



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

DYDDIAD Y CYFARFOD: DATE OF MEETING:	26 August 2021
TEITL YR ADRODDIAD: TITLE OF REPORT:	Business Justification Case (BJC) for Phase I of Fire Enforcement Notices (FENs) and Letters of Fire Safety Matters (LoFSMs) at Glangwili General Hospital (GGH)
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Andrew Carruthers, Director of Operations
SWYDDOG ADRODD: REPORTING OFFICER:	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

This report sets out the next stage in delivering the Capital investment necessary to comply with the FENs and LoFSMs in place on the GGH site.

The BJC document referred to in this report and attached at Appendix 1 sets out the Capital investment required for Phase 1 of fire enforcement works at GGH.

Cefndir / Background

The Mid and West Wales Fire & Rescue Service (MWWFRS), as part of its normal routine inspection, visited GGH on 24th February 2020 to undertake an inspection of Fire Safety. As a result of this inspection, FENs and LoFSMs were issued on the GGH site.

Hywel Dda University Health Board (HDdUHB) has worked closely with MWWFRS in developing a detailed implementation programme which allows the works to be undertaken in an operational acute hospital. This has resulted in the MWWFRS reissuing their FENs in the following stages, reflecting the dates from the HDdUHB implementation plan:

- Advance Works Contract – Vertical escape routes in main hospital core blocks and residential accommodation **(FEN KS/890/07) – works due for completion September 2021.**
- Phase 1 – Main horizontal compartmentation in main hospital core block and associated residential accommodation including main plant rooms and underground service ducts. **(FEN KS/890/08) – anticipated works start date September/ October 2021 subject to WG approvals.**
- Phase 2 – All departments / ward areas/ risk rooms **(FEN KS/890/09) – anticipated works start date January 2023 subject to WG approvals.**

Throughout the development of the above, HDdUHB has worked closely with Welsh Government (WG) to appraise them of progress and works planned in future.

The MWWFRS is fully involved in regular discussions with HDdUHB on progress and is supportive of actions to date. The service remains committed to supporting HDdUHB to complete all of these works.

Asesiad / Assessment

The next stage of the Implementation Programme at GGH is Phase 1, as noted above.

HDdUHB, supported by the Supply Chain Partner and appointed Project Manager and Cost Advisor, has developed the complete BJC and technical annexes to deliver the Phase 1 aspect of the FENs. Note: The technical annexes are not included due to their size; however they are available should they be required.

The development of the BJC has included extensive involvement of the General Management Team at GGH in order to organise the works with the minimum disruption possible.

The BJC for Phase 1 now indicates a completion date of December 2022. It should be noted that this is circa 5 months beyond the FEN date.

This has been discussed with MWWFRS, who have confirmed that they will manage this in the same way as the WGH FPS with a further inspection towards the end of the project when they will then issue the required extension.

The BJC also sets out the Capital needs for Phase 1, together with extensive detail of the fire engineering solutions included within the various technical annexes. The complexity of the Project has increased substantially from the initial Programme Business Case (PBC), following the detailed survey and design solutions developed by the Supply Chain Team.

In summary, the Capital cost of the Project is as follows:

- Basic Project Outturn Cost - £13,138,441.
 - Total Quantified Risk Contingency - £3,311,062
 - Total Outturn Cost (including contingency) £16,449,503
- (All of the above are inclusive of VAT)

It should be noted in the above summary that the figure of £3,311,062 for quantified risk contingency funding has been included following discussions with WG and agreement on an innovative way of dealing with contingency risk in terms of capital outturn. This element of funding can only be accessed by HDdUHB should the Project require additional funding.

This arrangement was negotiated as the contract will be based on the New Engineering Contract (NEC) Contract Option E rather than the normal Design For Life NEC Option C which is a shared risk contract based on a defined scope of works. Therefore, the contract will operate on a cost plus/ cost reimbursement basis where the contractor must fully justify all costs incurred and they will then be paid on this basis, with the addition of profit and overheads.

This major change was undertaken by WG following the reluctance of any national framework contractors to express an interest in the Project under the normal Option C target cost arrangements, due to the complexity of the Project.

This arrangement offers additional support to HDdUHB in the case of escalating capital costs as the works progress and is fully recognised as necessary by WG scrutiny teams.

HDdUHB has been in regular dialogue with WG regarding the development of capital cost and the technical fire engineering solutions required.

As noted above, the introduction of an Option E form of Contract was necessary in order to attract interest from WG-appointed Supply Chain contractors. The introduction of this contractual arrangement has implications for a range of contractual clauses, but particularly the ability of the Health Board (HB) to introduce Liquidated and Ascertained Damages (LADs) into the Contract conditions.

This matter has been fully discussed with Capital Audit and a paper has been presented and approved under their direction to the Project Group for full consideration. The key issue here is the ability of the HB to recover these damages versus the increased cost to the Contract that the Contractor would be able to charge. The review undertaken by our Technical Advisors and supported by Capital Audit is that it is extremely unlikely due to the nature of this contract that the HB would be able to impose any LADs. In addition, the cost to the Contract would be in the order of 100k plus to introduce this clause into the Contract. This is not deemed good Value for Money for the organisation and this position is supported by Capital Audit.

In order to ensure that the HB introduces the appropriate governances and challenge arrangements with the Contractor on any issue around cost overrun or Contract programming, the HB has increased scrutiny and monitoring in a number of areas, which has been discussed and agreed with Capital Audit. These measures will form part of the normal audit review undertaken by Capital Audit during the progression of the project. These measures include:

- Appointment of a Supervisor – To monitor works underway and record site resources. This will particularly be the case in recording on a daily basis staff numbers engaged on the project and the specific grades, in order to continually monitor staff costs.
- Monthly Contractor Account Review – full verification of actual costs in terms of materials and labour.
- Regular Project Group reports on project programme delivery - the Supervisor report to each monthly meeting will cover a review of site productivity and will record any disallowable costs etc.
- Budget Cost Review as Phases complete – as the Project is established and Phases are completed, and signed off, the HB will develop a template of cost and programming standards which will aid the monitoring of the remainder of the Project.

This process is currently in place for the WGH FPS scheme which has recently commenced on site. Any 'lessons learned' from the WGH project will be reflected in the GGH project.

Argymhelliad / Recommendation

The Strategic Development and Operational Delivery Committee is asked to support the submission of the BJC to progress with the Phase 1 works to WG, for Chairs Action if required prior to ratification by the Board.

Amcanion: (rhaid cwblhau) Objectives: (must be completed)	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	3.2 Review business cases, prior to Board approval, including the development of the Programme Business Case for the new hospital and the Programme Business Case for the repurposing of the Glangwili and Withybush General Hospital sites (PO 5C and 5D), underpinned by a robust process for continuous engagement to support delivery (PO 2C).
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	Risk 815 (Score 15 – extreme) Failure to fully comply with the requirements of the Regulatory Reform (Fire Safety) Order 2005
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	2.1 Managing Risk and Promoting Health and Safety
Amcanion Strategol y BIP: UHB Strategic Objectives:	4. Improve the productivity and quality of our services using the principles of prudent health care and the opportunities to innovate and work with partners.
Amcanion Llesiant BIP: UHB Well-being Objectives:	10. Not Applicable

Gwybodaeth Ychwanegol: Further Information:	
Ar sail tystiolaeth: Evidence Base:	Extensive site bases survey information and direct input from key operational estate staff
Rhestr Termiau: Glossary of Terms:	Explanation of terms is included in the body of the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Datblygu Strategol a Chyflenwi Gweithredol: Parties / Committees consulted prior to Strategic Development and Operational Delivery Committee:	Members of the CE&IM&TSC have been asked for any comment on the BJC documents. Any comments received will be shared with SDODC.

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	Funding sought from Welsh Government
Ansawdd / Gofal Claf: Quality / Patient Care:	Not Applicable
Gweithlu: Workforce:	Delivering a sustainable estate to support Clinical Functions

Risg: Risk:	Business Continuity Management
Cyfreithiol: Legal:	Risk of enforcement from external agencies
Enw Da: Reputational:	Not Applicable
Gyfrinachedd: Privacy:	Not Applicable
Cydraddoldeb: Equality:	Not Applicable

Hywel Dda University Health Board

Glangwili General Hospital: Fire Precaution Upgrade Works

Phase One Business Justification Case

Version: 1

19 July 2021

Version Control

Version	Date Issued	Notes	Issued To
0.1	24 May 2021	Shell Document	Jason Wood
0.2	15 June 2021	Incorporation of client feedback	Jason Wood
0.3	8 July 2021	Incorporation of capital costs	Jason Wood
1.0	19 July 2021	Final Issue	Jason Wood

Contents

1.0	Executive Summary	1
1.1	<i>Strategic Case</i>	2
1.1.1	Required Works.....	3
1.2	<i>Economic Case.....</i>	4
1.3	<i>Commercial Case</i>	5
1.3.1	Procurement Strategy	5
1.3.2	Service Requirements.....	5
1.3.3	Contractual Arrangements	6
1.3.4	Payment Arrangements	6
1.4	<i>Financial Case</i>	6
1.4.1	Capital Costs	6
1.4.2	Revenue Implications and Affordability.....	7
1.4.3	Funding Arrangements.....	7
1.5	<i>Management Case</i>	8
1.5.1	Programme Management Arrangements	8
1.5.2	Project Milestones.....	8
1.5.3	Arrangements for Contract Management	9
1.5.4	Main Risks.....	9
1.5.5	Main Benefits.....	11
1.5.6	Programme Assurance	11
1.5.7	Post Project Evaluation	11
1.5.8	Contingency Plans	11
1.6	<i>Conclusion and Recommendations</i>	12
2.0	Introduction	13
2.1	<i>Scope of Document.....</i>	13
2.2	<i>Document Structure.....</i>	13
3.0	Strategic Case	15
3.1	<i>Organisational Overview</i>	15
3.1.1	Hywel Dda Health and Care Strategy	15
3.1.2	Summary of Financial Standing.....	16
3.2	<i>Policy Context.....</i>	18
3.3	<i>Programme Investment Aims</i>	18
3.4	<i>Existing Arrangements</i>	19
3.5	<i>The Case for Change</i>	22
3.5.1	Fire Enforcement Notices.....	23
3.5.2	Immediate Works	27
3.5.3	Advanced Works	27
3.5.4	Outstanding Works.....	28
3.5.5	Changes to Scope since PBC.....	29
3.6	<i>Business Needs.....</i>	30
3.7	<i>Potential Scope and Service Requirements</i>	30
3.8	<i>Covid-19.....</i>	30
3.9	<i>Main Benefits</i>	31

