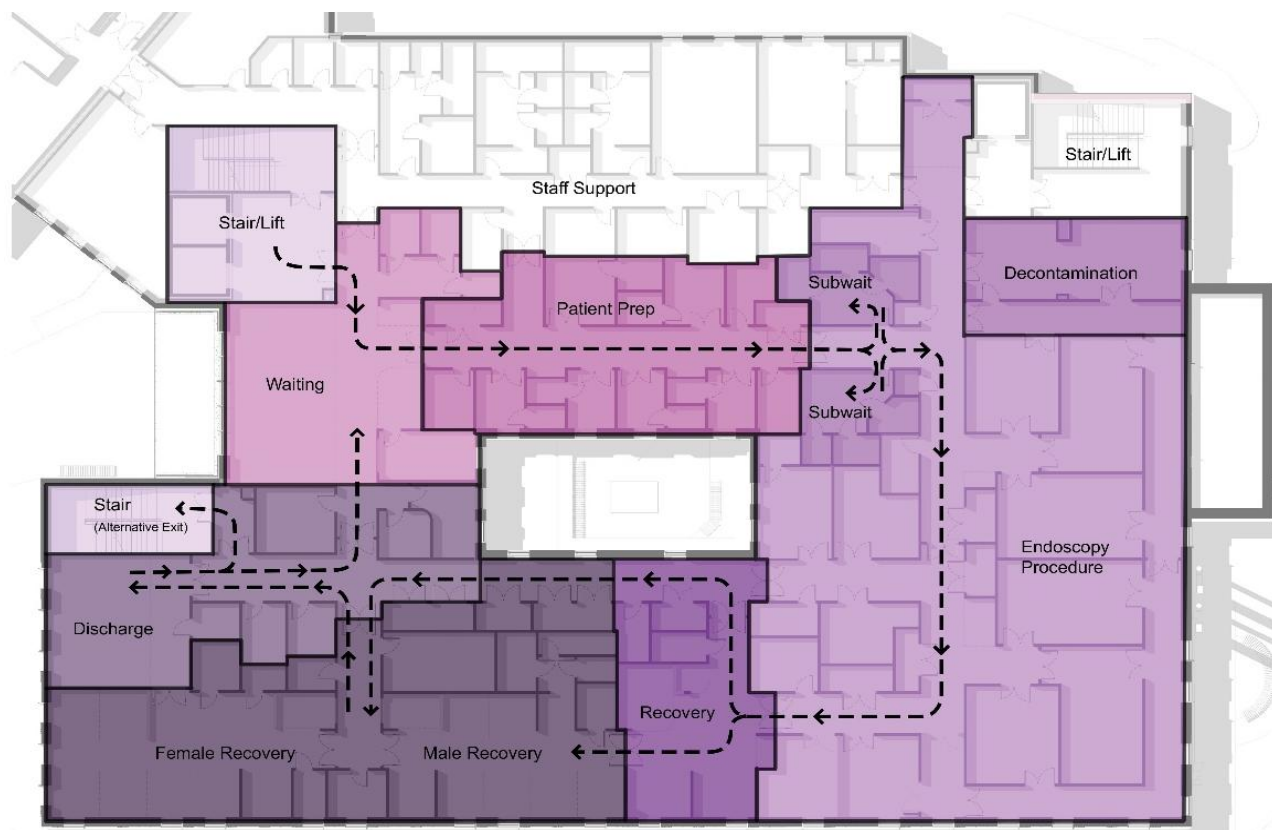
The anticipated requirement for CTMUHB remains as per the case mix established for the regional service specification in 2024 (40% gastroscopy, 40% sigmoidoscopy and 20% colonoscopy).

As part of the regional endoscopy planning, and as detailed above, it was identified that, should all local plans to optimise existing infrastructure be realised, there will be a need for just over four rooms to be commissioned in 2027/28.

The regional modelling confirms a need for four operational endoscopy rooms by 2027/28 based on the most recent demand modelling and regional Health Board agreed plans. In addition, there is a desire to create at least one training room, which would equate to a requirement of just over five rooms at LHP. The current design incorporates six endoscopy rooms and associated supporting space. This provides a sustainable and resilient approach to the development and enables the absorption of future growth or changes in screening requirements by Public Health Wales, as well as offering training opportunities and resilience in case of down time in any room.

The image below shows the current proposed layout for the Endoscopy unit, these designs have been discussed with the Welsh JAG lead, who has confirmed that they conform to current JAG requirements. It should also be noted that the physical aspects of CTM's endoscopy Unit at Royal Glamorgan Hospital make it practically impossible to achieve JAG compliance and therefore the LHP facility will increase the levels of endoscopy undertaken in a compliant estate.

Figure 5 - Proposed Endoscopy layout plan



3.7.4 Regional Endoscopy Training Academy

Endoscopy is a complex and evolving specialty requiring specialist education and training for all staff. Tailored training improves recruitment, retention, competency, and patient care. The JAG Endoscopy Training System (JETS) provides a structured framework for workforce training, progressing staff from foundation to leadership levels, with mandatory training requirements for JAG accreditation.

Endoscopy Training Academies have been established in the UK to enhance multi-professional learning, innovation, and workforce development. They have the potential to provide greater health system value than traditional education models as they:

- Enable training and supervision capacity to be expanded quickly and much more cost effectively
- Enable innovation in training through rapid at-scale adoption of technology enhanced learning and new multi-disciplinary learning models
- Accelerate independent working and service delivery productivity of trainees
- Enable more geographical equity in the distribution of training and hence the health professional workforce.

Through the Endoscopy Training Academy, training is provided to the whole endoscopy workforce, including nurses and support staff, in a multi-disciplinary environment. A south-east Wales Endoscopy Training Academy, co-located with the regional endoscopy suite, is proposed to support sustainable workforce training.

The development of a regional endoscopy training academy is a priority for Health Education and Improvement Wales (HEIW), as set out in its 2024-2027 intermediate medium-term plan. HEIW has developed a formal proposal for the training element of the academy, but this does not include consideration of the required physical infrastructure. The current working assumption for the LHP programme therefore includes the provision of a minimum of one theatre for the development of the academy. HEIW have committed to regular meetings with the regional endoscopy planning team to develop plans in alignment and will provide confirmation of the recurrent cost model for the academy for inclusion in the LHP full business case which will be prepared for health boards' consideration by November 2025 at the latest.

The requirements from health boards to facilitate a regional academy are to be confirmed. C&VUHB recently undertook a fixed term funded trial of an accelerated training programme, and the learning from this is informing the planning for the academy.

Following meetings with the design team and workstream meetings, the Endoscopy element of the Skills Academy includes; two theatres dedicated to providing training lists both for morning and afternoon sessions five days per week (Mon-Fri). The top floor is planned to be utilised as a multi-professional training space for simulation training (use of ex-vivo models) and a lecture theatre or seminar room for training courses (including live AV links to theatres thus meeting requirements and supporting endoscopy and surgical training.

One of the aims of the academy is the ability to train adequate endoscopy staff to allow the region to fill vacancies to provide safe and high-quality care and reduce reliance on outsourcing and in sourcing. This will also support the transition of the managed service contract staffing back to NHS staffing in LHP by the end of the contract. The current plans will support an environment appropriate to the delivery of all the course types required to develop the endoscopy workforce within the national requirements and standards for training set out by the JAG, as well as ensuring practice considerations.

In terms of the allocation of staff in the two theatres, the proposal is that:

- The Endoscopy Academy would provide ‘the Trainer’ (this will be a Centrally Contracted Endoscopist whose sessional time is paid for by HEIW), in addition HEIW will also fund and co-ordinate the process by which trainees are allocated to attend training lists and ensure backfill arrangements are in place in the event a Trainer is suddenly unavailable. The Trainers (endoscopists) will be responsible for following up any histology and ensuring that additional tests e.g. imaging is reported.
- The LHP ‘host UHB’ will be responsible for providing the Nursing Staff to staff the two theatres and will provide all the available endoscopic equipment, accessories and IT systems required to perform a high-quality endoscopy and report the findings onto an integrated reporting systems (so that results are available on WCP). The theatres will be equipped with both Scope Guides and AV (SMOTS) systems to ensure an appropriate training environment.
- For the third-floor training space HEIW will provide any endoscopic equipment that is solely required for model training and will provide the administrative and technical staff to support all endoscopy courses. These staff will require appropriate accommodation in the training space, but it is understood that they will need to share the accommodation / facilities with staff supporting other speciality courses and training.

An Endoscopy training facility within the academy has the potential to provide (aside from basic endoscopy training) immersion training, train-the-trainer courses, colonoscopy upskilling, non-technical skills, national assistant practitioner training, simulation and upper GI best practice training. Additional training opportunities within a skills academy include:

- Perioperative workforce; accelerated anaesthetic practitioner programmes, assistant peri-operative practitioner programmes, foundations of perioperative practice and surgical first assistants.
- Additional activities; OSCE preparation, pre-induction support for health and social care staff, national bronchoscopy and EBUS training, clinical skills for pharmacists, biomedical scientist registration portfolio, cultural humility resources, high volume cataract surgery resources and research institute which is attractive to current and potentially new staff.

3.7.5 Accelerated training for Endoscopy

Through investing in accelerated training infrastructure, the Endoscopy Academy will be able to plan, implement and target accelerated training to enable the trainee workforce to be available earlier to support service delivery. As JAG Certification is the UK standard for independent practice as an Endoscopist, if this has been achieved before completion of Specialist Training, the Endoscopist can actively contribute to service delivery. This affords Health Boards the option to address rising demand and capacity challenges by utilizing this workforce resource early in the training cycle through allocation to suitable lists and procedures.

The recommended approach would deliver 70 hours of intensive, hands-on training over a two-week period under 1:1 trainer supervision. This method compresses the traditional learning curve by up to 45%, enabling trainees to reach competency faster.

Modelling has demonstrated significant gains from accelerated training in terms of an increased number of certified upper GI endoscopists (within one year) and colonoscopists (over two years). A similar approach can be adopted for nurses, where acceleration can reduce the time taken to achieve independent practice for new nurse endoscopists from 9-12 to 5-6 months.

A pilot of accelerated endoscopy training commenced in University Hospital Llandough (CV) in January 2025 for a period of three months and anticipates within this short period in delivering endoscopies, bringing endoscopists through to achieve JAG upper GI Endoscopy Certification.

Projected additional endoscopy procedures delivered per year post accreditation, based on modelling

- Registrars: 256 OGD procedures or 128 colonoscopies (based on 1 list/week for 32 weeks per year adjusted for on calls and leave).
- Clinical Endoscopists: 1,408 OGD procedures or 704 colonoscopies (4 lists/week for 44 weeks per year).

Estimated workforce output

- Year 1: 7–11 JAG Certified UGI endoscopists.
- Year 2: 10–22 JAG Certified colonoscopists.

If 50% of these certified trainees were allocated regular service delivery lists, it would result in:

- **2,000 additional** UGI endoscopies annually.
- **1,280 additional** colonoscopies annually.

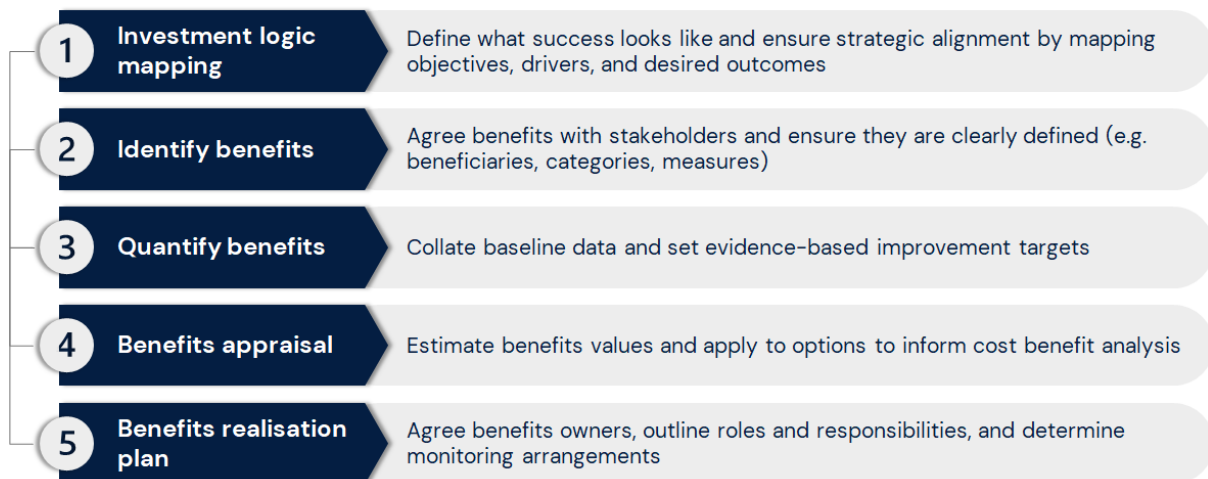
4 Benefits and Risks

This section of the business case identifies the benefits, risks, constraints and dependencies in that have been considered when developing and assessing the options for the development of Llantrisant Health Park.

4.1 Benefits case

A systematic approach was undertaken to develop the benefits analysis as outlined in the diagram below.

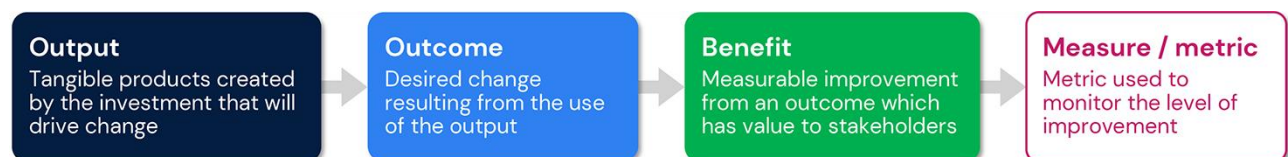
Figure 6 - Benefit analysis process



A significant amount of work has been undertaken during the development of the programme to identify the benefits of LHP.

This was consolidated within a series of workshops during April 2025 using the investment logic mapping approach outlined in the diagram below, following the restructure of the programme the benefits were reviewed to only include those directly related to Phase 1 :

Figure 7 - Investment logic mapping approach

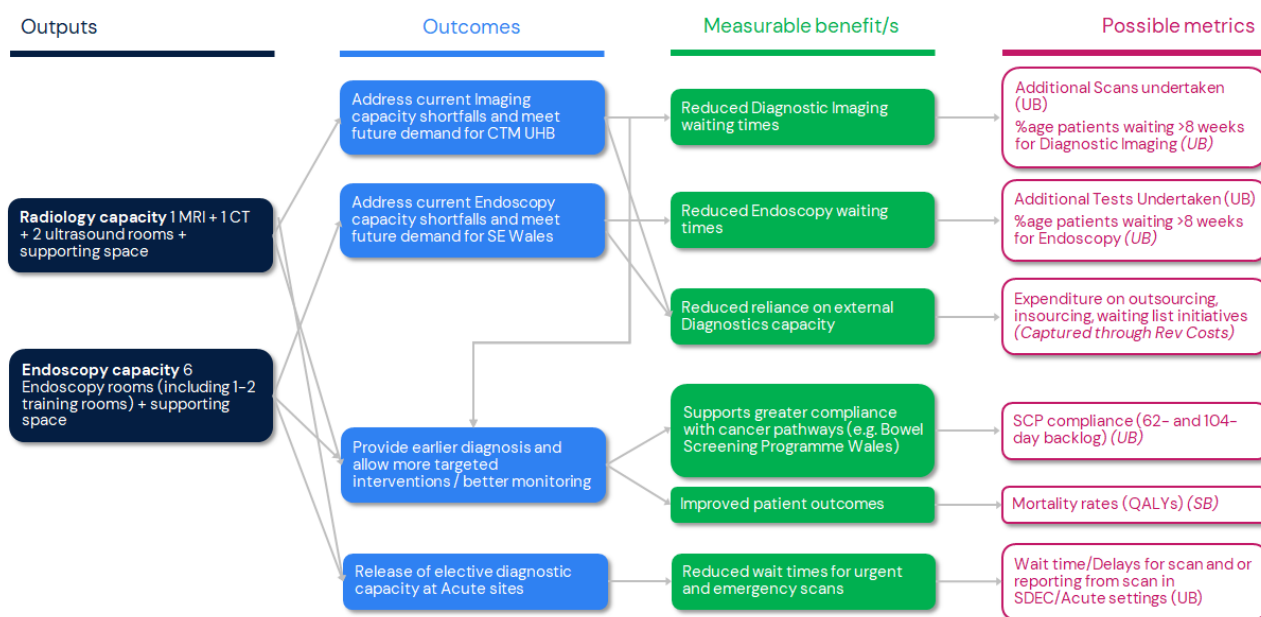


4.1.1 Creation of Diagnostics Centre

Delivery of the CDC will allow LHP to provide additional Diagnostic Imaging and Endoscopy capacity in the region to address current capacity shortfalls and ensure future demand can be met. As well as reducing waiting times for patients, this will support the cancer pathway by enabling earlier diagnosis, more targeted interventions and improved monitoring.

This will lead directly to delivering better patient outcomes, specifically improved cancer survival rates. In addition, the additional capacity will reduce reliance on expensive external Diagnostics capacity such as outsourcing, insourcing and waiting list initiatives.

Figure 8 - Benefits mapping: creation of Diagnostics Centre

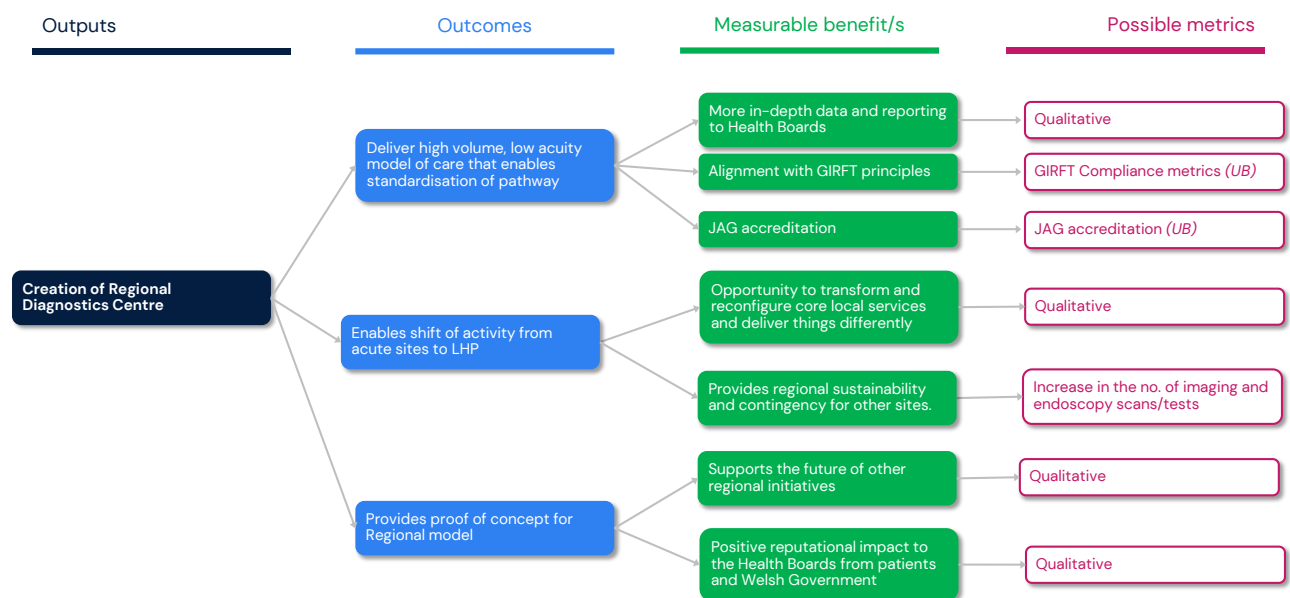


4.1.2 Model of care transformation

LHP will enable delivery of high volume, low acuity model of care that will enable the standardisation of patient pathways. This will result in better value for money due to increased throughput and better use of resources, reducing the average cost per test and providing opportunities for more efficient procurement. It will ensure services align with GIRFT principles and achieve JAG accreditation.

By providing capacity to shift activity from acute sites, the new CDC provides an opportunity to transform and reconfigure core local services and deliver things differently. For instance, the transfer of activity from CTMUHB to LHP provides opportunities to release space across the Estate in the future for other developments or to address risks around deteriorating facilities and reduce backlog maintenance. It is anticipated that these benefits may not accrue to regional partners for whom LHP will represent additional capacity only. The successful delivery of a regional centre will also provide proof of concept as the basis for the development of any future regional pathways.

