



## PWYLLGOR DATBLYGU STRATEGOL A CHYFLENWI GWEITHREDOL STRATEGIC DEVELOPMENT AND OPERATIONAL DELIVERY COMMITTEE

<b>DYDDIAD Y CYFARFOD: DATE OF MEETING:</b>	23 February 2023
<b>TEITL YR ADRODDIAD: TITLE OF REPORT:</b>	Programme Business Case (PBC) for Letter of Fire Safety Matters at Bronglais Hospital (BH)
<b>CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:</b>	Andrew Carruthers, Director of Operations
<b>SWYDDOG ADRODD: REPORTING OFFICER:</b>	Rob Elliott, Director of Estates, Facilities and Capital Management

**Pwrpas yr Adroddiad** (dewiswch fel yn addas)

**Purpose of the Report** (select as appropriate)

Ar Gyfer Penderfyniad/For Decision

### ADRODDIAD SCAA SBAR REPORT

#### Sefyllfa / Situation

The Hywel Dda University Health Board (HDdUHB) is currently working closely with Welsh Government (WG) and the Mid and West Wales Fire and Rescue Service (MWWFRS) in managing Fire Enforcement Notices (FENs) and Letters of Fire Safety Matters (LoFSM) on a range of premises across our Estate.

The PBC for Fire Improvements at BH, attached with this paper represents the next stage of investment within this overall Fire Safety Programme, now agreed with MWWFRS.

#### Cefndir / Background

The HDdUHB have set out a full delivery plan of how we will approach all of the above issues across our estate to MWWFRS who are fully supportive of the programmes provided and have re-issued FENs and LoFSM to align with this information.

WG have been fully briefed and have, to date, supported the HDdUHB in providing the necessary capital funding to continue with the programme. The HDdUHB have made MWWFRS fully aware that to continue with this programme, they will require continued funding from WG All-Wales Programme.

Across the HDdUHB, when considering allocations from the All-Wales Capital Programme and the more recent allocations from the Estates Funding Advisory Board (EFAB), the HDdUHB is managing live contracts in the order of £40m. This excludes the work set out in this paper for BH and also the Phase 2 programmes at both Withybush Hospital (WH) and Glangwili Hospital (GH) which are now being progressed at Business Justification Stage (BJC) stage.

#### Asesiad / Assessment

Following the issue of the four LoFSM for BH (one for each block, dated 25 May 2021, 8 June 2021, 15 June 2021 and 30 June 2021) the HDdUHB has worked proactively with MWWFRS to agree a phased investment plan to undertake the necessary improvements. We

have co-ordinated these discussions with WG to ensure they are fully aware of the situation and the likely timing of applications for funding. The phased approach can be considered as follows:

- Low-cost investments - supported by Operational Maintenance budgets and the Discretionary Programme
- Advance Works Programme - predominately vertical escape routes (funded by EFAB support)
- Final Phase – all remaining areas not already completed in the earlier phases (to be progressed via the normal business case process for major capital projects)

The significant amount of work undertaken in the initial two phases has been completed and presented to MWWFRS in detail. This has been inspected and approved by MWWFRS in May 2022.

The HDdUHB has established the Business Case process and timelines for the final phase, and have worked closely with MWWFRS. The current LoFSM dated 31 August 2022 now aligns with the Business Case process submitted to MWWFRS. Due to the complexity of the work, further discussions with MWWFRS will be required on overall delivery programmes to explain the phasing requirement of undertaking fire improvements works in a busy acute hospital. We are confident this will be considered in a positive way by MWWFRS, as we have excellent partnering work on the major projects at WH and GH and where necessary, dates have been extended due to complexity and content.

The PBC for the LoFSM at BH is attached at Appendix 1. The Estates Annex is available if required.

The investment as set out in this PBC at £29,599,880 forms an integral part of the overall plan in delivering the work needed at BH within the programme now established with MWWFRS.

This is a PBC only and is, therefore, the initial high level-Business Case which WG will need to endorse following their scrutiny process. On successful completion of this scrutiny process, the HDdUHB will then be in a position to obtain the necessary funding from WG to develop the BJC to seek formal approval for capital funding.

### Argymhelliad / Recommendation

The Strategic Development and Operational Delivery Committee is asked to:

- Note the position of this Programme Business Case within the overall HDdUHB Fire Investment Programme
- Support the submission of the attached Programme Business Case to the HDdUHB Board for onward transmission to Welsh Government for endorsement.
- Note that further reports will be provided to the Committee as this programme progresses.

**Amcanion: (rhaid cwblhau)**  
**Objectives: (must be completed)**

Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	2.1: To receive an assurance on delivery against all relevant Planning Objectives falling in the main under
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	<p>Strategic Objectives 4 (<i>The best health and wellbeing for our individuals, families and our communities</i>) and 5 (<i>Safe, sustainable, accessible and kind care</i>), in accordance with the Board approved timescales, as set out in HDdUHB's Annual Plan.</p> <p>2.3: Provide assurance to the Board that, wherever possible, University Health Board plans are aligned with partnership plans developed with Local Authorities, Universities, Collaboratives, Alliances and other key partners, such as the Transformation Group who form part of A Regional Collaboration for Health (ARCH).</p>
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	N/A
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	<p>2.1 Managing Risk and Promoting Health and Safety</p> <p>Choose an item.</p> <p>Choose an item.</p> <p>Choose an item.</p>
Amcanion Strategol y BIP: UHB Strategic Objectives:	4. The best health and wellbeing for our individuals, families and communities
Amcanion Cynllunio Planning Objectives	<p>Not Applicable</p> <p>Choose an item.</p> <p>Choose an item.</p> <p>Choose an item.</p>
Amcanion Llesiant BIP: UHB Well-being Objectives: <a href="#">Hyperlink to HDdUHB Well-being Objectives Annual Report 2018-2019</a>	<p>10. Not Applicable</p> <p>Choose an item.</p> <p>Choose an item.</p> <p>Choose an item.</p>

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Extensive site bases survey information and direct input from key operational estate staff
Rhestr Termau: Glossary of Terms:	Contained within the body of the text
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Datblygu Strategol a Chyflenwi Gweithredol: Parties / Committees consulted prior to Strategic Development and Operational Delivery Committee:	N/A

Effaith: (rhaid cwblhau) Impact: (must be completed)
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<b>Ariannol / Gwerth am Arian: Financial / Service:</b>	Funding sought from Welsh Government
<b>Ansawdd / Gofal Claf: Quality / Patient Care:</b>	N/A
<b>Gweithlu: Workforce:</b>	Delivering a sustainable estate to support Clinical Functions
<b>Risg: Risk:</b>	Business Continuity Management
<b>Cyfreithiol: Legal:</b>	Risk of Enforcement from external agencies
<b>Enw Da: Reputational:</b>	N/A
<b>Gyfrinachedd: Privacy:</b>	N/A
<b>Cydraddoldeb: Equality:</b>	N/A

# **Hywel Dda University Health Board**

## **Bronglais General Hospital: Fire Precaution Upgrade Works**

### **Programme Business Case**

Version: 1.2

15 February 2023

## Version Control

Version	Date Issued	Notes	Issued To
0.1	9 November 2022	Shell Document	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE)
0.2	23 November 2022	Incorporation of technical information	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE)
0.3	9 January 2023	Updates following client feedback	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE) K Parry (Lee Wakemans)
0.4	30 January 2023	Incorporation of capital costs	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE) K Parry (Lee Wakemans)
1.0 (Final)	31 January 2023	Final Issue	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE) K Parry (Lee Wakemans)
1.1 1.2	15 February 2023	Updates to Capital Costs Final amendments	J Wood (H DUHB) H Rees (H DUHB) M Brown (MACE) K Parry (Lee Wakemans)

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## 1.0 Executive Summary

Following visits from the Mid and West Wales Fire and Rescue Authority (MWWFRA) to the Bronglais Hospital (BGH), Hywel Dda University Health Board (HDUHB) has received letters of fire safety matters in relation to compliance with fire safety regulations. The focus of this programme is to ensure that the Health Board undertake the necessary actions to ensure compliance within the stipulated timescales.

This Programme Business Case (PBC) has been developed to detail the required investment in relation to the fire precaution upgrade works and seeks formal endorsement from Welsh Government (WG) for:

- The proposed approach to the works through a single Business Justification Case (BJC);
- Support for the required capital funding of £24,666,880 (plus an additional risk contingency to be held by WG of £4,933,00 – i.e. a total of £29,599,880).

This business case has been structured in line with the Better Business Case Investment Guidance, five case model structure, which is in accordance with HM Treasury best practice and the approach prescribed by Welsh Government.

## 1.1 Strategic Case

Bronglais General Hospital (BGH) is located in Aberystwyth, mid-west Wales and is built on a steeply sloping site. The original hospital, built in the 1960's, comprises two connected blocks of accommodation: a five-storey high medical block on the lower part of the site, and a six-storey high surgical block on the upper part.

Mid and West Wales Fire and Rescue Service (MWWFRS) visited site in May 2022 and concluded that people were at risk in case of fire. In line with The Regulatory Reform (Fire Safety) Order 2005 MWWFRS issued four letters of fire safety matters dated 31 August 2022 (Appendix 1). These letters have set out a series of actions which the UHB must address or risk the potential of further enforcement action.

The letters of fire safety cover a wide variety of works which include general housekeeping improvements. The Health Board has already commenced a number of less intrusive elements, however the outstanding items require substantial further investigation, planning of work and financial investment to remedy:

- Compartmentation – amendments and improvements including fire strategy layout and fire smoke dampers to main and sub compartment walls;
- Fire resisting doors – repairs or replacement;
- General fire stopping.

Following receipt of the letters of fire safety matters, HDUHB is at risk of enforcement action for non-compliance and potentially the enforced closure of the site. In order to maintain the safety of all staff, patients and visitors, HDUHB must address all of the areas of concern in line with the stipulated delivery timeline. It is recognised that this is a challenging programme due to the nature of the required works and the complexity of the site, therefore the UHB have adopted a pragmatic approach to the delivery programme which will be both reviewed with WG and further explored within the next stage business case.

### 1.1.1 Business Needs

Spending Objective	Existing Arrangement	Business Need
<b>Strategic Driver</b>		
Ensuring the estate is compliant with statutory requirements and latest estate standards and guidance where it is possible to do so and those articulated within the Business Continuity (Major Infrastructure) Programme Business Case submitted to WG	Estate is non-compliant with statutory requirements (Fire Code Regulations) and latest estate guidance (WHTM 05 series).	Compliance with statutory requirements and latest estate guidance requiring substantial upgrade works in respect of fire safety matters as outlined in the MWWFRS letters of fire safety matters.
<b>Investment Objectives</b>		
Ensure compliance with core statutory standards namely Fire Code regulations	Letters of fire safety matters issued from MWWFR as a result of non-compliance with Fire Code regulations resulting in visitors, staff and patients being at risk in the event of fire.	Compliance with the MWWFRS schedule of requirements to a) ensure safety of individuals on the BGH site and b) avoid the risk of further enforcement action and potentially site closure.
Reduce the risk profile on estate infrastructure	Non-compliance with Fire Code regulations	Ensure the estate is compliant with Fire Code regulations – this will eliminate these elements from the backlog maintenance
Support the delivery of safe, sustainable and accessible services, and facilitate high standards of patient care	Buildings are currently non-compliant with Fire Code regulations resulting in people being at risk in the event of fire – this is not aligned with the aims of delivering safe services and high standards of patient care.	Compliance with Fire Code regulations to support the delivery of safe services.