3.10	<i>Main Risks</i>	31
3.11	<i>Constraints</i>	31
3.12	<i>Dependencies</i>	31
4.0	Economic Case	32
4.1	<i>Critical Success Factors</i>	32
4.2	<i>Main Options</i>	32
4.3	<i>Preferred Way Forward</i>	33
5.0	Commercial Case	34
5.1	<i>Procurement Strategy</i>	34
5.1.1	<i>Contract Type</i>	34
5.2	<i>Service Requirements and Outputs</i>	35
5.3	<i>Planning</i>	35
5.4	<i>Commercial Arrangements</i>	35
5.4.1	<i>Contractual Arrangements</i>	36
5.4.2	<i>Payment Arrangements</i>	36
5.4.3	<i>Proposed Charging Mechanisms</i>	36
5.5	<i>Quality Assurance / Standards Compliance</i>	36
5.6	<i>Personnel Implications</i>	37
5.7	<i>Potential for Risk Transfer</i>	37
5.8	<i>Accountancy Treatment</i>	38
6.0	Financial Case	39
6.1	<i>Indicative Capital Costs</i>	39
6.1.1	<i>Capital Cost Assumptions</i>	40
6.1.2	<i>Changes in Capital Cost Assumptions from PBC</i>	40
6.2	<i>Revenue Implications and Affordability</i>	41
6.3	<i>Funding Arrangements</i>	41
7.0	Management Case	42
7.1	<i>Programme Management Arrangements</i>	42
7.1.1	<i>Programme Roles and Responsibilities</i>	43
7.1.2	<i>Use of Special Advisors</i>	44
7.2	<i>Programme Milestones</i>	45
7.2.1	<i>Phasing Strategy</i>	45
7.3	<i>Arrangements for Contract Management</i>	46
7.4	<i>Arrangements for Change Management</i>	47
7.5	<i>Risk Management</i>	47
7.5.1	<i>Risk Register</i>	48
7.5.2	<i>Main Risks</i>	49
7.6	<i>Benefits Realisation</i>	50
7.7	<i>Programme Assurance</i>	50
7.7.1	<i>Risk Potential Assessment</i>	50
7.7.2	<i>Equality and Health Impact Assessment</i>	51
7.7.3	<i>Integrated Impact Assessment</i>	51
7.7.4	<i>Integrated Assurance and Approval Plan</i>	51
7.8	<i>Post Project Evaluation</i>	51
7.8.1	<i>Stage 1 Evaluation: Project Procurement</i>	52

7.8.2	Stage 2 Evaluation: Implementation	52
7.9	Contingency Plans.....	53
8.0	Conclusion and Recommendations.....	54
9.0	Glossary of Abbreviations	55
10.0	Appendices	57

Index of Tables

Table 1:	Enforcement Notice Timelines for Compliance	3
Table 2:	Indicative Capital Costs	7
Table 3:	Indicative cash flow for capital expenditure	7
Table 4:	Programme Milestones	8
Table 5:	Main Risks.....	10
Table 6:	Glangwili General Hospital Site – 2019/20 Backlog Maintenance Liability	20
Table 7:	Fire Enforcement Notice – areas of non-compliance	24
Table 8:	Revised Enforcement Notices	25
Table 9:	Letter of Fire Safety Matters.....	26
Table 10:	Risk Allocation Matrix.....	37
Table 11:	Indicative Capital Costs	39
Table 12:	Indicative cash flow for capital expenditure	39
Table 13:	Changes in capital costs from PBC	41
Table 14:	Programme Roles and Responsibilities	44
Table 15:	Specialist Advisors.....	44
Table 16:	Programme Milestones	45
Table 17:	Phasing Plans.....	46
Table 18:	Main Risks.....	50

Index of Figures

Figure 1:	Glangwili Hospital Site - Age profile of the existing estate	20
Figure 2:	GGH Building Condition Plan.....	21
Figure 3:	Governance Structure.....	43

1.0 Executive Summary

Following visits from the Mid and West Wales Fire and Rescue Service (MWWFRS) to Glangwili General Hospital in February 2020, Hywel Dda University Health Board (HDUHB) received an enforcement notification in relation to compliance with fire safety regulations.

A Programme Business Case was submitted to Welsh Government in October 2020 detailing a need for capital investment to enable the Health Board to achieve compliance within the stipulated timescales. The main risk associated with this BJC is the failure to comply with the fire enforcement notices which has a risk of prosecution and potentially the enforced closure of identified buildings.

This Business Justification Case (BJC) sets out the required investment and proposed programme of works in relation to Phase One of the required fire precaution upgrade works for Glangwili General Hospital.

The approach to the works has been developed to ensure minimum disruption and congestion on the site as possible and has an overall construction programme of 66 weeks. This programme will result in the completion of works in December 2022, which does extend the MWWFRS stipulated expectation for compliance with the enforcement notices by July 2022. Based on the approach MWWFRS have taken to the WGH site, the Health Board expectation is that the fire service will hold a review meeting once the works are underway and enforcement notices will be aligned with the anticipated construction programme.

The capital costs outturn at an estimated cost of **£16,449,503** including VAT. This includes both the quantified risk contingency held by the Health Board and an additional quantified risk contingency to be held by WG reflecting the level of risk associated with the project.

The BJC seeks formal endorsement from Welsh Government (WG) for:

- Approval to proceed with the Main Works: Phase One;
- Release of the associated capital funding.

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

In 2020, the Mid and West Wales Fire and Rescue Service (MWWFRS) issued the Health Board with an enforcement notice due to failure to comply with provisions of the Regulatory Reform (Fire Safety) Order 2005 because people were unsafe in case of fire. Enforcement notice KS/890/06 dated 17 April 2020 required the Health Board to remedy a number of specific areas by 16 October 2020 (Appendix 1).

The Health Board met with MWWFRS on the 16 June 2020 to review progress against both the GGH fire enforcement notice and those that had previously been issued for Worthybush General Hospital (WGH). MWWFRS recognised that there had been impact on the operations of the Health Board due to effects of the Covid-19 pandemic and agreed to an extension of the original remedial date of October 2020 to February 2021.

The Programme Business Case (PBC) submitted in October 2020 detailed the outstanding works relating to compartmentation, fire resisting doors and fire damper systems which require substantial further investigation, planning of work and financial investment to remedy. A series of technical surveys were 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 could not be fully determined.

The proposed approach to delivery of the works set out in the PBC was to immediately address the most urgent works and to group the main package of works into two phases to remediate the fire compartmentation on the main hospital and associated residential accommodation blocks.

- Immediate Works: those works requiring immediate resolution including items of housekeeping, testing of emergency lighting and dry riser systems);
- Advanced Works: those works against which rapid progress was required including escape stairwells in the main hospital core block and associated residential accommodation block.
- Phase 1 will resolve the main horizontal compartmentation lines within the main hospital and associated residential accommodation i.e. escape routes, compartmentation between wards and departments and upgrading and provision of fire and smoke dampers and fire doors including main plant areas and underground service duct (subject of this BJC);
- Phase 2 will resolve the existing horizontal sub-compartments, vertical compartmentation, hazard rooms within departments and ancillary buildings plus additional lobbied approaches to escape stairwells (subject of a subsequent BJC).

The UHB met with MWWFRS in October 2020 and January 2021 to explain the proposed approach to works as described in the PBC. MWWFRS agreed to the approach and amended the enforcement notices to align with the proposed delivery programme (Appendix 4):

Enforcement Notice	Work Package	Action	Timeline
KS/890/07	Advanced Works	Vertical Escape Routes	31 August 2021
KS/890/08	Phase One Works	Main horizontal compartmentation lines within the main hospital and associated residential accommodation including main plant areas and underground service ducts	31 July 2022
KS/890/09	Phase Two Works	Horizontal sub-compartments, vertical compartmentation, hazard rooms within departments and ancillary buildings plus additional lobbied approaches to escape stairwells	31 August 2024

Table 1: Enforcement Notice Timelines for Compliance

Following approval of the PBC, the Advanced Works (those works against which rapid progress was essential) commenced on site in May 2021 and will complete during September 2021.

A further visit to site was undertaken by MWWFRS in June 2021 and a Letter of Fire Safety Matters was subsequently issued (Appendix 5). This identified elements requiring immediate attention (compliance within one month of date of letter), plus additional items to be addressed in line with the programme described in Table 1 above (relating to compartmentation and fire doors).

1.1.1 Required Works

The outstanding Phase One works (subject of this BJC) include the upgrade of existing main compartment walls to achieve agreed fire resistance rating, fire stopping throughout and repairs and / or replacement of fire doors along with integration of new fire / smoke dampers at the main compartment lines. The requirement for compliance is for works to be completed by end of July 2022.

The Phase 1 scope includes:

- Removal and replacement of suspended ceilings as necessary;
- Treatment of asbestos if impacted by the works;
- Repairs and replacement of defective fire door sets and furniture;
- Fire compartmentation improvement works as required both horizontally and vertically;

- Mechanical engineering installations including fire / smoke dampers (FDS) and associated ductwork;
- Control panels, temporary diversion of services to facilitate the works and associated builders work in connection (BWIC);
- Electrical installations modifications including door controls, minor alterations, minor fire alarm modifications to align with revised fire strategy.
- Temporary diversions as required including power, lighting, comms, alarms, ductwork and medical gas etc and associated BWIC.

In order to maintain the safety of staff, patients and visitors to the GGH site, the UHB must comply with the MWWFRS fire enforcement notices and failure to adhere could result in prosecution and potential an enforced closure of buildings.

Following discussion with MWWFRS the enforcement notices were aligned to the anticipated schedule of works requiring the works associated with this BJC to be completed by July 2022. It is now anticipated that MWWFRS will undertake a further visit once the works are underway and will align the enforcement notices to reflect the agreed contracted programme.

1.2 Economic Case

The Health Board have assessed the available options and determined that there are only two available options:

- Do nothing and risk prohibition notices;
- Undertake the works required to comply with the enforcement notices.

The approach to options development and appraisal was reviewed with NHS Wales Shares Services Partnership Specialist Estates Services (NWSSP-SES) in January 2021 where there was agreement that there is only one viable option available to the Health Board which is to undertake the works as required by MWWFRS. Adopting the phased approach to the works will allow for a continual programme of improvement and will allow more time to detail the requirements for the Phase Two works and how these can be approached to minimise the impact on operational services as far as possible.

This option ensures compliance with the Fire Enforcement requirements and sustains the hospital for the next 7 – 10 years in the context of the AHMWW Strategy.

The Do Nothing option risks further enforcement notices being served and potentially enforced closure of buildings. As this is not seen as a viable option, in agreement with WG, a Generic Economic Model (GEM) has not been completed for the scheme.

1.3 Commercial Case

1.3.1 Procurement Strategy

The Health Board has procured the design and construction elements of the proposed scheme through the NHS Building for Wales framework. 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).