Figure 9 - Benefits mapping: model of care transformation



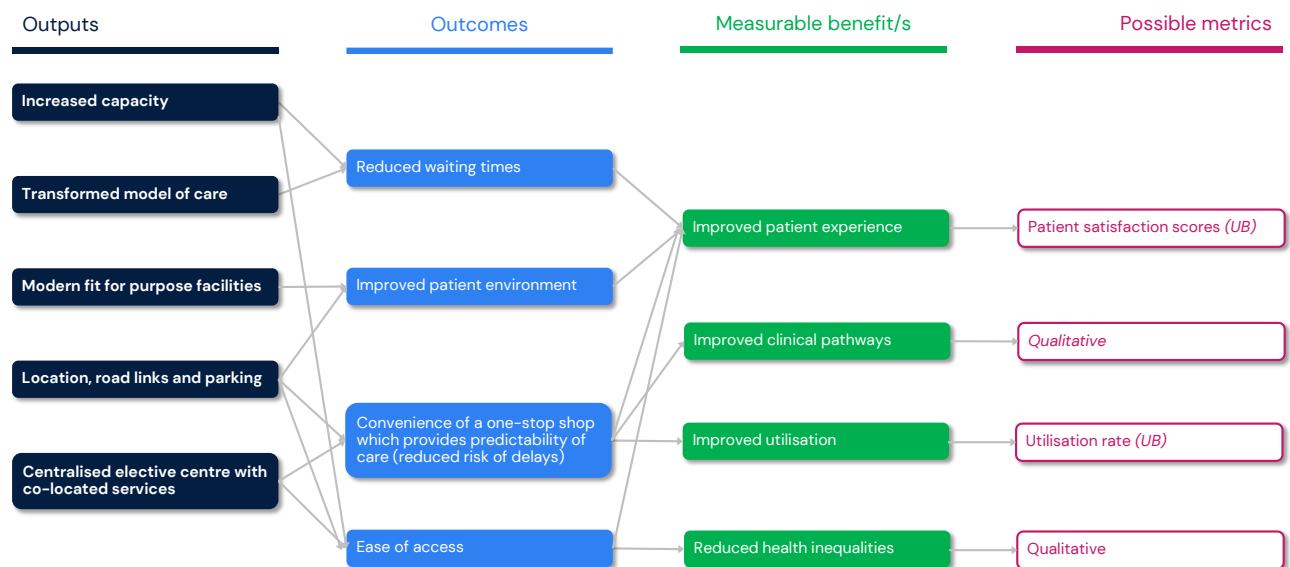
4.1.3 Improving patient experience

The outcomes presented above, such as reductions in waiting times, will contribute to a significant improvement in patient experience.

This is enhanced by the modern fit for purpose facilities and the ease of access the location of LHP offers, with its good road links and parking. Having a centralised elective centre with co-located services provides the convenience of a 'one-stop' shop clinic with greater predictability of care.

This contributes to more confidence in booking patients and tests which should lead to improved utilisation. In general, the improved access and reduced waiting times ensures a more equitable service is available within the region.

Figure 10 - Benefits mapping: patient experience

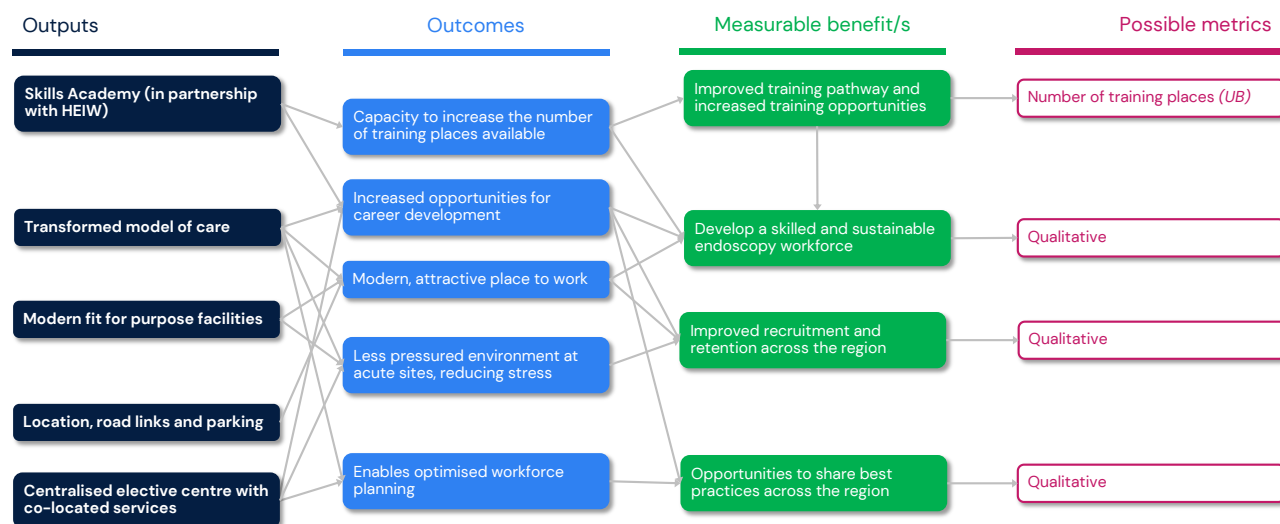


4.1.4 Delivering a sustainable workforce

Delivery of the Endoscopy Academy in partnership with HEIW will provide significant opportunities to increase the number of training places available in the region.

The improved training pathway and increased training opportunities, along with the modern fit for purpose facilities and a consolidated service model that enables can reduce pressures on acute sites contributes to staff satisfaction across the region. It also creates an attractive place to work in the future which will support recruitment and retention of highly trained health professionals.

Figure 11 - Benefits mapping: sustainable workforce



For the CDH, the initial plan is that the workforce will largely be provided via the managed service contract with the appointed provider. Therefore, there will be direct benefits for them in terms of recruitment and retention however these benefits are expected to flow to regional partners when the service is brought back in house at the end of the contract. It is clear therefore, that the majority of the workforce benefits will be indirect for the contractual phase.

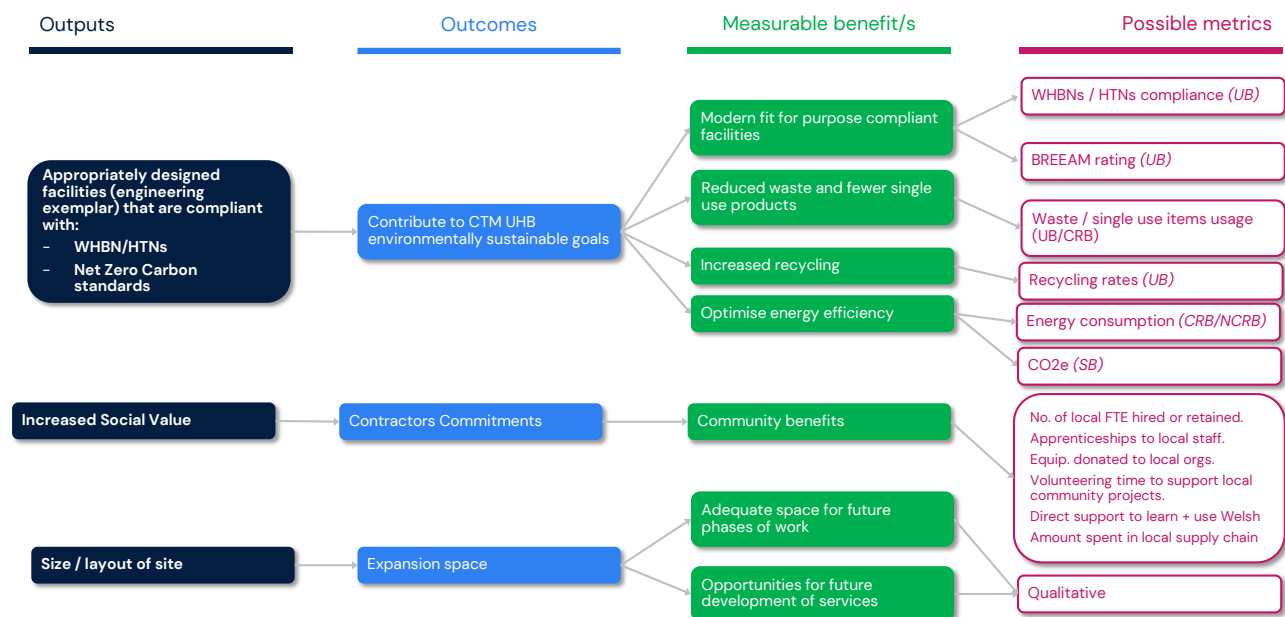
4.1.5 Providing a sustainable estate

The delivery of appropriately designed compliant facilities provides opportunities to contribute to CTMUHB's environmentally sustainable goals and national strategies around decarbonisation, by ensuring they are compliant with WHBNs and HTNs, achieve BREEAM rating of Excellent and optimise energy efficiency.

The transformed model of care with its standardised pathway is likely to make it easier to implement and maintain sustainability programmes that CTMUHB has instituted in other areas, such as reducing waste and single use products.

The site also provides a level of future proofing by providing expansion space that offers opportunities for other future developments.

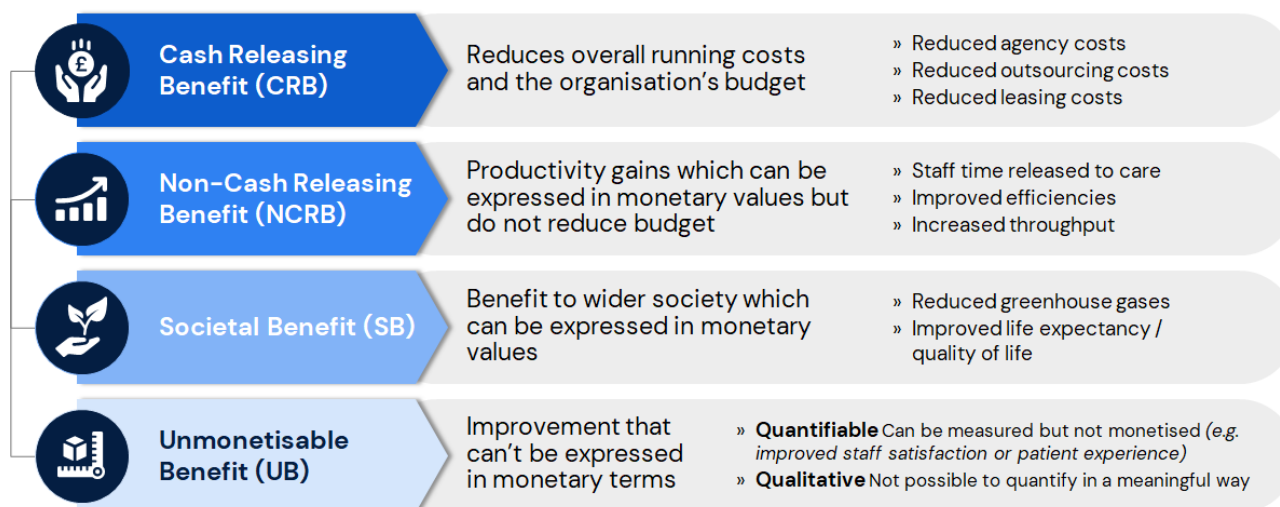
Figure 12 - Benefits mapping: sustainable estate



4.2 Main benefits

The investment logic, outlined above, resulted in the identification of the main benefits for each of the categories outlined in the figure below.

Figure 13 - Benefits categories



The main benefits are summarised in the table below.

Table 14 - Main benefits

Theme	Benefit	Beneficiary	Type	Possible Metrics
Creation of diagnostics centre	Increased Imaging and Endoscopy Capacity	Patients / Health Boards	Quantifiable	Additional scans / test undertaken
	Reduced waiting times across Endoscopy and Imaging	Patients	Quantifiable	Number of patients waiting over 8 weeks
	Release of elective diagnostic capacity at Acute sites, which can be used for urgent and emergency care patients/pathways.	Patients	Quantifiable	No. of scans undertaken in SDEC Wait time / delays for scan and or reporting from scan in SDEC/Acute settings
	Supports greater compliance with cancer pathways leading to better patient outcomes	Patients	Societal	SCP compliance (62- and 104-day backlogs) Improved mortality rates (QALYs)
	Improved patient outcomes (non-cancer related):	Patients	Societal	No of Additional Endoscopy tests undertaken (leading to improved mortality rates (QALYs))
	Reduced reliance on external Diagnostics capacity	Health Boards	Captured via revenue costs	Expenditure on outsourcing, insourcing, waiting list initiatives
	Assist with meeting 'Straight to Test' guidance.	Health Boards	Quantifiable	No. of direct referrals from GPs to Radiology
Model of Care Transformation	Greater alignment with GIRFT principles and achievement of JAG compliance	Health Boards	Quantifiable	GIRFT principles JAG accreditation
	Provide more robust and in-depth data and reporting to Health Boards	Health Boards	Qualitative	N/A

Theme	Benefit	Beneficiary	Type	Possible Metrics
	Providing regional sustainability and capacity to allow contingency at other sites.	Health Boards	Quantifiable	Increase in the no. of imaging and endoscopy scans/tests
	Provides opportunities for the future reconfiguration of services at the Health Boards	Health Boards	Qualitative	N/A
	Supports the future of other regional initiatives	Region	Qualitative	N/A
	Positive reputational impact to the Health Boards from patients and Welsh Government from positive outcomes of the initiative	Health Boards	Qualitative	N/A
Improved Patient Experience	Improved patient experience	Patient	Quantifiable	Patient satisfaction scores
	Improved utilisation	Patients / Health Boards	Quantifiable	Utilisation rate
	Increased number of and improved clinical pathways developed and delivered at LHP	Patients / Health Boards	Qualitative	N/A
	Reduced health inequalities	Patient / society	Qualitative	N/A
Delivering a Sustainable Workforce	Develop a skilled and sustainable endoscopy workforce	Staff / Health Boards	Qualitative	N/A
	Improved recruitment and retention across the region	Health Board	Qualitative	N/A
	Opportunities to share best workforce practices across the region	Region	Qualitative	N/A
Providing a Sustainable Estate	Modern fit for purpose compliant facility	Health Board	Quantifiable	WHBN/HTMS BREEAM rating Enhanced facilities
	Community Benefits	Region	Quantifiable	No. local direct full time equivalent (FTE) employees hired or retained. No. of weeks of apprenticeships provided to local staff. Equipment or resources donated to local third sector and civil society organisations Directly funded no. hours volunteering time provided to support local community projects. Direct support and investment provided for people to learn and use Welsh (e.g. interactions and signage). Total amount (£) spent in the local supply chain.
	Reduced waste and single use products	Health Board/Society	Quantifiable	Waste and single use products usage

Theme	Benefit	Beneficiary	Type	Possible Metrics
	Improved recycling	Health Board/Society	Quantifiable	Recycling rates
	Contribute to decarbonisation targets (Net Carbon Zero) with energy efficiency	Health Board / Society	Societal	Energy consumption CO2e
	Contribute to decarbonisation targets with more efficient pathway	Health Board / Society	Societal	CO2e reductions
	Preservation of biodiversity and wetland area due to choice and design of site.	Society	Qualitative	N/A
	Enables and provides meaningful and adequate spaces for future phases of work that are planned	Health Boards	Qualitative	NA
	Provides opportunity for future expansion	Health Boards	Qualitative	NA

The quantification of these benefits is explored within section 7.6 of the Economic Case and realisation plans outlined in section 10.6 of the Management Case.

4.3 Main risks

Risk is the possibility of a negative event occurring that adversely impacts on the success of the delivery of the project and its benefits. Identifying, mitigating and managing the key risks is crucial to successful delivery, since the key risks are likely to be that the project will not deliver its intended outcomes and benefits within the anticipated timescales and spend.

The full quantified capital programme risk register can be found in Appendix 5 and informs the planning contingency. An operational / revenue risk register is also developed to cover those risks that do not have capital implications.

Availability of resources to fund the required regional service developments has been highlighted as a risk to deliverability. The diagnostics programme was working on the basis that the funding would be derived from health board budgets, and additional recurrent funding allocated for regional services and performance improvement is intended to support the developments. However, it has been identified that the resource required for revenue funding exceeds funds currently available to health boards and the recommended course of action is to seek funding support for these new service developments from Welsh Government.

Delivery of value for money is a core underpinning principle and requirement. This is being supported by both the development of a robust service specification and assessment of all options, including commercial, for the delivery of community diagnostic hubs.

The currently identified top programme and infrastructure risks are as set out in the table below:

Table 15 - Top risks (current assessment) C x L = R

Description	Consequence	Likelihood	Rating
Regional engagement to facilitate development of clinically led model	5	4	20
Delayed Welsh Govt approval of OBC	5	4	20
Car parking provision available within site confines results in delayed Planning permission	4	4	16
Approval of SAB resubmission required to support the building phasing	4	4	16
FFE provision exceeds the high-level allowances within the cost plan	4	4	16
Medical equipment provision exceeds the high-level allowances within the cost plan	4	4	16
Last minute issues delay completion of building and handover	5	3	15
Contractor insolvency	5	3	15

4.4 Constraints

Constraints relate to the parameters that the project is working within and any restrictions or factors that might impact on its delivery. These typically include limits on resources and compliance issues. The project is subject to the following constraints:

- facilities must be fit for purpose and have future flexibility/adaptability
- implementation must not negatively impact continuation of current service provision
- the proposed solution must be technically feasible
- it must be delivered within agreed capital and revenue funding.

The project must support regional integration and collaboration and be supported by all 3 Health Boards.

4.5 Dependencies

Dependencies include things that must be in place to enable the project or project phases and typically include links to other projects and funding requirements that are likely to be managed elsewhere.

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

- Availability of Welsh Government funding for both capital and revenue
- Approval from Welsh Government, IIB and other health boards
- Continued support for proposed service model and successful procurement process leading to the appointment of the managed service provider for diagnostics.
- Access to pathology, particularly for endoscopy services. There is a recognised regional capacity gap for pathology. The Regional Diagnostics Programme includes a pathology project whose current main focus is the development of cellular pathology.
- A national business case for digital cellular pathology is a key enabler for regional cellular pathology development and the maintenance of cellular pathology services, as training moves away from the use of microscopes to processing digital samples. The national business case is

awaited, and the regional programme has links to the National Diagnostics Programme to ensure that the digital cellular pathology business case is considered. This will have revenue cost implications for health boards.

- Digital developments including changes to e-referral forms and information flows for reporting to ensure the proposed pathways for regional services are appropriately connected to health board systems. These interdependencies are identified and worked through by digital experts supporting the specification development and where changes are required to systems, these are highlighted to the Directors of Digital Services through the regional portfolio governance structure and support mechanisms.

Economic Case

5 Options identification and appraisal

5.1 Potential scope of services

This section of the business case identifies the scope of the project in terms of the key service requirements that should be considered in designing the future service model and developing options. The case for purchase of the site identified the following services as being integral to the creation of the Phase 1 elective diagnostic hub:

- Diagnostic Imaging Capacity – MRI, CT, Ultrasound and potential X Ray
- Provision of a regional Endoscopy Academy for training
- Endoscopy

These services constitute the core services required for delivery of a diagnostic hub on the LHP site. In terms of deliverability, currently the Health Board, is involved in a procurement exercise to appoint a partner for the delivery of the community diagnostic hub (CDH).

The proposal is that the partner will provide diagnostic services comprising both imaging and endoscopy in the CDH. The ongoing procurement will appoint a partner to provide the services on the LHP site with an option to create facilities on future sites. The CTMUHB CDH is the only one proposed to include regional endoscopy services as well as accommodating an endoscopy academy.

The current design combines capacity to meet the forecast level of demand when the centre opens but with an opportunity to further expand to meet further growth or changes in health screening requirements. The ability to easily absorb and accommodate demand increases gives LHP a unique position of being future ready at the day of opening and the ability to respond quickly and directly to ongoing service pressures.

5.2 CDH - Clinical service delivery options

In November 2022, prior to the full implementation of the Regional Diagnostics Programme a clinical summit was held with representatives of the clinical body from each of the region's health boards. At this point there was agreement on the aims and objectives of the regional working, which were subsequently built into the Project Initiation Document and approved by the Project and Programme Board.

To achieve the stated aims of the business case, the options are required to ensure that:

- Delivery is more accessible to residents living in areas of socio-economic deprivation and able to deliver to more than one health board population in the region.
- Developments deliver an increase in capacity.
- Developments will be founded on seeking sustainable solutions to demand backlogs.

To align with other programmes within the South East Wales Regional Portfolio, the criteria for assessment used for the regional ophthalmology programme for the cataracts interim solution were reviewed and expanded for use to assess the options for radiology service developments. The criteria agreed for the option appraisal were:

- Strategic viability (does it fit with the local and regional plans?)
- Does this option meet the service demand requirements?
- Will this deliver sustainable diagnostic services?

- Clinical viability (can the option deliver the procedures included in the service specification?)
- Operational viability (can this be operational within project timeframes?)
- Workforce viability: does this option:
 - ♦ Support sustainable workforce?
 - ♦ Deliver on national strategy?
 - ♦ Facilitate training?
 - ♦ Have implications for existing workforce?
- Estates viability (would this option facilitate the appropriate spaces, e.g. clinic rooms and outpatients space?)
- Financial viability (are the revenue and capital costs reasonable?)
- Geographic suitability / accessibility.

Stage 1 of the consideration of options for regional collaboration was to develop and test a range of potential models. The long list of model options for appraisal was developed in spring 2023 to inform the Project Initiation Document and were reviewed by the Programme Board in a Position Statement to the April 2023 Board. The outcome of this initial appraisal was that community diagnostic hubs and changes to existing practices in collaboration were to be considered further. There was recognition of the potential benefits of the CDH model based on the literature, as set out in the Strategic Case.

During 2023, this long list has been reviewed collaboratively through the clinical and operational leads group against an agreed set of criteria and subsequently tested by each health board prior to consideration by project and programme boards.

Further consideration of appropriate service models have been undertaken by ABUHB as part of the assessments which led to the development of a business justification case for a community diagnostic hub, managed wholly in-house within the NHS (and enabled by the establishment of a second MRI scanner at the Grange University Hospital), which is intended to be located within an existing community services setting. The business justification case sits alongside the regional business case for a managed service contract, with the intention that a community diagnostic hub initiated in the ABUHB area would be geographically accessible to C&VUHB and CTMUHB residents as per the agreed programme aims and principles.

The options considered by the regional Project Board are set out below.