Table 1: Business Needs

### 1.1.2 Required Works

A detailed action plan has been developed (Appendix 2) which forms the basis of the outstanding works. The required works will ensure compliance with the MWWFRS letters of fire safety matters plus other areas of improvement the HB have identified including:

- Inclusion of further lobby areas at key locations;
- Changes to the 60 mins fire compartmentation in some areas;
- Changes of room classification to elevate to 'risk room'.

Spot checks above ceiling voids confirm that whilst general, firestopping appears in good order there do remain areas to be addressed. Breaches vary in size and complexity, ranging from small holes where a cable passes to areas of wall incomplete or missing above the ceiling line.

The location of breaches and the type of repair required varies greatly and as such the difficulty of repair will vary, as will the consequential impact on the ability to maintain a continual clinical service at Bronglais. The type of repair work required, the location of the work and the proximity of adjacent services will determine the complexity of the repair. A summary of work elements includes:

- Reconfiguration of main and sub compartment 60 mins and 30 mins fire resistant compartments;
- Ensuring compartmentation of all hazard/risk rooms – this will involve fire stopping of holes, infilling at head junctions etc;
- The above will require extensive fire damper works. The reasons for this are covered by Health Board fire Officer guidance as:
  - Firecode (WHTM05/02 Table 7) requires Fire Safety Doors to compartment and sub-compartment penetrations, whereas Fire Dampers are still permitted in hazard room enclosures;
  - Under the legislation (Regulatory Reform (Fire Safety) Order 2005), there is no specific requirement to upgrade the existing hospital to a code-compliant standard. However, recognising the importance of compartmentation and sub-compartmentation in terms of the evacuation strategy, and the potential for this to be compromised through the ventilation system, there is a need to ensure Fire Safety Doors protect the integrity of the compartmentation and sub-compartmentation. Fire Safety Doors triggered by the fire alarm, are more responsive and have better fire / smoke performance characteristics than traditional Fire Dampers which are only heat activated.
- An upgrade to the existing fire alarm systems will be required to accommodate the additional damper connections and control requirements including the upgrade of communication cabling between main fire alarm panels. The main fire alarm 'ring' circuit wiring is not 1 hour fire resistant and will therefore need replacing;
- Replacement / repair of doors as necessary to fire compartment lines and risk rooms;
- Emergency Lighting. The site has a mixture of Thorlux Smartlight and Smartscan lighting to certain areas which is deemed suitable to remain., Other areas do not have a suitable standard of emergency lighting and it is proposed that these areas be fitted with Thorlux Smartscan (Appendix 5);

- The works will require elements of asbestos removal;
- The works will involve significant decant arrangements;

The following works are excluded from this business case:

- Residential blocks – works undertaken by Health Board direct;
- Floor void access hatches – deemed acceptable to remain as installed;
- Fire alarm detector heads – works undertaken by Health Board direct;
- Xray / CT scanner & Pharmacy departments undergoing refurbishment currently. Fire stopping / doors works undertaken by Health Board direct. This PBC will cover any ductwork FSD requirements;
- External cladding – included within Business Continuity PBC due to links with other works, such as windows and re-roofing;
- Estates department / management block.

It is recognised that undertaking works of this nature, in a live hospital environment is challenging and will result in a high level of disruption and low productivity. Business continuity must be maintained throughout the duration of the works therefore any requirement for service re-provision (i.e. decant facilities / temporary relocations) is also considered to be core scope within this PBC.

Due to the size and complexity of the task and the resulting disruptions it is proposed to approach the works in a phased manner as agreed with MWWFRS:

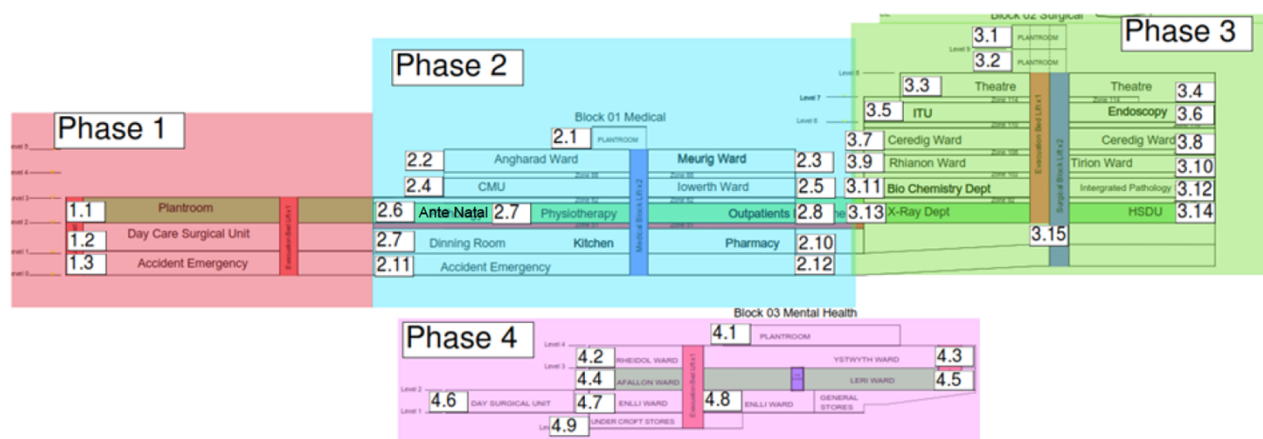


Figure 1: Proposed Approach

It is anticipated that a decant facility will be required to facilitate works within ward areas, however, there is no immediately available location which will impact on the ability to deliver the fire precaution upgrade works within the wards and clinical areas without adversely affecting service level.

It should be noted that the proposed approach represents an overall works programme potentially in the order of 6 years and is based upon a series of assessments and assumptions with the full extent of works, impact of asbestos and methodology restrictions not fully determined at this stage.

## 1.2 Economic Case

### 1.2.1 Critical Success Factors

The critical success factors associated with this PBC are:

- Strategic Fit:
  - Compliance with MWWFRS letters of fire safety matters.
- Achievability:
  - Timescales for delivery;
  - Deliverability with minimal site constraints or challenges;
  - Potential affordability (capital).
- Supplier Capacity and Capability:
  - Ability of potential suppliers to deliver the required services;
  - How attractive the option is to the supply side.
- Potential Value For Money.

### 1.2.2 Main Options

Given the nature of this business case there are limited choices available to the UHB i.e. compliance with fire safety requirements is mandatory. Business as Usual is not a realistic option as this would result in non-compliance with the letters of fire safety matters risking enforcement action and the potential closure of the site. Therefore the scope for this scheme is determined by the MWWFRS stipulated schedule of requirements i.e. undertake works to comply with MWWFRS letters of fire safety matters in a single-phase approach.

#### Service Solution

To enable a rolling sequence of ward upgrade works to take place a decant facility will be required. A long list of options has been developed and reduced to two potentially viable options following a sifting exercise:

Option		Appraisal	Sifting
<b>A</b>	Build area on top of red block (new A&E) to create decant capacity	High-cost option to provide and maintain long-term	<b>Potential</b>

Option		Appraisal	Sifting
<b>B</b>	Review potential to rent space from a nearby nursing home (Hafan Y Waun) to be utilised as a step-down facility to expedite discharge of patients.	Potential to allow for larger areas to be decanted, shortening the programme No agreement with Hafan Y Waun	<b>Potential</b>
<b>C</b>	Allocate an existing ward (Y Banwy – Afallon) to be the decant ward for the duration of the works	High reliance on social care to support discharge of patients for initial release of inpatient bed capacity – challenging Impact on sustaining a business as usual approach through reduced inpatient capacity	<b>Potential</b>
<b>D</b>	Provide an additional facility (i.e. modular building) on the site footprint to act as decant	Not practical due to severe site constraints and general lack of space – non-viable option	<b>Discount</b>
<b>E</b>	Purchase space from the University to decant admin areas releasing space on site for clinical services	Potential to purchase additional space likely to be favourable Unlikely that vacated space would be suitable for the delivery of clinical services	<b>Potential</b>

Table 2: Longlist Option Sifting

Options A, B, C and E will continue to be explored as part of the next stage business case process. Option C (the allocation of an existing ward for the duration of the works) is the emerging preferred option and the current cost and programme in this PBC are based on Option C. Opportunities for concurrent work will be considered, should the programme for the fire safety works in this PBC and the business continuity programme align.

### 1.2.3 Preferred Way Forward

The UHB must comply with the requirements of the letters of fire safety matters and has therefore only considered the Do Minimum option as this ensures compliance with the Fire Enforcement requirements and sustains the hospital for the next 7 – 10 years in the context of the AHMWW Strategy. Due to the nature of the situation, and the limited options available, a single stage Business Justification Case is proposed.

## 1.3 Commercial Case

The detailed consideration of the commercial case will take place within the next stage Business Justification Case.

The preferred funding option for the investment is via Welsh Government Funding as public funding is considered the only viable option.

The NHS Building for Wales frameworks is the preferred procurement route both due to the nature of the works and to maintain consistency in the approach at both Glangwili and Worthybush Hospital sites.

The Supply Chain Partner team includes design consultant services. It is this team who will react to the current surveys, develop them in further detail and provide a cost based upon agreed delivery approach and methods. The Supply Chain Partner and associated designer will be the Principal Contractor and Principal Designer for the purpose of the Construction (Design and Management) Regulations 2015 (CDM 2015).

## 1.4 Financial Case

The total cost of the investment for the whole programme of work is estimated at £24,666,880 plus a WG held project risk contingency of £4.9M (total £29,599,880) as shown in Table 3.

Element	Totals
Programme Business Case	£30,000
Procurement Process (BJC)	£50,000
Business Justification Case	£750,000
Works Cost Phase Summary	£13,391,000
Design Fees	£3,348,000
Non-Works Costs	£1,337,000
Equipment	£14,000
<b>Sub Total</b>	<b>£18,920,000</b>
HDUHB Project Risk Contingency (allowance 10%)	£1,891,000
<b>Sub Total</b>	<b>£20,811,000</b>
VAT (20%)	£4,162,200
VAT Reclaim (assume only on HDUHB directly appointed consultants)	(£306,320)
<b>Sub Total</b>	<b>£24,666,880</b>
Welsh Government Held Project Risk Contingency (allowance 20%)	£4,933,000
<b>PBC Total (indexed at Q1 2023)</b>	<b>£29,599,880</b>

Table 3: Indicative Capital Costs



An indicative cash flow for the capital expenditure is included in Table 4.

Financial Year	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
<b>Annual</b>	£40,600	£1,039,525	£4,231,995	£7,619,580	£9,069,760	£7,598,420	£0
<b>Cumulative</b>	£40,600	£1,080,125	£5,312,120	£12,931,700	£22,001,460	£29,599,880	£29,599,880

Table 4: Indicative cash flow for capital expenditure

### 1.4.1 Capital Cost Assumptions

The detailed cost report in relation to this business case is included at Appendix 7 with the following key assumptions made in developing the capital costs for this PBC:

- Capital costs – indexed at first quarter 2023 (NB: escalation will have to be carefully considered by WG and NWSSP-SES based on the long programme duration);
- Design Fees – allowance of 25% based on benchmark data (this sum could vary greatly dependent upon scope and choice of procurement strategy);
- Non-works costs based on benchmark data;
- Equipment – based on allowance of 0.1% of works costs;
- Project risk contingency of 10% – based on GGH Phase 1 BJC strategy;
- Allowance of 20% for additional project risk contingency to be held by WG – based on GGH Phase 1 BJC strategy;
- VAT at 20% on all with VAT reclaim assumed only on consultants directly appointed by HDUHB;
- Exclusion – upgrading the existing fire alarm installation undertaken separately by HDUHB outwith this PBC;
- WG and NWSSP-SES to assess and consider escalation for the PBC from Q1 2023 to Q1 2028.