The project is complicated in that it is impossible to assess the quantum and full nature of the works required in all areas prior to the business case submission, the elements being above ceiling in live wards and the sheer extent of survey and disruption that would be caused to the hospital. As such, the procurement strategy has had to respond to the level of risks and hence the procurement process is based on NEC Option E (cost reimbursable contract). This approach has been agreed with WG and NWSSP SES.

1.3.2 Service Requirements

This BJC states a requirement for the delivery of the Fire Safety Precautions scheme under the NEC3 Engineering & Construction (ECC) Form of Contract (Option E) and Designed for Life: Building for Wales Framework.

A series of design proposals are available to support the functional content, based on Health survey reports and building notes and latest available guidance. A full copy of the latest version of the design proposals is included as an appendix to the Estates Annex.

This BJC covers the Phase 1 works only, Phase 1 being the main horizontal escape route and associated compartment walls. Phase 2 is to follow via a separate business case and will cover horizontal sub-compartments, vertical compartmentation and hazard rooms, which are mainly in the departments and ancillary buildings plus additional lobbied approaches to escape stairwells. The requirement for decant accommodation will also be further considered as part of Phase 2.

A phasing methodology and approach to delivering the works has been agreed in principle with the hospital management team and is further detailed within the estates annex.

Planning permission is not required for the Phase 1 works.

1.3.3 Contractual Arrangements

Contractual Arrangements with all parties have been entered into using the NEC contract as prescribed under the Framework. Due to the nature of the project, an Option E Contract (cost reimbursable contract) has been negotiated. This is a change to the framework standard of the NEC Option C form and as such it has required substantial amendments and re-writing. The final contract has been prepared and signed by all parties.

Other than the change to NEC Option E, there are no key contractual clauses over and above the standard framework clauses, although requirements for AEDET, NEAT, BIM and BREEAM in relation to this project will be amended through local contract amendment.

1.3.4 Payment Arrangements

The Health Board have made, and will continue to make, payments to the externally appointed team in respect of products and services as follows:

- The contract will be managed by Hywel Dda University Health Board under the NEC3 Option E Target Cost Contract with regards to the Project Manager and Cost Advisor appointments, in line with 'Building for Wales' Framework terms and conditions;
- The contract will be managed by Hywel Dda University Health Board under the NEC3 Option E Cost Reimbursable with regards to the Supply Chain Partner appointment in line with 'Building for Wales' Framework terms and conditions.

The Project Bank Account process has been initiated and the account details verified by the Health Board as required. Following BJC approval, the Project Bank Account will be activated.

1.4 Financial Case

The capital costs of the preferred option outturn at an estimated cost of **£16,449,503** including VAT and the quantified risk contingencies held by both the Health Board and WG.

1.4.1 Capital Costs

Capital cost forms are included at Appendix 7 and summarised in the table below:

Element	Capital Costs
Works Cost	£7,611,593
Fees	£1,951,648
Non-works Costs	£629,839
Equipment	N / A
Quantified Risk Contingency	£905,713
Project Sub Total (excl. VAT)	£11,098,793
VAT	£2,039,647
Project Outturn Cost (inc. VAT)	£13,138,441
WG General Risk Contingency	£2,759,218
VAT	£551,844
Risk Contingency Total (inc. VAT)	£3,311,062
Forecast Project Outturn Cost (inc. VAT)	£16,449,503

Table 2: Indicative Capital Costs

An indicative cash flow for the capital expenditure (including the additional quantified risk contingency held by WG) is included in Table 3.

2020/21	2021/22	2022/23	2023/24	Total
£50,618	£7,786,942	£8,381,739	£230,203	£16,449,503

Table 3: Indicative cash flow for capital expenditure

1.4.2 Revenue Implications and Affordability

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. The estimated Annually Managed Expenditure (AME) Impairment charge is £11,471,512 and annual Departmental Expenditure Limit (DEL) depreciation charge is £129,428.

1.4.3 Funding Arrangements

This project requires further funding from the Welsh Government NHS All Wales Capital programme.

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 WGH Delivery Team with direct reporting into the Project Board and the Capital, Estate, Information Management and Technology Sub-Committee (CEIMTS). A fortnightly Fire Enforcement Control Group has been established to ensure delivery of the agreed action plan.

The Health Board Director of Operations (Andrew Carruthers) 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 (Rob Elliott) is the Programme Director who will be responsible for the successful delivery of all projects within the programme. The Capital Development Manager (Jason Wood) will be the Estates lead overseeing operational delivery of the project.

1.5.2 Project Milestones

The detailed programme is included in Appendix 8 with the key milestones shown in Table 4:

Programme	Time
Phase 1 Delivery Programme	
Business Justification Case Submission to WG	July 2021
WG approval to proceed to construction	August 2021
Phase 1 Works (primary escape routes) based on 66 week programme	16 August 2021 – 12 December 2022
Phase 2 Delivery Programme	
Business Justification Case submission to WG	August 2022
Phase 2 Commencement of works on site	January 2023
Phase 2 Completion of Works (general ward / clinical spaces)	January 2026

Table 4: Programme Milestones

1.5.3 Arrangements for Contract Management

This will be administered under the NEC3 Engineering & Construction (ECC) Form of Contract, Option E Cost Reimbursable Contract.

The design and construction contract for the Supply Chain Partner, Integrated Health Projects (IHP), will also be administered under the NEC3 Engineering & Construction (ECC) Form of Contract, Option E Cost Reimbursable Contract.

1.5.4 Main Risks

A comprehensive risk register is in place which has been ratified following a workshop including all of the delivery team members, HDUHB estates and operations team and importantly, the key stakeholders representing the hospital nursing / operational teams. The detailed risk register is included in Appendix 9, with the key risks (risk score 16 and above) identified in the table below:

Risk	Mitigation Measure
Strategic / Planning / Programme Risks	
Hospital activities impact on proposed phasing and/or decant strategy OR decant strategy changes to original agreement	Early engagement with the Hospital and management teams to discuss requirements and expectations
Decant requirements as a result of ward separation / lobby installation. Phasing to be agreed however risk that Phase 1 work requirements will increase – unknown until fire strategy industrialized	Works to lobbies and internal to wards phasing to be agreed.
Design Risks	
Design / scope is not compliant with Hospital Fire Strategy and Evacuation Strategy. The hospital does not have a full fire or evacuation strategy in place which can be used to inform the scope of works and design	Explore every avenue to obtain fire strategy information from hospital. Recommend and appoint Fire engineer / consultant to validate / confirm the fire strategy. Clearly state assumptions made in design so that these can be used as basis for when fire strategy is developed.
Completeness, adequacy and condition of the existing M&E designs and requirement for service diversions	Thorough surveys to be carried out to establish routes where diversions / modification required. Surveys to establish flow rates 'before and after' service diversion to confirm reduction.
Existing survey information is inaccurate or incomplete	SCP to check information as part of the design process
Scope of works not fully defined and contradictions within the works information	TA team to ensure scope of works is as detailed as possible and includes all relevant standards

Risk	Mitigation Measure
Existing structural defects not apparent at time of submitting design proposals (i.e. after surveys completed)	Works to be captured early / as soon as they become apparent, with allowances made in programme budget
Lack of detailed survey information and full fire strategy. Design options created using a nominal scheme based on assumptions	Recommend and appoint Fire engineer / consultant to validate / confirm the fire strategy. Base design assumptions on worst case scenario. Clearly state assumptions made in design so that these can be used as basis for when fire strategy is developed.
Extent of asbestos works / incomplete surveys	Survey where possible and proceed with caution.
Site and Construction Risks	
Disruption to existing services during construction impacting on hospital services	Regular liaison with stakeholders throughout the project. Contractor strategy to be developed.
Dampers to ductwork – solution requires extensive fabric or other services removal	Early engagement between design team and SCP to provide an achievable solution.
Live services impeding the Works and inability to isolate or relocate	Investigate the compartmentation lines
Fire Precaution works required in key function / high risk areas that must remain operation (e.g. pharmacy and labs)	Stakeholder meeting to be arranged to discuss approach to working in these areas
Smoke sealing to doors / flatness of floors	Added to list of derogations. Likely that drop down seals to doors will be required.
Incomplete Crest surveys not identifying the entire scope of fire stopping (both sides of wall / entire length of corridors and phase1 locations)	Establish fire stopping works from other side.
Restricted surveying being undertaken at OBC/FBC (limited to 174 locations from a planned 181) Missed survey locations may affect ongoing design work and costing.	Complete the missing survey points if and when access becomes available. Apply assumptions to the further Works.
Financial Risks	
Increased costs due to unknown works	Financial risk strategy agreed with WG

Table 5: Main Risks

The HDUHB has agreed with WG and Shared Services that due to the difficulty in scoping the works contained in this Phase One BJC, that an additional risk allocation, over and above the project risk allocation, will be held centrally by WG. The BJC therefore includes for a reasonable level of contingency (wholly owned by the Health Board) along with a further sum allocated to the project but held by WG under Group 3 funding, being made available in the event that it is required.

1.5.5 Main Benefits

The main benefit from this project will be HDUHB compliance with fire enforcement notices avoiding closure of buildings and ensuring delivery of patient services can be sustained. Additional benefits in relation to reduced backlog maintenance and a comprehensive concise fire strategy for the site will also be realised.

1.5.6 Programme Assurance

Due to the nature of this BJC, 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.

A Risk Potential Assessment has been undertaken by the SRO (Appendix 10) and the project has been assessed as being low risk.

1.5.7 Post Project Evaluation

The Programme Board will ensure that post project evaluation is undertaken in accordance with Welsh Government requirements. Evaluation will include:

- 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.

1.5.8 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.

1.6 Conclusion and Recommendations

This business case sets the required actions for Hywel Dda University Health Board to be compliant with fire safety regulations.

The business case has described the proposed approach which aims for completion of the Phase One works by December 2021, which is dependent on work commencing in August 2021. It is anticipated that MWWFRS will review progress with the Health Board once works have commenced and will align enforcement notices to the contractor programme.

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 the Glangwili Hospital and / or associated sites.

It is requested that Welsh Government:

- Approve this business case based on the proposed cost and approach to delivery of work;
- Acknowledge the MWWFRS expectations for completion of works by July 2022 with the anticipation realignment of enforcement notices to the programme described in this BJC which requires HDUHB to commence works in August 2021.

2.0 Introduction

2.1 Scope of Document

This Business Justification Case (BJC) has been developed to detail the required investment for Glangwili General Hospital (including residential accommodation blocks) in relation to fire precaution upgrade works.

Following visits from the Mid and West Wales Fire and Rescue Service (MWWFRS) to Glangwili General Hospital (GGH) in February 2020, Hywel Dda University Health Board (HDUHB) received an enforcement notification in relation to compliance with fire safety regulations.