Option 1	Do nothing - Health boards would continue to provide services as per current arrangements.
Option 1a	Different approach to the use of existing services in each health board, and work toward collaboration through shared processes. Health board expansion of internal capacity and/or other forms of regional working.
Option 2	Independent Community Diagnostic Hubs (CDH) – each health board operating their own CDH with no cross-border treatments.
Option 3	Regional Community Diagnostic Hubs – a minimum of one per health board, delivering cross-border diagnostic treatment.
Option 4	A single Regional Radiology Diagnostic centre , located on one site, serving all three health boards.
Option 5	Combined approach - Regional Diagnostic Centre/community diagnostic hubs.
Option 6	Community Diagnostic Hub with Mobile Units – as option 3 but with mobile units attached to reach outlying communities through community diagnostic clinics.

Assessment by the clinical and operational leads resulted in a short-list of model options for consideration by the Project Board. The shortlist included three options:

- **1a** – different approach to the use of existing services
- **3** – Community diagnostic hubs (CDH) with a minimum of one per health board area, and
- **6** – Community diagnostic hubs with the option of mobile units.

The Project Board considered these options formally on 23 January 2024 and confirmed the acceptability of both **Option 3** and **Option 6** with the preferred option of development of a community diagnostic hub model for the region, which may incorporate mobile units, as required.

Potential options for the CDH delivery model include the following, which have been tested on the basis of timely delivery, financial delivery and through the site identification and appraisal:

- Repurposing existing estate in the community, staffed by NHS workforce.
- Repurposing existing estate in community, staffed by commercial provider.
- New build (capital), staffed by NHS workforce.
- New build (capital), staffed by commercial provider.
- Partnership with commercial provider (estate and workforce solution).

5.3 Site and infrastructure delivery options

The purpose of the Options Analysis is to identify and appraise the options for the delivery of project and to recommend the option that is most likely to offer best value for money.

However, in this instance this section will not undertake a traditional options appraisal using the business case framework, which is an approach that has been agreed with colleagues in the Capital and Estates team in Welsh Government (WG).

The reasons for this centre on the fact that on purchase of the site a case for purchase was prepared and resulted in approval of capital funds to enable the same. The funding was made on the condition that CTMUHB collaborated with other NHS organisations to develop the site as part of a regional approach to the delivery of services. Therefore, consideration of alternative site options is not relevant.

The services included at this business case stage are the same as those included in the original case for the purchase of the site, with some small changes to the numbers of the same, in line with demand and capacity modelling provided in Section 3 of this case. In addition, after purchase, regional partners were asked to nominate desired alternative or additional services to be included at LHP; no changes or additions to the scope of services were requested or proposed at this time.

As a result, this section will not consider alternative options for service change with the scope and scale having been proven in the sections above. In addition, following WG approvals, design work has already progressed beyond the traditional stage for an OBC, with WG approval to proceed to RIBA 3 given in December 2024. RIBA 3 has completed for Phase 1 and to maintain programme, RIBA 4 works have also commenced.

The RIBA 2 design work was subject to scrutiny by Shared Services Specialist Estates and considered only the **preferred new build infrastructure option**. Scrutiny on the RIBA 2 phase closed on 18 December and approval to proceed to RIBA 3 was given on that date.

In addition to above funding, WG approval was granted to proceed with the demolition of the existing buildings on 31 January 2025, with planning licence approval granted on 2 April 2025.

These works have commenced under a separate contract to the main design works and are programmed to complete by 16 September 2025. As a result, there is no scope to further consider infrastructure and build options.

Finally, a main contractor for completion of the design phase was appointed on 28 March 2025. This appointment was made after a lengthy tender process utilising the Crown Commercial Services Framework under 2 lots to encourage bidders from both pure modular and other off site construction backgrounds to develop the more beneficial construction solution for LHP.

The tender process demonstrated a modular form of MMC was preferred and WG approval to enter into the design contract was received on 14 March 2025. As a result, the build methodology has also been fully determined. Therefore, the economic appraisal in following sections will focus on the delivery options for the CDH only in terms of the scope of the agreement with the third party provider.

6 Economic Appraisal

6.1 Introduction

The purpose of the economic appraisal is to evaluate the costs, benefits and risks of the shortlisted options to identify the option that is most likely to offer best public value for money. In line with current Welsh Government Better Business Case and HM Treasury Green Book project business case guidance, this involves:

- Estimating the capital and revenue costs for each option.
- Undertaking an assessment of benefits and risks for each option, wherever possible quantifying these in monetary-equivalent values.
- Using the DHSC's Comprehensive Investment Appraisal (CIA) Model to prepare discounted cash flows and estimate the Net Present Social Value (NPSV) and Benefit Cost Ratio (BCR) for each option.
- Presenting the results, including sensitivity analysis, to determine the preferred option.

As per Section 5 above, for the purposes of this case, the scope of the **do something** options is all the same (outlined in 5.3), with only how the service is delivered differing. As agreed, as part of the Strategic Overview, there are no other scope options viable for consideration.

6.2 Summary of Phase 1 service delivery options

Whilst the decision has been made to appoint an independent service provider to deliver the model in the CDH, there are options about the extent to which this can be delivered by the partner. As a result, this has been the focus of a more detailed option appraisal with the key options being:

Table 16 - Phase 1 service delivery options summary

Components	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Building	ISP Design and Build (Costs captured through revenue costs)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)
General Building Equipment	ISP Design and Build (Costs captured through revenue costs)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)	NHS Design and Build (WG Capital Funding)
Specific Service Delivery Equipment – First 10 Years after completion of LHP	ISP provide and maintain (Costs captured through revenue costs)	ISP provide and maintain (Costs captured through revenue costs)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)
Specific Service Delivery Equipment – After 10 years	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)	NHS Provide and Maintain (WG Capital Funding)
Service Delivery (Staffing) – First 10 Years after completion of LHP	ISP Staffing	ISP Staffing	ISP Staffing	NHS Staffing

Components	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Service Delivery (Staffing) – After 10 Years	NHS Staffing	NHS Staffing	NHS Staffing	NHS Staffing
Lifecycle Costs – First 10 Years after completion of LHP	N/A	Building Lifecycle Costs	Building Lifecycle Costs	Building Lifecycle Costs
Lifecycle Costs – After 10 years	NHS (WG Capital Funding) buys building buy back at net book value after 10 years. Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs	Building Lifecycle and equipment replacement Costs

6.3 Capital costs

Capital costs for construction of phase 1 of the LHP have been estimated and prepared for the Preferred Way Forward (Option 2) by the Health Board's Cost Advisors, Mott Macdonald using the following assumptions:

- Agreed Schedules of Accommodation and RIBA 3b design. Agreed scope of Phase 1 to cover the build of the CDH plus additional site wide infrastructure to facilitate later phases
- Proposed start on site 26 February 2026 and proposed construction completion date of July 2027 (though final commissioning continues until the end of October 2027).
- Works costs calculated using benchmarked rates suitable for South Wales (including Healthcare Premises Cost Guide) @ BCIS TPI updated 20/08/2025
- Allowances for fees, equipment costs, planning contingency have been applied as appropriate.
- No allowance for optimism bias has been applied given the degree of certainty at this stage in terms of maturity of design, knowledge of the site, and publicly declared political support for the development. It is therefore superseded by the Costed Risk Register figure.

The capital costs for Options 3 and 4 are the same as Option 2, except for an adjustment made to the equipment costs, to account for these options providing specific service delivery equipment. This has a flow on effect to the Quantified Risk Contingency and VAT. The value of the equipment has been estimated by the Health Board, with a full breakdown of the equipment and costs provided in appendix 10 (CIA Model).

The resulting capital costs estimates are summarised in the table below and a copy of the detailed capital cost form for Option 2 is provided in Appendix 8.

Table 17 - Initial capital costs

Element, £'000	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Works Costs	-	-	58,058	58,058	58,058
Fees	-	-	14,463	14,463	14,463
Non-Works Costs	-	-	10,362	10,362	10,362
Equipment Costs	-	-	2,628	11,483	11,483
Quantified Risk Contingency	-	-	10,583	11,680	11,680
Subtotal	-	-	96,094	106,046	106,046
VAT	-	-	13,895	15,666	15,666
Total capital costs (as per capital cost forms)	-	-	109,989	121,712	121,712
Exclude sunk costs	-	-	-15,123	-15,123	-15,123
Exclude Inflation adjustment to rebase to base year	-	-	-2,553	-2,553	-2,553
Exclude VAT	-	-	-13,895	-15,666	-15,666
Total capital costs (for Economic Case)	-	-	78,417	88,369	88,369

It should be noted that, in accordance with HM Treasury Green Book guidance, these costs have been adjusted for the purposes of the economic appraisal as follows:

- Exclude sunk costs
- Exclude VAT
- Are restated at base year prices.

6.4 Lifecycle capital costs

Ongoing investment requirements reflect the whole life costs of replacing, refurbishing or upgrading of assets over the lifetime of the appraisal period.

Building lifecycle costs across the appraisal period have been estimated for Options 1-4 using lifecycle figures provided by the Health Board's Cost Advisors, Mott Macdonald. It is also expected that both general and specific service delivery equipment will be replaced every 10 years in every "do something" option. Further refinement of lifecycle costs will be provided at FBC stage.

Further to this it is assumed in Option 1, at the end of the managed service contract the Health Boards would have to buy back the building from the provider at the assumed net book value.

A breakdown of the current estimation of lifecycle costs across the whole appraisal period is provided in the table below:

Table 18 - Lifecycle Costs

Lifecycle Costs, £'000	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Building Buy Back Costs	-	61,457	-	-	-
Building lifecycle Costs	-	106,361	112,821	112,821	112,821
Equipment replacement costs	-	57,413	57,413	57,413	57,413
Total lifecycle costs - Full appraisal period	-	225,232	170,234	170,234	170,234

6.5 Recurring revenue costs

6.5.1 Assumptions

Recurring revenue costs for the period of the managed service contract (10 years) for each option has been estimated using the following assumptions:

Option 1 - Fully outsourced managed service contract

- No pay costs
- No non-pay costs
- Healthcare Services costs calculated by: 2025-26 Tariff price of scan/test with a 5% market forces factor applied multiplied by amount of activity of relevant scan/test.
- Assumed additional rental costs for the endoscopy Skills Academy space which is estimated at a daily rental cost of £6,000 based on indications from providers.

Option 2 - Traditional capital build + ISP equip and deliver services via managed service contract

- No pay costs
- No non-pay costs
- Healthcare Services costs calculated by:
 - ♦ 2025-26 Tariff price of scan/test with a 5% market forces factor applied multiplied by amount of activity of relevant scan/test.
 - ♦ Applying a 20% tariff discount due to the Health Boards providing the LHP land and building.

Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract

- Pay costs for site-based staffing (i.e. receptionists etc.)
- Non-pay costs for imaging, endoscopy and site-based elements, including supplies, utilities, equipment maintenance etc.
- Healthcare Services costs calculated by: Assumed cost of managed services contracted staffing.

Option 4 - Traditional capital build and equip + NHS staffing and service provision

- Pay costs for cost of using NHS staff to provide the imaging and endoscopy.
- Non-pay costs for imaging, endoscopy and site based elements, including supplies, utilities, equipment maintenance etc.
- No Healthcare Services costs

6.5.2 Recurring revenue costs summary

The annual impact on each option for the period of the managed service contract (10 years) is summarised in the table overleaf. It is assumed that costs will be incurred from the start of 2027-28 for each option. More detailed calculations are provided in Appendix 9 and 10.

Table 19 - Annual revenue costs during managed service contract period (first 10 years post implementation)

Element, £'000	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Pay Costs	-	-	-	324	2,788
Non-Pay Costs	-	-	-	3,313	2,587
Healthcare Services (cost of managed service contract)	-	9,341	7,473	3,780	-
Rental Payment for Endoscopy Skills Academy	-	2,190	-	-	-
Total annual revenue costs	-	11,531	7,473	7,417	5,376
<i>Incremental Impact on Annual Revenue Costs</i>	-	<i>11,531</i>	<i>7,473</i>	<i>7,417</i>	<i>5,376</i>

After the end of the managed services contract, it is assumed that the service will come in house and all options will have Option 4's recurring revenue costs.

A breakdown of the annual revenue costs after the managed service contract period is outlined in the table below:

Table 20 - Annual revenue costs post managed service contract period

Element, £'000	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Pay Costs	-	2,788	2,788	2,788	2,788
Non-Pay Costs	-	2,587	2,587	2,587	2,587
Total annual revenue costs	-	5,376	5,376	5,376	5,376
<i>Incremental Impact on Annual Revenue Costs</i>	-	<i>5,376</i>	<i>5,376</i>	<i>5,376</i>	<i>5,376</i>

It should be noted that, in accordance with HM Treasury Green Book guidance, these costs exclude capital charges such as depreciation and therefore differ from the total figures in the Finance Case.

6.6 Transitional costs after the end of managed service contract period

It is expected that after the end of the managed service contract period for Option 1, due to it being a complete handover, there would be 6 months of dual running costs while the inhouse service ramps up, this would equate to c.£4.7m in 2037/38.

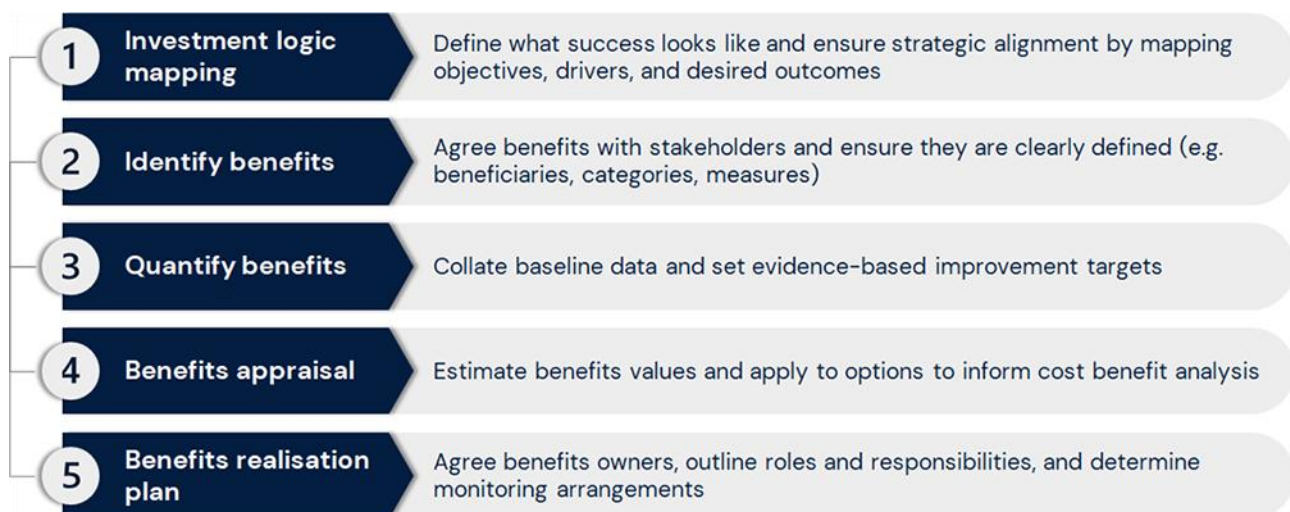
It is not expected that there would be any significant transitional costs in any of the other options.

6.7 Benefits analysis

6.7.1 Approach

As outlined in sections 5.2 and 5.3 of the Strategic Case, a systematic approach has been undertaken to develop the benefits analysis, which involved establishing the benefits case and identifying measurable benefits, and metrics.

Figure 14 - Benefits analysis approach



As part of the Economic Case, these benefits must be quantified to enable a robust value for money analysis to be undertaken, using the following categories.

Figure 15 - Benefits categories



An initial quantified benefits analysis has therefore been prepared based on the baseline and benchmarking data that is available at this stage. Every effort has been made to quantify the benefits for the OBC and, where possible, they have been stated in monetary equivalent values. Further work will continue into the FBC stage to validate assumptions, collate missing data and identify key baselines, as well as exploring benefits which have not yet been quantified.

6.7.2 Benefits assumptions

An overview of the main benefits that it is anticipated will be delivered as a result of the LHP, along with the key assumptions used to quantify them, is provided in the table overleaf. Detailed calculations are available in Appendix 6.

Table 21 - Overview of LHP benefits

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Creation of diagnostics centre						
Increased Imaging capacity	Additional scans undertaken	N/A	TBC (26,000 scans provided at LHP by the managed service)	Not monetisable	To be confirmed exact extent but it is assumed a portion of the imaging capacity will be a transfer of current capacity, but the vast majority will be additional capacity. This helps with freeing up space in acute settings for emergency care patients and pathways. (Likely an additional benefit) – Could look at same day emergency care no. of scans (delays over a week for scans and reporting) Helps to focus on emergency work.	UB1 (a)
Increased Endoscopy capacity	Additional tests undertaken	N/A	11,330 additional endoscopy tests at LHP	Not monetisable	The increased endoscopy capacity will be additional to current levels.	UB1 (b)
Reduced Imaging waiting times as a result of additional capacity provided by the diagnostics centre.	% of patients waiting over 8 weeks for Imaging	47% (CTMUHB % as of January 2024. Source: Strategic Overview Case 2025)	0% (In line with NHS Wales target wait times)	Not monetisable	Comparators - NHS England's planning guidance for 2024/25 requests that the percentage of patients waiting 6 weeks or more should be at most 5%. - NHS Wales target is that the maximum wait for access to specified diagnostic tests is 8 weeks. The target improvements will be incorporated into the managed service contract as KPI's meaning there will be a high degree of certainty that the improvement will be reached.	UB2 (a)
Reduced Endoscopy waiting times as a result of additional capacity provided by the diagnostics centre.	% of patients waiting over 8 weeks for Endoscopy	64% (Average for 3 UHBs in August 2024. Source: Regional Endoscopy Plan 2025)	0% (In line with NHS Wales target wait times)	Not monetisable		UB2 (b)
Release of elective diagnostic capacity at Acute sites, which can be used for urgent and emergency care patients/pathways. This would lead to reduced waiting times for urgent scans and subsequent reports.	No. of scans undertaken in SDEC Wait time/Delays for scan and or reporting from scan in SDEC/Acute settings	To be confirmed at FBC	To be confirmed at FBC	Not Monetisable	The additional capacity provided at LHP will free up capacity at acute sites for urgent and emergency patients requiring scans/tests. This will lead to more prompt turnaround of scans and subsequent reporting. Measures included as potential ways to measure this benefit, but quantification will be completed at FBC stage.	UB3

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Supports greater compliance with cancer pathways: By providing earlier diagnosis which will allow more targeted interventions and better monitoring.	Single suspected cancer pathway (SCP) compliance: 62-day backlog %age of patients starting treatment within 62 days	58% Equates to 444 patients waiting longer than 62 days (Source: CTMUHB)	80% Equates to c.211 patients waiting longer than 62 days (In line with national target)	Contributes to SB1	National target of at least 80% of people starting first definitive treatment for cancer within 62-days as per NHS Wales planning framework 2025 to 2028, Annex 1: key delivery expectations (NHS Wales planning framework 2025 to 2028 GOV.WALES) The target improvements will be incorporated into the managed service contract as KPI's meaning there will be a high degree of certainty that the improvement will be reached.	UB4
	SCP compliance: 104-day backlog	130 patients waiting longer than 104 days (Based on a 2024-25 average Source: CTMUHB.)	39 patients waiting longer than 104 days (In line with CTMUHB Target for March 2026)	Contributes to SB1	104-day backlog targets in line with CTMUHB Target. The target improvements will be incorporated into the managed service contract as KPI's meaning there will be a high degree of certainty that the improvement will be reached.	UB5
Improved patient outcomes: Earlier diagnosis of cancers leading to more targeted interventions and better monitoring will contribute to improved mortality rates	Single suspected cancer pathway (SCP) compliance: 62-day backlog %age of patients starting treatment within 62 days	58% Equates to 444 patients waiting longer than 62 days (Source: CTMUHB)	80% Equates to 211 patients waiting longer than 62 days (This equates to an assumed 16 QALYs p.a. based on 24 patients benefit from earlier cancer diagnosis as result of achievement of SCP compliance 62-day backlog targets)	£3.4m p.a. after confidence rating applied	Based on figures provided by Cancer Research UK in written evidence to the UK parliament on 4 common types of cancer, the average 10-year survival rate when diagnosed at the earliest stage is 78% compared to 10% at the latest stage. Percentage of suspected cancer referrals to cancer diagnosis was 10% based on data from NHS England Cancer Waiting Times Feb 2024-25 It is therefore assumed for the c.233 patients who receive an earlier diagnostic test (due to - achievement of SCP compliance 62-day backlog targets outlined in UB1), 24 will receive a cancer diagnosis. As a result of the earlier diagnosis, those 24 patients will have increased their 10-year survival rate by 68%. Apply 1 QALY for 10 years to the increased survival rate per patient. QALY value of £70,000 as per HM Treasury Green Book (uplifted to base year prices)	SB1