### 1.4.2 Revenue Implications

For the purposes of this business case it has been assumed that there will be no additional recurrent pay and non-pay costs, with the exception of capital charges attributable to the delivery of the programme. The Health Board's assumption is that capital charges including increased depreciation and any impairment charges on completion will be funded by Welsh Government. However, should the Hafan y Waun nursing home option be pursued (Option B) following further review at the next stage, then revenue implications associated with rental of areas of the facility would require funding and be assessed as part of any future Business Justification Case. Should this option become the preferred way forward then there is potential to further reduce the delivery programme thus reducing the capital funding requirements.

## 1.5 Management Case

### 1.5.1 Programme Management Arrangements

The programme management structure for this programme is aligned with the Business Continuity (Major Infrastructure) Programme Approach which has been formally constituted and established in line with best practice (Managing Successful Programmes) and will be managed in accordance with PRINCE 2 methodology.

The programme of works identified within this business case will be managed via the BGH Delivery Team with direct reporting into the Project Board and the Capital Sub-Committee (CSC). A fortnightly Fire Enforcement Control Group has been established to ensure delivery of the agreed action plan.

The Health Board Director of Operations is the formal Senior Responsible Officer (SRO) and will ensure that the project meets its overall objectives and delivers its expected benefits. The Director of Estates, Facilities and Capital Management is the Programme Director who will be responsible for the successful delivery of the project. The Capital Development Manager will be the Estates lead overseeing operational delivery of the project.

### 1.5.2 Programme Milestones

Milestone	Target Date
PBC submission to WG	April 2023
WG approval to proceed	May 2023
Appointment of PSCP / Design Team	September 2023
BJC submission to WG	October 2024
WG approval to proceed	December 2024
Commencement of works on site	January 2025
Completion of Works	February 2028

Table 5: Programme Milestones

### 1.5.3 Main Benefits

The main benefit from this project will be HDUHB compliance with fire regulations and the MWWFRS letters of fire safety matters, avoiding closure of the hospital and supporting the safe delivery of patient services. Additional benefits in relation to reduced backlog maintenance and a comprehensive concise fire strategy for the site will also be realised.

### 1.5.4 Main Risks

A full risk register will be developed as part of the next stage business case. The most significant risks at this stage of the project are:

Risk	Mitigation Measure
Control of noise – noise levels during construction not acceptable to hospital causing works to stop	Hospital to advise any times/periods when specific restrictions apply during early meetings. Individuals identified with authority to stop works. SCP to maintain regular contact with operational team to resolve issues associated with disruption ASAP.
Disruption to existing services during construction impacting on hospital services	Liaise with Hospital regularly throughout the project. Contractor strategy to be developed to deal with such circumstances.
Ward disruption to works – Events happening on wards results in contractors having to stop works	Suitable contingency/float to be allowed in programme AND/OR Suitable decant strategy to be prepared and agreed AND/OR Individual rooms to be vacated as per Phase 1 phasing strategy
Fire Precaution works required in key function / high risk areas that must remain operational. E.g. Pharmacy and Labs result in increased cost/duration	Stakeholder meeting to be arranged to discuss approach to working in these areas.
Incomplete / restricted surveys not identifying the entire scope of fire stopping (both sides of wall / entire length of corridors etc)	Establish fire stopping works from other side SCP reviewing and have identified gaps.
Extent of asbestos works / incomplete surveys underestimated	Survey where possible and proceed with caution. Asbestos removal required in U G Duct – stakeholder workshops to be arranged to discuss detailed scope to ensure all aligned in expectations
Capital costs underestimated at BJC	Score updated in line with experience at similar sites. Risk scored high however estimates on cost, programme impact and mitigation actions are covered through the risks on the register.
Significant changes in inflation of key materials / labour or shortages	Contractor to procure the materials in a timely manner
Increased costs due to unknown works	Survey wherever possible.
Unrealistic programme set for the main construction phase.	Detail surveys will determine any issues.
Nature and location of works leads to lack of contractor / tender interest	Review with NWSSP for framework interest. Consider meet the buyer type event.

Table 6: Main Risks

## 1.5.5 Post Project Evaluation

The Programme Board will ensure that post project evaluation will be undertaken in accordance with Welsh Government requirements, the details of which will be included in the business justification case.

## 1.6 Conclusion and Recommendations

This business case sets the required actions and proposed approach to works for Hywel Dda University Health Board to be compliant with fire safety regulations. MWWFRS have aligned the target completion dates for all actions with the proposed contractor programme and it is anticipated that will review progress with the Health Board once works have commenced.

The Health Board must comply within the stipulated timeframe set by the Mid and West Wales Fire and Rescue Service or risk prosecution and ultimately the potential closure of Bronglais Hospital.

It is requested that Welsh Government:

- Endorse this business case based on the proposed cost and approach to delivery of work and support the resource requirements in terms of fees to progress the BJC;
- Acknowledge the MWWFRS expectations for completion of works by October 2027:
  - The UHB anticipate MWWFRS realigning the milestones to meet agreed programme based on similar agreements on both the WGH and GGH sites.

## 2.0 Introduction

### 2.1 Scope of Document

Following visits from the Mid and West Wales Fire and Rescue Authority (MWWFRA) to the Bronglais Hospital (BGH), Hywel Dda University Health Board (HDUHB) has received letters of fire safety matters in relation to compliance with fire safety regulations. This Programme Business Case (PBC) has been developed to detail the required investment in relation to the fire precaution upgrade works.

The PBC seeks formal endorsement from Welsh Government (WG) for the proposed approach to the works through a single Business Justification Case (BJC) and approval / capital funding of £28,893,100 plus a WG held project risk contingency of £5.8M (total £34,672,100).

This business case has been structured in line with the Better Business Case Investment Guidance, five case model structure, which is in accordance with HM Treasury best practice and the approach prescribed by Welsh Government (WG):

- **Strategic Case:** This section provides an overview of the context within which the investment will be made. It sets out the background and strategic context outlining the issues faced by Hywel Dda University Health Board and describes how the proposed investment will support organisational objectives;
- **Economic Case:** This section identifies the options for consideration along with indicative capital costs and the option appraisal process undertaken;
- **Commercial Case:** This section sets out the proposed procurement arrangements for the scheme;
- **Financial Case:** This section confirms funding arrangements and affordability and explains any impact on the balance sheet of the organisation;
- **Management Case:** This section details the plans for successful delivery of the project to cost, time and quality.

A glossary of abbreviations used is included at Section 9.0.

## 3.0 Strategic Case

This case describes the context within which this programme has been developed and demonstrates that the programme has been informed by, and will address, the identified drivers for change.

Following visits from the Mid and West Wales Fire and Rescue Authority (MWWFRA) to the Bronglais Hospital sites, Hywel Dda University Health Board (HDUHB) has received letters of fire safety matters in relation to compliance with fire safety regulations. The focus of this programme is to ensure that the Health Board undertake the necessary actions to ensure compliance within the stipulated timescales.

### 3.1 Organisational Overview

Hywel Dda University Health Board (HDUHB) is one of seven health boards in Wales and serves the population of mid and west Wales. The Health Board provides primary, community, in-hospital, mental health and learning disabilities services to a population of 384,000 taken from the three counties as follows:

- Carmarthenshire 183,936 residents;
- Ceredigion 79,488 residents;
- Pembrokeshire 120,576 residents.

HDUHB covers more than a quarter of the landmass of Wales and is the second most sparsely populated Local Health Board area, with roughly 13% of the total population of Wales.

Acute and community services are provided via four main hospital sites as well as a range of community-based services. The geography of the Health Board is challenging with journey times between the health board sites ranging from 45 to 105 minutes. The acute sites are:

- Bronglais General Hospital in Aberystwyth (BGH);
- Glangwili General Hospital in Carmarthen (GGH);
- Prince Philip Hospital in Llanelli (PPH);
- Withybush General Hospital in Haverfordwest (WGH).

#### 3.1.1 Summary of Financial Standing

The Health Board's outturn for 2021/22 was a deficit of £24.9m. For 2022/23 the UHB has developed an annual plan at the end of quarter 1 2022/23 with a revised forecast deficit of £59m.

### **3.1.1.1 Capital Plan**

The largest strategic capital commitments in the coming years relate to the new build Urgent and Planned Care Centre and the repurposing of Glangwili and Withybush Hospitals. To support the UHB's capital and infrastructure plans, the UHB is currently considering the resource capacity and capability requirements to deliver this complex, high value programme and discussions with Welsh Government will be held to address the scale of development and modernisation needed including the digital modernisation required. The submitted Programme Business Case will provide the evidence and confidence that major capital investment can help deliver the sustainable service model envisaged.

The Capital Investment Plan will prioritise both capital developments and backlog maintenance in line with the current prioritised position and strategic objectives and be informed by the current risks the organisation holds. A core focus of the capital plan is the delivery of essential quality and safety, business continuity schemes including replacements, issues of compliance and infrastructure maintenance.

This scheme is in direct response to MWWFRS letters of fire safety matters and will be reflected in the capital plan.

### **3.1.1.2 Discretionary Capital Programme**

In previous years, the UHB has received an annual allocation of circa £7.4m which is allocated into the areas of highest investment needs. The UHB has also received EFAB funding for other fire compliance work. The works included in this PBC do not include any works currently funded from EFAB. For this financial year (2022/23), the UHB has seen a 24% reduction in the discretionary capital allocation to £5.6m.

For these locally controlled funds, this is in the main targeted to support issues of quality and safety, and business continuity and is allocated over the following headings:

- Infrastructure and statutory backlog;
- Estates statutory compliance;
- Replacement of medical and other equipment;
- Essential maintenance of estates infrastructure;
- Standardisation of medical equipment and devices across sites to enable cross site working;
- Capital support posts and business case developments;
- Significant upgrades of IT infrastructure and keeping pace with IT replacements.

The UHB faces very significant backlog pressures in IM&T, estates maintenance and equipment replacement which means that not all risks can be mitigated and programmes of replacement over a longer timeline are being developed and will need to be the subject of All Wales Capital support.

### 3.1.2 Hywel Dda Health and Care Strategy

In 2018, HDUHB published 'A Healthier Mid and West Wales: Our Future Generations living well' (AHMWW), the long-term strategy for transforming health services and delivering quality care closer to home. The AHMWW Programme is the Health Board's strategic transformation work programme which brings together all strategic work into one defined programme. The ethos of continuous engagement and co-production is at the heart of the programme with the key objective being to co-design future care and services with patients, staff, the public, key stakeholders and partners, in order to move beyond the traditional structure for NHS services by being truly able to address the needs of the population through earlier intervention, a flexible and joined up approach to care and preventing ill health in the first place.

The underlying ethos of AHMWW is that the programme should be clinically led and deliver a long-term strategic future for health and care. The focus is on keeping people healthy with a shift away from hospitals to care closer to home. While hospitals will continue to be a key part of the health and care system, the wider whole system approach will involve the hospitals working much more closely in the community at one end, while forming stronger links to highly specialised services at the other.