A Programme Business Case was submitted to Welsh Government in March 2020 detailing proposals which ensured that the Health Board would be able to achieve compliance within the stipulated timescales.

The PBC recommended immediate commencement on a programme of Advanced Works (essential works targeted at the buildings where the Health Board had received enforcement notices). These works have been completed.

The remaining works were packaged into two separate phases and this BJC specifically focuses on Phase One of the main works (primary escape routes). A separate BJC for Phase Two will address the sub-compartments and hazard rooms within departments and is intended to be submitted in August 2022.

2.2 Document Structure

This business case has been structured as follows and 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 confirms the available options and makes recommendations for the preferred way forward;
- **Commercial Case:** This section sets out the 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 including the proposed approach for post project evaluation.

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.

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. 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.

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.

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 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 approached 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 hospital 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, Glangwili Hospital will be repurposed to offer a range of services to support the social model for health and well-being.

The Health Board is developing a Programme Business Case (PBC) with the expectation of this being submitted to Welsh Government in September 2021. The PBC will set 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 has been formally submitted to Welsh Government and will be reviewed at the June 2021 Infrastructure Investment Board.

Addressing the essential fire upgrade works as described in this BJC will be essential to maintaining both continuity of service in the interim period as well as supporting the re-purposing requirements.

3.1.2 Summary of Financial Standing

The Health Board's outturn for 2020/21 was a deficit of £24.9m. For 2021/22 the UHB has developed an annual plan with a forecast deficit of £25m which is the projected end of year position.

3.1.2.1 Capital Plan

The largest strategic capital commitments in the coming years and, for which detailed planning commenced in 2019/20, relate to the new build Urgent and Planned Care Centre and the

repurposing of Glangwili and Withybush Hospitals in line with the Healthier Mid and West Wales Strategy. 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. This will include the need for a Programme Business Case to be developed to provide the evidence and confidence that major capital investment in both the acute and community estate 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.

3.1.2.2 Discretionary Capital Programme

The UHB receives an annual allocation of circa £7.421m which is allocated annually into the areas of highest investment needs. 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.

3.2 Policy Context

The Health Board has a corporate responsibility to deliver an efficient, safe estate that supports clinical services in line with HBN-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 Health Technical Memoranda (HTM). HTMs 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);
- HTM 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 Business Justification Case.

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 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 Glangwili Hospital Site.

The schemes of work included within this BJC are specific to GGH, elements of which are also works packages included in the Estates Infrastructure / Business Continuity programme which is the subject of a separate business case.

The programme investment aims for this BJC 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.

3.4 Existing Arrangements

The largest of the four Hywel Dda University Health Board's hospitals, Glangwili General Hospital is located approximately 2 miles from the centre of Carmarthen. It has a gross floor area of 48,750m² providing approximately 390 beds and a 24-hour Emergency Department. The total site area is approximately 11.3 hectares. The site includes buildings of various ages from over 60 years to buildings completed within the last 15 years, with the core buildings constructed in the 1950/60s (this includes inpatient wards, operating theatres, outpatients, radiology and pathology services).

Figure 1 below shows the age profile of the buildings on the Glangwili site. The age profile of the estate has implications on estate backlog performance and despite capital investment of circa £25M over the past 10 years a significant backlog maintenance liability remains. This was assessed as being £23.6M as at 31 March 2020 (Table 6).

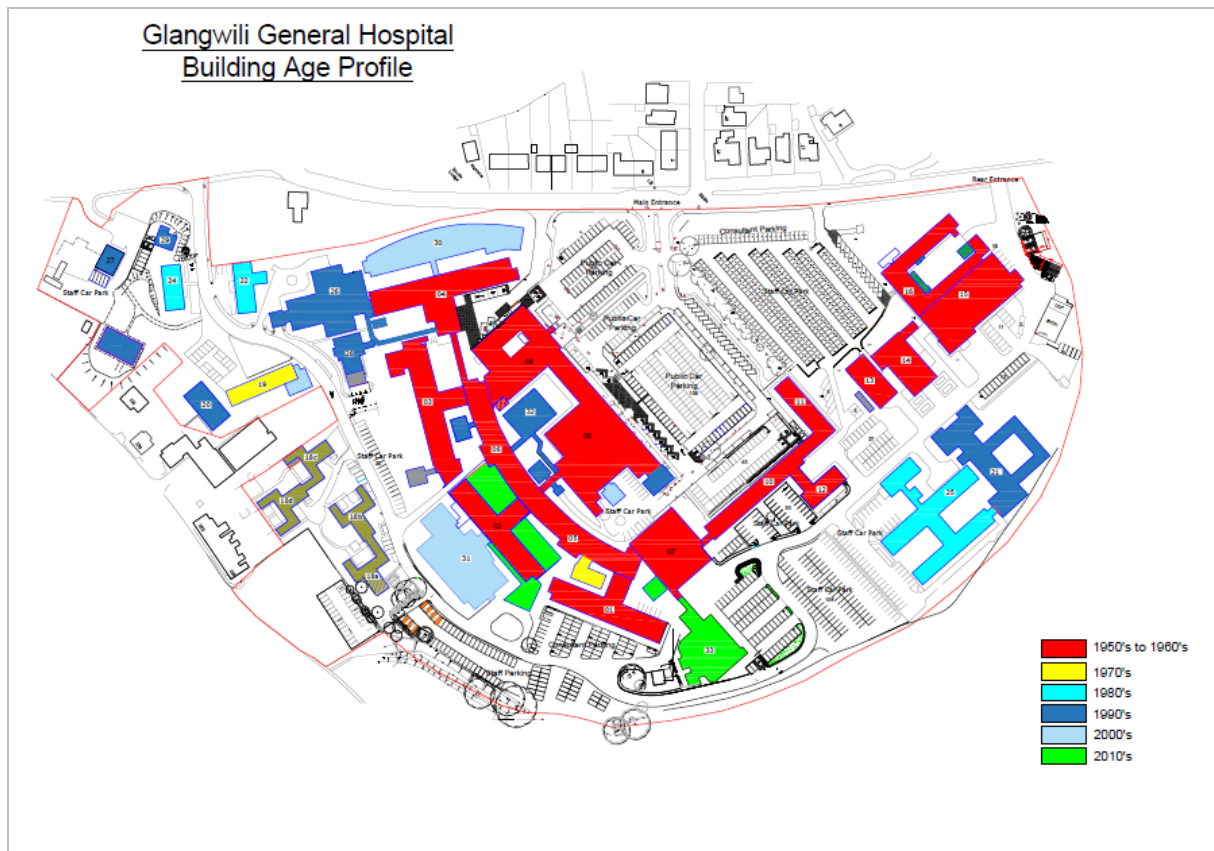


Figure 1: Glangwili Hospital Site - Age profile of the existing estate

Backlog Maintenance Costs by Risk Category per risk category for 2019/20				
High Risk	Significant Risk	Moderate Risk	Low Risk	Total
£0.00	£17,837,820	£3,562,821	£2,241,789	£23,642,429

Table 6: Glangwili General Hospital Site – 2019/20 Backlog Maintenance Liability

The plan below indicates the current condition of the existing estate. Those buildings coloured beige are the core clinical buildings, the majority of which are over 50 years old and category C in terms of condition (Operational but major repair or replacement needed in the short to medium-term). These buildings contain the main inpatient bed stock, imaging, theatres, outpatients, essential clinical and some non- clinical support services. The other buildings shown in blue are rated as condition category A/B (operationally safe and exhibiting only minor deterioration).

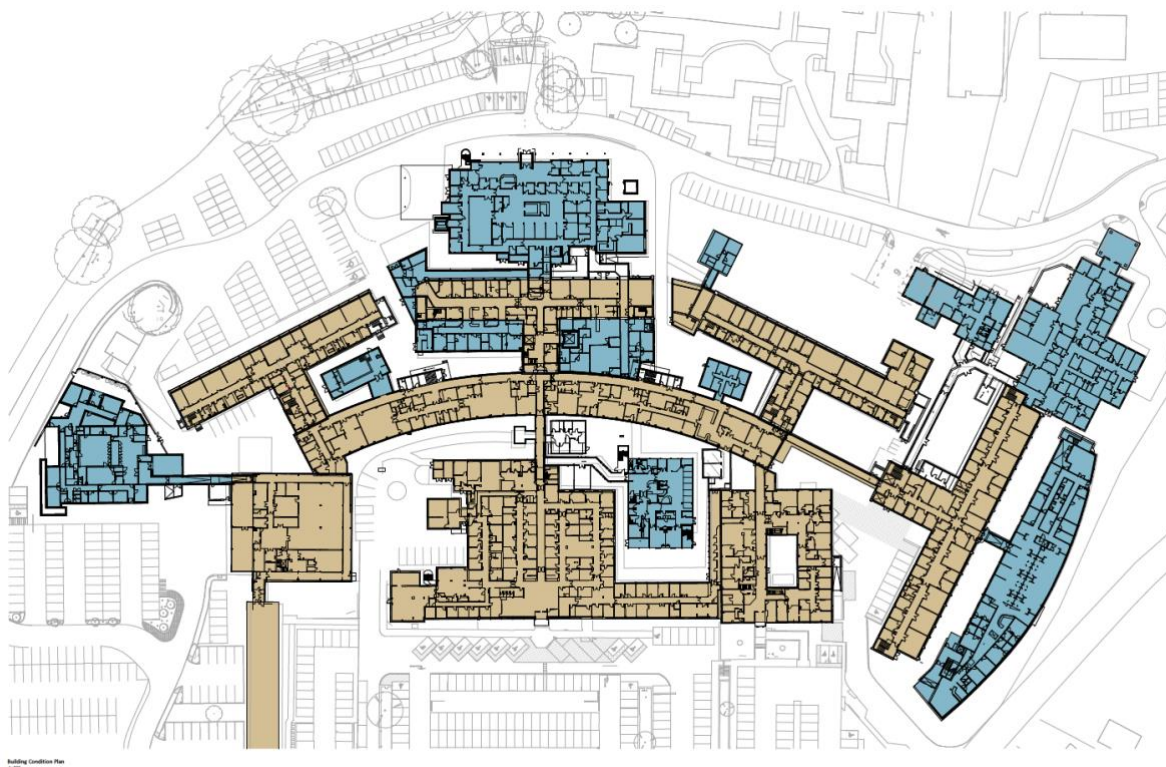


Figure 2: GGH Building Condition Plan

The Health Board has benefited from an uplift in its recurring discretionary capital allocation over the last few years and whilst this has been welcomed and has enabled greater flexibility at a local level to manage competing expenditure priorities, it remains extremely difficult to resolve all risks. Even with a current level of discretionary capital of £7.4M, the HDUHB continues to face very significant backlog pressures in IM&T, estates maintenance and equipment replacement. The resulting impact has been service interruptions, risks to clinical service and business continuity and health and safety concerns. 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. 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.