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
					A prudent 25% confidence rating is then applied noting the significant increase in 10-year survival rate that has been applied, and that it assumes that by achieving the 62-day backlog target, those patients will receive the diagnosis at the earliest stage compared to the latest stage.	
Improved patient outcomes: Earlier diagnosis of other clinical issues (non-cancer related) leading to more targeted interventions and better monitoring will contribute to improved quality of life for patients.	No of additional Endoscopy tests undertaken	N/A	11,330 additional endoscopy tests at LHP	£5.2m after confidence rating applied	Increased number of endoscopy tests will lead to an increase in the number of people with hypertension being diagnosed. This diagnosis will cause the patient to get treatment and management of Hypertension. This will in turn lead to a potential reduction in all-cause mortality by 13% of those diagnosed with hypertension. The following assumptions have been used to calculate a monetary value: - Only focused on the increased number of endoscopy tests (11,330) as these are all additional. - Prevalence of Hypertension in CTM's catchment area is 16.9% (See: https://www.gov.wales/general-practice-disease-registers-interactive-dashboard). - Assume that the additional tests diagnose patients with hypertension in line with prevalence and that 50% of those patients otherwise did not know they had it/was not controlled - It is noted that this is a large assumption, but this is factored into a low confidence rating (outlined below). - No. of additional patients diagnosed with hypertension per year = 957 - This leads to those patients undertaking treatment and controlling it, which reduces the risk of all-cause mortality by 13% (see: https://www.england.nhs.uk/blog/under-control-why-getting-to-grips-with-blood-pressure-is-a-win-win-intervention-for-healthcare-systems/) - Potential reduction in mortality per year is 124.	SB2

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
					Assume this results in 1 QALY for 10 additional years per reduction in mortality. QALY value of £70,000 as per HM Treasury Green Book (uplifted to base year prices) A prudent 5% confidence rating is then applied noting there are significant assumptions within the calculation including that a significant no. of patients that are tested are not already aware they have hypertension and that as a result of knowing there will be a significant reduction in mortality that does not take into account other factors.	
Release of capacity at acute sites to undertake Bowel cancer screenings.	No. of Bowel Cancer Screenings undertaken at acute sites	To be confirmed at FBC	To be confirmed at FBC	To be confirmed at FBC (potentially monetisable)	To be confirmed at FBC	SB3
Reduced reliance on external Diagnostics capacity: Reduced outsourcing, insourcing and waiting list initiatives as a result of additional capacity provided by CDC	Expenditure on Diagnostics outsourcing, insourcing and waiting list initiatives	N/A	N/A	Included in BAU costs	Included in the transfer of costs associated with substitution of services at CTMUHB. It should be noted that the LHP and the managed service contract has been built/developed so that additional capacity can be accommodated. This would mean that if there was an increase in the capacity required it could be managed without having to rely on relatively more expensive and shorter term outsourcing, insourcing and waiting list initiatives. Note FBC Actions include verify whether the other UHBs can reduce costs / all 3 UHBs can reduce the risk of these costs as a result of LHP.	N/A
Assist with meeting 'Straight to Test' guidance.	No. of direct referrals from GPs to Radiology	TBC	TBC	TBC	LHP will increase the ability to have direct referrals from GP to radiology will help meet the Straight to Test guidance. This will also improve waiting list cleanliness because it will help to ensure that the lists only have the necessary patients who require the service on them.	UB6

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Model of care transformation						
Greater alignment with GIRFT principles	GIRFT principles	To be confirmed at FBC	To be confirmed at FBC	Not monetisable	N/A – Will help all of the other sites to align with GIRFT principles.	UB7
Achievement of JAG accreditation	JAG accreditation	To be confirmed at FBC	Achieve JAG accreditation (minimum contract requirement)	Not monetisable	N/A – Will help all of the other sites to reach JAG accreditation.	UB8
Provide more robust and in-depth data and reporting to Health Boards: the managed service can provide more robust and in-depth data to the Health Boards which can be used to better inform decisions.	Qualitative	N/A	N/A	Not Monetisable	Not possible to quantify in a meaningful way at this stage	UB9
Providing regional sustainability and capacity to allow contingency at other sites.	Increase in the no. of imaging and endoscopy scans/tests	N/A	26,000 imaging scans provided at LHP by the managed service and 11,330 additional endoscopy tests at LHP	Not monetisable	As a result of the increased capacity at LHP it will provide regional sustainability and contingency at other acute sites.	UB10
Provides opportunities for future reconfiguration of services at the 3 UHBs: The move of diagnostic activity to LHP will release regional capacity, providing the UHBs opportunities to consolidate or reconfigure services for future rationalisation	Qualitative	N/A	N/A	Not Monetisable	Not possible to quantify in a meaningful way at this stage	UB11
Supports other regional initiatives: Delivery of a successful regional model provides an evidence-base and acts as a potential exemplar, providing a catalyst for standardising other suitable pathways or centralising other suitable services	Qualitative	N/A	N/A	Not Monetisable	Not possible to quantify in a meaningful way at this stage	UB12

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Positive reputational impact to UHBs from patients and Welsh Government from positive outcomes of the initiative	Qualitative	N/A	N/A	Not Monetisable	It is assumed that the investment and service will be delivered in a productive and beneficial manner which will provide positive outcomes for patients, staff and the organisations. This will lead to a positive reputational impact from both patients and Welsh Government.	UB13
Improving patient experience						
Improved patient experience as a result of reduced waiting times, ease of access and quality of care.	Patient satisfaction scores	N/A (not possible to isolate existing patient scores from wider UHB)	95% (Based on current targets)	Not monetisable	N/A	UB14
Ability to achieve better utilisation as result of confidence in level of booking: Centralised elective centre with co-location of equipment and clinical rooms making it a “one-stop” clinic provides predictability of care and planning.	Utilisation rate	To be confirmed at FBC	To be confirmed at FBC	Potentially monetisable – to be explored at FBC	Due to LHP being a centralised elective centre, there would be more confidence in how many elective scans will be utilised and hence how many should be booked, leading to better utilisation. This would be a benefit to both the Health Boards and patients and would assist with reducing waiting times and throughput.	UB15
Increased number of and improved clinical pathways developed and delivered at LHP	Qualitative	N/A	N/A		Due to LHP being a centralised elective centre and a “one-stop” clinic, it will lend itself to developing and delivering more and improved clinical pathways. These pathways and improved ways of working could be used as an exemplar and then also be rolled out across the region.	UB16
Reduced health inequalities Reduction in waiting times and ease of access supports equality of access	Qualitative	N/A	N/A		Not possible to quantify in a meaningful way at this stage	UB17

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Delivering a sustainable workforce						
Develop a skilled and sustainable endoscopy workforce: The new Skills Academy in partnership with HEIW at LHP will train and develop a skilled endoscopy workforce that can provide high quality endoscopy service.	Qualitative	N/A	N/A	Not monetisable	The skills academy in partnership with HEIW will provide training opportunities to help develop a highly skilled and sustainable endoscopy workforce, so that at the end of the managed services contract LHP can be staffed adequately and provide high quality endoscopy services. The skills academy in partnership with HEIW will provide improved access to consistent, high-quality training programmes to ensure uniform competencies among endoscopy practitioners. Due to the network of regional training centres provided by HEIW, best practices can also be shared across the region. It will also encourage collaboration among healthcare professionals to enhance team-based care in endoscopy services It should be noted that currently there are endoscopy workforce challenges including risk that a significant portion of the workforce may retire in the short to medium term, meaning that development of staff to replace them is of a high priority. Although it is assumed that should there be the opportunity for the transfer of some staff into opportunities at LHP after the end of the managed service contract this would be incidental. The main goal and benefit would be in partnership with HEIW to develop an endoscopy workforce during the period of the managed services contract that would be able to manage the service at the end.	UB18
Improved recruitment and retention across the region due to the improved training and development provided at LHP as well as from reduced pressure on acute sites as a result of increased capacity at LHP.	Qualitative	N/A	N/A	Not monetisable	It is expected that as a result of the improved opportunities for training and development at LHP that would be available for endoscopy workforce across the region, this will lead to improved recruitment and retention across the region (from opening). It is also expected staff at Acute sites will have reduced pressure on them from the increased capacity at LHP, which will lead to staff being able to provide timelier service to patients at those acute	UB19

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
					sites, which in turn should lead to less complaints/concerns and a better place to work, contributing to improved recruitment and retention. It is also expected that after the end of the managed service contract, there will be significant and desirable new opportunities for colleagues to continue providing the service at LHP.	
Opportunities to share best workforce practices across the region	Qualitative	N/A	N/A	Not monetisable	Learnings around more efficient ways of workings can be taken from the managed diagnostics service. This will lead to optimised workforce planning and a team that can operate in a more agile way is expected to result in productivity improvements and rota efficiencies	UB20
Providing a sustainable estate						
Modern fit for purpose compliant facility that aligns with current guidance and provides more robust, resilient and sustainable facilities	WHBNs HTNs	N/A	Complies with relevant WHBNs and HTNs	Not monetisable	N/A	UB21
	BREEAM rating	N/A	BREEAM rated as excellent	Not monetisable	N/A	UB22
	Enhanced facilities	N/A	Enhanced facilities enhanced provisions (i.e. 2 oxygen tanks, N+N generator etc.)	Not monetisable	N/A	UB23
Community Benefits (Social Value provided by the contractor))	Number of local direct full time equivalent (FTE) employees hired or retained.	N/A	10 FTE	Not monetisable	Target as per Social Value information provided as part of the Tender documents by MTX.	UB24 (a)
	Number of weeks of apprenticeships provided to local staff.	N/A	250 weeks	Not monetisable	Target as per Social Value information provided as part of the Tender documents by MTX.	UB24 (b)
	Equipment or resources donated to local third sector and civil society organisations	N/A	£25,000 donated	Potentially monetisable	Target as per Social Value information provided as part of the Tender documents by MTX.	UB24 (c)

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
	Directly funded number of hours volunteering time provided to support local community projects.	N/A	250 Hours of volunteering time	Not monetisable	Target as per Social Value information provided as part of the Tender documents by MTX.	UB24 (d)
	Direct support and investment provided for people to learn and use Welsh (e.g. interactions and signage).	N/A	£25,000	Potentially monetisable	Target as per Social Value information provided as part of the Tender documents by MTX. Allocate £25,000 to support the Welsh language on a construction project by offering free Welsh lessons for workers, tailored to industry vocabulary (£12k). Introduce bilingual site signage, safety instructions, and manuals (£7k). Host community engagement events, such as guided tours and Welsh-themed workshops, in partnership with local schools or organizations (£5k). Celebrate Welsh culture onsite with events and competitions like St. David's Day (£1.5k). Leave a legacy with bilingual plaques or contributions to local Welsh programs (£1.5k). Partner with Mentrau Iaith or Learn Welsh Cymru for effective delivery and long-term impact, promoting Welsh language use onsite and beyond.	UB24 (e)
	Total amount (£) spent in the local supply chain.	N/A	£20,000,000 spent locally	Not Monetisable	Target as per Social Value information provided as part of the Tender documents by MTX. Potential social value generated by value spent locally = £20,000,000*1.76 (Local Multiplier) = £35,200,000. Note will not be included as a monetisable value in the CIA Model.	UB24 (f)
Reduced waste and single use products: Contribute to CTMUHB environmentally sustainable goals by reducing waste and single use products	Waste and single use products usage	TBC at FBC	TBC at FBC	TBC at FBC	TBC at FBC (however examples include the Gloves off initiative)	UB25

Benefit	Measure	Baseline	Target Improvement	Value	Assumptions	Ref
Improved recycling: Contribute to CTMUHB environmentally sustainable goals by improved recycling and finding alternative ways of disposing of waste	Recycling rates	TBC at FBC	TBC at FBC	TBC at FBC	TBC at FBC	UB26
Contribute to decarbonisation targets (Net Carbon Zero) with energy efficiency: Providing an energy efficient building which optimises energy consumption and associated CO2e	Energy consumption CO2e	No baseline available as new facility	TBC at FBC	TBC at FBC	TBC at FBC	UB27
Preservation of biodiversity and wetland area due to choice and design of site.					As a result of the choice of site for the development and that is recycling a previously developed industrial site instead of a greenfield site, there is preservation of biodiversity in the region. The choice of design and ensuring it stays within the already developed portions of the site, the wetland area is preserved and protected from all development in line with Local Council's recommendations.	
Enables and provides meaningful and adequate spaces for future phases of work that are planned	Qualitative	N/A	N/A	Not monetisable	Not possible to quantify in a meaningful way at this stage	UB28
Provides opportunity for future expansion: As a result of the choice of site and design, it allows for expansion to capacity in current services as well as development of future services	Qualitative	N/A	N/A	Not monetisable	Not possible to quantify in a meaningful way at this stage Existing design allows for future increase in capacity (i.e. has design has factored in space for further equipment and rooms to accommodate providing additional capacity in the future)	UB29

6.7.3 Monetisable benefits analysis

While work continues to validate assumptions and explore benefits that it has not yet been possible to quantify, initial analysis has identified circa £8.6m of monetisable benefits per year, as summarised in the table below.

Table 22 - Monetisable benefits values after confidence rating (when benefits are fully realised)

Element	Option 0 – BAU £'000	All “Do Something” Options £'000
Cash releasing benefits	0	0
Non-cash releasing benefits	0	0
Societal benefits	0	8,619
Total annual recurring benefits values	0	8,619

These figures can be considered risk-adjusted since, as outlined in Table 22 above, relatively prudent confidence ratings have been applied to them to reflect the degree of uncertainty at this stage in the process. Further work will be undertaken at FBC to firm up these assumptions and reduce the level of uncertainty.

6.7.4 Unmonetisable benefits analysis

In addition to the monetisable benefits there are several benefits which it is not possible to monetise at this stage, either because they cannot be meaningful quantified or because they cannot be stated in monetary terms. A summary is provided below.

Table 23 - Unmonetisable benefits analysis

Ref	Description	Option 0 - BAU	All “Do Something” Options
UB1 (a)	Increased Imaging capacity	-	TBC (26,000 scans provided at LHP by the managed service)
UB1 (b)	Increased Endoscopy capacity	-	11,330 additional endoscopy tests at LHP
UB2 (a)	Reduced Imaging waiting times	-	Percentage patient wait times for imaging of greater than 8 weeks will reduce from 47% to 0% for CTMUHB
UB2 (b)	Reduced Endoscopy waiting times	-	Percentage of patient wait times for endoscopy of greater than 8 weeks will reduce from 64% to 0% across the 3 Health Boards
UB3	Release of elective diagnostic capacity at Acute sites, which can be used for urgent and emergency care patients/pathways.	-	To be confirmed at FBC
UB4/5	Supports greater compliance with cancer pathways	-	SCP Compliance = 75% 62-day backlog = 279 patients 104-day backlog = 39 patients
UB6	Assist with meeting ‘Straight to Test’ guidance.	-	To be confirmed at FBC
UB7/8	Greater alignment with GIRFT principles and achievement of JAG compliance	-	Achieve JAG accreditation (minimum contract requirement)
UB9	Provide more robust and in-depth data and reporting to Health Boards	-	Qualitative
UB10	Providing regional sustainability and capacity to allow contingency at other sites.	-	26,000 imaging scans provided at LHP by the managed service and 11,330 additional endoscopy tests at LHP

Ref	Description	Option 0 - BAU	All “Do Something” Options
UB11	Provides opportunities for the future reconfiguration of services at the three Health Boards	-	Qualitative
UB12	Supports the future of other regional initiatives	-	Qualitative
UB13	Positive reputational impact to the Health Boards from patients and Welsh Government from positive outcomes of the initiative	-	Qualitative
UB14	Improved patient experience	-	95% patient satisfaction
UB15	Ability to achieve better utilisation as result of confidence in level of booking	-	To be confirmed at FBC
UB16	Increased number of and improved clinical pathways developed and delivered at LHP	-	Qualitative
UB17	Reduced health inequalities	-	Qualitative
UB18	Develop a skilled and sustainable endoscopy workforce	-	Qualitative
UB19	Improved recruitment and retention across the region due to the improved training and development provided at LHP as well as from reduced pressure on acute sites as a result of increased capacity at LHP.	-	To be confirmed at FBC
UB20	Opportunities to share best workforce practices across the region	-	Qualitative
UB21-23	Modern fit for purpose compliant facility	-	Complies with WHBN/HTMs BREEAM rated as excellent Enhanced facilities with enhanced provisions (i.e. 2 oxygen tanks, N+N generator etc.)
UB24	Community Benefits (Social Value provided by the contractor))	-	10 local direct full time equivalent (FTE) employees hired or retained. 250 weeks of apprenticeships provided to local staff. £25,000 worth of equipment or resources donated to local third sector and civil society organisations 250 Hours of volunteering time provided to support local community projects. £25,000 direct support and investment provided for people to learn and use Welsh (e.g. interactions and signage). £20,000,000 spent in the local supply chain.
UB25	Reduced waste and single use products	-	To be confirmed at FBC
UB26	Improved recycling	-	To be confirmed at FBC
UB27	Contribute to decarbonisation targets (Net Carbon Zero) with energy efficiency	-	To be confirmed at FBC
UB28	Preservation of biodiversity and wetland area due to choice and design of site.	-	Qualitative

Ref	Description	Option 0 - BAU	All “Do Something” Options
UB29	Enables and provides meaningful and adequate spaces for future phases of work that are planned	-	Qualitative
UB30	Provides opportunity for future expansion: As a result of the choice of site and design, it allows for expansion to capacity in current services as well as development of future services	-	Qualitative

6.8 Risk analysis

The risks for each option have been assessed and, as far as possible, quantified and expressed in monetary equivalent terms, including:

- Quantified risk in relation to planning contingency included in capital cost forms
- Key project risks which have not been accounted for within capital costs.

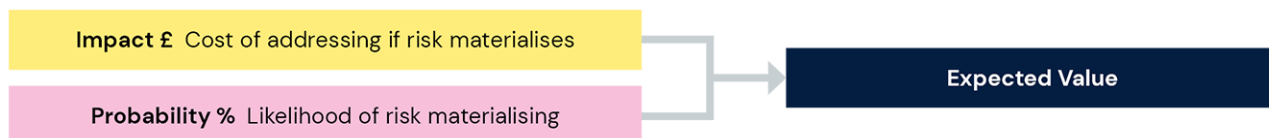
Key project risks have been identified which are not already accounted for within capital costs and these include the following:

- **Funding Risk - Unable to secure sufficient capital funding to deliver the project:** There is a risk that due to the significant amount of initial capital funding required to deliver the project it may take time to secure this funding which could lead to delays in the programme while alternative routes are explored.
- **Funding Risk - Unable to secure sufficient revenue funding to deliver the project:** There is a risk that due to the significant amount of ongoing revenue funding required to deliver the project it may take time to secure this funding which could lead to delays in the programme while alternative routes are explored.
- **Implementation Risk – Increased procurement timescales lead to delays:** There is a risk that the procurement timescales are longer than expected leading to delays in implementation of the project and resulting in the programme having to be extended.
- **Outsourcing Risk – Unable to secure a partner to provide the service:** There is a risk that due to the ISP having to provide the new LHP and to a much lesser extent provide the service that it would be difficult to find a provider that is willing to partner on the project. This could lead to delays in the programme while alternative routes are explored.
- **Workforce Risks – Recruitment and Retention (short term):** There is a risk that in the option where the service would be provided by NHS staff, that it would be difficult to recruit sufficient substantive staff in the short term, which could lead to a reliance on unplanned, expensive temporary and locum staff leading to increased staffing costs.
- **Workforce Risks – Recruitment and Retention (long term):** There is a risk that after the end of the ISP contract period that it would be difficult to recruit sufficient substantive staff, which could lead to a reliance on unplanned, expensive temporary and locum staff leading to increased staffing costs. It should be noted that this risk is significantly mitigated in the options where an ISP provides the service in the short term as that will have given the Health Boards an opportunity to train staff and share learnings ready for the service to be provided by NHS staff.
- **Outsourcing Risk – Increased Handover Costs:** There is a risk that after the end of the ISP contract period, for the fully outsourced option, when the Health Boards purchase the building back from the ISP, the cost of this has been understated, leading to an increased handover payment.

- **Outsourcing Risk – The building that would be provided by the ISP doesn’t meet the health Boards’ requirements:** There is a risk that the ISP owned building that is handed over to the Health Boards after the end of the ISP contract period does not fully meet the Health Boards requirements due to the Health Boards having less control at design stage. This could lead to increased lifecycle costs for the building.

These risks have been quantified by calculating an ‘expected value’. This provides a single value for the expected impact of all risks. It is calculated by multiplying the likelihood of the risk occurring (probability) by the cost of addressing the risk (impact) and summing the results for all risks and outcomes.

Figure 16 - Risk quantification approach using single-point probability analysis



The assumptions included to assess the impact and probability of these risks are outlined in the table below.