The future model will have a new hospital located in the south of the region which will be the main site within a network of hospitals across mid and West Wales that includes the existing hospital sites. These hospitals will be vibrant centres supporting the health and well-being of the communities they serve. Under the proposal, Bronglais General Hospital will be retained as a local general hospital offering a range of locally based acute services in support of the social model for health and well-being. Addressing the essential fire precaution works as detailed in this PBC will be essential to maintaining both continuity of service in the interim period as well as supporting the re-purposing requirements.

The Health Board submitted a Programme Business Case (PBC) to Welsh Government (WG) in March 2022 which sets out the context and high-level need for the resources to support capital and estates planning for the delivery of the Health and Care Strategy transformation programme. This will deliver the essential estates infrastructure of a new purpose built planned and urgent care hospital and the repurposing of the existing hospital sites and will also consider the required for investment into the community estate infrastructure to support delivery of the new models of care.



A separate PBC has been developed to address the business continuity / estates infrastructure issues across all four acute hospitals within the context of the AHMWW Strategy. This was submitted to Welsh Government and received endorsement in July 2021.

## 3.2 Policy Context

The Health Board has a corporate responsibility to deliver an efficient, safe estate that supports clinical services in line with WHBN-008: Strategic Framework for the efficient management of healthcare estates and facilities. There are also legal responsibilities in the provision of soft and hard FM services requiring adherence to Welsh Health Technical Memoranda (WHTM). WHTMs provide guidance for the design, management and maintenance of healthcare engineering systems including fire safety.

There are a number of regulatory frameworks that the Health Board must comply with in relation to fire safety. These include:

- Building Regulations 2010;
- Regulatory Reform (Fire Safety) Order 2005;
- WHTM 05-01: Firecode Managing Healthcare Fire Safety (2019);
- WHTM 05-02: Fire safety in the design of healthcare premises (2014);
- WHTM 05: Fire Safety (2011);
- Fire and Rescue Services Act (2004).

The Regulatory Reform (Fire Safety Order) consolidated the fire related legislation. As a result, the Healthcare Firecode suite of documents was revised with mandatory requirements for all NHS bodies. The NHS Wales Fire Safety Policy provides an unambiguous statement applicable to the NHS in Wales and premises where patients receive treatment or care. The aims are to minimise the incidence of fire throughout the NHS estate in Wales and to minimise the impact from fire on life, safety, delivery of service, the environment and property.

Compliance with these regulatory frameworks underpins this PBC and the UHB will maintain focus on continuity of clinical services throughout the work programme.

## 3.3 Programme Investment Aims

Within the overall NHS planning context, the Minister for Health and Social Services has determined a series of investment objectives for the NHS Infrastructure Investment Programme including capital and revenue funding delivery models. These objectives have been adopted by HDUHB and interpreted these for the overarching Estates Infrastructure programme as follows:

- Reduce the risk profile on Estate infrastructure;
- Maintain appropriate levels of patient safety and comfort;
- Extend the operating life of the hospitals;
- Support future service planning by ensuring sufficient infrastructure of systems resilience and capacity for future service modelling;
- Reduce essential backlog maintenance requirements;
- Identify and deliver a cost effective and value for money solution, programme timetable and budget.

The investment aims specific to this Programme Business Case have been developed within the context of the overarching estates infrastructure approach and have a specific focus on ensuring compliance with the NHS Wales Fire Safety Policy on the Bronglais Hospital Site. The schemes of work included within the PBC are specific to BGH. Elements of this works are also packages included in the Estates Infrastructure / Business Continuity programme which is the subject of a separate business case.

The specific programme investment aims for this PBC are to:

- Ensure compliance with core statutory standards namely Fire Code regulations;
- Reduce the risk profile on estate infrastructure;
- Support the delivery of safe, sustainable and accessible services, and facilitate high standards of patient care. UHB as part of the BJC process for this fire safety scheme and the business continuity scheme will look for opportunity to carry out concurrent works, to maximise value for money.

## 3.4 Existing Arrangements

Bronglais General Hospital (BGH) is located in Aberystwyth, mid-west Wales. The hospital has 138 beds and provides a comprehensive range of inpatient and outpatient facilities, mental health services together with a 24 hour Emergency and Urgent Care Centre.

Built on a steeply sloping site near the National Library of Wales, BGH comprises a series of stepped linear accommodation blocks that follow the existing topography and result in a multi storey building with multiple entrances at different floor levels. The original hospital, built in the 1960's, comprises two connected blocks of accommodation: a five-storey high medical block on the lower part of the site, and a six-storey high surgical block on the upper part. The second floor (Level 2) of the medical block is the only floor that continues through into the surgical block, where it becomes the ground floor.

The site includes a number of peripheral buildings, which include domestic scale properties built in the 1900's, and purpose-built residential accommodation blocks and a postgraduate centre that were built in the 1960's.

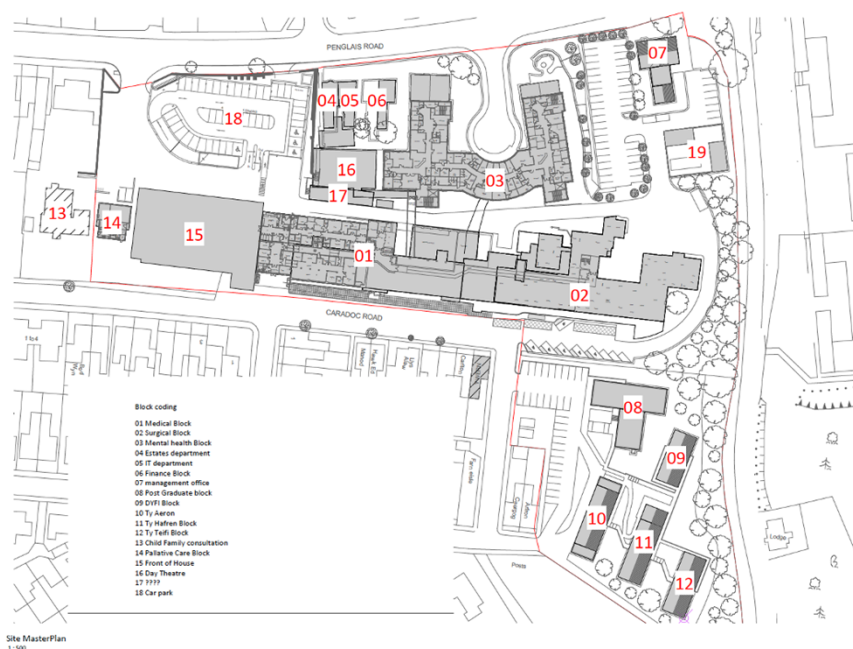


Figure 2: Site Master Plan

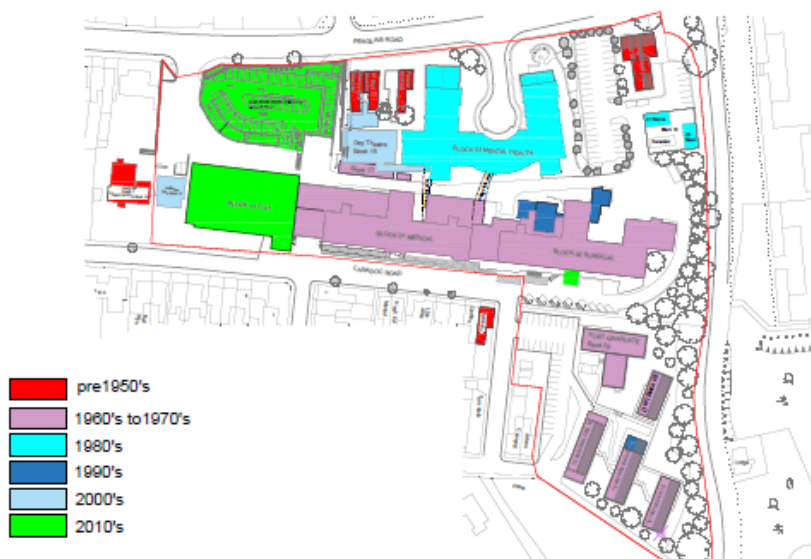


Figure 3: Bronglais Hospital Site – Age Profile of the Existing Estate

The main clinical facilities are accommodated within blocks 1, 2 and 15. Blocks 1 and 2 were constructed in the 1960s and the areas that have not been refurbished are now in a poor state of repair. Block 15 is the result of a Front of House scheme that opened in 2013. As part of the Front of House build several areas in the main hospital have benefited from significant investment and are in good condition. These include the accident and emergency unit, the day care surgical unit, the outpatient department, maternity services, pathology services, operating theatres and multi storey car park. The original 1960s buildings have also been partially refurbished internally. Figure 4 below indicates the areas where refurbishment, including some firestopping works have been undertaken:

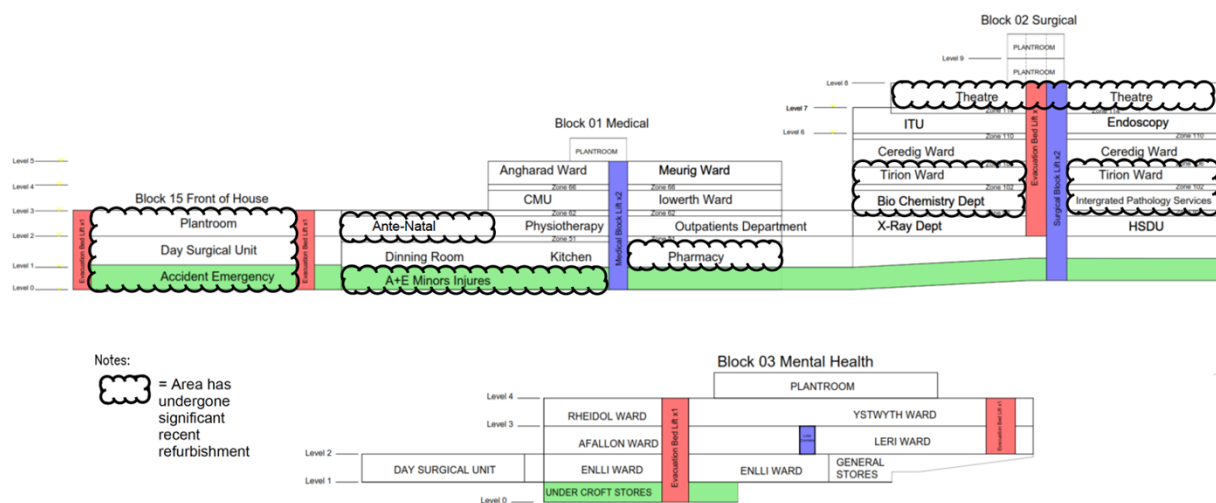


Figure 4: Areas of recent refurbishment

The physical constraints of the existing site, structure and fabric have a significant influence on the spatial standards and functional relationships. The long, narrow, linear building form, many level changes, and lack of connecting floors, make it difficult to achieve efficient departmental layouts, and co-locate linked services. Due to the form of the building principal circulation routes pass through the middle of some departments, causing disruption, affecting patient privacy, and security. Investment is still required in several areas to remove significant infrastructure risks. The following table identifies the backlog maintenance liability for the hospital from April 2022 to March 2023.