An assessment of the estate was undertaken in 2018 to determine the extent of works required to bring the acute sites in line with statutory compliance regulations. Fire compliance has been assessed against the current version of HTM 05-02–Firecode – Guidance in support of functional provisions 2015 and it has been concluded that the current core clinical services blocks do not meet current standards with respect to fire safety. For example:

- Reference to drawings indicates that compartmentation is present but it was anticipated that some making good works would be required to ensure continuity;
- Fire doors are generally in poor condition, requiring replacement of seals, closers and ironmongery. Whole system replacement is needed to achieve certified performance;
- A number of staircases are accessed direct from inpatient accommodation with no lobbies;
- Staircases are undersized compared to current guidance for mattress evacuation purposes;
- Corridors are below the width recommended for escape.
- The configuration of the wards does not support progressive horizontal evacuation with insufficient space in adjacent wards for patients from other wards;
- There was evidence of waste being stored in corridors and rooms which would typically be classified as 'hazard rooms' in HTM 05-02 and are not fire protected.

The extent and efficacy of fire protection to the structure was unknown, requiring further detailed investigation. The UHB therefore commissioned fire compartmentation surveys to support the development of the Programme Business Case which was submitted in October 2020. The core non-compliance is related to the configuration of the buildings and therefore refurbishment would not fully resolve these issues.

As part of developing this BJC a series of technical surveys have been undertaken to better understand the potential extent of the works required which are described further in section 3.5.4.

3.5 The Case for Change

In line with the AHMWW strategy there is a clear direction of travel for the future of the GGH site. The Health Board is clear that as part of this strategy there is a need to maintain business continuity and a business-as-usual approach whilst the wider strategy is delivered. This requires 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.

The following sections detail the fire enforcement notices that have been received, the works that have been completed, works that have commenced but not yet completed along with a detailed assessment of those works that are outstanding and form the subject of the business case.

3.5.1 Fire Enforcement Notices

The Mid and West Wales Fire and Rescue Service (MWWFRS) visited Glangwili General Hospital on 24 February 2020 and issued an enforcement notice (KS/890/06 dated 17 April 2020) requiring the Health Board to remedy a number of specific areas by 16 October 2020. The enforcement notice was issued due to failure to comply with provisions of the Regulatory Reform (Fire Safety) Order 2005 because people were unsafe in case of fire. The letter and accompanying schedule which detail the areas of non-compliance are included as Appendix 1 and summarised below:

Area of Non-Compliance		Required Action
1	Obstructed escape routes	Ensure everyone can evacuate safely and quickly by removing cabinets, lockers bins and a fridge from escape routes.
2	Compartmentation	Carry out a full survey of the hospital to identify areas where fire compartmentation is incomplete. Reinstate the fire resistance in all areas identified. Ensure any room that is made into a hazard area should comply with WHTM 0502 5.40.
3	Fire damper system	Ensure fire damper systems are properly tested and maintained, to British Standard 5588-9.
4	Fire resisting doors and corridors	Ensure escape routes are kept free from fire and smoke by making sure that all fire doors are fit for purpose and protect the means of escape as they are intended to do so.
5	Fire risk assessment	Ownership needs to be taken of the significant findings in the Fire Risk Assessment and where possible necessary appropriate support is to be requested from Estates / Capital.
6	Add device to and update the fire alarm	Extend smoke detection within the corridor of Tyssul Ward and link to the existing fire alarm system; exchange smoke detection for heat detection within the staff room Block 32FF; update outdated Detector heads in accordance with BS 5839 part 1 and fit fire alarm repeater panels for both wards within Block 2 FF.
7	Escape lighting system – maintenance	Ensure the Emergency Lighting system is properly tested and maintained to allow it to operate in case of local lighting circuit failure.
8	Training of own staff	Provide employees with instruction and training, ensure that they are familiar with what they need to do in case of fire
9	Co-operation / Communication	Establish effective systems of communication for all departments to ensure all relevant individuals are provided with suitable and sufficient information in respect of the fire safety measures implemented.

Area of Non-Compliance		Required Action
10	Alternative Escape Route	Install a BS EN 179 compliant push pad or similar device to the adjoining door within Room 32 X-Ray department GF Block 6 and room 26, along with signage on both sides of the door to indicate that is to be used as a fire exit.
11	Fire Fighting Equipment	Remove existing Dry Powder Extinguishers from within all departments of the hospital site and replace with the correct class of extinguisher.
12	Storage of Refuse	Manage waste responsibly to control overflow and accumulation of combustible material.
13	Flammables Storage	Remove unnecessary items stores within the site's plant rooms.
14	Access	Ensure emergency fire access to all parts of the hospital buildings is available at all times, as mentioned in WHTM – 0502 Chapter 7 and Part B of Schedule 1 of the Building Regulations 2010.

Table 7: Fire Enforcement Notice – areas of non-compliance

It was clear within the Enforcement Notice that failure to comply could result in further action being taken, including prosecution. Shortly after receiving the Enforcement Notice, the Covid-19 pandemic began to impact on routine services. As such, the Health Board experienced a number of operational difficulties which impacted on the ability to progress the required works.

A review meeting between HDUHB and MWWFRS took place on the 16 June 2020 to discuss progress against the Enforcement Notices issued against the premises. MWWFRS noted that progress had been made in addressing some of the identified issued and they also acknowledged the delays associated with Covid-19. As a consequence, MWWFRS reviewed the Enforcement Notice and adjusted the timeline for compliance to February 2021 on the basis of progress to the planned phased works agreed between the UHB and MWWFRS in the meeting (Appendix 2).

A further meeting was held on 2 October 2020 to review progress and the ongoing impact of the Covid-19 on the works. MWWFRS subsequently issued a letter to the UHB advising that a number of matters remained outstanding. They withdrew Enforcement Notice KS/890/06 and to rationalise the correspondence associated with the outstanding matters and to provide clarity on the enforcement expectations issued Enforcement Notices KS/890/07, KS/890/08 and KS/890/09 to align with the agreed approach to works as summarised below and detailed in Appendix 3.

Enforcement Notice	Work Package	Action	Timeline
KS/890/07	Advanced Works	Compartmentation: All Vertical Escape Routes To undertake whatever works are necessary to ensure that any/all breaches in fire resisting compartmentation that affect the Vertical Escape Routes within Glangwili General Hospital are addressed as agreed in the programme for Advanced works.	31 August 2021
KS/890/08	Phase One Works	Compartmentation: All Horizontal Escape Routes To undertake whatever works are necessary to ensure that any/all breaches in fire resisting compartmentation that affect the Horizontal Escape Routes within Glangwili General Hospital are addressed as agreed in the programme for Phase 1 Works.	31 July 2022
		Compartmentation: All Vertical Breaches and / or Penetrations To undertake whatever works are necessary to ensure that any/all breaches in fire resisting compartmentation that affect the intermediate floors between levels within Glangwili Hospital are addressed as agreed in the programme for Phase 1 Works	
KS/890/09	Phase Two Works	Compartmentation: All Vertical Escape Routes To undertake whatever works are necessary to ensure that any/all breaches in fire resisting compartmentation that affect the Wards, Theatres, Plant Rooms, Offices, Surgeries, Specialist Units and any other compartmented spaces within Glangwili General Hospital are addressed as agreed in the programme for Phase 2 works.	31 August 2024

Table 8: Revised Enforcement Notices

Following a meeting on 6 January 2021 MWWFRS issued a letter (dated 12 January 2021) confirming the timeline for completion of all works and alignment with the approach proposed in the PBC and summarised in Table 8 (Appendix 4).

MWWFRS visited the site on 1 June 2021 to review fire safety measures and subsequently issued a Letter of Fire Safety Matters dated 8 June 2021 (Appendix 5). This letter confirmed the expectation of compliance with the previously issued enforcement notices but detailed further areas of concern which are shown below.

Area of Non-Compliance		Required Action
1	Compartmentation	<p>Inspected areas to be included within the current compartmentation survey.</p> <p>Holes in ceiling to be repaired in Block 3 FF Rm 36 (IT room)</p> <p><i>Timeline for completion – in line with the agreed programme of works</i></p>
2	Fire resisting doors and corridors	<p>Ensure escape routes are kept free from fire and smoke by:</p> <ol style="list-style-type: none"> 1. Removing key locks and replacing with single action locking device within Blocks 18A and D 2. All missing hammers on Redlam panic bolts on exits within Block 4 FF, SF, TF to be fitted 3. Doors to rooms not accessed by the public / patients to be locked (e.g. bin store on access corridor, undercroft by pharmacy, Parden Ward) 4. Move all recycling bins from escape routes (Block 4) <p><i>Items 1-4 timeline for completion: within one month of date of letter (July 2021)</i></p> <p>5. Ensure fire doors default to closed position on activation of alarm (corridor doors in Block 4 GF) default to open</p> <p><i>Item 5 timeline for completion: in line with the agreed programme of works</i></p>
3	Alarm and Detention	<p>Fire detection to be updated in accordance with BS 5839 part 1 (outdated detector heads)</p> <p><i>Timeline for completion – within one month of date of letter</i></p>
4	Storage of Refuse	<p>Management of waste</p> <p><i>Timeline for completion – within one month of date of letter</i></p>
5	Obstructed Escape Route	<p>Ensure that everyone can evacuate quickly and safely by removing bins from the access room to the plant room within the area of obstetrics department</p> <p><i>Timeline for completion – within one month of date of letter</i></p>

Table 9: Letter of Fire Safety Matters

MWWFRS indicated that a review would be scheduled for July 2021 with a risk of a further enforcement notice being issued should progress not be observed. The HB would anticipate that this visit will be scheduled once the Phase One works are underway with a realignment of enforcement notices to the timelines detailed within this BJC. All items requiring compliance within one month have been actioned.

In order to maintain the safety of staff, patients and visitors to the GGH site, the UHB must comply with the MWWFRS fire enforcement notice and failure to adhere could result in prosecution and potential an enforced closure of buildings.

3.5.2 Immediate Works

As described in the PBC, a number of issues requiring resolution in relation to enforcement notice KS/890/06 were immediately actioned as confirmed with MWWFRS (Appendix 6):

- Obstructed escape routes: All housekeeping items removed by a combination of clearance and management process updates;
- Maintenance:
 - Escape lighting testing records in place and shared with MWWFRS;
 - Fire Damper testing and maintenance regime updated and shared with MWWFRS;
 - Escape routes - inappropriate locking mechanisms to Fire Doors replaced;
- Firefighting equipment – replacement of dry power extinguishers;

The PBC stated that the outstanding items (relating to compartmentation, fire resisting doors and fire damper systems) required substantial further investigation, planning of work and financial investment to remedy.