Table 24 - Risk assumptions

Element	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
K1 – Funding Risk: Capital Funding					
Risk	Unable to secure sufficient capital funding to deliver the project				
Consequence	Programme extended to allow time to explore alternative routes				
Impact per year			Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m
Probability			5%	10%	10%
Timescales			Year 0	Year 0	Year 0
Total Risk Value £'000	Does Not Apply	Does Not Apply	1,040	2,080	2,080
K2 – Funding Risk: Revenue Funding					
Risk	Unable to secure sufficient revenue funding to deliver the project				
Consequence	Programme extended to allow time to explore alternative routes				
Impact per year		Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension at a run rate of £400k per week, which equals £20.8m
Probability		30%	10%	10%	10%
Timescales		Year 0	Year 0	Year 0	Year 0
Total Risk Value £'000	Does Not Apply	6,240	2,080	2,080	2,080
K3 – Implementation Risk: Delays from increased procurement timescales					
Risk	Implementation is delayed due to increased procurement timescales				
Consequence	Programme extended				
Impact per year		Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m		Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m
Probability		75%		15%	15%
Timescales		Year 0		Year 0	Year 0
Total Risk Value £'000	Does Not Apply	15,600	Does not Apply	3,120	3,120

Element	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
K4 – Outsourcing Risk: Unable to Secure Partner					
Risk	Unable to secure partner to provide the service				
Consequence	Programme extended to allow time to explore alternative routes				
Impact per year		Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m	Assume a 12-month extension to the programme at a run rate of £400k per week, which equals £20.8m	
Probability		75%	2.5%	5%	
Timescales		Year 0	Year 0	Year 0	
Total Risk Value £'000	Does Not Apply	15,600	520	1,040	Does Not Apply
K5 – Workforce Risk: Recruitment and Retention (short term)					
Risk	Unable to recruit sufficient staff to enable delivery of the model in the short term				
Consequence	Reliance on unplanned outsourcing of services leading to increased costs				
Impact per year					Assume unplanned outsourcing is equal to cost of outsourcing the service in Option 1 (£4m p.a.)
Probability					75%
Timescales					Years 2 - 11
Total Risk Value £'000	Does Not Apply	Does Not Apply	Does Not Apply	Does Not Apply	29,740
K6 - Workforce Risk: Recruitment and Retention (long term)					
Risk	Unable to recruit sufficient staff to enable delivery of the model in the long term				
Consequence	Reliance on unplanned outsourcing of services leading to increased costs				
Impact per year		Assume unplanned outsourcing is equal to cost of outsourcing the service in Option 1 (£4m p.a.)	Assume unplanned outsourcing is equal to cost of outsourcing the service in Option 1 (£4m p.a.)	Assume unplanned outsourcing is equal to cost of outsourcing the service in Option 1 (£4m p.a.)	Assume unplanned outsourcing is equal to cost of outsourcing the service in Option 1 (£4m p.a.)
Probability		2.5%	2.5%	2.5%	5%
Timescales		Years 12 - 62	Years 12 - 62	Years 12 - 62	Years 12 - 62
Total Risk Value £'000	Does Not Apply	5,056	5,056	5,056	10,112

Element	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
K7 - Outsourcing Risk: Increased Handover Costs					
Risk	For the fully outsourced option, risk that costs for the handover of ISP owned building at end of the contract is understated				
Consequence	Increased handover payment at end of contract				
Impact per year		25% increase on current assumed Handover Cost			
Probability		25%			
Timescales		Year 12			
Total Risk Value £'000	Does Not Apply	15,364	Does Not Apply	Does Not Apply	Does Not Apply
K8 – Outsourcing Risk: Building Provided by ISP Doesn't Meet HB Requirements					
Risk	For the fully outsourced option, risk that handover of ISP owned building at end of the contract does not fully meet HB requirements due to less control at design stage				
Consequence	Increased lifecycle costs				
Impact per year		Lifecycle Costs are doubled			
Probability		10%			
Timescales		Years 12 - 62			
Total Risk Value £'000	Does Not Apply	9,870	Does Not Apply	Does Not Apply	Does Not Apply

6.9 Economic appraisal

The Comprehensive Investment Appraisal (CIA) model has been populated with the assumptions outlined above to support the appraisal of overall value for money by producing a cost-benefit analysis of the shortlisted options.

The assumptions above have been incorporated into a discounted cash flow for each of the costs, benefits and risks are calculated over a 63-year appraisal period including Year 0 (base year) + 19 months construction/commissioning + 60 years estimated useful life.

- Year 0 is 2025/26
- Costs and benefits use real base year prices – all costs are expressed at 2025/26 prices in line with the baseline costs.

The following costs are excluded from the economic appraisal:

- Exchequer **transfer** payments, such as VAT
- General inflation
- Sunk costs
- Non-cash items such as depreciation and impairments
- A discount rate of 3.5% is applied to years 1-30, 3.0% from year 31 onwards.

The economic summary is provided in the table below and a copy of the CIA model is provided in Appendix 10.

Table 25 - Economic summary

Element	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Capital expenditure including contingency (discounted)	0	-98,417	-137,538	-146,828	-146,828
Revenue expenditure (discounted)	0	-180,472	-145,534	-145,498	-129,422
Operational Risks	0	-59,101	-5,291	-9,971	-34,480
Risk-adjusted Present Cost	0	-337,989	-288,363	-302,298	-310,729
Cash releasing benefits (discounted)	0	0	0	0	0
Non-cash releasing benefits (discounted)	0	0	0	0	0
Societal Benefits (discounted)	0	327,217	327,217	327,217	327,217
Total Benefits	0	327,217	327,217	327,217	327,217
Discounted Net Present Social Value (NPSV)	0	-10,772	38,855	24,920	16,488
Incremental costs - total	0	-337,989	-288,363	-302,298	-310,729
Incremental benefits - total	0	327,217	327,217	327,217	327,217

Element	Option 0 - BAU	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Risk-adjusted Incremental Net Present Social Value (NPSV)	0	-10,772	38,855	24,920	16,488
Benefit-cost ratio	0.00	0.97	1.13	1.08	1.05

Option 2, which entails a traditional capital build of Phase 1 of the LHP (the Community Diagnostics Hub portion), with an ISP providing the service provision equipment and delivering the service via a managed service contract for the first 10 years before the service becomes inhouse and run by the Health Boards, provides the best value for money of the options. This option would deliver an incremental Net Present Social Value (NPSV) of £38.9m when compared to the Business as Usual (BAU) position and a Benefit Cost Ratio (BCR) of 1.13. This means that £1.13 of incremental benefit is delivered for every £1.00 of incremental whole life cost, which suggests LHP will deliver value for money.

Option 2 offers the best value for money primarily due to it bringing the least operational risk when compared to the other options, while also providing all the same quantifiable benefits as the other options. This option also provides all the outlined non-monetisable benefits, including the ability to develop a robust, skilled and sustainable endoscopy workforce.

It should be noted that this is based on an initial assessment of benefits and risks with further work being required to fully quantify several of the benefits and risks of each option as the scheme progresses to Full Business Case (FBC) stage. Where benefits have been quantified, values have been estimated based on current assumptions as outlined in section 7.6 of this case. Given further work is required at FBC to validate and refine these assumptions, a relatively low confidence rating has been attached to the majority of these to ensure a prudent approach is taken to claiming benefits until a more detailed analysis can be undertaken. It is therefore reasonable to assume that at FBC stage, the BCR is likely to increase and further strengthen the value for money case.

Option 3, which involves a Traditional Capital Build for LHP Phase 1 with the specific service provision equipment being supplied by Welsh Government/Health Boards, while the diagnostics service is provided by an ISP through a managed service contract for the initial period, has the next best value for money of the options. It has a slightly lower BCR (1.08) and NPSV (£24.9m) largely because it provides the same benefits as Option 2 but has a higher initial capital outlay from the Health Boards having to provide the specific service provision equipment and having slightly higher level of risk attributed to it.

Option 4, which entails a Traditional Capital Build for LHP Phase 1 and the whole diagnostics service being provided by the Health Boards, offers the next best value for money, with a BCR of 1.05 and an NPSV of £16.5m. There are significant risks around this option including that there would be difficulty recruiting sufficient NHS diagnostics staff to deliver the service in the first 10 years, which could lead to a poorer service being provided, expensive temporary and locum staff having to be used, or poorer service occurring across the region, as staff in those areas are re-located to LHP. It should be noted that a key benefit of using a managed service contract for the initial period is to develop a diagnostic workforce capable of providing the service during that period, which would not be available in this option.

Option 1, which entails both the construction of Phase 1 of LHP and the diagnostics service being fully outsourced to an ISP, delivers the lowest BCR (0.97) and would result in a Net Present Cost of £10.8m. This is because there are significantly higher revenue impacts in this option; it is still expected that the Health Boards would have to purchase the LHP back from the ISP at the end of the managed service contract at, at least the Net Book Value and that there are significant risks attached to this option including finding an ISP that would be willing to design and construct the LHP which would lead to significant delays to the programme.

6.10 Sensitivity analysis

The results of the economic appraisal above have been subject to a sensitivity analysis to examine the impact of potential movements in capital and revenue costs.

The first part of this involves undertaking a switching values analysis to test the robustness of the ranking of options. This is applied to areas of material cash flows to identify the extent that costs and benefits of each of the alternative options must change for the BCR to reflect that of the highest-ranking option (excluding BAU). This analysis is outlined in the table below:

Table 26 - Sensitivity switching analysis (BCR)

	Option 1 - Fully outsourced managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Increase in benefits to equal preferred option	17.2%	4.8%	7.8%
Decrease in capital costs to equal preferred option	-50.4%	-9.5%	-15.2%
Decrease in revenue costs to equal preferred option	-27.5%	-9.6%	-17.3%
Decrease in quantitative risks to equal preferred option	-84.0%	-139.8%	-64.9%
Decrease in total costs to equal preferred option	-14.7%	-4.6%	-7.2%

This demonstrates that in order to change the ranking of the options:

- Option 3 would need to improve its current benefits by 4.8% (£15.8m) or otherwise reduce capital costs by 9.5% or revenue costs by 9.6% (£13.9m) to rank equal to Option 2.
- Option 4 would need to improve its current benefits by 7.8% (£25.4m) or otherwise reduce capital costs by 15.1%, revenue costs by 17.3% or quantified risk by 64.9% (£22.4m) to rank equal to Option 2.
- Option 1 would need to improve its current benefits by 17.2% (£56.3m) or otherwise reduce capital costs by 50.4%, revenue costs by 27.5% or quantified risk by 84.0% (£49.6m) to rank equal to Option 2.

This suggests that Options 3's rankings are relatively sensitive to benefit or cost assumptions, however noting that this option and the preferred option have the same benefits and relatively similar cost assumptions it is likely that any change in benefits and costs would be similar in both Option 3 and the preferred option. As such it is unlikely that this option could overtake Option 2 as the preferred option.

This suggests that Options 1 and 4's rankings are not particularly sensitive to benefit or cost assumptions and so it is unlikely that these options would overtake Option 2 as the preferred option.

Additionally, to the switching analysis, alternative scenarios have been calculated to consider how the value for money of the options may be affected by future uncertainty as outlined in the table below.

Table 27 - Sensitivity analysis scenarios

Scenario	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 1 - Fully outsourced managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Original Results (BCR)	1.13	0.97	1.08	1.05
1. Initial Capital costs increase by 20%	1.08	0.97	1.03	1.00
2. Revenue costs in Options 2 and 3 are 10% higher due to the tariff discount for land and building in options 2 and 3 not being as large as estimated	1.08	0.92	1.03	1.01
3. Building Buy Back value in Option 1 is 20% lower than expected	1.13	0.99	1.08	1.05
4a. Improved patient outcomes (cancer related) as a result of shorter diagnostics waiting times confidence rating decreased from 25% to 12.5%	0.92	0.78	0.87	0.85
4b Improved patient outcomes (cancer related) as a result of shorter diagnostics waiting times confidence rating increased from 25% to 50%	1.57	1.34	1.50	1.46
5a. Improved patient outcomes (non-cancer related) as a result of shorter diagnostics waiting times confidence rating decreased from 25% to 12.5%	0.80	0.68	0.76	0.74
5b Improved patient outcomes (non-cancer related) as a result of shorter diagnostics waiting times confidence rating increased from 25% to 50%	1.81	1.55	1.73	1.68
6. Costed Risks are overstated by 20%	1.14	1.00	1.09	1.08

In summary:

- **Scenario 1:** Even if initial capital costs were to increase by 20% (c.£14m excluding VAT), this would have minimal impact on the BCR of all options, and the preferred option would still deliver a positive NPSV.
- **Scenario 2:** A 10% increase in revenue costs in Options 2 and 3 (c. £538-747k p.a. increase in the preferred option) would have minimal impact on the BCR of Options 2 and 3, and the preferred option would still deliver a positive NPSV.
- **Scenario 3:** if the Building Buy Back value in Option 1 is 20% lower than expected Option 1's BCR would increase however it would not overtake Option 2 as the preferred option.
- **Scenario 4:** The benefit associated with improved patient outcomes as a result of reduced Diagnostics waiting times for patients with a suspected cancer appears to have a significant impact on the value for money indicators for all options. For instance, if the confidence rating was reduced from 25% to 12.5% this would reduce the BCR for the preferred option from 1.13 to 0.92, while increasing it to 50% would improve the BCR to 1.57. While this suggests value for money is relatively sensitive to changes in the confidence rating applied to this benefit, it should be noted that there is still some work to be done at FBC stage to quantify more of the benefits, as well as firming up the level of certainty in those already quantified, which would likely mitigate this.
- **Scenario 5:** The benefit associated with improved patient outcomes as a result of reduced Diagnostics waiting times for patients with non-cancer related health issues also appear to have a significant impact on the value for money indicators for all options. For instance, if the confidence rating was reduced from 25% to 12.5% this would reduce the BCR for the preferred option from 1.13 to 0.80, while increasing it to 50% would improve the BCR to 1.81. While this suggests value for money is relatively sensitive to changes in the confidence rating applied to this benefit, it should be noted that there is still some work to be done at FBC stage to quantify more of the benefits, as well as firming up the level of certainty in those already quantified, which would likely mitigate this.
- **Scenario 6:** if the costed risks in each of the options was overstated by 20%, this would have minimal impact on each of the options BCRs and it would have no effect on the rankings.

The results of the scenario analysis show that the BCR is relatively sensitive to some changes in assumptions, specifically the confidence rating applied to patient outcomes associated with reducing diagnostic waiting times. However, it is believed that as the project progresses to FBC and assumptions can be firmed up, it will be possible to monetise further benefits and increase the confidence rating applied to those already quantified. This would likely increase the BCR overall.

6.11 Preferred option

The results of the economic appraisal demonstrate that the preferred way forward offers value for public money.

Option 2, which utilises a traditional capital for the build of phase 1 of the LHP (the Community Diagnostics Hub portion), with an ISP providing the service provision equipment and delivering the service via a managed service contract for the first 10 years before the service becomes inhouse and run by the Health Boards, will require capital investment of £109.1m and ongoing revenue costs of £7.5m (excluding depreciation) for the initial 10 year period of the managed services contract, reducing to £5.4m after the end of the contract. Based on estimated costs and benefits, it is anticipated that this option will deliver an incremental Net Present Social Value (NPSV) of £38.9m and a Benefit Cost Ratio (BCR) of 1.13.

This represents £1.13 of incremental benefit delivered for every £1.00 of incremental whole life cost, because of the quantifiable benefits that it has been possible to state in monetary values at this point in time, including:

- **Improved patient outcomes from earlier diagnosis:** Delivery of the CDC will address CTMUHB Diagnostic Imaging and regional Endoscopy capacity shortfalls and ensure future demand can be met. This will have a direct impact on waiting times for patients and support the cancer pathway by enabling earlier diagnosis, more targeted interventions and improved monitoring. This will lead directly to delivering better patient outcomes, specifically contributing to improved cancer survival rates.
- **Improved patient outcomes from earlier diagnosis (non-cancer related):** Delivery of a significant increase in additional Endoscopy capacity should lead to earlier and increased diagnosis for patients with health issues other than cancer such as hypertension, which will lead to better patient outcomes and help contribute to reduced mortality related to those health issues.

In addition to this, there are other quantifiable benefits which it has not yet been possible to state in monetary values given the information that is available at this time. These will be explored further at FBC-stage and, it is expected, will further strengthen the BCR. These include:

- **Release of elective diagnostic capacity at Acute sites, which can be used for urgent and emergency care patients/pathways:** The capacity provided at LHP for more elective diagnostic tests will free up Acute sites to use their diagnostic capacity for non-elective scans/tests, which reduce delays for urgent and emergency patients.
- **Improved predictability and confidence in booking scans and tests:** The centralised elective centre with co-located services provides a 'one-stop' shop clinic with greater predictability of care which in turn means that scans and tests can be booked with more confidence leading to improved utilisation of the service.
- **Impact of a more sustainable estate:** The delivery of appropriately designed and compliant facilities provides opportunities to contribute to CTMUHB's environmentally sustainable goals and national strategies around decarbonisation and optimising energy efficiency. The transformed model of care with its standardised pathway is likely to make it easier to implement and maintain sustainability programmes that CTMUHB has instituted in other areas, such as reducing waste and single use products.

LHP will also deliver various non-financial benefits which while they cannot be quantified in monetary terms are equally important to the delivery of local, regional and national policy. These include:

- **Additional Imaging and Endoscopy capacity leading to reduced waiting times:** The additional capacity at LHP will allow the Health Boards to meet the NHS Wales target that no patient is waiting more than 8 weeks for imaging or endoscopy tests.
- **Help to meet 'Straight to Test Guidance':** The additional capacity provided at LHP will assist with meeting 'Straight to Test Guidance', allowing an increase in the number of direct referrals from GPs to radiology. It will also allow for improved regional sustainability and provide contingency for other sites across the region.
- **Increased number of and improved clinical pathways:** Due to LHP being a centralised elective centre and a "one-stop" clinic, it will lend itself to developing and delivering more and improved clinical pathways. These pathways and improved ways of working could be used as an exemplar and then also be rolled out across the region.
- **Reduced health inequalities:** Reduction in waiting times and ease of access supports equality of access.

- **Community Benefits:** The contractor has agreed to implementing several community benefits, including hiring local, providing volunteering and donations to local organisations, investing in people learning and using Welsh and investing in the local supply chain.
- **Improved patient experience:** As well as reduced waiting times patient experience is enhanced by the modern fit for purpose facilities and the ease of access the location of LHP offers, with its good road links and parking. Having a centralised elective centre with co-located services provides the convenience of a **one-stop shop** clinic with greater predictability of care.
- **Increased staff satisfaction:** The improved training pathway and increased training opportunities, along with the modern fit for purpose facilities and a consolidated service model that enables more effective ways of working, contributes to staff satisfaction and creates an attractive place to work which will support recruitment and retention of highly trained health professionals in the long term.
- **Develop a skilled endoscopy workforce:** Delivery of the Skills Academy in partnership with HEIW will provide significant opportunities to increase the number of training places available in the region and help to build a skilled and sustainable endoscopy workforce.
- **Increased compliance:** The dedicated CDC will ensure that the Health Boards have capacity across the region to ensure alignment with GiRFT principles and continue to achieve JAG accreditation. Modern fit for purpose facilities that are compliant with WHBNs and HTNs, achieve BREEAM rating of Excellent.
- **Future proofing:** The site also provides a level of future proofing by providing expansion space that offers opportunities for other future developments.
- **Opportunities for future transformation:** The additional capacity offered by LHP provides opportunities to transform and reconfigure core local services and deliver things differently in the future. Further to this the robust and in-depth data/reporting the service at LHP will provide to the Health Boards will greatly inform future decisions. The successful delivery of a regional centre will also provide proof of concept as the basis for the development of any future regional pathways and will have a positive reputational effect.

The results of the options appraisal (excluding BAU) are presented in the table below.

Table 28 - Results of options appraisal

Element	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
Initial capital investment	£0m	£109.1m	£119.7m	£119.7m
Incremental NPSV	-£10.8m	£39.9m	£24.9m	£16.5m
Benefit Cost Ratio	0.97	1.13	1.08	1.05
Key benefits	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option	As per benefits outlined above for the Preferred Option
Key risks	• Unable to secure a service provider who would be willing to provide the service • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales	• Significant initial capital outlay • Unable to secure revenue funding	• Significant initial capital outlay • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales	• Significant initial capital outlay • Unable to secure revenue funding • Implementation is delayed due to increased procurement timescales • Unable to recruit sufficient staff to enable

Element	Option 1 - Fully outsourced managed service contract	Option 2 (PWF) - Traditional capital build + ISP equip and deliver services via managed service contract	Option 3 - Traditional capital build and equip + ISP deliver services via managed service contract	Option 4 - Traditional capital build and equip + NHS staffing and service provision
	Significant risks around handover of the building at the end of the managed service contract period, including higher than expected handover costs and that the building would not fully meet the Health Boards requirements.			delivery of the model in the short term

It should be noted that this assessment is based on an initial assessment of benefits and risks and further work is required to quantify these more fully. As outlined above, it is anticipated that this is likely to further strengthen the BCR and value for money case as the scheme progresses to FBC stage.

Commercial Case

7 Procurement strategy

7.1 Introduction

This section of the business case outlines the procurement strategy and proposed deal to deliver the preferred option to develop a community diagnostic hub for CTMUHB, co-located with a regional endoscopy centre on the Llantrisant Health Park site, as discussed in the economic case. The preferred delivery model would be to undertake the build and fit out of the site using NHS capital funds and deliver the services through a contract with a commercial service partner who would also equip the facility.

The former British Airways Avionics Engineering (BAAE) site was acquired by CTMUHB in February 2023. The Llantrisant Health Park site will comprise a Community Diagnostics Hub, Orthopaedic Surgical Hub with associated ward accommodation, and other regional services, which may include Day Surgery. The Community Diagnostics Hub will be delivered as the first phase of a multi-phase development.

The following section sets out the commercial arrangements for the capital LHP site, including procurement and delivery of the design and build and fit out, with the procurement strategy for the independent delivery partner shown in section 7.3.

7.2 Procurement of the Capital Build and Fit Out

Work on the design of the CDH commenced shortly after the site purchase in the autumn 2023 and progressed via the appointed design team lead by Strides Treglowan Architects. The design team progressed through the RIBA design stages from masterplanning to completion of RIBA 2 in December 2024 culminating in the approval to commence demolition works and RIBA 3 design works in December 2024.

Alongside the completion of the RIBA 2 works, work had commenced on the appointment of separate contractors for the demolitions and the main build programmes and each will be set out as below:

7.2.1 Demolition Contractor procurement

A detailed procurement tender was undertaken by CTMUHB procurement and NWSSP using the Crown Commercial Services Framework, Construction Works and Associated Services Lot 10 Demolition framework.