Backlog Maintenance Costs by Risk Category for 2022/23				
High Risk Backlog Costs (£)	Significant Risk Backlog Costs (£)	Moderate Risk Backlog Costs (£)	Low Risk Backlog Costs (£)	Total Backlog Costs (£)
£0	£5,232,909	£1,266,863	£1,279,726	£5,360,238

Table 7: Bronglais Hospital Site – 2022/23 Backlog Maintenance Liability

In line with the AHMWW strategy there is a clear direction of travel for the future of the BGH site. A full range of district general hospital services will continue to be provided from Bronglais as part of a

network of services with strengthened roles with the community. As part of this strategy, the Health Board is clear that there is a need to maintain business continuity and a business as usual approach whilst the wider strategy is delivered requiring the UHB to maintain estate and capital requirements to support clinicians to deliver services within the existing model during transition years. The business continuity schemes are crucial to on-going service delivery across the organisation and any deterioration in service delivery within the existing model will impact on clinical care and patient outcomes as well as affecting the ongoing engagement and positive relationship with the local population.

## 3.5 The Case for Change

An assessment of all acute sites was undertaken in 2018 to determine the extent of works required to bring them in line with statutory compliance regulations and formed the foundation of the PBC submitted to Welsh Government in July 2021 in relation to addressing the business continuity/estates infrastructure issues across all four acute hospitals within the context of the AHMWW Strategy,

Fire compliance was assessed against the current version of HTM 05-02 – Firecode – Guidance in support of functional provisions 2015 and it was determined that the core clinical services blocks did not meet the standards with respect to fire safety. In particular the configuration of the blocks, width of existing staircases, doors and corridors combined with the size of existing compartments do not support progressive horizontal escape and as the core non-compliance is related to the configuration of the buildings, refurbishment would not fully resolve these issues.

This assessment of the site also noted that due to the restricted nature of the site there were limited options to provide any decant space impacting on the ability to undertake any development works (including essential upgrade works) on the site without major disruption to the delivery of clinical and essential support services.

### 3.5.1 Letter of Fire Safety Matters

Mid and West Wales Fire and Rescue Service (MWWFRS) visited the Bronglais Hospital site in May 2022 and concluded that some people were at risk in case of fire. In line with The Regulatory Reform (Fire Safety) Order 2005 MWWFRS issued four letters of fire safety matters dated 31 August 2022 (Appendix 1). These letters have set out a series of actions which the UHB must address or risk the potential of further enforcement action. The Health Board have an ongoing duty to ensure the safety of people and MWWFRS have advised that arrangements for follow up site visits to monitor progress will be made.

Table 8 and Table 9 summarise the schedule of requirements from each of the letters which form the basis for the works detailed within this business case.

Item	Required Action
<b>ARTICLE 12 – ELIMINATION OR REDUCTION OF RISKS FROM DANGEROUS SUBSTANCES</b>	
Multiplug adaptors and Electrical fittings	Additional electrical sockets are to be provided where trailing leads, adapters or extension leads are in use.
<b>ARTICLE 13 – FIREFIGHTING AND FIRE DETECTION</b>	
Fire Extinguishers	An assessment should be undertaken to ensure that all areas have suitable and sufficient Firefighting equipment installed and in suitable location).(BS 5306-8.
<b>ARTICLE 14 – EMERGENCY ROUTES AND EXITS</b>	
Combustible Material, ignition source and Obstruction	All combustible materials, ignition sources and obstructions should be removed from all escape routes, internally and externally.
Signage	A review of signage is required throughout the property. Indicate the nearest way out (in case of fire) with fire exit signs that comply with BS 5499-4.
<b>ARTICLE 17 – MAINTENANCE</b>	
Maintenance	Records must be kept of events, tests, or maintenance of the following equipment / installations. <ul style="list-style-type: none"> <li>• Suppression system</li> <li>• Automatic operated vent (AOV) linked to the fire alarm system</li> </ul>
<b>ARTICLE 22 CO-OPERATION AND CO-ORDINATION</b>	
Communication between departments and management	Effective systems of communication must be established with those who are responsible for all departments to ensure all relevant persons are provided with suitable and sufficient information in respect of the fire safety measures implemented.
<b>ARTICLE 13 FIRE ALARM SYSTEM</b>	
Fire Alarm System	The existing fire warning system must be updated as necessary to conform fully to BS 5839-1:2017 Category L1, also as stated in NWSSP-HD/F1/018-JFR April 2022 (shared services document).  All work involving the fire alarm should be carried out in accordance with BS 5839-1:2017.

Table 8: MWWFRS Schedule of Requirements – Bronglais Hospital Site

The action plans specific to each of the blocks with timescales for completion are as summarised below:

Item	Required Action	Timescale
<b>All Blocks (Red, Blue, Purple, Green)</b>		

Item	Required Action	Timescale
Fire Doors	<ol style="list-style-type: none"> <li>1. All fire resisting doors throughout the premises are to be examined and repaired or replaced to ensure they are effectively self-closing onto their rebates. Gaps between door edge and frame are to be no more than 3-5 mm</li> <li>2. Self-closing devices on all fire resisting doors to be checked and if required adjusted, repaired, or replaced so the doors close completely into their rebates.</li> <li>3. All self-closing devices to be regularly inspected / maintained.</li> <li>4. All fire doors should have intumescent strips / smoke seals</li> <li>5. All fire door vents should be designed in accordance with the required British Standard.</li> </ol>	<p>Phase 1 – January 2025</p> <p>Phase 2 – October 2027</p>
Compartmentation	An assessment should be undertaken to ensure that there is suitable 30-minute fire resistance sub compartments and 60 minutes fire resistant compartmentation throughout the blocks.	<p>Phase 1 – January 2025</p> <p>Phase 2 – October 2027</p>
Fire Safety Management	An assessment should be undertaken to ensure there is a suitable and up to date fire management Plan.	September 2022
Training	It is essential that all staff are fully trained in evacuation procedures for the premises. You should ensure that staffing levels are sufficient and available at all material times to facilitate the movement of residents to safety within the determined safe evacuation time.	January 2023
<b>Green Block</b>		
Emergency Lighting	An assessment should be undertaken to ensure all Internal and external escape routes are illuminated by emergency lighting that will operate if the local lighting circuit fails. The system should conform to BS 5266.	End December 2022
Maintenance	<p>Records must be kept of events, tests, or maintenance of the following equipment / installations.</p> <ul style="list-style-type: none"> <li>• Suppression system</li> <li>• Automatic operated vent linked to fire alarm system</li> </ul>	September 2022
<b>Blue Block</b>		
Fire Alarm System	The system is to be upgraded to meet a category L1 system., As specified in the British Standard 5839: 1 - 2017 "Fire Detection and Alarm Systems in Buildings", or the equivalent European Standard.	September 2022
Maintenance	<p>Records must be kept of events, tests, or maintenance of the following equipment / installations.</p> <ul style="list-style-type: none"> <li>• Dampers</li> <li>• Roller shutter doors</li> </ul>	September 2022

Table 9: MWWFRS Action Plan

### 3.5.2 Works Completed



The letters of fire safety cover a wide variety of works which include general housekeeping improvements. The Health Board has already commenced a number of less intrusive elements and the Health Board's fire officer has also undertaken an initial review of the existing site fire strategy (Appendix 3)

The UHB have confirmed to MWWFRS the actions that have been completed as shown below and referred to in the detailed action plan (Appendix 2):

- Fire Extinguishers – annual maintenance contract in place;
- Residential Blocks – all works completed;
- Vertical Stair Cores – all fire doors, emergency lighting and firestopping completed;
- Fire Damper maintenance. All existing fire dampers surveyed and remedials under way;
- Fire alarm maintenance – all repairs actioned;
- Emergency Lighting– all repairs actioned;
- X ray department – currently under refurbishment, the firestopping remedials are being undertaken as part of those works;
- Pharmacy currently under refurbishment, the firestopping remedials are being undertaken as part of those works.

### 3.5.3 Outstanding Works

The outstanding items require substantial further investigation / planning of work and financial investment to remedy:

- Compartmentation – amendments and improvements including fire strategy layout and fire smoke dampers to main and sub compartment walls;
- Fire resisting doors – repairs or replacement;
- General fire stopping.

The UHB has undertaken a review with its fire officer and NWSSP's Head of Fire Safety and indicated several improvements that should be made. These relate to:

- Inclusion of further lobby areas at key locations;
- Changes to the 60 mins fire compartmentation in some areas;
- Changes of room classification to elevate to 'risk room'.

## 3.6 Business Needs



Following receipt of the letters of fire safety matters, HDUHB is at risk of enforcement action for non-compliance and potentially the enforced closure of the site. In order to maintain the safety of all staff, patients and visitors, HDUHB must address all of the areas of concern in line with the stipulated delivery timeline. This PBC describes the required action and associated investment plan to ensure compliance with the fire safety matters as identified by MWWFRS.

It is recognised that this is a challenging programme due to the nature of the required works and the complexity of the site, therefore the UHB have adopted a pragmatic approach to the delivery programme which will be both reviewed with WG and further explored within the next stage business case.

The strategic drivers underpinning this Programme Business Case are aligned with the organisational strategy:

- Supporting the transformation programme, planning priorities and strategic objectives;
- Ensuring the estate is functionally suitable for purpose;
- Ensuring the estate is compliant with statutory requirements and latest estate standards and guidance where it is possible to do so and those articulated within the Business Continuity (Major Infrastructure) Programme Business Case submitted to Welsh Government.

The table below provides an overview of the business need in relation to the agreed investment objectives:

Spending Objective	Existing Arrangement	Business Need
<b>Strategic Driver</b>		
Ensuring the estate is compliant with statutory requirements and latest estate standards and guidance where it is possible to do so and those articulated within the Business Continuity (Major Infrastructure) Programme Business Case submitted to WG	Estate is non-compliant with statutory requirements (Fire Code Regulations) and latest estate guidance (WHTM 05 series).	Compliance with statutory requirements and latest estate guidance requiring substantial upgrade works in respect of fire safety matters as outlined in the MWWFRS letters of fire safety matters.
<b>Investment Objectives</b>		
Ensure compliance with core statutory standards namely Fire Code regulations	Letters of fire safety matters issued from MWWFR as a result of non-compliance with Fire Code regulations resulting in visitors, staff and patients being at risk in the event of fire.	Compliance with the MWWFRS schedule of requirements to a) ensure safety of individuals on the BGH site and b) avoid the risk of further enforcement action and potentially site closure.
Reduce the risk profile on estate infrastructure	Non-compliance with Fire Code regulations	Ensure the estate is compliant with Fire Code regulations – this will eliminate these elements from the backlog maintenance

Spending Objective	Existing Arrangement	Business Need
Support the delivery of safe, sustainable and accessible services, and facilitate high standards of patient care	Buildings are currently non-compliant with Fire Code regulations resulting in people being at risk in the event of fire – this is not aligned with the aims of delivering safe services and high standards of patient care.	Compliance with Fire Code regulations to support the delivery of safe services.

Table 10: Business Needs

### 3.6.1 Required (Outstanding) Works

The UHB has had a rolling programme of firestopping works across the Bronglais estate, however, following receipt of the letters of fire safety matters, the UHB has undertaken a review with its fire officer team and NWSSP's Head of Fire Safety and developed a detailed action plan (Appendix 2) and also identified other areas for improvement relating to:

- Inclusion of further lobby areas at key locations;
- Changes to the 60 mins fire compartmentation in some areas;
- Changes of room classification to elevate to 'risk room'.

A spot check above ceiling voids confirms that, in general, firestopping appears in good order, however, there remain some areas to be addressed. From initial reviews the breaches vary in size and complexity, ranging from small holes where a cable passes to areas of wall incomplete or missing above the ceiling line. Of note is the top level of Purple Block, where ceiling level compartmentation between rooms does not appear to exist. Another example is where compartment lines are amended and require infills above existing corridor doors.