A series of specialist surveys were conducted to enable initial assessments and assumptions of the required works to be made, however, the full extent of works, the impact of asbestos and likely methodology restrictions could not be fully determined at that stage.

The proposed approach to delivery of the works was to immediately address the most urgent works and to group the main package of works into two phases to remediate the fire compartmentation.

The approach was agreed with MWWFRS and the enforcement notice was amended to reflect the agreed delivery programme (Appendix 3). The following sections describe progress against the Advanced Works and the outstanding works packages that will be addressed through this BJC.

3.5.3 Advanced Works

The Advanced Works were those works against which rapid progress was essential. The Fire Service were given assurance that work would be progressed in advance of the formal business justification case approval process.

Welsh Government approved the commencement of the Advanced Works and following financial approvals and a local tender based procurement exercise, works commenced on site in May 2021 and will complete during September 2021. These works included:

- Escape stairwells in the main hospital core block and associated residential accommodation block.

3.5.4 Outstanding Works

In line with the agreed strategy with MWWFRS, the PBC recommended approaching the remaining works in two phases which will remediate the fire compartmentation on the main hospital and residential blocks plus any remaining items from the advanced works phase:

- Phase 1 will resolve the main horizontal compartmentation lines within the main hospital and associated residential accommodation i.e. escape routes, compartmentation between wards and departments and upgrading and provision of fire and smoke dampers and fire doors including main plant areas and underground service duct;
- Phase 2 will resolve existing horizontal sub-compartments, vertical compartmentation, hazard rooms within departments and ancillary buildings plus additional lobbied approaches to escape stairwells

The specialist surveys conducted to support the development of the PBC concluded that the overall works programme was likely to be in excess of 4 years and that more detailed technical surveys were required. The difficulty in assessing the scope of the work content within a business case stage includes its sheer volume and accessibility, whilst keeping the hospital functioning. "As Built" information is also lacking in both accuracy and extent. The majority of fire stopping remedials are above ceiling voids and would require a full survey to both sides of the partition, removal / investigation of every previously sealed penetration. This is impractical as would require extremely high inputs of labour and time and is almost as disruptive as physically undertaking the works itself requiring detail above ceiling surveys within wards and the like. Similarly, until ceilings are removed, it is difficult to ascertain the extent of the difficulty in carrying out the remedial activity, for example determining whether services placed close to the wall preventing access and requiring diverting prior to firestopping works being undertaken.

The Phase 1 element of the project remediates the main escape routes / compartmentation lines within the hospital buildings. The scope includes:

- Removal and replacement of suspended ceilings as necessary;
- Treatment of asbestos if impacted by the works;
- Repairs and replacement of defective fire door sets and furniture;
- Fire compartmentation improvement works as required both horizontally and vertically;
- Mechanical engineering installations including fire / smoke dampers (FDS) and associated ductwork;
- Control panels, temporary diversion of services to facilitate the works and associated builders work in connection (BWIC);
- Electrical installations modifications including door controls, minor alterations, minor fire alarm modifications to align with revised fire strategy.
- Temporary diversions as required including power, lighting, comms, alarms, ductwork and medical gas etc and associated BWIC.

Acknowledging the difficulties in fully establishing the required works, the SCP has undertaken a number of targeted detail reviews and surveys of areas of the site to establish the likely issues that will be encountered during the construction phase. The detailed surveys are included within the accompanying Estates Annexe.

An exercise has also been completed to establish a fire strategy as this does not currently exist in a co-ordinated, combined document. This exercise has supported the horizontal evacuation strategy currently implemented at the hospital and defined in the Phase 1 area.

The scope of these works is to ensure compliance with the enforcement notice which will require the development of both fire and evacuation strategies and to then engineer the fire compartment walls once they are located. Within these Phase 1 works the vertical penetration areas are to also be sealed.

Having reviewed the enforcement notice the technical team have developed design proposals for this phase of the works which are contained within the accompanying Estates Annexe.

3.5.5 Changes to Scope since PBC

Whilst there are no changes to scope since PBC, it is acknowledged, that due to the nature of the works this BJC will not describe a fully defined schedule of works and that the programme will need to be responsive to findings as the works progress.

3.6 Business Needs

This BJC demonstrates that HDUHB is at risk of prosecution and potentially the enforced closure of identified buildings for non-compliance with fire enforcement notices. In order to maintain the safety of all staff, patients and visitors at GGH, HDUHB must address all of the areas of concern. The BJC describes the actions that have already been undertaken by the UHB and sets out the required action and associated investment plan to ensure compliance with all fire safety matters as identified by the MWWFRS.

The strategic drivers underpinning this 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.

3.7 Potential Scope and Service Requirements

The scope of this business case is the programme of works required to ensure all buildings on the Glangwili site are compliant with fire safety regulations. Whilst the proposed delivery strategy has taken into consideration the need to minimise the impact on operational service delivery, the nature of the works makes it impossible to avoid a degree of disruption. A stakeholder engagement and liaison strategy will be in place for the duration of the works (as described in the Management Case). This will ensure that there is a robust approach to maintaining all essential service requirements, acknowledging that this may impact on overall programme length.

3.8 Covid-19

The potential impact of Covid-19 on this project has been considered extensively and the programme will need to respond flexibly to any further disruption as a result of the pandemic. Appropriate infection control measures will be enforced throughout the works programme with regular review as required. Risks associated with Covid-19 are identified on the risk register (Appendix 9).

3.9 Main Benefits

There are two main benefits associated with this project. It is unlikely that these will be fully realised until the end of Phase 2 works:

- Removal of the fire enforcement notices;
- Improved safety of patients, staff and visitors in the event of a fire.

3.10 Main Risks

The main risk associated with this BJC is the failure to comply with the fire enforcement notices leading to risk of prosecution and potentially the enforced closure of identified buildings. A detailed risk register has been developed for the project which considers strategic, financial, design and construction risks (see section 7.5.2).

3.11 Constraints

There are a number of constraints to the delivery of the Phase 1 project requiring management:

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

3.12 Dependencies

The project is dependent on the following considerations:

- MWWFRS support to the proposed approach;
- WG and NWSSP SES support to proposed approach;
- Availability of capital funding, noting that WG have already funded the Advanced Works Package.

4.0 Economic Case

The purpose of the economic case is to identify the preferred programme that optimises value for money. Having determined the strategic context for the investment proposal and established a robust case for change, this part of the economic case:

- Identifies critical success factors;
- Identifies and assesses the options for delivering service needs;
- Identifies a preferred way forward based on the preferred programme.

4.1 Critical Success Factors

The critical success factors associated with this PBC are:

- Strategic Fit:
 - Compliance with MWWFRS fire enforcement notices.
- 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

The Health Board have assessed the available options and determined that there are only two available options:

- Do nothing and risk prohibition notices;
- Undertake the works required to comply with the enforcement notices.

The approach to options development and appraisal was reviewed with NHS Wales Shares Services Partnership Specialist Estates Services (NWSSP-SES) in January 2021 where there was agreement that there is only one viable option available to the Health Board which is to undertake the works as required by MWWFRS. Adopting the phased approach to the works will

allow for a continual programme of improvement and will allow more time to detail the requirements for the Phase Two works and how these can be approached to minimise the impact on operational services as far as possible.

The Do Nothing option risks further enforcement notices being served and potentially enforced closure of buildings. As this is not seen as a viable option, in agreement with WG, a Generic Economic Model (GEM) has not been completed for the scheme.

4.3 Preferred Way Forward

The UHB must comply with the requirements of the fire enforcement notices resulting in only one viable option (i.e. the Do Minimum option). This option ensures compliance with the Fire Enforcement requirements and sustains the hospital for the next 7 – 10 years in the context of the AHMWW Strategy.

The proposed approach is summarised within the strategic case (Section 3.5.4) and described in detail within the Estates Annexe which accompanies this BJC.

The capital and revenue 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 Procurement Strategy

The Health Board has procured the design and construction elements of the proposed scheme through the NHS Building for Wales framework. The Supply Chain Partner team includes design consultant services. It is this team who will develop the current surveys 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).

The project is complicated in that it is impossible to assess the quantum and full nature of the works required in all areas prior to the business case submission, the elements being above ceiling in live wards and the sheer extent of survey and disruption that would be caused to the hospital.

The initial tender enquiry was issued using the framework standard NEC Option C contract (target cost) with interviews scheduled for 7 October 2020. The Supply Chain Partners (SCP) felt that, due to the impossibility of accurately defining and therefore costing the works, the risks associated with the contract were too high and no bids were returned.

Following consultations with Welsh Government and NHS Wales Shared Services Partnership Specialist Estates Services (NWSSP SES), a revised tender approach based on NEC Option E (cost reimbursable contract) was agreed and the tender process was rerun with a closing date of 26 October 2020. Two tenders were received from Interserve and Integrated Health Projects (IHP).

Following a robust interview process on 5 November 2020, IHP were selected and appointed as the successful SCP for the scheme.

5.1.1 Contract Type

Contractual Arrangements with all parties have been entered into using the NEC contract as prescribed under the Framework. Due to the nature of the project, an Option E Contract (cost reimbursable contract) has been negotiated. This is a change to the framework standard of the NEC Option C form and as such it has required substantial amendments and re-writing.

As of 15 March, a series of meetings have been held between HDUHB, NWSSP SES, IHP and the respective legal parties. Agreements have been made and the final contract has been prepared with final signing anticipated.

Other than the change to NEC Option E, there are no key contractual clauses over and above the standard framework clauses, although requirements for AEDET, NEAT, BIM and BREEAM in relation to this project will be amended through local contract amendment.

5.2 Service Requirements and Outputs

This BJC states a requirement for the delivery of the Fire Safety Precautions scheme under the NEC3 Engineering & Construction (ECC) Form of Contract (Option E) and Designed for Life: Building for Wales Framework.

A series of design proposals are available to support the functional content, based on Health survey reports and building notes and latest available guidance. A full copy of the latest version of the design proposals is included as an appendix to the Estates Annex.

This BJC covers the Phase 1 works only, Phase 1 being the main escape route and associated compartment walls. Phase 2 is to follow via a separate business case and will cover sub-compartment and risk rooms, which are mainly in the ward and department areas.

A phasing methodology and approach to delivering the works has been agreed in principle with the hospital management team and is further detailed within the Estates Annex.

5.3 Planning

Planning permission is not required for the Phase 1 works.

5.4 Commercial Arrangements

This section details the proposed procurement approach and gives detailed consideration to the specific commercial arrangements required. The preferred funding option for the investment is via Welsh Government Funding as public funding is considered the only viable option for this scheme.