The procurement was prepared and completed by CTMUHB, the appointed design team and NWSSP procurement services. The procurement process was undertaken for a new contract, whereby an Expression of Interest was issued to 13 national demolition providers on 30 October 2024 and providers had until 31 October 2024 to respond. Following the deadline, only five providers responded to the Expression of Interest.

A Mini competition was undertaken, utilising *RM6088 Construction Works and Associated Services Framework lot 10 Demolition*, and was published via e-Tender Bravo portal, in which certain selection criteria was applied at the qualification, technical and commercial evaluation stages.

Tenders were published on 1 November with the deadline for submission on 25 November. At the end of the tender period, five submissions were received, however after review, two suppliers failed to meet the minimum criteria, leaving three for scoring. Detail of the scoring approach is included in the tender analysis submitted as part of the estates annex.

A preferred supplier was identified and appointed in January 2025 following WG approval of funding for demolition works to proceed.

The contract has commenced and works began on site on 14 April 2025. This contract was originally programmed to conclude by 22 August 2025, however, there has been a delay of around three weeks, and the works are now expected to complete by 20 September, when the contractor will leave site.

7.2.2 Main Contractor procurement

The main contractor tender process completed in November 2024. The tender was issued via the Crown Commercial Services (CCS) framework. The Welsh NHS run Building for Wales (BfW) framework was not selected due to:

- Delays in the implementation of the new framework after the previous one ended in April 2024
- Delays associated with securing the funding information required to commence the tender
- Inclusion of high levels of modular development in the design, with no modular supplier on BfW this would not have provided value for money.

As a result, a framework was selected that enabled the Programme to test the appetite and ability of both modular and other modern methods of construction (MMC) contractors to respond and offer the most advantageous infrastructure solution to the programme. A two-stage design and build contract solution was selected with a fixed price for the professional services and a target cost model for the construction phase (similar to the contractual arrangements under BfW).

An expression of interest was issued in October 2024 and seven companies opted in to show an interest. The tender was published on 13 November 2024 and after two extensions, closed on 31 January 2025.

The process has been managed by Mott McDonald, acting as primary PM for tender and procurement exercise and at all stages support has been provided by NWSSP procurement services.

The tender period closed on 31 January 2025 with three responses received. There were some clarifications required from tendering parties, the detail of which is available if required. Legal advice was sought regarding the contractual terms and conditions.

By the end of the process, only one contractor confirmed full acceptance of the proposed terms and conditions for both design and build contracts. In addition, the same contractor offered the best overall score in the combined qualitative and quantitative analysis. This information can be found in the tender analysis report contained in the estates annex to the business case.

Following completion of the tender scoring, the outcome was presented to NWSSP-SES and a paper prepared for WG approval for CTMUHB to appoint MTX, the preferred contractor. This approval was granted by letter on 14 March and, following the mandatory 10 day standstill period, MTX were appointed as the successful contractor on 31 March 2025, under an NEC professional services contract, to deliver the design up to completion of RIBA 4 and development of target cost.

Once FBC approval is received, CTMUHB will enter into an ECC contract with MTX to deliver the phased construction solution. This is expected to be structured to support sectional completion in line with the LHP phased construction programme.

Tendering parties provided costs up to RIBA 4 completion, as per standard NEC professional services contract (PSC). This will enable generation of completed design, securing of planning and SAB approvals, with fully tendered build costs. As a design and build arrangement, and to proceed to construction, an ECC contract will be required to be entered into on FBC approval.

CTMUHB requested WG approval to enter into the full PSC contract, which would take the scheme up to RIBA 4, at a contractor design fee cost of £3.935m. This cost excludes VAT and the additional health board fees associated with both RIBA 3 and 4. Full costs are included in the finance section of this case.

It should be noted that the cost tendered by the contractor was based on a single business case process and start-on-site of a phased construction completion programme. The recent decision and instruction to split this work into phases, each with its own business case and development programme, has subsequently elongated the programme and increased the level of costs and fees incurred. A longer design period will mean further costs for all time-based consultants. Additional design works will also be required to ensure that Phase 1 can be fully operational as a standalone building for a longer period. In addition, the ability to create linked buildings whilst maintaining the operational status of the CDH has also had to be considered and resulted in some redesign of the area that will immediately adjoin Phase 2.

One of the key areas of impact has been around the mechanical and electrical engineering and medical gases works, where short term solutions had been proposed to support a phased opening whilst construction of other phases, including the permanent engineering infrastructure, was completed. With the risk of a longer period of opening without this infrastructure in place, the timing and location of much of the supporting infrastructure has had to be reconsidered and alternative areas included. This has also brought much of this forward in the programme and means it is included in Phase 1.

Work with the construction partner has confirmed the level of fees to support the Phase 1 contract however the design fees for Phases 2 and 3 are under review and being developed at the time of writing this business case. This information will be included in the phase 1 FBC and the Phase 2 OBC.

In December funding was approved for the RIBA 3 design stage of £3.5m which included stages 3A and 3B, 3B undertaken by MTX. RIBA 3A was completed by the end of March 2025, with RIBA 3B completed by the main contractor by 30 June 2025.

As per the tender return, the total MTX fees only for the design stage are £3.935m based on a fixed price submission. The total Phase 1 fees have now been agreed and sit within this sum. Phase 2 fees are currently being agreed, and it is likely that these will exceed this original tendered sum and will require an uplift.

Table 29 - Breakdown of original tendered fees

Cost element	RIBA 3 £000	RIBA 4 £000	Total £000
Design fees	377	2,632	3,009
Management services	-	495	495
Surveys	-	207	207
Overhead and profit @ 6%	23	200	223
Total	400	3,535	3,935

As mentioned above this covered the total programme costs. Whilst the RIBA 3 costs have not changed, from those committed above, the sums for phase 1 RIBA 4 have changed.

Phase 1 RIBA 4 costs are £2.573m, however this represents main contractor design fees only. The total RIBA 4 cost up to approval of the FBC and contractor start on site are as set out in Table 30 **Table 31** below, to date £2.828m funding has been received from WG, approved on 12 August. Therefore, the balance sought to complete RIBA 4 and proceed to works on site will be £2.177m

Table 30 - Requested fees to complete RIBA 4 up to start on site

Fee description	Forecast cost £000
Health Board Fees	1,507
MTX Fees	2,573
Non works costs	341
Planning Fees	430
Sub total	4,851
VAT (less recoverable)	154
Total cost	5,005
Funding Received to OBC	-2,828
Balance of funding required	2,177

Should a decision be made not to complete RIBA 4 following the outcome of this business case then there is a risk of a contractor claim against the Health Board under the PSC contract. Whilst any payment is likely to be negotiated, it is probable that a sum amounting to any actual costs rightfully incurred and incurred will be paid, alongside a claim for loss of profit on all phases and likely to be around two months of committed / contracted cost.

As a worst-case scenario, this could amount to a liability of approximately, £1.3m however it is likely to be significantly lower after negotiation.

7.3 Independent Service Provider (ISP) procurement

CTMUHB, acting on behalf of the three Health Boards in South East Wales is currently undertaking a procurement exercise to appoint a prime contractor to act as a design partner and contributor to the pathway redesign currently being scoped out for diagnostic services to provide one imaging CDH with the option to flex to one further CDH over the course of the contract. In addition, the CDH will also have at the same location, an ISP staffed Endoscopy Suite comprising of up to four rooms co-located with an NHS staffed two room Endoscopy Training Academy. The endoscopy suite requirements will be designed and fitted out to meet JAG accreditation standards.

There will be a co-located training academy which will include an endoscopy theatre. It is expected that the fitting out of the academy training rooms, and delivery of activity will be facilitated by NHS organisations through collaborative work with Health Education and Improvement Wales.

The Regional Radiology Project Board and the Regional Diagnostics Programme Board endorsed the use of competitive dialogue to test the market potential to support the development of a regional diagnostic centre and associated community diagnostic hubs, one of which will be on the LHP site. The competitive dialogue procedure is flexible and allows the Procurement Evaluation team to discuss proposed solutions with bidders to understand advantages and disadvantages.

The recommended option is to develop a regional endoscopy centre through a traditional NHS capital build proposal and to seek the equipment and delivery of the centre activity through contract with a commercial partner.

To drive this strategy, further competitive dialogue will need to be completed to understand financial implications and other non-financial risks. The current procurement programme leads to the appointment of the ISP by the end of October 2025.

The successful provider will provide a range of new clinical and non-clinical equipment items, including furniture as required for the commissioned services. Equipment must be new and installed at the start of the contract. The overall requirement would be expected to provide economies of scale linked to staff resources, training and cross cover; logistics associated with consumables, equipment, maintenance, corporate and management overheads.

The proposed contract between CTMUHB and the ISP is for an initial period of seven years from the operational commencement date with an option to extend for up to an additional three years (in 12 month tranches).

As stated above, MTX, the main contractor, has been appointed to undertake the modular construction of the whole site and the CDH shell for the ISP to equip, commission and operate.

7.4 Health Board contracting arrangements

CTMUHB will enter into the ISP contract with the successful bidder. The proposed contract mechanism with the ISP partner will be a cost per case arrangement with a base minimum level of expected activity creating a floor financial value for each modality of service. Any activity over and above this floor will be charged on an agreed marginal cost per case using agreed activity currencies.

Initial volumes indicate a potential for surplus capacity at the site that the commercial service provider could utilise for private patient access, all non NHS activity undertaken at the site will attract an enhanced rate for the health boards' contract with the supplier for the NHS activity.

During the next few months arrangements with regional partners will be confirmed so that upon entering into contract with the ISP there is a confirmed and signed agreement in place with all regional partners for contracting and recompense. This will be further detailed at FBC stage.

7.5 Workforce Plan for CDH Delivery via ISP/MSCE plans

7.5.1 Background

There is a well-documented shortage in the diagnostic workforce across Wales, particularly in radiology and endoscopy. This has created a significant barrier to timely diagnostics and service delivery, impacting patient outcomes and system flow across south Wales.

To address this, the Community Diagnostic Hub (CDH) model will be delivered in the medium term through an Independent Sector Provider (ISP) under a Managed Service Contract (MSC). The ISP will operate independently with its own commercial and operational model but must align with NHS Employers standards and the strategic workforce objectives of Cwm Taf Morgannwg UHB (CTM) and the wider South East Wales region.

The MSC is expected to be a seven-year contract, with the option of three one-year extensions (7+1+1+1), subject to performance and strategic review. This provides a stable platform for service delivery while allowing flexibility for future transition planning addressing the workforce pipelines shortages that will be essential to transition back in house.

Whilst the new ISP provider must define its own commercial structure to have its own identity and flexibility to function, through this it must also provide robust assurance to all stakeholders. They must provide a safe and effective workforce that delivers a safe and high-quality service to the users of the facility.

7.5.2 Assurance

To ensure the ISP delivers a safe, effective, and sustainable workforce model, a robust assurance framework will be embedded in the tender and contract documentation.

Workforce KPIs

The contract will include a suite of workforce-related Key Performance Indicators (KPIs), such as:

- Staffing levels and skill mix appropriate to meet service demand demonstrating efficiency
- Compliance with professional registration and revalidation
- Completion of Statutory and Mandatory Training (StatMan Framework)
- Sickness absence, turnover, and retention rates
- Use of agency or temporary staff, ratio to substantive
- Evidence of qualifications, DBS checks, and safe recruitment practices
- Percentage of workforce recruited from within South East Wales, the wider UK, and internationally.

Recruitment standards

All recruitment must align with NHS Employers governance and standards. The ISP will be required to demonstrate adherence to safe recruitment practices, including verification of qualifications, right to work checks, enhanced DBS clearance, and reference checks.

These requirements will be explicitly stated in the tender and contract documentation aligned to the parameters of the framework compliance.

Workforce impact mitigation

While the ISP cannot be contractually prevented from recruiting CTMUHB staff, the contract will include mechanisms to monitor and limit the impact on the existing South East Wales workforce. KPIs will track recruitment sources and workforce movement to ensure the ISP does not destabilise local services. The ISP will be expected to work collaboratively with CTMUHB and regional partners to support workforce sustainability.

Partnership and governance

CTMUHB will ensure senior workforce representation on the tender evaluation panel. Workforce and clinical experts will review the provider's submitted workforce plan to ensure appropriate skill mix and competencies, suitability for CDH service delivery, and alignment with patient safety and training standards.

Providers will be expected to demonstrate experience of collaborative working with NHS facilities in England or similar settings, with a proven record of partnership and workforce stability.

There will be monitoring of the service delivery and workforce through regular contract meetings with the ISP

7.5.3 Transition back in-house

The long-term ambition is to transition diagnostic service delivery back into CTM, ensuring integration, sustainability, and alignment with NHS values.

Transition planning

The timing of the transition will be defined collaboratively with the appointed provider during the tender and contract agreement stage, recognising the dialogue-based nature of the contract. CTMUHB will begin scoping the transition plan during the contract period, depending on service maturity and workforce readiness. The addition of the Skills academy will support the development of an increased work force to provide a greater number of staff trained with skills to work within an endoscopy environment. This will form a key component of the plan to bring the CDH endoscopy service back into the NHS

The transition plan will include:

- A training and development programme to support internal workforce growth
- Exploration of dual running costs to support over-recruitment and phased handover
- Scope and develop a transition plan that will comply with the legal regulation (TUPE) to move workforce from the ISP to CTMUHB contract of employment
- Engagement with HEIW (for endoscopy) and the Radiology Academy to support workforce development and succession planning.

Workforce Development

CTMUHB will explore opportunities to develop new roles and increase skill mix, including:

- Clinical support workers
- Assistant practitioners
- Advanced radiographers.

These roles will be developed in partnership with the ISP, drawing on their experience and models used elsewhere throughout Wales and England. The transition plan will also include a skills gap analysis and a future workforce model to ensure readiness for in-house delivery model with a clear plan around the transition timeline.

Education and training

CTMUHB and regional partners will work to provide better access to education and training, supporting:

- Upskilling of existing staff
- Development of new career pathways
- Attraction and retention of local talent.

The ISP will be expected to contribute to this agenda by sharing best practice, supporting placements, and participating in joint workforce planning.

Monitoring and evaluation

Regular review points will be built into the MSC to assess readiness for transition. Workforce impact assessments will inform decision-making. Ongoing stakeholder engagement will ensure transparency and shared ownership of the transition process.

7.5.4 TUPE arrangements and/or transfer of staff

It is not anticipated that TUPE will apply to any existing NHS staff in the establishment of the service agreement as there will be no change to existing capacity at the Health Board.

Following the end of the Contract term there may be TUPE implications for staff employed by the Commercial Service Provider in the continuation of the services either by NHS providers or by any subsequent Commercial Service Provider Partner.

It is anticipated that there will be no TUPE arrangements required in relation to the wider site development as staff would not be required to transfer out of their existing organisation. This will be reviewed at FBC.

7.5.5 Adapted-risk service model

Detailed workforce implications will continue to be developed as part of revenue assessments. This service model is anticipated to lead to some workforce efficiencies as there will be improved integration within teams and support systems.

7.6 Associated disposals

There are no known disposals associated with this development, which would generate income for the three Health Boards.

7.7 Design and compliance with mandatory standards

7.7.1 NHS Net Zero compliance

In October 2020 the NHS published the ***Delivering a Net Zero National Health Service*** in response to the health emergency that climate change will bring. More intense storms and floods, more frequent heat waves and the spread of infectious diseases resulting from climate change threaten to undermine years of health gains.

Two clear and feasible targets emerge for the NHS net zero commitment, based on the scale of the challenge posed by climate change, current knowledge, and the interventions and assumptions that underpin this analysis:

- For the emissions the NHS controls directly (the NHS Carbon Footprint), net zero by 2040, with an ambition to reach an 80% reduction by 2028 to 2032;
- For the emissions that can be influenced (the NHS Carbon Footprint Plus), net zero by 2045, with an ambition to reach an 80% reduction by 2036 to 2039.

NHS Net Zero Building Standard

The NHS Net Zero Building Standard, published in February 2023, provides technical guidance to support the development of sustainable, resilient, and energy efficient buildings that meet the needs of patients now and in the future. 10% plus of the carbon emissions associated with operating the NHS estates are as a result of energy usage (operational carbon) alongside embodied carbon. The standard is a critical element in ensuring that the design, and construction of new NHS buildings and the inevitable refurbishment / repurposing of the existing estate, supports the “Delivering Net Zero” commitment to a zero-carbon estate by 2040.

The proposed LHP development design process will follow the guidance of the standard through RIBA stages 1-4.

The construction process for LHP will follow the guidance of the standard through RIBA stages 5-7. To facilitate this as required a Net Zero Carbon (NZC) Coordinator will be appointed who will be responsible for managing the process as well as being an advocate for Zero Carbon within the design team.

7.7.2 Modern Methods of Construction

NHS Wales and NHS Improvement with the Department of Health and Social Care, are working on progressing the approaches used to increase the use of Modern Methods of Construction (MMC) on all business cases requiring central NHS sign off. As part of this, an interim draft guidance has been developed for inclusion in the NHS Capital Business Case Fundamental Criteria Checklist.

Early consideration of the use of off-site manufacture, allows the process to be streamlined through the design and construction process, maximising the benefits this approach can bring. Agreement to an early BIM Execution Plan and sharing information in a project specific Common Data Environment (CDE) allows all parties to input in an integrated design, manufacturing, and assembly process.

LHP will be constructed using MMC and be entirely modular.

7.7.3 BREEAM

The Building Research Establishment Environmental Assessment Method (BREEAM) is the leading and most widely used environmental assessment method for buildings and communities. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

As of 1 July 2008, all developments of new healthcare buildings in the UK seeking OBC approval must commit to achieving an EXCELLENT rating (assessed against BREEAM New Construction) and all refurbishments (assessed against BREEAM Non-Domestic refurbishment and fit-out) to commit to a VERY GOOD rating. Any project with a capital value exceeding the £2m threshold must include a BREEAM assessment.

BREEAM provides clients, developers, designers and others with:

- Market recognition for low environmental impact buildings
- Assurance that best environmental practice is incorporated into a building development
- Inspiration to find innovative solutions that minimise the environmental impact
- A benchmark that is higher than regulation
- A tool to help reduce running costs, improve working and living environments
- A standard that demonstrates progress towards corporate and organisational environmental objectives.

BREEAM addresses wide ranging environmental and sustainability issues and enables developers and designers to prove the environmental credentials of their buildings to planners and clients and:

- Uses a straightforward scoring system that is transparent, easy to understand and supported by evidence-based research
- Has a positive influence on the design, construction and management of buildings
- Sets and maintains a robust technical standard with rigorous quality assurance and certification.

BREEAM is a compulsory requirement for projects of this scale in Wales, as such work towards accreditation has been ongoing since RIBA Stage 1. The Design Stage Tracker set out the target ambition for the project to achieve BREEAM 'Excellent'. Moving forward, workshops are to be set up for RIBA 3B stage, ensuring that design adaptations do not compromise the project trajectory.

7.7.4 Infection control

The proposed development will be designed and configured in compliance with HBN and HTM guidance to provide clean, well-designed environments within which clinical services and procedures can be carried out safely. Infection prevention and control measures will be designed into the new building through zoning, with appropriate clinical adjacencies to facilitate clean to dirty flows and the provision of good access for cleaning and maintenance to take place.

As planned for the design development at OBC stage, the clinical leads will be fully engaged to ensure the needs of users are understood and clearly articulated in the design brief. Health Board Infection Prevention and Control Teams will also be further engaged by the Project Team and Design Team to inform the detailed designs.

7.7.5 Sustainability

Efficient building services design can have a positive impact on future climate scenarios by reducing energy consumption and greenhouse gas emissions associated with buildings. Climate change is primarily driven by the release of greenhouse gases such as carbon dioxide, methane, and nitrous oxide into the atmosphere, and buildings account for a significant portion of these emissions.

When designing LHP, the aim will be to ensure that the building will operate as efficiently and sustainably as possible.

See Appendix 7; RIBA 3a report for further information on the design details.

7.8 VAT recovery

A VAT Advisor has not yet been engaged for OBC stage, but the Cost Forms allow for VAT recovery on fees and a nominal amount (5%) on the main build. Once into FBC Stage, engagement with the VAT Advisor will be sought.

7.9 Interface

The LHP finance representative has confirmed there is no interface between any NHS LIFT, PFI, PF2 or other PPP and there are no joint venture agreements/contracts already in place and therefore there are practical or contractual issues in the light of HM Government changes to the use of PFI in its various forms.

7.10 Summary and conclusion

Following a robust tender process, MTX have been appointed as the preferred contractor offering the most commercially advantageous tender, following both qualitative and financial appraisal.

Welsh Government approval for the balance of RIBA 4 cost of £2.177m which will fund the programme to complete RIBA 4 stage and through FBC approval and start on site is being sought as part of this business case.

Financial Case

8 Financial appraisal

8.1 Introduction

The purpose of the Financial Case is to outline the financial implications of the preferred option and assess affordability. As such it sets out the capital requirements and revenue consequences, along with underpinning assumptions, of the proposed scheme. It outlines anticipated funding arrangements and the impact on the overall financial statements.

As outlined in the Economic Case the preferred option involves an NHS funded capital build while an independent sector provider (ISP) provides and manages the necessary equipment and delivers MRI, CT, non-obstetric ultrasound (NOUS), and Endoscopy services.