The UHB is aware that the buildings contain asbestos and it is likely that asbestos removal will be required to facilitate the fire safety improvement works.

The location of breaches and the type of repair required varies greatly and as such the difficulty of repair will vary, as will the consequential impact on providing a continual clinical service at Bronglais. The type of repair work required, the location of the work and the proximity of adjacent services determines the complexity of the repair, below is a list of examples:

- Prior alterations to remove / adjust services to gain access to repair compartment breaches;
- Removal of ceilings locally to access the work and bring in materials;
- Congested services in ceiling voids resulting in limited working space;
- Working off access scaffold to reach higher breaches;
- Restricted access in occupied areas, particularly patient accommodations;

- Proximity of asbestos and the associated encapsulation or removal issues;
- Compartment walls missing / breaches over entrance doors restricting access to wards and other departments;
- Replacing / repairing fire door-sets leading into wards and departments;
- Installing fire smoke dampers in main and sub compartment areas;
- Installing smoke dampers to risk / hazard areas;
- Compartment breaches in inpatients areas resulting in decant requirements;
- Compartment breaches in outpatient areas resulting in delayed treatments;
- Compartment breaches in theatre areas resulting in missed procedures.
- Compartment breaches in kitchen area resulting in alternative arrangements required.

The locations impacted are:

- Horizontal and vertical primary escape routes.
- Day patient accommodation, consultation / treatment areas, theatres.
- In patient accommodation, ward areas, theatres.
- Main kitchen.
- Staff areas.
- The floor voids which form their own fire compartment.
- Vertical risers, especially the connection/link to the floor voids.

Due to the size and complexity of the task and the resulting disruptions it is proposed to approach these remaining works in a phased manner as agreed with MWWFRS (illustrated in Appendix 4).

It is anticipated that a decant facility will be required to facilitate works within ward areas, however, there is no immediately available location which will impact on the ability to deliver the fire precaution upgrade works within the wards and clinical areas without adversely affecting service level. It has also been identified that due to capacity pressures no potential exists within the existing footprint to reduce the available services. Further consideration will be given to this within the next stage business case.

Whilst options for decanting wards / departments will need to be explored, there are a number of other services where decant will not be suitable and piecemeal working will be required. These areas are identified below along with a proposed solution (the programme item numbers correspond to the diagram in Appendix 4):

Area	Programme item	Approach
Red Block		

Area	Programme item	Approach
Plantroom	1.1	Works in situ – local shutdowns where necessary
Day Surgery Unit	1.2	Phased working (2 sections)
Accident & Emergency	1.3	Phased working (6 sections)
<b>Blue Block</b>		
Physiotherapy	2.7	Decant & re-provide elsewhere
Outpatients	2.8	Decant & re-provide elsewhere
Dining Room	2.9	Temporary Closure
Kitchen	2.9	Internal decant to servery/dining room with limited menu and freezer-based menu. Will require temporary/additional cold storage and regeneration area. Note. It may be beneficial to purchase rather than hire some equipment and retain on site long term due to current equipment provision levels, and a pending business case to move to permanent cook/freeze. This should be reviewed at the next stage.
Pharmacy	2.10	Further consideration required at BJC
Accident & Emergency	2.11	Phased working (2 sections)
<b>Green Block</b>		
2 Theatres, Endoscopy, ITU	3.3, 3.4, 3.5, 3.6	Reduce service – take over 1 theatre and rotate zones as needed
Ceredig Ward	3.7, 3.8	Phased working (2 phases)
Rhianon, Tirion	3.9, 3.10	Reduced works as recent refurbishment undertaken by estates
Bio-Chemistry	3.11	Further consideration required at BJC
Pathology	3.12	Further consideration required at BJC
X Ray	3.13	Reduced works as recent refurbishment undertaken by estates
HSDU	3.14	Temporary closure and cost for off site supply/transport etc.
<b>Purple Block</b>		
Day Surgery	4.6	Reduced works as recent refurbishment undertaken by estates
Leri	4.5	Reduced works as recent refurbishment undertaken by estates
Enlli Ward	4.7, 4.8	Phased approach
Undercroft Stores	4.9	Phased approach

Table 11: Proposed approach to departmental works

It should be noted that the above approach represents an overall works programme potentially in the order of 6 years and is based upon a series of assessments and assumptions with the full extent of

works, impact of asbestos and methodology restrictions not fully determined at this stage. Following appointment of a construction partner the proposed methodology will be refined and explored within the next stage business case.

## 3.7 Potential Scope and Service Requirements

The scope of this programme business case is to ensure compliance with fire safety regulations as stipulated in the letters of fire safety matters and associated schedules of requirements issued by MWWFRS in August 2022 (Table 8, Table 9, Appendix 1).

The overall works required will be extensive, a summary of work elements includes:

- Reconfiguration of main and sub compartment 60 mins and 30 mins fire resistant compartments;
- Ensuring compartmentation of all hazard/risk rooms – this will involve fire stopping of holes, infilling at head junctions etc;
- The above will require extensive fire damper works. The reasons for this are covered by Health Board fire Officer guidance as:
  - Firecode (WHTM05/02 Table 7) requires Fire Safety Doors to compartment and sub-compartment penetrations, whereas Fire Dampers are still permitted in hazard room enclosures;
  - Under the legislation (Regulatory Reform (Fire Safety) Order 2005), there is no specific requirement to upgrade the existing hospital to a code-compliant standard. However, recognising the importance of compartmentation and sub-compartmentation in terms of the evacuation strategy, and the potential for this to be compromised through the ventilation system, there is a need to ensure Fire Safety Doors protect the integrity of the compartmentation and sub-compartmentation. Fire Safety Doors triggered by the fire alarm, are more responsive and have better fire / smoke performance characteristics than traditional Fire Dampers which are only heat activated.
- An upgrade to the existing fire alarm system will be required to accommodate the additional damper connections and control requirements including the upgrade of communication cabling between main fire alarm panels. The main fire alarm 'ring' circuit wiring which is not 1 hour fire resistant will therefore need replacing;
- Replacement / repair of doors as necessary to fire compartment lines and risk rooms;
- Emergency Lighting. The site has a mixture of Thorlux Smartlight and Smartscan lighting to certain areas which is deemed suitable to remain. Other areas do not have a suitable standard of emergency lighting and it is proposed that these areas be fitted with Thorlux Smartscan (Appendix 5);
- The works will require elements of asbestos removal;
- The works will involve significant decant arrangements;

The following works are excluded from this business case:

- Residential blocks – works undertaken by Health Board direct;

- Floor void access hatches – deemed acceptable to remain as installed;
- Fire alarm detector heads – works undertaken by Health Board direct;
- Xray / CT scanner & Pharmacy departments undergoing refurbishment currently. Fire stopping / doors works undertaken by Health Board direct. This PBC will cover any ductwork FSD requirements;
- External cladding – subject of business continuity case;
- Estates department / management block.

It is recognised that undertaking works of this nature, in a live hospital environment is challenging and will result in a high level of disruption and low productivity. Business continuity must be maintained throughout the duration of the works therefore any requirement for service re-provision (i.e. decant facilities / temporary relocations) is also considered to be core scope within this PBC.

## 3.8 Benefits

The main benefits associated with this business case are:

- Ensuring the safety of patients, visitors and staff in relation to fire safety matters;
- Compliance with MWWFRS letters of fire safety matters – eliminating the risk of enforcement action.

## 3.9 Risks

The main risks associated with this business case are:

- Detrimental impact on delivery of essential patient services;
- Failure to comply with MWWFRS timelines;
- Failure to secure necessary capital funding;
- Difficulty in assessing quantity of works and capital costs;
- Difficulty in gauging / obtaining materials.

## 3.10 Constraints

There are a number of constraints to the delivery of the programme requiring management:

- Availability of capital funding;
- A need to comply with the actions and timeframes stipulated by MWWFRS;
- A need to minimise disruption to services during the construction phases.

## 3.11 Dependencies

The programme is dependent on the following considerations:

- Welsh Government support and funding for the proposed approach;
- MWWFRS support to the proposed approach;
- HDUHB has an ongoing programme of maintenance and minor capital investment work through their discretionary programme which will also be reviewed and considered alongside this PBC and in relationship to the Business Continuity PBC.

## 4.0 Economic Case

The purpose of the economic case is to identify and appraise the options for the delivery of the scheme and to recommend the option that is most likely to optimise value for money.

### 4.1 Critical Success Factors

The critical success factors associated with this PBC are:

- Strategic Fit:
  - Compliance with MWWFRS letters of fire safety matters.
- Achievability:
  - Timescales for delivery;
  - Deliverability with minimal site constraints or challenges;
  - Potential affordability (capital).
- Supplier Capacity and Capability:
  - Ability of potential suppliers to deliver the required services;
  - How attractive the option is to the supply side.
- Potential Value For Money.

### 4.2 Main Options

Given the nature of this business case there are limited choices available to the UHB i.e. compliance with fire safety requirements is mandatory. A series of technical surveys have been undertaken to allow initial assessments and assumptions of the required works to be made, however, the full extent of works, impact of asbestos and methodology restrictions cannot be fully determined at this stage. Further refinement of the programme and works is being undertaken and will be considered further within the next stage BJC.

#### 4.2.1 Scoping Options

The scope for this scheme is determined by the MWWFRS stipulated schedule of requirements pertaining to the Bronglais site i.e. undertake works to comply with MWWFRS letters of fire safety matters in a single-phase approach.

Business as Usual is not a realistic option as this would result in non-compliance with the letters of fire safety matters risking enforcement action and the potential closure of the site.



## 4.2.2 Service Solution Options

To maintain an operational hospital site, a phased approach to the works will be required. This will continue to be reviewed throughout the programme and fully defined in the next stage business case, however initial reviews have been undertaken with senior site management representatives (Assistant General Manager and Head of Nursing) to consider the impact on maintaining service continuity. To enable a rolling sequence of ward upgrade works to take place a decant facility will be required. There are a number of departments that cannot be easily relocated on a temporary basis. Table 11 details these department with first considerations to the proposed approach for undertaking works with further exploration through the next stage business case anticipated.

The options for providing an additional facility to act as a decant ward with the outcome of the longlist option sifting exercise are shown below:

Option		Appraisal	Sifting
<b>A</b>	Build area on top of red block (new A&E) to create decant capacity	High-cost option to provide and maintain long-term	<b>Potential</b>
<b>B</b>	Review potential to rent space from a nearby nursing home (Hafan Y Waun) to be utilised as a step-down facility to expedite discharge of patients.	Potential to allow for larger areas to be decanted, shortening the programme No agreement with Hafan Y Waun	<b>Potential</b>
<b>C</b>	Allocate an existing ward (Y Banwy – Afallon) to be the decant ward for the duration of the works	High reliance on social care to support discharge of patients for initial release of inpatient bed capacity – challenging Impact on sustaining a business as usual approach through reduced inpatient capacity	<b>Potential</b>
<b>D</b>	Provide an additional facility (i.e. modular building) on the site footprint to act as decant	Not practical due to severe site constraints and general lack of space – non-viable option	<b>Discount</b>
<b>E</b>	Purchase space from the University to decant admin areas releasing space on site for clinical services	Potential to purchase additional space likely to be favourable Unlikely that vacated space would be suitable for the delivery of clinical services	<b>Potential</b>

Table 12: Longlist Option Sifting

Options A, B, C and E will continue to be explored as part of the next stage business case process. Option C (the allocation of an existing ward for the duration of the works) is the emerging preferred option and the current cost and programme in this PBC are therefore based on Option C. Opportunities for concurrent work will be considered, should the programme for the fire safety works in this PBC and the business continuity programme align.