5.4.1 Contractual Arrangements

In consultation with NWSSP SES, the Health Board have elected to adopt the NEC Option E contract. This is a cost reimbursable contract in which the contractor is reimbursed the actual costs they incur in carrying out the works plus an additional fee. Whilst this does place a greater financial risk on the Health Board, this contract type tends to be used where the nature or scope of the work cannot be properly defined at the outset, and the risks associated with the works are high. Option E was therefore felt to be the most appropriate contract type for this scheme.

5.4.2 Payment Arrangements

The Health Board have made, and will continue to make, payments to the externally appointed team in respect of products and services as follows:

- The contract will be managed by Hywel Dda University Health Board under the NEC3 Option E Target Cost Contract with regards to the Project Manager and Cost Advisor appointments, in line with 'Building for Wales' Framework terms and conditions;
- The contract will be managed by Hywel Dda University Health Board under the NEC3 Option E Cost Reimbursable with regards to the Supply Chain Partner appointment in line with 'Building for Wales' Framework terms and conditions.

The Project Bank Account process has been initiated and the account details verified by the Health Board as required. Following BJC approval, the Project Bank Account will be activated.

5.4.3 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 project.

5.5 Quality Assurance / Standards Compliance

Upgrade works will be designed and installed in line with HTM 05-02 where reasonably practicable. Where total compliance cannot be achieved, engineered judgement from competent fire safety specialists will be drawn upon to ensure compliance with the functional requirements of the regulations can be achieved. A full derogations schedule is included within the Estates Annex accompanying this BJC.

Due to the nature of the project, the existing building, and project scope of works, BIM level 2 will not be provided. A Common Data Environment and naming conventions of which the client

team will be involved with, will be in place. The project will be providing a comprehensive fire and evacuation strategy for the Glangwili General Hospital.

AEDET, NEAT and BREEAM are also not relevant to this scheme.

5.6 Personnel Implications

As this procurement is for construction only there are no Transfer of Undertakings (Protection of Employment) (TUPE) and Retention of Employment (RoE) 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 the work packages are identified in the cost forms.

5.7 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). The following table indicates where the responsibility for risk lies between public and private sector:

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 10: Risk Allocation Matrix

The HDUHB has agreed with WG and Shared Services that due to the difficulty in scoping the works contained in this Phase One BJC, that an additional risk allocation, over and above the project risk allocation, will be held centrally by WG. The mechanism for accessing this risk fund will be agreed with WG.

5.8 Accountancy Treatment

It is estimated that the impact on the Balance Sheet of the Health Board will be an increase in the value of fixed assets by £4,977,989.

6.0 Financial Case

6.1 Indicative Capital Costs

The purpose of this section is to set out the financial implications of the preferred option identified in the Economic Case and the proposed deal as described in the Commercial Case.

The capital costs of the preferred option outturn at an estimated cost of £16,449,503 including VAT. This includes the quantified risk contingency held by the Health Board and an additional quantified risk contingency to be held by WG as summarised in Table 11. The cash flow is included in Table 12. Capital cost forms are included at Appendix 7. The quantified risk register is included at Appendix 9.

Element	Capital Costs
Works Cost	£7,611,593
Fees	£1,951,648
Non-works Costs	£629,839
Equipment	N /A
Quantified Risk Contingency	£905,713
Project Sub Total (excl. VAT)	£11,098,793
VAT	£2,039,647
Project Outturn Cost (inc. VAT)	£13,138,441
Additional Quantified Risk Contingency	
WG General Risk Contingency	£2,759,218
VAT	£551,844
Risk Contingency Total (inc. VAT)	£3,311,062
Forecast Project Outturn Cost (inc. VAT)	£16,449,503

Table 11: Indicative Capital Costs

Cash Flow	2020/21	2021/22	2022/23	2023/24	Total
Project Costs	£50,618	£6,214,698	£6,689,401	£183,7,23	£13,138,441
Additional Quantified Risk Provision	£0	£1,572,244	£1,692,338	£46,480	£3,311,062
Total	£50,618	£7,786,942	£8,381,739	£230,203	£16,449,503

Table 12: Indicative cash flow for capital expenditure

6.1.1 Capital Cost Assumptions

The following assumptions have been made in developing the capital costs for this PBC:

- Capital costs – costs are escalated with published and assessed inflation for the duration of the project;
- Professional Fees – based on allowance of 25.64% of works costs;
- Location Factor – 0.97;
- Risk Contingency – based on quantified risk register (Appendix 9) equating to 8.89% of combined works, fees and non-works costs;
- A planning contingency has not been included;
- VAT: with the exception of professional fees (20%), no allowance has been made for VAT recovery. An assessment will be made of potential VAT recovery with the Health Board's VAT advisors with opportunities for VAT recovery maximised;
- An additional quantified risk contingency (to be held by WG) has been included in relation to the anticipated additional risk level associated with the project. This equates to 27.07% of combined works, fees and non-works costs;
- The internal project management costs associated with the development of this programme business case have been included in the professional fees.

6.1.2 Changes in Capital Cost Assumptions from PBC

At PBC stage, a series of technical surveys were undertaken to allow initial assessments and assumptions of the required works to be made. It was acknowledged that the full extent of works could not be fully determined at that stage and that more detailed analysis of requirements at BJC stage would refine the assumptions.

The technical team have undertaken a number of targeted surveys to support assessment of the requirements and to establish the likely issues during the construction phase. Given the nature of the works, the full scope cannot be fully determined until works begin on site, therefore indicative allowances and / or assumptions for certain elements have been made.

Table 13 provides a comparison between the indicative cost assumptions made at PBC stage and the projected outturn at BJC stage.

Element	PBC Indicative Costs	BJC Projected Outturn	Variance
Works Cost	£3,790,000	£7,611,593	£3,821,593
Design Fees	£760,000	£1,951,648	£1,191,648
Non-works Costs	£370,000	£629,839	£259,839
Equipment	£90,000	N /A	(£90,000)
Project Risk Contingency	£1,000,000	£905,713	(£94,287)
Sub Total (excl. VAT)	£6,010,000	£11,098,793	£5,088,793
VAT (HDUHB to establish VAT reclaim opportunities)	£1,200,000	£2,039,647	£839,647
Total (inc. VAT)	£7,210,000	£13,138,441	£5,928,441
Additional Quantified Risk Contingency (inc VAT)	N/A	£3,311,062	£3,311,062
TOTAL	£7,210,000	£16,449,503	£9,239,503

Table 13: Changes in capital costs from PBC

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.

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. The estimated Annually Managed Expenditure (AME) Impairment charge is £11,471,512 and annual Departmental Expenditure Limit (DEL) depreciation charge is £129,428.

6.3 Funding Arrangements

This project requires further funding from the Welsh Government NHS All Wales Capital programme.

7.0 Management Case

This section of the BJC 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 are able to make progress against the identified key priority areas but also have sufficient flexibility to respond to changing requirements.

7.1 Programme Management Arrangements

The programme management structure within which this project sits, 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 WGH Delivery Team with direct reporting into the Project Board and the Capital, Estate, Information Management and Technology Sub-Committee (CEIMTS). A fortnightly Fire Enforcement Control Group has been established to ensure delivery of the agreed action plan.

The Estates Infrastructure Programme Board will provide strategic direction in order to develop the specific capital investment proposals within this Business Justification 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, Estates and Information and Technology Sub-committee as illustrated in Figure 3 below.



Figure 3: Governance Structure

7.1.1 Programme Roles and Responsibilities

The Health Board Director of Operations (Andrew Carruthers) 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 (Rob Elliott) is the Programme Director who will be responsible for the successful delivery of all projects within the programme. The Capital Development Manager (Jason Wood) will be the Estates lead overseeing operational delivery of the project.

Role	Responsibility
Project Board	<p>Responsible for successful delivery of the Programme to meet requirements of MWWFRS</p> <ul style="list-style-type: none"> • Monitor programme / project plan for completion at key stages in capital investment process and monitor on a monthly or as required basis; • Provide strategic leadership and direction to the Delivery Team; • Approve project plan for completion of key stages and monitor on behalf of HDUHB; • Provide a challenge mechanism for the project; • Receive project reports and outputs ensuring sufficient detail is provided; • Progress strategic specific issues and monitor the associated work programmes; • Support the development of technical briefs and outline design in conjunction with the Delivery Team; • Ensure that there are adequate project management arrangements in place; • Brief WG / MWWFRS on a regular basis to ensure good communication and understanding of project;

Role	Responsibility
	<ul style="list-style-type: none"> Monitor capital costs; Support and guide the development of the technical documentation for the BJC in support of the delivery team and approval of the Health Board.
Delivery Team	<p>Responsible for delivering the projects</p> <ul style="list-style-type: none"> Develop programme / project plan for completion at key stages in capital investment process and monitor on a monthly or as required basis; Implementation of project plan activities on a daily basis; Develop and monitor project planning, phasing and sequencing programme; Manage associated work programme; Provide operational and technical lead for the site; Communicate with the site operational managers and master planning team; Ensure suitable project management arrangements are in place; Implement project systems and controls e.g. risk, change management; Issue regular progress reports to the Programme Board; Develop capital costs; Develop BJCs; Participate in internal and external audit processes.

Table 14: Programme Roles and Responsibilities

7.1.2 Use of Special Advisors

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

Advisor	Responsibility
Mace	Project Management
Lee Wakemans Management	Quantity Surveyors / Cost Advisors
Strategic Healthcare Planning	Business Case Authors
IHP	PSCP
HLM Architects	Architect
Hydrock Consultants	M&E and Civil and Structural Engineer
Hydrock Consultants	Fire Engineer
Imtech	Principal M&E Installer
TBC	NEC Supervisor

Table 15: Specialist Advisors

7.2 Programme Milestones

Given the locations and concealed nature of the works, full exposure of the as-built arrangements and conditions will be required to fully assess the scope of works and establish accurate timescales for their execution. Temporary or permanent diversions to existing services may also be required to facilitate access to the works. Indicative allowances and assumptions have therefore been made for certain elements.

The programme takes account of these assumptions and is built up using quantitative analysis of surveyed information for representative work sections and relative allowances for other sections based on size and complexity.

A detailed programme is included in Appendix 8 with key milestones summarised in Table 16:

Programme	Time
Phase 1 Delivery Programme	
Business Justification Case Submission to WG	July 2021
WG approval to proceed to construction	August 2021
Phase 1 Works (primary escape routes) based on 66 week programme	16 August 2021 – 12 December 2022
Phase 2 Delivery Programme	
Business Justification Case submission to WG	August 2022
Phase 2 Commencement of works on site	January 2023
Phase 2 Completion of Works (general ward / clinical spaces)	January 2026

Table 16: Programme Milestones

7.2.1 Phasing Strategy

The programme has been discussed with hospital stakeholders and a detailed approach to the works has been developed following feedback. Engagement will continue throughout the construction phase with monthly updates and the preparation of lookahead programmes that will clearly identify current and forthcoming works in the short term. The general approach to sequencing of works will be on a block-by-block basis, ensuring that two immediately adjacent sections are not progressed simultaneously. Close liaison will be undertaken with the appropriate clinical and estates personnel relative to the sections being addressed in each short-term programme.