8.2 Capital costs and funding

8.2.1 Capital costs

Delivery of the preferred option requires capital investment of £109.1m in total, including expenditure incurred to date. This is based on capital requirements prepared by the Health Board's Cost Advisors, Mott Macdonald using the following assumptions:

- Agreed Schedules of Accommodation and RIBA 3b design. Agreed scope of Phase 1 to cover the build of the CDH plus additional site wide infrastructure to facilitate later phases
- Proposed start on site 26 February 2026 and proposed works completion date end of July 2027. At completion the site will be handed over to the ISP for equipping and commissioning which is estimated to last 3-4 months
- Works costs calculated using benchmarked rates suitable for South Wales (including Healthcare Premises Cost Guide) @ BCIS TPI updated 20/08/2025.
- Allowances for fees, equipment costs, planning contingency have been applied as appropriate.
- No allowance for optimism bias has been applied given the degree of certainty at this stage in terms of maturity of design, knowledge of the site, and publicly declared political support for the development. It is therefore superseded by the Costed Risk Register figure.
- VAT advisor advice will be sought on VAT recovery options before FBC. Currently all fees are forecast to be VAT recoverable.

The resulting capital costs estimates are summarised in the table below and a copy of the detailed capital cost forms are provided in Appendix 8.

Table 31 - Capital costs

Element	Net £'000	VAT £'000	Total £'000
Works costs	58,058	11,611	69,669
Fees	14,463	2,892	17,355
Non-works costs	10,362	2,072	12,435
Equipment costs	2,628	526	3,145
Quantified risk contingency	10,583	2,116	12,699
Subtotal	96,094	19,218	115,312
Less: recoverable VAT	-	-5,323	-5,323
Total capital costs	96,094	13,895	109,989

The capital cost schedule includes costs for the provision of the CDH alongside a range of site wide infrastructure works to support the later phases of development. This is the most efficient way to deliver these services as it avoids having to dig up areas more than once. It also offers efficiencies in only requiring machinery and certain skills for a concentrated period of time in one phase therefore further reducing the risk of duplication in a phased approach.

The scope of sitewide works is detailed in the estates annex to this business case and has been shared with NWSSP-SES for their consideration. The inclusion of this element of the infrastructure does therefore mean that the capital costs appear above benchmarking if just measured across the 9,500m² building footprint for Phase 1.

8.2.2 Funding requirements

Funding of £18.1m had been received to date from WG for:

- Site purchase - £8.0m
- RIBA 2 fees - £3.1m
- RIBA 3 fees - £3.5m
- Demolition - £0.7m
- RIBA 4 fees - £2.8m.

This includes funding of £2.828m which has been approved in August 2025 to support the phase 1 OBC redesign and the commencement of RIBA 4 works to support the FBC being completed for November Boards. Further funding of £91.9m is therefore requested from Welsh Government.

Table 32 - Capital cashflow and funding sources

	2022/23 £'000	2023/24 £'000	2024/25 £'000	2025/26 £'000	2026/27 £'000	2027/28 £'000	Total £'000
Costs							
Construction costs	0	0	0	1,803	42,054	14,200	58,058
Project fees	0	791	3,498	5,544	3,759	871	14,463
Non-works costs	7,990	268	962	825	310	8	10,362
Equipment costs	0	0	0	0	0	2,628	2,628
Planning contingency	0	0	0	1,746	5,891	2,945	10,583
Subtotal	7,990	1,059	4,460	9,918	52,013	20,652	96,094
VAT	0	0	192	874	9,651	3,178	13,895
Total capital costs	7,990	1,059	4,652	10,794	61,664	23,830	109,989
Funding							
Site purchase	7,990	10	0	0	0	0	8,000
RIBA 2	0	1,049	2,042	0	0	0	3,091
RIBA 3	0	0	2,013	1,486	0	0	3,499
Demolition	0	0	109	591	0	0	700
RIBA 4	0	0	0	2,828	0	0	2,828
Funding received to date	7,990	1,059	4,164	4,905	0	0	18,118
Construction	0	0	0	5,889	61,664	23,830	91,871
Funding still required	0	0	0	5,889	61,664	23,830	91,871
Total funding	7,990	1,059	4,164	10,794	61,664	23,830	109,989

As mentioned in section 7.2.2 in table 32, this OBC is requesting fees to take the programme from OBC approval to FBC approval and start on site, currently forecast to be late February 2026. The fee requested is contained in table 32 and excludes any works costs. This is why the funding balance differs slightly from that in Table 33 above. On FBC approval it is anticipated that the remaining 2025/26 funding of £3.712M will be required within the 25/26 CRL to avoid programme delay.

8.3 Revenue affordability

8.3.1 Recurring revenue costs

It is anticipated that the creation of the new diagnostics centre will incur additional recurring full year revenue costs of £9.3m p.a. related to the managed service contract with the ISP for the provision of equipment and delivery of services related to MRI, CT, NOUS, and Endoscopy. This is based on:

- Activity based on individual HB requirements included in the ISP procurement specification.
- ISP cost estimate currently based on 2025/26 NHSE CDC tariff.
- Case mix assumptions are based on 2024/25 CTMUHB activity.
- ISP procurement specification assumes seven-year contract with the option to extend for a further three years.
- Excludes depreciation and any IFRS16 implications (which are considered in section 9.4).

It is expected that the contract value will be reduced through the agreement of a tariff discount in return for the ISP's use of land and buildings. This has been estimated for the purposes of the OBC at £1.9m p.a.

It is also expected that activity and revenue costs will begin post completion and ISP commissioning of Phase 1 of the build. Whilst the main contractor build programme will complete at the end of June it is expected that the handover, equipping and commissioning could take up to four months, which is expected to be at the end of October 2027, which means the first year will incur five months of activity and revenue costs.

A summary of costs is provided below with more detailed calculations provided in Appendix 9 and 10.

Table 33 - Summary of revenue costs

Revenue element	2027/28 (assume opening - end of October 2027)	2028/29	2029/30 until end of ISP contract period
Activity	No. of tests	No. of tests	No. of tests
MRI	3,333	8,000	8,000
CT	5,000	12,000	12,000
NOUS	2,500	6,000	6,000
Gastroscopy	1,413	3,390	3,390
Colonoscopy	2,568	6,491	6,947
Sigmoidoscopy	250	763	992
Revenue costs	£'000	£'000	£'000
MRI	544	1,307	1,307
CT	518	1,242	1,242
NOUS	155	373	373
Gastroscopy	713	1,711	1,711
Colonoscopy	1,584	4,003	4,284
Sigmoidoscopy	107	326	423
Total ISP contract	3,621	8,961	9,341
Less: tariff discount for land	-724	-1,792	-1,868
Total ISP costs after discount	2,897	7,169	7,473

8.3.2 Commissioner funding requirements

Commissioner revenue funding requirements have been estimated for each of the three Health Boards based on projected activity assumptions at this stage, as outlined in the table below.

Table 34 - Activity assumptions

UHB	Revenue element	2027/28 ⁶	2028/29	2029/30 ⁷
CTM	Activity	No. of tests	No. of tests	No. of tests
	MRI	3,333	8,000	8,000
	CT	5,000	12,000	12,000
	NOUS	2,500	6,000	6,000
	Gastroscopy	850	2,040	2,040
	Colonoscopy	1,360	3,264	3,264
	Costs	£'000	£'000	£'000
	Allocation of ISP contract costs	2,486	5,965	5,965
	Less: allocation of tariff discount for land	-497	-1,193	-1,193
	Allocation of revenue costs	1,989	4,772	4,772
C&V	Activity	No. of tests	No. of tests	No. of tests
	Gastroscopy	563	1,350	1,350
	Colonoscopy	1,208	2,900	2,900
	Sigmoidoscopy	250	600	600
	Costs	£'000	£'000	£'000
	Allocation of ISP contract costs	1,135	2,726	2,726
	Less: allocation of tariff discount for land	-227	-545	-545
	Allocation of revenue costs	908	2,181	2,181
AB	Activity	No. of tests	No. of tests	No. of tests
	Colonoscopy	0	327	784
	Sigmoidoscopy	0	163	392
	Costs	£'000	£'000	£'000
	Allocation of ISP contract costs	0	271	651
	Less: allocation of tariff discount for land	0	-54	-130
	Allocation of revenue costs	0	217	521

These assumptions will be firmed up at FBC stage once more detailed information is available and funding requirements adjusted accordingly. This results in a full year funding requirement of £9.3m p.a. (£7.5m per year after the proposed tariff discount) associated with the ISP contract, to be allocated as follows:

- CTMUHB £6.0m p.a. (£4.8m after the proposed tariff discount)
- C&VUHB £2.7m p.a. (£2.2m after the proposed tariff discount)
- ABUHB £0.7m p.a. (£0.5m after the proposed tariff discount)

⁶ assumed opening - end of July 2027

⁷ until end of ISP contract period

8.4 Accounting treatment and capital charges

8.4.1 Accounting treatment

The resulting asset will be held on CTMUHB's balance sheet and therefore be treated in line with the Health Board's policy in relation to depreciation and impairments.

8.4.2 Capital charges

Capital charges have therefore been estimated based on the following assumptions:

- Asset additions of £110.0m
- Impairment is applied when the resulting asset comes into use. Based on recent schemes in the region, specifically the Grange as a new build development at ABUHB, it is anticipated that this will be in the region of 20%, although this will need to be explored with the District Valuer and CTMUHB's Auditors during the development of the FBC stage. Full impairment is assumed on fees and non-works costs
- Depreciation charges are applied based on straight line depreciation using the following standard useful life:
 - ♦ **Buildings** – 60 years for buildings and 30 for engineering works (using a typical 65:35 split)
 - ♦ **Equipment** – seven years as a proxy for a mixture of short life ICT equipment (five years) and longer life equipment (10 years). This will be explored further at FBC stage when a costed equipment list is available.

It is anticipated that this will result in:

- Circa £48.0m non-recurring AME impairment on completion of the new build which will be funded as AME funding via Welsh Government
- £2.29m annual depreciation, which will be funded by Welsh Government.

8.4.3 IFRS16 implications

There will be IFRS16 implications associated with the external contract with the independent sector provider for Diagnostic Imaging and Endoscopy services. These will be calculated at FBC stage once more detail is available about equipment requirements and contractual arrangements. An estimate of these costs has been being provided via the WG required non cash returns.

8.5 Overall affordability

The financial analysis demonstrates that delivery of the preferred way forward is affordable providing that Welsh Government capital funding can be secured, and agreement reached with commissioners about revenue funding requirements.

8.5.1 Capital affordability

The cost plan prepared by CTMUHB's Cost Advisors, based on RIBA3a design, estimates that delivery of LHP will result in capital investment requirements of £110.0m in total, including expenditure incurred to date. It is anticipated that this will be funded as follows:

- £18.1m has been received, to date from WG, for:
 - ♦ Site purchase - £8.0m
 - ♦ RIBA 3 fees - £3.5m
 - ♦ RIBA 4 fees - £2.8m
 - ♦ RIBA 2 fees - £3.1m
 - ♦ Demolition - £0.7m

This includes funding of £2.828m which has been approved in August 2025 to support the phase 1 OBC redesign and the commencement of RIBA 4 works to support the FBC being completed for November Boards.

Further funding of £91.9m is therefore requested from Welsh Government for construction works.

8.5.2 Revenue affordability

Work undertaken to date by the programme team and finance leads, estimates that provision of services at LHP will incur recurring revenue costs of £9.3m for contracted out services for MRI, CT, NOUS, and Endoscopy.

It is expected that the contract value will be reduced through the agreement of a tariff discount in return for the ISP's use of land and buildings. This has been estimated for the purposes of the OBC at £1.9m per year.

These indicative costs are based on high level assumptions at this stage and will be firmed up at FBC stage once more detailed information is available.

This therefore results in a full year recurring revenue funding requirement of £7.5m. This has been allocated across the three Health Boards, based on projected activity assumptions which have been identified at this point in time, which equates to the following:

- CTMUHB £6.0m per year (£4.8m after the proposed tariff discount)
- C&VUHB £2.7m per year (£2.2m after the proposed tariff discount)
- ABUHB £0.7m per year (£0.5m after the proposed tariff discount)

It should be noted that should less activity be required funding requirements adjusted accordingly.

Management Case

9 Management arrangements

9.1 Introduction

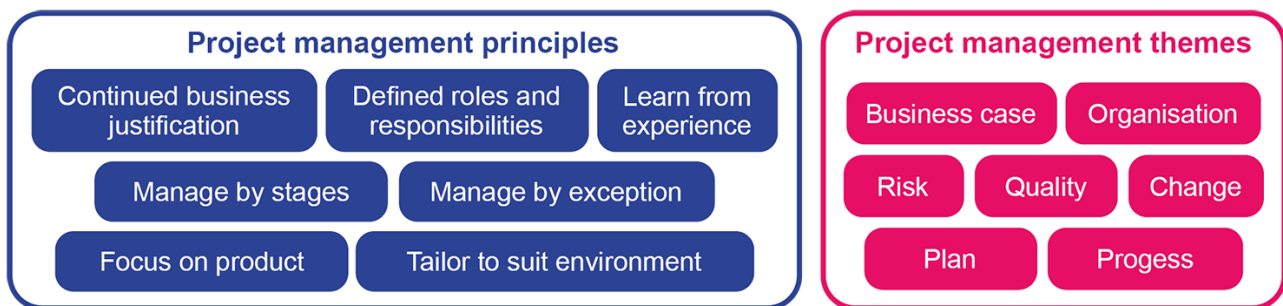
This section of the business case sets management arrangements that will successfully deliver Llantrisant Health Park Programme to time, cost and quality. The Management Case outlines the following arrangements:

- Project management arrangements
- Project assurance at different stages of the project
- Change management arrangements
- Benefits realisation and plans
- Risk management plans
- Contract management arrangements
- Post project evaluation plans
- Contingency plans.

9.2 Project management arrangements

The project will be delivered in line with PRINCE2 methodology. PRINCE2 is organised into seven principles and seven themes, which are deemed essential for any project to be deemed to be 'controlled'. This programme will apply these principles and themes throughout.

Figure 17 - Project management principles and themes



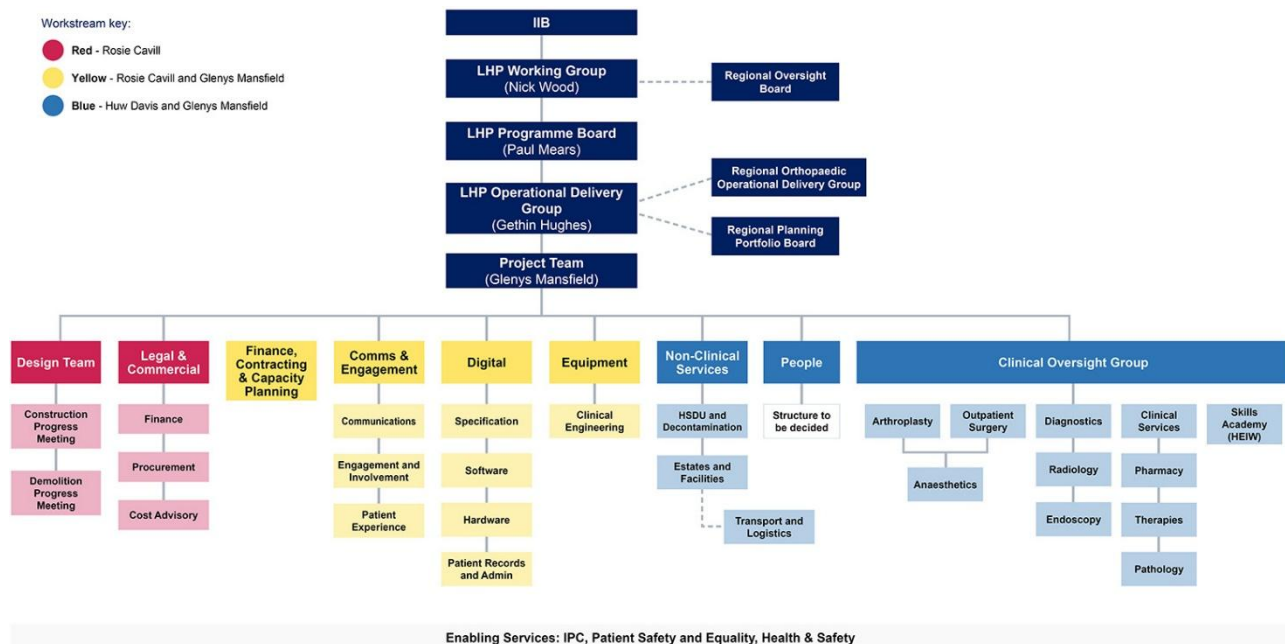
The key principles of PRINCE2 are the identification of three main functional areas of the project governance structure, including governance, delivery and assurance functions.

9.2.1 Project reporting structure

The programme governance structure has been established to reflect the principles and themes of controlled project delivery. The workstreams will report into the Project Team and Steering Group, Steering Group then reports into Programme Board which then reports to the Regional Oversight Board and CTMUHB Governance.

The project governance arrangements are outlined below.

Figure 18 - Project governance arrangements



9.2.2 Governance pathway

There is a clear demarcation between those groups with a responsibility to produce outputs needed to deliver the project i.e. workstreams and delivery groups, and those forums with responsibility to scrutinise, challenge and approve the outputs ensuring that the programme is directed consistently across all subject matters i.e. governance committees.

The main governance routes for reporting include CTMUHB Main Board and the Regional Portfolio Oversight Board.

9.2.3 Programme Board

Chair: Paul Mears, Chief Executive Officer and SRO for the Project, CTMUHB

The Llantrisant Health Park Infrastructure Programme Board has responsibility for overseeing the management and delivery of all aspects of this programme including the design proposals and the associated business cases.

The duties of the Programme Board are as follows:

- Ensure the programme objectives and scope of all projects have been appropriately defined and that any material changes are formally approved and integrated
- Ensure a robust programme timetable has been produced and monitored and that each workstream lead is committed and remains committed to its delivery
- Oversee the delivery of all projects within the defined parameters of time, cost and to the required quality and specification
- Ensure the cost implications of the programme are fully set out within robust financial plans and that it remains within the health board's overall affordability envelope
- Ensure there is an effective system of cost control in place and receive regular reports on the current and planned expenditure relating to the delivery of the programme
- Ensure that the programme is sufficiently resourced to deliver within its agreed scope, time, cost, and quality parameters
- Ensure there is an effective risk management system in place and that regular reports on the risks and issues are effectively acted upon

- Ensure that all development proposals meet the highest possible standards of design in respect of clinical use, patient and staff environment and building quality
- Sign off key documents including the clinical services strategy, business case, prior to submission to the IIB/Welsh Government for approval, as well as other key programme documents as required.

9.2.4 Programme Management Office

The Programme Management Office (PMO) is responsible for the oversight of all workstream project management within the programme. The PMO maintains internal reports and PRINCE2 documents including risk registers, issues logs and an assumptions log for the redevelopment. The team provides assurance by maintaining a focus on governance and programme controls and through the regular review and mitigation of risks and issues.

The programme plan is regularly reviewed and revised by the PMO team to accurately reflect progress, identify potential delays and ensure lessons learned are applied to planning. The PMO support resource management within the programme and produce project artefacts and tools for workstreams.

The duties of the PMO are as follows:

- Establish and run an effective PMO to support the programme during the business case process
- Establish and implement a robust governance structure
- Collate and interrogate management reports, assessing the health of the programme delivery environment
- Assess the status of milestones and deliverables from each workstream
- Plan and schedule resources efficiently in order to meet objectives
- Streamline and automate processes and workflows, ensuring escalation routes to governance committees are robust and succinct
- Facilitate knowledge transfers between workstreams
- Support project management resource within workstreams, where appropriate
- Facilitate cross stream working and collaboration
- Develop progress and assurance reports for key groups and committees as required.

9.2.5 Specialist workstreams and task and finish group

Included in the structure above (Figure 18) are specialist task and finish groups to support the clinical and non-clinical aspects of the redevelopment. These groups are the key interface between the delivery functions and the 'front line' workforce who deliver clinical and operational (non-clinical) services. The groups provide feedback and knowledge on their departmental requirements to the programme technical delivery experts.

9.2.6 Design Team

A design team has been appointed to review the concept site assumptions made prior to the site acquisition and develop design proposals. The design team's work will be informed by the regional workstreams' clinical specification and proposed models of care.

The key deliverables from this work are:

- Review of the technical infrastructure report (completed)
- A high-level design (RIBA Stage 1) and master plan (completed)
- A concept design (RIBA Stage 2) for the agreed clinical pathways (completed)
- RIBA 3 design works developing on the agreed clinical pathways (underway)
- Undertaking of site surveys (completed)
- A specification of enabling works for the temporary diagnostics facility (completed)
- Preparation of a temporary planning application for the mobile diagnostics facility (completed)
- Appointment of modular partner (completed)
- Confirmation of planning strategy and development of planning applications as required during the timeframe.

Terms of reference for all key project groups i.e. Programme Board, Steering Group, Project Team or Design Team can be made available upon request.

9.2.7 Outline project roles and responsibilities

Key Project delivery roles are described below:

Senior Responsible Officer (SRO)

The Chair/SRO role is held by **Paul Mears**, CEO of CTMUHB - responsibilities include:

- Keeping the Programme Board members informed of progress, escalating matters, as relevant
- Is responsible for providing leadership and the strategic activity of the Health Board, ensuring it is operating effectively and efficiently
- Being the ambassador within the local community and also at a regional and national level
- Ensuring that the programme aligns with the priorities of the wider Welsh Government plans
- Ensuring that the redevelopment programme fulfils its duties to exercise its functions effectively, efficiently and economically thus ensuring improvement in the quality of services and the health of the local population whilst maintaining value for money
- Sponsoring the project within CTMUHB and acts as the main point of contact with the Health Board and Executive Director
- Owning the vision for the project and the supporting business case
- Providing clear leadership and direction at an executive level throughout the programme
- Having full responsibility and accountability for the outcome of the project and realisation of the benefits
- Managing the interface with key senior stakeholders, keeping them engaged and informed
- Being the key link between the relationship between the programme, Regional Portfolio Oversight Board and Welsh Government;
- Maintaining the alignment of the project to the organisation's strategic direction
- Ensuring that the project remains affordable and will improve the quality of care to the target population
- Ensuring that the necessary resources are made available to deliver the scheme
- Chairing the Programme Board.