At this stage, Y Banwy (Afallon) within the purple block second floor is identified as the most appropriate location to operate as a decant area and an indicative sequence is for each ward block to be remediated in a top / down sequence on a floor-by-floor basis is proposed (as shown below).

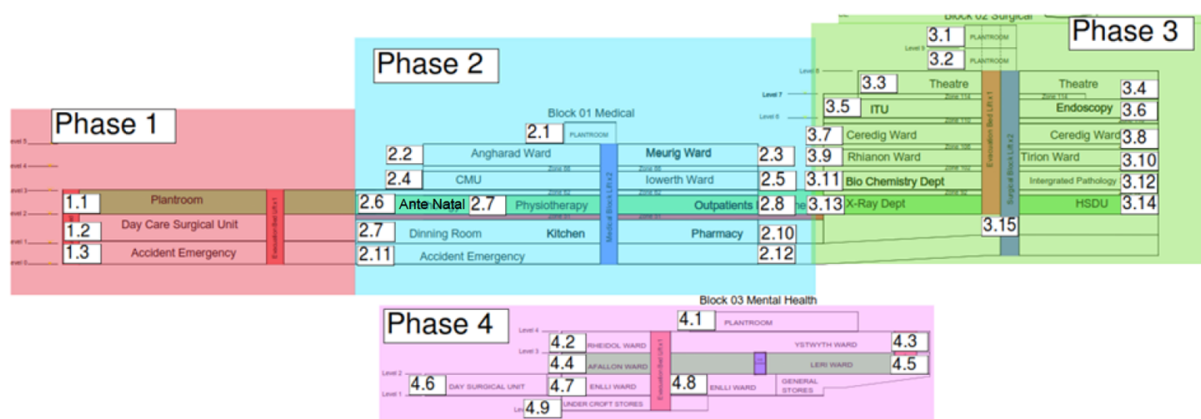


Figure 5: Proposed Phasing Sequence

### 4.2.3 Service Delivery Options

The UHB has assumed that due to the scale of the programme that a standard Building for Wales contractor procurement route will be adopted for the works in line with similar schemes at Glangwili and Worthybush Hospital sites.

### 4.2.4 Service Implementation Options

The programme of works associated with the approach described in 4.2.2 has two options:

- Basic Programme – block by block and floor by floor approach to works. Anticipated completion February 2028. The PBC is based on this approach;
- Enhanced Programme – as above but assumes simultaneous working in more than 1 block at a time. Potential reduced programme dependent on availability and size of an off-site decant location which has not been secured at this stage.

### 4.2.5 Funding Options

The UHB has assumed that in line with the schemes at Glangwili and Worthybush Hospital sites, Welsh Government funding will be required.

## 4.3 Preferred Way Forward

The UHB must comply with the requirements of the letters of fire safety matters and has therefore only considered the Do Minimum option as this ensures compliance with the Fire Enforcement requirements and sustains the hospital for the next 7 – 10 years in the context of the AHMWW Strategy. Due to the nature of the situation, and the limited options available, a single stage Business Justification Case is proposed.

The cost implications of the preferred way forward are described in Section 6.0 (Financial Case) and the timescales are as described in Section 7.0 (Management Case).

## 5.0 Commercial Case

### 5.1 Commercial Arrangements

The detailed consideration of the commercial case will take place within the next stage Business Justification Case with the commercial arrangements forming a key part of the business cases. The preferred funding option for the investment is via Welsh Government Funding as public funding is considered the only viable option.

### 5.2 Procurement Strategy

The delivery of the required solution requires procurement in relation to the design and build of fire safety improvements in accordance with the agreed brief.

The NHS Building for Wales frameworks is the preferred procurement route both due to the nature of the works and to maintain consistency in the approach at both Glangwili and Withybush Hospital sites.

The Supply Chain Partner team includes design consultant services. It is this team who will react to the current surveys, develop them in further detail and provide a cost based upon agreed delivery approach and methods. The Supply Chain Partner and associated designer will be the Principal Contractor and Principal Designer for the purpose of the Construction (Design and Management) Regulations 2015 (CDM 2015).

Due to the nature of these works, the limited options available to remedy matters and the technical nature, approval is sought from Welsh Government to adopt the Business Justification Case approach. The programme indicated within this document assume this is acceptable.

### 5.3 Personnel Implications

The internal project management arrangements and requirements for specialist advice to support the design, procurement and delivery of the projects will be reviewed on an ongoing basis to ensure that adequate resources are available to deliver projects to the quality, cost and timelines required. The resource implications for each project or work package will be identified in the BJC.

### 5.4 Proposed Charging Mechanisms

At the completion of the projects there will be no ongoing service arrangements provided by the Procurement partner and therefore no recurring charges associated with the project.

## 5.5 Potential for Risk Transfer

The general principle is that risks should be passed to “the party best able to manage them”, subject to value for money (VFM). As there is no firm or finalised procurement strategy at present this is yet to be agreed. Once agreed the contractual arrangements will address the ability to transfer risk.

Risk category	Potential Allocation		
	Public	Private	Shared
Design Risk	✓		
Construction and development risk	✓		
Transition and implementation risk	✓		
Availability and performance risk	✓		
Operating risk	✓		
Variability of revenue risks	✓		
Termination risks	✓		
Technology and obsolescence risks	✓		
Control risks	✓		
Residual value risks	✓		
Financing risks	✓		
Legislative risks	✓		
Other project risks	✓		

Table 13: Risk Allocation Matrix

## 5.6 Accountancy Treatment

All projects will be on the balance sheet of the Health Board.

## 6.0 Financial Case

### 6.1 Indicative Capital Costs

The total cost of the investment for the whole programme of work is estimated at £24,666,880 plus a WG held project risk contingency of £4.9M (total £29,599,880) as shown in Table 14. These costs will be further refined as part of the next stage business case.

Element	Totals
Programme Business Case	£30,000
Procurement Process (BJC)	£50,000
Business Justification Case	£750,000
Works Cost Phase Summary	£13,391,000
Design Fees	£3,348,000
Non-Works Costs	£1,337,000
Equipment	£14,000
<b>Sub Total</b>	<b>£18,920,000</b>
HDUHB Project Risk Contingency (allowance 10%)	£1,891,000
<b>Sub Total</b>	<b>£20,811,000</b>
VAT (20%)	£4,162,200
VAT Reclaim (assume only on HDUHB directly appointed consultants)	(£306,320)
<b>Sub Total</b>	<b>£24,666,880</b>
Welsh Government Held Project Risk Contingency (allowance 20%)	£4,933,000
<b>PBC Total (indexed at Q1 2023)</b>	<b>£29,599,880</b>

Table 14: Indicative Capital Costs

An indicative cash flow for the capital expenditure is included in Table 15:

Financial Year	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
<b>Annual</b>	£40,600	£1,039,525	£4,231,995	£7,619,580	£9,069,760	£7,598,420	£0
<b>Cumulative</b>	£40,600	£1,080,125	£5,312,120	£12,931,700	£22,001,460	£29,599,880	£29,599,880

Table 15: Indicative cash flow for capital expenditure

### 6.1.1 Capital Cost Assumptions

The detailed cost report in relation to this business case is included at Appendix 7 with the following key assumptions made in developing the capital costs for this PBC:

- Capital costs – indexed at first quarter 2023 (NB: escalation will have to be carefully considered by WG and NWSSP-SES based on the long programme duration);
- Design Fees – allowance of 25% based on benchmark data (this sum could vary greatly dependent upon scope and choice of procurement strategy);
- Non-works costs based on benchmark data;
- Equipment – based on allowance of 0.1% of works costs;
- Project risk contingency of 10% – based on GGH Phase 1 BJC strategy;
- Allowance of 20% for additional project risk contingency to be held by WG – based on GGH Phase 1 BJC strategy;
- VAT at 20% on all with VAT reclaim assumed only on consultants directly appointed by HDUHB;
- Exclusion – upgrading the existing fire alarm installation undertaken separately by HDUHB outwith this PBC;
- WG and NWSSP-SES to assess and consider escalation for the PBC from Q1 2023 to Q1 2028.

## 6.2 Revenue Implications and Affordability

For the purposes of this business case it has been assumed that there will be no additional recurrent pay and non-pay costs, with the exception of capital charges attributable to the delivery of the programme. The Health Board's assumption is that capital charges including increased depreciation and any impairment charges on completion will be funded by Welsh Government. However, should the Hafan y Waun nursing home option be pursued (Option B) following further review at the next stage, then revenue implications associated with rental of areas of the facility would require funding and be assessed as part of any future Business Justification Case. Should this option become the preferred way forward then there is potential to further reduce the delivery programme thus reducing the capital funding requirements.

## 6.3 Funding Arrangements

This programme of works requires funding from the Welsh Government NHS All Wales Capital programme.

## 7.0 Management Case

This section of the PBC demonstrates the approach that HDUHB will take to support the delivery of the programme in accordance with best practice. The programme management arrangements are aligned with those described in the Estates Infrastructure Programme Business Case ensuring that the Health Board is able to make progress against the identified key priority areas but also has sufficient flexibility to respond to changing requirements.

### 7.1 Programme Management Arrangements

The programme management structure for this programme is aligned with the Business Continuity (Major Infrastructure) Programme Approach which has been formally constituted and established in line with best practice (Managing Successful Programmes) and will be managed in accordance with PRINCE 2 methodology.

The programme of works identified within this business case will be managed via the BGH Delivery Team with direct reporting into the Project Board and the Capital Sub-Committee (CSC). A fortnightly Fire Enforcement Control Group has been established to ensure delivery of the agreed action plan (Appendix 2).

The Estates Infrastructure Programme Board will provide strategic direction in order to develop the specific capital investment proposals associated with this Programme Business Case and ensure that these are aligned with the Business Continuity (Major Infrastructure) PBC. Progress will be reported to the Health Board via the Capital Sub-Committee as illustrated in Figure 6 below.

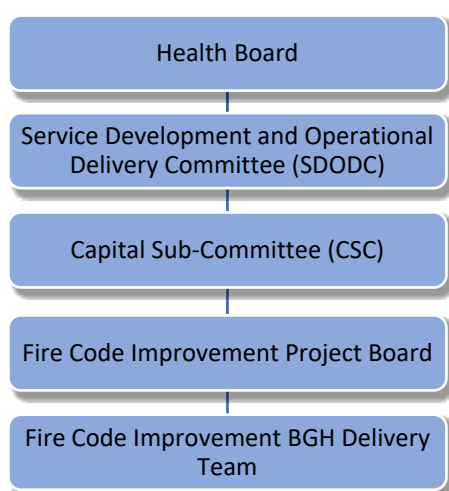


Figure 6: Governance Structure



## 7.1.1 Programme Roles and Responsibilities

The Health Board Director of Operations is the formal Senior Responsible Officer (SRO) and will ensure that the programme meets its overall objectives and delivers its expected benefits. The Director of Estates, Facilities and Capital Management is the Programme Director who will be responsible for the successful delivery of the programme.