Using this process in conjunction with the proposed phasing strategy, the following construction timescales have been developed to ensure minimum disruption and congestion wherever possible:

Phase	Duration	Indicative Dates
Block 1	16 weeks	23/08/2021 – 10/12/2021
Block 31	10 weeks	13/09/2021 – 19/11/2021
Block 5	31 weeks	27/09/2021 – 20/05/2022
Block 4	13 weeks	11/10/2021 – 21/01/2022
Block 9	14 weeks	08/11/2021 – 25/05/2022
Block 2	26 weeks	17/01/2022 – 22/07/2022
Block 3	24 weeks	24/01/2022 – 15/07/2022
Block 8	13 weeks	21/02/2022 – 27/05/2022
Block 30	11 weeks	28/02/2022 – 20/05/2022
Block 26	6 weeks	11/04/2022 – 27/05/2022
Block 28	6 weeks	02/05/2022 – 10/06/2022
Block 6	14 weeks	16/05/2022 – 19/08/2022
Block 7	6 weeks	13/06/2022 – 22/07/2022
Plantrooms	8 weeks	11/10/2021 – 03/12/2021
Underground Service Duct	8 weeks	06/12/2021 – 11/02/2022

Table 17: Phasing Plans

7.3 Arrangements for Contract Management

This will be administered under the NEC3 Engineering & Construction (ECC) Form of Contract, Option E Cost Reimbursable Contract, with standard Designed for Life: Building for Wales Framework amendments for both the Project Manager and Cost Advisor.

The design and construction contract for the Supply Chain Partner, Integrated Health Projects (IHP), will also be administered under the NEC3 Engineering & Construction (ECC) Form of Contract, Option E Cost Reimbursable Contract.

7.4 Arrangements for Change Management

The Health Board recognises the challenges associated with delivery of these works whilst maintaining an operational site.

The 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 have been established during the 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 on the Glangwili site. Any fundamental changes to the project scope or timeline will be authorised in advance by the Project Director and established Project Board.

7.5 Risk Management

There are a number of objectives from the implementation of a robust risk management process. The key objectives are as follows:

- 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 comprehensive risk register is in place which has been ratified following a workshop including all of the delivery team members, HDUHB estates and operations team and importantly, the key stakeholders representing the hospital nursing / operational teams.

The risk register has been priced to ascertain the proposed contingency level. This is an incredibly difficult process in that predicting potential outcomes is based on items that are in themselves unknown. The resulting contingency level is significant and far exceeds that which would normally be expected on a typical refurbishment project at this stage.

It is proposed that the BJC includes for a reasonable level of contingency (wholly owned by the Health Board) with a further sum allocated to the project but held by the Welsh Government under Group 3 funding, being made available in the event that it is required. The mechanism for accessing this funding will be agreed with WG.

7.5.1 Risk Register

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. The risk register records and logs details of any item or event which is considered by the project team to put the objectives of the programme at risk (Appendix 9).

7.5.2 Main Risks

The main risks were reviewed at a workshop with clinical and operational service representation. The main risks (risk score 16 and above) are identified in the following table:

Risk	Mitigation Measure
Strategic / Planning / Programme Risks	
Hospital activities impact on proposed phasing and/or decant strategy OR decant strategy changes to original agreement	Early engagement with the Hospital and management teams to discuss requirements and expectations
Decant requirements as a result of ward separation / lobby installation. Phasing to be agreed however risk that Phase 1 work requirements will increase – unknown until fire strategy industrialized	Works to lobbies and internal to wards phasing to be agreed.
Design Risks	
Design / scope is not compliant with Hospital Fire Strategy and Evacuation Strategy. The hospital does not have a full fire or evacuation strategy in place which can be used to inform the scope of works and design	Explore every avenue to obtain fire strategy information from hospital. Recommend and appoint Fire engineer / consultant to validate / confirm the fire strategy. Clearly state assumptions made in design so that these can be used as basis for when fire strategy is developed.
Completeness, adequacy and condition of the existing M&E designs and requirement for service diversions	Thorough surveys to be carried out to establish routes where diversions / modification required. Surveys to establish flow rates 'before and after' service diversion to confirm reduction.
Existing survey information is inaccurate or incomplete	SCP to check information as part of the design process
Scope of works not fully defined and contradictions within the works information	TA team to ensure scope of works is as detailed as possible and includes all relevant standards
Existing structural defects not apparent at time of submitting design proposals (i.e. after surveys completed)	Works to be captured early / as soon as they become apparent, with allowances made in programme budget
Lack of detailed survey information and full fire strategy. Design options created using a nominal scheme based on assumptions	Recommend and appoint Fire engineer / consultant to validate / confirm the fire strategy. Base design assumptions on worst case scenario. Clearly state assumptions made in design so that these can be used as basis for when fire strategy is developed.
Extent of asbestos works / incomplete surveys	Survey where possible and proceed with caution.
Site and Construction Risks	

Risk	Mitigation Measure
Disruption to existing services during construction impacting on hospital services	Regular liaison with stakeholders throughout the project. Contractor strategy to be developed.
Dampers to ductwork – solution requires extensive fabric or other services removal	Early engagement between design team and SCP to provide an achievable solution.
Live services impeding the Works and inability to isolate or relocate	Investigate the compartmentation lines
Fire Precaution works required in key function / high risk areas that must remain operation (e.g. pharmacy and labs)	Stakeholder meeting to be arranged to discuss approach to working in these areas
Smoke sealing to doors / flatness of floors	Added to list of derogations. Likely that drop down seals to doors will be required.
Incomplete Crest surveys not identifying the entire scope of fire stopping (both sides of wall / entire length of corridors and phase1 locations)	Establish fire stopping works from other side.
Restricted surveying being undertaken at OBC/FBC (limited to 174 locations from a planned 181) Missed survey locations may affect ongoing design work and costing.	Complete the missing survey points if and when access becomes available. Apply assumptions to the further Works.
Financial Risks	
Increased costs due to unknown works	Financial risk strategy agreed with WG

Table 18: Main Risks

7.6 Benefits Realisation

The main benefit from this project will be HDUHB compliance with fire enforcement notices avoiding closure of buildings and ensuring delivery of patient services can be sustained. Additional benefits in relation to reduced backlog maintenance and a comprehensive concise fire strategy for the site will also be realised.

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 10). 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 BJC, 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 11).

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 is being developed to keep staff informed throughout the duration of the works.

7.7.4 Integrated Assurance and Approval Plan

Capital audit will be undertaking audits of the scheme in accordance with the HB Audit and Risk and Assurance Committee requirements. This will provide assurance on the effectiveness of governance and risk management arrangements and will maintain an appropriate financial focus.

7.8 Post Project Evaluation

The Programme Board will ensure that post project evaluation will be undertaken in accordance with Welsh Government requirements.

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 project 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.

7.8.1 Stage 1 Evaluation: Project Procurement

The evaluation at this stage will examine:

- The effectiveness of the project management of the scheme;
- The quality of the documentation prepared by HDUHB;
- Communications and involvement during procurement;
- The effectiveness of advisers utilised on the scheme;
- The efficacy of NHS guidance in delivering the scheme;
- Perceptions of advice, guidance and support from:
 - Welsh Government;
 - NWSSP – Estates.

It is planned that this evaluation will be undertaken within four months of BJC approval.

7.8.2 Stage 2 Evaluation: Implementation

The evaluation at this stage will examine:

- The effectiveness of HDUHB project management of the scheme;
- The effectiveness of the PSCP project management of the scheme;
- Communications and involvement during commissioning;
- The effectiveness of the joint working arrangements established by the project partner and the project team;
- Support during this stage from other stakeholder organisations – Welsh Government, Welsh Health Estates and any others as appropriate;

It is planned that this evaluation will be undertaken six months following works completion.

7.9 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.

8.0 Conclusion and Recommendations

This business case sets out the required actions for Hywel Dda University Health Board to be compliant with fire safety regulations.

The business case has described the proposed approach which aims for completion of the Phase One works by December 2021, which is dependent on work commencing in August 2021. It is anticipated that MWWFRS will review progress with the Health Board once works have commenced and will align enforcement notices to the contractor programme.

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 the Glangwili Hospital and / or associated sites.

It is requested that Welsh Government:

- Approve this business case based on the proposed cost and approach to delivery of work;
- Acknowledge the MWWFRS expectations for completion of works by July 2022 with the anticipation realignment of enforcement notices to the programme described in this BJC which requires HDUHB to commence works in August 2021.

9.0 Glossary of Abbreviations

Abbreviation	Definition
AHMWW	A Healthier Mid and West Wales: Our Future Generations living well
AME	Annually Managed Expenditure
BGH	Bronglais General Hospital
BJC	Business Justification Case
BRE	Building Research Establishment
BWIC	Builders Work in Connection
CDM	Construction (Design and Management)
CEIMTS	Capital, Estates, Information Management and Technology sub-committee
CSF	Critical Success Factor
DEL	Departmental Expenditure Limit
ECC	Engineering and Construction
FDS	Fire/Smoke Dampers
FM	Facilities Management
GEM	Generic Economic Model
GGH	Glangwili General Hospital
GIFA	Gross Internal Floor Area
HBN	Health Building Note
HUHB	Hywel Dda University Health Board
HTM	Health Technical Memoranda
IHP	Integrated Health Projects
IIA	Integrated Impact Assessment
IM&T	Information Management and Technology
MWWFRS	Mid and West Wales Fire and Rescue Service
NEC	New Engineering Contract
NHS	National Health Service
NWSSP SES	NHS Wales Shares Services Partnership Specialist Estates Services
PBC	Programme Business Case
PPE	Post Project Evaluation

PPH	Prince Philip Hospital
PSCP	Principle Supply Chain Partner
RoE	Retention of Employment
RPA	Risk Potential Assessment
SCP	Supply Chain Partner
SES	Specialist Estates Services
SRO	Senior Responsible Officer
TBC	To Be Confirmed
TUPE	Transfer of Undertakings (Protection of Employment)
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. MWWFRS Enforcement Notice (17 April 2020)
2. MWWFRS Correspondence (24 August 2020)
3. MWWFRS Enforcement Notices KS/890/07,08,09 (4 November 2020)
4. MWWFRS Correspondence (12 January 2021)
5. MWWFRS Letter of Fire Safety Matters (8 June 2021)
6. HDUHB Fire Safety Action Plan
7. Cost Report
8. Project Programme
9. Risk Register
10. Risk Potential Assessment
11. Integrated Impact Assessment