Infrastructure Programme Director

The Programme Director role is held by **Rosie Cavill**, LHP Programme Director - the main responsibilities include:

- Co-ordinating all workstreams to deliver the agreed objectives
- Monitoring progress, resolving issues, mitigating risks, and initiating corrective action as appropriate
- Providing an overall monitoring and assurance role across the project workstreams, ensuring that project risks and issues and any internal or external dependencies are defined, managed, and escalated where appropriate
- Ensuring appropriate risk, benefits and stakeholder management frameworks are in place for the project
- Acting as the day-to-day agent on behalf of the SRO for the infrastructure elements to ensure the successful delivery of the scheme
- Owning and reviewing the project plan, communicating the impact of any revisions in terms of milestones, timelines, and dependencies
- Ensuring the development of the business case and project documentation
- Ensuring that the initiatives and projects that support the infrastructure delivery of the Health Park are initiated on a consistent basis with governance arrangements that meet requirements
- Managing allocated outputs to the required quality within the agreed time and costs constraints
- Managing and providing assurance for the work of project team members
- Reporting regularly to all relevant individuals and groups using standard reporting processes and templates.

Clinical Operational Director

The Clinical Operations Director role is held by **Glenys Mansfield**, LHP Clinical Operations Director - the main responsibilities include:

- Clinical and operational pathway development to inform design and operational running of LHP
- Review of 1:200 and 1:50 designs
- Development of clinical governance structure
- Development of the workforce plan and delivery plan
- Development of the Digital infrastructure
- Establishing and managing task and finish groups
- Managing interdependencies of clinical model/pathways across workstreams
- Acting as the day-to-day agent on behalf of the SRO for the clinical pathway and operational elements to ensure the successful delivery of the scheme
- Ensuring that the initiatives and projects that support the delivery of the new hospital are initiated on a consistent basis with governance arrangements that meet requirements
- Ensuring appropriate risk, benefits and stakeholder management frameworks are in place for the project
- Reporting regularly to all relevant individuals and groups on clinical and operational pathway developments using standard reporting processes and templates.

Infrastructure Project Manager

The Infrastructure Project Manager role is held by **Alex Bowles**, Archus PM - the main responsibilities include:

- Ensure operational delivery of the project to time, quality, and budget
- Decision on matters for escalation and approval to Project Board and Health Board as required
- Management of risks and issues and escalation of appropriate matters for executive direction and/or approval
- Developing the format of the report, contents, and key requirements for consideration
- Planning and delivering stakeholder engagement and workshops
- Ensure the key milestones are agreed and communicated with all stakeholders.

Construction Partner

The role of Construction Partner Lead will be fulfilled by **MTX**. The role includes:

- Being point of contact for all infrastructure and estate related issues including arranging Isolations and issuing permits to work etc.
- Management of the construction programme
- Providing design/estates related input to OBC/FBC processes.

9.3 Special advisors – roles and responsibilities

Special Advisors have been used in a timely and cost-effective manner in accordance with the Treasury Guidance: Use of Special Advisors, to support the internal resources for this development. Special advisors and their roles on the project are shown below.

Business Case Support – Archus

- Manage the Business Case process including the facilitation of workshops, chasing of information etc.
- Stakeholder engagement
- Technical authoring of the OBC
- Support submission of OBC to WG
- Liaise with LHP Programme Lead on Business Case progress.

Technical Advisor (Architecture and Design) - Stride Treglown

- Providing design advice to the LHP Project Team on contractor lead design changes
- Liaise with appropriate stakeholders
- Preparing regular reports for the Project Manager.

Technical Advisor (Mechanical and Electrical Engineering) Stantec

- Providing technical advice and solutions to the Project/Design Team
- Liaise with appropriate stakeholders
- Assist with the design and construction teams where required
- Preparing regular reports for the Project Manager.

Cost Advisor – Mott MacDonald

- Full financial management and reporting of project costs together with payment recommendations for all expenditure incurred on the project
- Preparation of contract documents, procurement of contractors, payment of valuations and agreement of final accounts
- Budget estimating and cost modelling
- Cost planning
- Provision of cost advice
- Analysing and reporting on tenders received.
- Reporting and advising on all tendering and contractual arrangements
- Preparation of tender documents, including incorporation of client standard amendments and appropriate insurance provisions
- Preparing and issuing regular executive financial reports and cash flow summaries to the Project Manager.

Site Supervisor

To be appointed during RIBA 4

9.4 PM and professional fees budget

The following table outlines the estimated project and professional fees budget for the OBC.

Table 35 - Fees and non-work costs

Company	Purpose	Total fees spent incl. 20% VAT
Archus	Project Management	£1,069,127
Archus	Business Case Support	£20,250
Stride Treglown (ST)	Design Planning to RIBA 3a	£1,026,114
Mott Macdonald	Cost Advisor	£423,480
TBA	NEC Supervisor	£310,000
Stantec / ST	TA Support	£180,000
CTMUHB	Client Fees	£4,158,299
MTX	Construction (PSCP)	£8,555,529
MTX	Planning	Incl. in MTX fees
MTX	Building Services; M&E and Surveys	Incl. in MTX fees
Stride Treglown (MTX)	Design Planning	Incl. in MTX fees
Total		£15,742,799

9.5 Key milestones

A construction project programme has been developed to control and track the progress (attached at Appendix 11 and included in the estates annex) and delivery of the project and resulting outcomes. Key milestones for Phase 1 are summarised below.

Table 36 - Phase 1 project timeline

Milestone	Start	Completion
Confirm Scope and Develop OBC	14/07/2025	31/08/2025
Draft OBC Submitted to WG	05/09/2025	05/09/2025
HB OBC Approval	08/09/2025	15/10/2025
WG OBC Review and Approval	04/09/2025	16/10/2025
Planning Application	11/07/2025	15/10/2025
RIBA 4 and FBC Prep	28/07/2025	20/11/2025
HB FBC Approval and WG Submission	27/11/2025	27/11/2025
Scrutiny and WG FBC Approval	28/11/2025	23/01/2026
Contractor Mobilisation	23/01/2026	26/02/2026
Construction	01/03/2026	30/06/2027
Supplier Fit out of CDH	01/07/2027	31/08/2027
Commissioning	01/09/2027	31/10/2027

Indicative Milestones dates are also provided for the procurement of the ISP which should see them brought on line just at the completion of RIBA stage 4. It has been assumed that the ISP procurement is approved at IIB on 16th October alongside the Phase 1 OBC. In addition, whilst the date of the provider appointment is given it is anticipated that there will be a number of contractual negotiations during the construction phase. The ISP will become part of the design team moving forward so that programmes around equipping and commissioning can be fully aligned. It is anticipated that this may shorten the fit out and commissioning programme allowances however this cannot be confirmed at this stage.

Table 37 - ISP provider appointment timeline

Milestone	Start	Completion
ISP Tender Issue	18/08/2025	18/08/2025
ISP Tender Period	18/08/2025	19/09/2025
ISP Tender Evaluation	22/09/2025	03/10/2025
HB ISP Approval	06/10/2025	06/10/2025
WG ISP Procurement Approval	06/10/2025	16/10/2025
Intent to Award and Standstill Period	17/10/2025	31/10/2025
ISP Provider Appointment	31/10/2025	31/10/2025

9.6 Stakeholder engagement

9.6.1 Engagement to date

Key staff stakeholders across all health boards have been involved in design so far. RIBA 3 design review meetings were held in April and May 2025 to confirm all key stakeholders were agreed with current designs. In addition, the LHP Clinical team have worked closely with clinical users to ensure compliance with clinical standards and also with members of JAG compliance teams to ensure compliance.

9.6.2 Future communications and engagement

A communications and engagement group will be put in place to manage the engagement, consultation and communication processes for the regional Diagnostic Programme. This group will consist of communications and engagement leads for each health board, service leads and other colleagues to be co-opted as required.

The communications and engagement plan will be supported by the following key steps:

- Facilitating and supporting stakeholder identification, mapping and analysis
- Engagement with patients, clinicians, staff and the public to discuss and explore issues, refine and evaluate proposals, and decide which questions to consult on. This includes the proposed pre- engagement activity to assess the public's views on the development of diagnostic services (endoscopy and radiology) delivered outside of an acute hospital setting on both a local and regional level, and to identify their needs and any barriers they face in accessing services.
- Focused formal consultation on fully evaluated proposals will last a minimum of six weeks
- Communication of agreed changes to key stakeholders, organisation-wide staff groups, and the public – it should be noted that this activity does not replace management communications with specific teams.

In developing and delivering our communications and engagement activities we will:

- Maintain stakeholder and public confidence in the LHP as a landmark development that will improve the provision of modern health care in south-east Wales
- Provide the public with a range of opportunities to inform the development of the LHP in ways that maximise access, clinical effectiveness and the experience of patients
- Take a collaborative approach, with NHS partners, to developing and disseminating messages and communications/engagement resources, that enable consistency, clarity and accuracy across the region and nationally
- Identify and promote opportunities to add social value within local communities
- Identify and celebrate programme milestones, alongside partners
- Involve local political partners and relevant third-sector organisations
- Provide assurance to the programme board and national bodies on the effectiveness of communications and engagement activities and seek to continually improve.

9.6.3 Involving and engaging the public

It is important that those communities who will benefit from the LHP, are provided with meaningful opportunities to inform the ways in which they will experience, and access healthcare and support provided from the facility.

Working in partnership with Llais, and through collaboration across NHS partner organisations, we are developing approaches and resources that enable people to be engaged and involved in a range of ways, recognising and respecting barriers and protected characteristics, and adhering to best practice and law including the Llais Service Change Protocol as appropriate.

We will take a continual involvement approach that seeks to embed the patient voice into the structure of the programme and the development of the facility. This may include the formation of a citizens' panel which would include representation from different communities across the region.

9.7 Project assurance

The current governance structure allows for a clear separation between governance functions and those that deliver or approve outputs. The assurance functions will confirm that the processes and procedures followed by the delivery groups have been sufficient and in accordance with sound management principles. The assurance function will also act as the coordination point between the delivery and governance functions. Within the PRINCE 2 governance arrangements the PMO is classed as part of the Assurance function.

Programme

- Review of upcoming programme activity and milestones with LHP Technical PM and Project Director to determine outputs required by workstreams
- Create lookahead programme highlighting key programme deliverables over coming weeks/months for dissemination to workstreams
- Track workstream output and performance toward achieving programme deliverables and feed progress into monthly reporting – PMO drumbeat.

Risk

- Review of risk with LHP Technical PM and Project Director to review and update risk register based on workstream risks
- Track workstream risks and feed into project reporting – PMO drumbeat.

Key Performance Indicators (KPIs)

- Work with LHP Project Director to determine workstream KPIs
- Track workstream KPIs and feed into project reporting – PMO drumbeat.

9.8 Change management

The Health Boards are aware that the project will cause major change for staff working in the area and across all three Health Boards, and therefore its success is predicated on staff supporting the project. To date, key staff have been involved in workshops regarding clinical flows and design, and it is envisaged that they will continue to play an instrumental role as the project moves into its next phase. Prior to the new facilities opening, detailed planning will be undertaken to understand any changes to ways of working, and staff will be supported by the project team to prepare for this. Transition plans will be developed, in collaboration with relevant stakeholders, to ensure the new facilities run smoothly and that staff are prepared for any resulting changes to their working models.

There will be no change to organisational structures following completion of the development. There is potential for positive cultural changes following completion to enable staff to work more effectively and efficiently in a new fit-for-purpose building. This can help contribute to higher levels of staff retention over the coming years to improve the working culture for both staff and patients.

Within each stage there will be a series of decision points where major documents produced by workstreams will be ratified within the governance arrangements. For example, clinical advice leaflets pre/post day surgery. All documents will be subject to a robust and consistent version control methodology.

All changes will be subject to a formal change control process. Change is not design development. Change can only occur when strategic, operational policies or functional content quantities are altered from those included in the current approved documents. Change management associated with the infrastructure aspects of this project will be managed by the LHP Project Team through Programme Board and Regional Oversight Board.

9.9 Contingency plans

Should the current scheme fail to proceed, the only contingency plan would be to continue with business as usual for services regionally, working with wait list initiatives or temporary diagnostic solutions such as mobile MRI when required to meet additional demand.

9.10 Benefits realisation

A Benefits Realisation Plan will be developed by the Programme Board to put in place the necessary arrangements to ensure that the project delivers its anticipated benefits. This includes setting out the arrangements for planning, modelling and tracking the identified benefits as well as a framework that assigns responsibility for the realisation of the benefits throughout key phases of the project. The Benefits Realisation Plan will be owned jointly by the Health Board's Infrastructure and Clinical and Operational Programme Directors.

The main benefits for the preferred option are outlined in the benefits register included in Appendix 6 while the actions required to realise the benefits will be confirmed at FBC stage.

The spending objectives and aligned benefits used in the selection of the preferred option will be used to measure the project success.

This evaluation process will be run in parallel with the Post Project Evaluation Plan as noted below and will be developed as part of the detailed design stage. The Benefits Realisation Plan will be regularly reviewed and updated. This will ensure that – should any strategic change take place, such as a legislative change – the service and project will be flexed accordingly to ensure that the facility delivers a fit for purpose service from the point of operational commencement.

The benefits realisation approach outlined above is a key output to provide assurance on investment delivery and performance and will be shared with the Health Boards and Welsh Government to facilitate shared learning at FBC stage.

9.11 Risk management

The complexity of the LHP programme necessitates an appropriate risk management process is put in place to identify, assess and mitigate the likelihood of risks materialising throughout the programme duration.

Workstream risks are those which are considered by each workstream as a risk to successful delivery of business outcomes and targets. They vary from seemingly insignificant risks to risks which are potentially very damaging. Where risks are deemed to be significant (residual rating >12) and occur across several workstreams these are considered as programme risks and dealt with accordingly.

Risk management is therefore dealt with in a two-tier system approach:

- Workstream risk management is an iterative process undertaken by workstream leads, with a monthly reporting cycle up to the LHP Steering Group. All workstreams will be issued a risk register template to log their risks and issues
- Programme risk management is an iterative document that is reviewed monthly in the Programme Board and Steering Group meetings and updated to reflect any changes that may impact programme scope, cost, timeliness, quality, or designs.

Should any risks be identified through the programme that have an impact on the Health Board service delivery and / or strategic direction then it should be escalated via the SRO to the Assistant Director of Governance and Risk for inclusion and scrutiny on the Organisational Risk Register.

9.11.1 Consequence and likelihood definitions

The below tables include the initial definitions relating to the consequence and likelihood of a risk occurring. These definitions are used for both workstream-level risks that are maintained in the dashboard report *and* the programme levels risks that are reflected in the programme risk register.

Table 38 - Risk consequence definitions

Score	Descriptor	Actual or potential impact on the individual/service or organisation
1	Negligible	• Minimal injury requiring no/minimal intervention or treatment. • Potential for public concern • Insignificant cost increase/ schedule slippage • Minimal or no impact on the environment
2	Minor	• Minor injury or illness, requiring minor intervention. • Local media coverage – short-term reduction in public confidence • <5% over project budget, schedule slippage • Minor impact on the environment
3	Moderate	• Moderate injury requiring professional intervention. • Local media coverage – long-term reduction in public confidence • 5 – 10% over project budget, schedule slippage • Moderate impact on the environment
4	Major	• Major injury leading to long-term incapacity/disability • National media coverage with <3 days service well below reasonable public expectation • 10-25% over project budget, schedule slippage, key objectives not met • Major impact on the environment
5	Catastrophic	• National media coverage with >3 days service well below reasonable public expectation. MP concerned (questions in the House) • Incident leading to > 25% over project budget, schedule slippage, key objectives not met • Catastrophic impact on the environment

Table 39 - Risk *likelihood* definitions

Score	Descriptor	Likelihood of occurrence
1	Rare	This will probably never happen/recur
2	Unlikely	Do not expect it to happen/recur but it is possible it may do so
3	Possible	Might happen or recur occasionally
4	Likely	Will probably happen/recur but it is not a persisting issue
5	Almost certain	Will undoubtedly happen/recur, possible frequently

9.11.2 Risk matrix

The risk matrix shown below is also consistent between both levels of risk management. The Health Board risk matrix is shown below.

Figure 19 - Risk scoring matrix (Likelihood x Consequence = Risk score)

Likelihood	Frequency	Consequence				
		1 Negligible	2 Minor	3 Moderate	4 Major	5 Catastrophic
1 Highly unlikely: will probably never happen	not for years	1	2	3	4	5
2 Unlikely: not expected to happen / recur, but is possible	at least annually	2	4	6	8	10
3 Likely: might happen / recur occasionally	at least monthly	3	6	9	12	15
4 Highly likely: will probably happen / recur, but not a persistent issue	at least weekly	4	8	12	16	20
5 Almost certain: will undoubtedly happen / recur, possibly frequently	at least daily	5	10	15	20	25

Risks should be assessed and reviewed on a regular basis, as determined by their score:

1-6 Low	Low risks should be reviewed and progress on actions recorded and updated at least every 6 months
8-12 Moderate	Moderate risks should be reviewed and progress on actions recorded and updated at least quarterly
15-25 High	High risks should be reviewed and progress on actions recorded and updated at least every 2 months; if scored 20 or over the risk should be reviewed each month

The following management actions are taken for each category:

- **Red** – Reviewed at every Steering Group and Programme Board meeting with clear and determined action reviews in each pertinent workstream. Workstream leads are predominantly identified as the risk owner;
- **Amber** – Reviewed regularly and appropriate review dates are agreed at workstream groups/committees. The risk owner should be a senior member of the pertinent workstream; and
- **Yellow and Green** – Reviewed regularly to ensure the likelihood and/or consequence of the risk arising has not risen. Risk ownership can be assigned to anyone on the pertinent workstream.

9.12 Contract management

Robust contract management process will be put in place to oversee both the construction contracts and the managed service contracts with the ISP. The use of regular reviews and KPI monitoring will be critical to managing and overseeing performance throughout contract durations.

9.13 Post-project evaluation

Post-project evaluation (PPE) is a mandatory requirement for infrastructure projects that receive Welsh Government funding. The purpose of PPE is to improve project delivery through lessons learned during the project delivery phase and to appraise whether the project has delivered its anticipated outcomes and benefits.

The Health Board and its partners are committed to ensuring that a thorough and robust post-project evaluation is undertaken at key stages in the process to ensure that lessons are learnt. The PPE also sets in place a framework within which the benefits realisation plan set out in section 10.11 can be tested to identify which benefits have been achieved and which have not.

The Health Board is exploring opportunities to work with a local university in carrying out the PPE. Detailed plans will be drawn up in partnership with the university. The evaluation will be carried out in line with NHS guidance, and will measure the project against the following factors:

- The extent to which the original objectives have been met
- Measurement against the Benefits Realisation Plan
- Risk allocation
- Timetable
- The economic viability of the project in comparison with the 'Do Nothing option
- Functional Suitability – how the facility performs
- Functional Relationships – how well the various process flows (staff, patient, service) work.
- The cost of the project and the extent to which it can demonstrate value for money
- The Project outcome compared with the 'Do Nothing' or 'Do Minimum' scenarios
- User satisfaction
- Procurement route

We envisage four key stages to the evaluation, outlined as follows:

Stage 1: Project procurement

The objective of the evaluation at this stage is to assess how well the project was managed from the time of OBC approval to commencement of the construction phase. It is planned that this evaluation will be undertaken within three months of construction commencement. The evaluation at this stage will examine:

- How effectively the project was managed
- The quality of the documentation prepared by the Health Board and its partners
- Communications and involvement during procurement
- The effectiveness of advisers used on the scheme
- The efficacy of NHS guidance in delivering the scheme.

Stage 2: Implementation

The objective of this stage is to assess how well the project was managed from the time the construction phase commences through to commencement of operational commissioning.

It is considered that this should be undertaken three months following operational commissioning of the unit. The evaluation at this stage will examine:

- How effectively the project was managed
- Communications and involvement during construction
- The effectiveness of the joint working arrangements established by the Contractor, the design team and the project team.

Stage 3: New operational model in place

The objective of this stage will be to assess how well the project was managed during the operational commissioning phase, through to operation in the new building. It is proposed that this stage will be undertaken up to 12 months after completion of operational commissioning of the scheme. The evaluation at this stage will examine:

- How effectively the project was managed
- Effectiveness of the new operational model
- Communications and involvement during commissioning, and into operations
- Overall success factors for the project in terms of cost and time
- Extent to which the new operational model meets users' needs – from the point of view of patients, carers and staff.

Stage 4: New operational model well-established

It is proposed that this evaluation is undertaken 18 months following completion of operational commissioning. The objective of this stage will assess how well and effectively the project was managed during the actual operation of the new Health and Wellbeing Centre. The evaluation at this stage will examine:

- Effectiveness of the new operational model
- Extent to which the new operational model meets users' needs – from the point of view of patients, carers and staff.

The evaluation process will be managed by the Project Manager via a bespoke team established to oversee the PPE. Evaluation reports will be made available to all relevant stakeholders, including Welsh Government.