Role	Responsibility
Project Board	<p>Responsible for successful delivery of the Programme to meet MWWFRS requirements:</p> <ul style="list-style-type: none"> <li>• Monitor programme / project plan for completion at key stages in capital investment process and monitor on a monthly or as required basis;</li> <li>• Provide strategic leadership and direction to the Delivery Team;</li> <li>• Approve project plan for completion of key stages and monitor on behalf of HDUHB;</li> <li>• Provide a challenge mechanism for the project;</li> <li>• Receive project reports and outputs ensuring sufficient detail is provided;</li> <li>• Progress strategic specific issues and monitor the associated work programmes;</li> <li>• Support the development of technical briefs and outline design in conjunction with the Delivery Team;</li> <li>• Ensure that there are adequate project management arrangements in place;</li> <li>• Brief WG / MWWFRS on a regular basis to ensure good communication and understanding of project;</li> <li>• Monitor capital costs;</li> <li>• Support and guide the development of technical documentation in support of the delivery team and approval of the Health Board.</li> </ul>
Delivery Team	<p>Responsible for delivering the projects</p> <ul style="list-style-type: none"> <li>• Develop programme / project plan for completion at key stages in capital investment process and monitor on a monthly or as required basis;</li> <li>• Implementation of project plan activities on a daily basis;</li> <li>• Develop and monitor project planning, phasing and sequencing programme;</li> <li>• Manage associated work programme;</li> <li>• Provide operational and technical lead for the site;</li> <li>• Communicate with the site operational managers and master planning team;</li> <li>• Ensure suitable project management arrangements are in place;</li> <li>• Implement project systems and controls e.g. risk, change management;</li> <li>• Issue regular progress reports to the Programme Board;</li> <li>• Develop capital costs;</li> <li>• Develop BJs;</li> <li>• Participate in internal and external audit processes.</li> </ul>

Table 16: Programme Roles and Responsibilities

## 7.1.2 Use of Special Advisors

The following team of specialist advisors has been appointed to by the Health Board to support the PBC. Additional advisors will be appointed to support the individual projects as appropriate.

Advisor	Responsibility
MACE Ltd	Project Management
Lee Wakemans Management	Quantity Surveyors / Cost Advisors
Strategic Healthcare Planning	Business Case Authors

Table 17: Specialist Advisors

## 7.2 Programme Milestones

At the next stage in the business case process, HDUHB will expedite the detailed exploration of the preferred way forward for the various components of the programme through the development of appropriate scoping strategies and business cases for approval. An indicative programme for delivery of the proposed work packages has been included within this business case. The Programme Director will ensure that subsequent business cases are developed in accordance with the agreed programme.

The proposed programme is included in Appendix 6 with the key milestones shown in Table 18:

Milestone	Timeline
PBC submission to WG	April 2023
WG approval to proceed	May 2023
Appointment of PSCP / Design Team	September 2023
BJC submission to WG	October 2024
WG approval to proceed	December 2024
Commencement of works on site	January 2025
Completion of Works	February 2028

Table 18: Programme Milestones

## 7.3 Arrangements for Change Management

The Health Board recognises the challenges associated with delivery of these works whilst maintaining an operational site and works will be implemented in a systematic way that causes the least disruption to services. The project structure has been established to implement the necessary changes and ensure operational management leadership remains central to this.

To take this process forward working groups will be established during the further development of the BJC involving the key hospital managers and nursing heads, or delegated leads. These groups will be fully consulted with regards to any changes to the works that may impact the provision of health services. Any fundamental changes to the project scope or timeline will be authorised in advance by the Project Director and established Project Board.

## 7.4 Risk Management

There are a number of objectives from the implementation of a robust risk management process:

- Secure predictability: by analysing the risks, greater insight can be gained into the likelihood of successfully delivering the project within budget, on programme and to the required quality;
- Manage the risk exposure proactively: a clear understanding of the threats and opportunities will ensure that robust mitigation strategies can be put in place and opportunities are realised. This significantly reduces the chance of failure through a constant reassessment of the project's risk profile;
- Define mitigation strategies: provide clear mitigation strategies and action plans which are to be addressed by the appropriate owners;
- Ensure opportunities are both identified and realised;
- Address contingency management: ensure that the contingency of both client and contractor allowances are managed, providing adequate cover for identified risks. If the opportunity arises to release contingency back in to working capital this should be addressed in line with the requirements of the project.

Risk management helps with matters of cost control and with overall project delivery by assessing potential problems and formulating mitigation measures through the implementation of a structural approach so that:

- Potential risks to a project are identified;
- Management action plans are drafted as a response to the risks;
- Contingencies can be allocated to reflect identified risks;
- An audit trail is produced for the decisions taken;
- There is increased team understanding of the project and of the implications of certain courses of action;
- Risk events are responded to more swiftly and effectively.

Risk management will be an ongoing project control measure that encourages all participants to be proactive in identifying areas of concern and potential risk that can, when identified at an early enough stage, be managed to reduce / eradicate the impact on the programme.

A risk register will be developed to record and log details of any item or event which is considered by the project team to put the objectives of the programme at risk as part of the next stage business case.

The risk register is a management tool that logs potential risks to the programme, primarily driven by health and safety, cost, programmes delays or any other risks that may be relevant to its successful completion.

The register is a live document and will be updated at regular intervals in Project Team and Board meetings as appropriate. The Project Manager will manage and retain ownership of the risk register throughout the programme. The risk register will be updated by both adding newly identified risks and reallocating risk funds where activities no longer pose risk.

## 7.4.1 Main Risks

At this early stage of the programme, the most significant risks (risk score 16 and above) have been identified. These will be further reviewed as part of the development of the detailed risk register at the next stage:

Risk	Mitigation Measure
Control of noise – noise levels during construction not acceptable to hospital causing works to stop	Hospital to advise any times/periods when specific restrictions apply during early meetings. Individuals identified with authority to stop works. SCP to maintain regular contact with operational team to resolve issues associated with disruption ASAP.
Disruption to existing services during construction impacting on hospital services	Liaise with Hospital regularly throughout the project. Contractor strategy to be developed to deal with such circumstances.
Ward disruption to works – Events happening on wards results in contractors having to stop works	Suitable contingency/float to be allowed in programme AND/OR Suitable decant strategy to be prepared and agreed AND/OR Individual rooms to be vacated as per Phase 1 phasing strategy
Fire Precaution works required in key function / high risk areas that must remain operational. E.g. Pharmacy and Labs result in increased cost/duration	Stakeholder meeting to be arranged to discuss approach to working in these areas.
Incomplete / restricted surveys not identifying the entire scope of fire stopping (both sides of wall / entire length of corridors etc)	Establish fire stopping works from other side SCP reviewing and have identified gaps.
Extent of asbestos works / incomplete surveys underestimated	Survey where possible and proceed with caution. Asbestos removal required in U G Duct – stakeholder workshops to be

Risk	Mitigation Measure
	arranged to discuss detailed scope to ensure all aligned in expectations
Capital costs underestimated at BJC	Score updated in line with experience at similar sites. Risk scored high however estimates on cost, programme impact and mitigation actions are covered through the risks on the register.
Significant changes in inflation of key materials / labour or shortages	Contractor to procure the materials in a timely manner
Increased costs due to unknown works	Survey wherever possible.
Unrealistic programme set for the main construction phase.	Detail surveys will determine any issues.
Nature and location of works leads to lack of contractor / tender interest	Review with NWSSP for framework interest. Consider meet the buyer type event.

Table 19: Main Risks

## 7.5 Benefits Realisation

The main benefit from this project will be HDUHB compliance with fire regulations and the MWWFRS letters of fire safety matters, avoiding closure of the hospital and supporting the safe delivery of patient services. Additional benefits in relation to reduced backlog maintenance and a comprehensive concise fire strategy for the site will also be realised.

## 7.6 Contingency Plans

There are no contingency plans should this project fail to achieve approval. The Health Board are at risk of receiving further enforcement notices which would impact on delivery of all hospital services.

## 7.7 Programme Assurance

### 7.7.1 Risk Potential Assessment

The impact of the programme has been scored against the risk potential assessment (RPA) model (Appendix 8). The project has been assessed as low risk which will continue to be monitored via the Project Board and escalated as required.

### 7.7.2 Equality and Health Impact Assessment

Due to the nature of this business case, the Health Board has determined that an Equality and Health Impact is not required. Ensuring that buildings are compliant with fire safety regulations will improve the safety for all patients, staff and visitors to the hospital.

### 7.7.3 Integrated Impact Assessment

An Integrated Impact Assessment (IIA) has been completed by the Health Board to determine impact on service and workforce (Appendix 9).

As an infrastructure upgrade project there are no long-term impacts anticipated, however there will be disruption to services during the delivery phase of the works. The aim is to minimise this impact and a communications plan will be developed to keep staff informed throughout the works duration.

## 7.8 Post Project Evaluation

The Programme Board will ensure that post project evaluation will be undertaken in accordance with Welsh Government requirements, the details of which will be included in the business justification case.

The Health Board is committed to ensuring that a thorough and robust post-project evaluation (PPE) is undertaken to ensure that positive lessons can be learnt from the project. The lessons learnt will be of benefit to:

- HDUHB – in using this knowledge for future projects including capital schemes;
- Other key local stakeholders – to inform their approaches to future major projects;
- The NHS more widely – to test whether the policies and procedures which have been used in this procurement are effective.

PPE also sets in place a framework within which the benefits realisation plan can be tested to identify which benefits have been achieved and which have not. NHS guidance on PPE has been published and the key stages which are applicable for this programme are:

- Evaluation of the project procurement stage;
- Evaluation of the various processes put in place during implementation;
- Evaluation of the project in use shortly after the works are completed.

## 8.0 Conclusion and Recommendations

This business case sets the required actions and proposed approach to works for Hywel Dda University Health Board to be compliant with fire safety regulations. MWWFRS have aligned the target completion dates for all actions with the proposed contractor programme and it is anticipated that will review progress with the Health Board once works have commenced.

The Health Board must comply within the stipulated timeframe set by the Mid and West Wales Fire and Rescue Service or risk prosecution and ultimately the potential closure of Bronglais Hospital.

It is requested that Welsh Government:

- Endorse this business case based on the proposed cost and approach to delivery of work and support the resource requirements in terms of fees to progress the BJC;
- Acknowledge the MWWFRS expectations for completion of works by October 2027:
  - The UHB anticipate MWWFRS realigning the milestones to meet agreed programme based on similar agreements on both the WGH and GGH sites.

## 9.0 Glossary of Abbreviations

Abbreviation	Definition
AHMWW	A Healthier Mid and West Wales: Our Future Generations living well
BGH	Bronglais General Hospital
BJC	Business Justification Case
CDM	Construction (Design and Management)
CEIMTS	Capital, Estates, Information Management and Technology sub-committee
CSF	Critical Success Factor
FM	Facilities Management
GGH	Glangwili General Hospital
GIFA	Gross Internal Floor Area
HBN	Health Building Note
HDUHB	Hywel Dda University Health Board
HTM	Health Technical Memoranda
IM&T	Information Management and Technology
MWWFRS	Mid and West Wales Fire and Rescue Service
NHS	National Health Service
PBC	Programme Business Case
PPE	Post Project Evaluation
PPH	Prince Philip Hospital
SRO	Senior Responsible Officer
TBC	To Be Confirmed
UHB	University Health Board
VAT	Value Added Tax
VFM	Value for Money
WGH	Withybush General Hospital
WG	Welsh Government
WHTM	Welsh Health Technical Memoranda



## 10.0 Appendices

1. Letters of Fire Safety Matters
2. BGH Fire Precaution Works Action Plan
3. Proposed Fire Compartmentation
4. Area Demarcations
5. Emergency Lighting Upgrade Areas
6. Project Programme
7. Capital Costs
8. Risk Potential Assessment
9. Integrated Impact Assessment