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Bae Abertawe
Swansea Bay University
Health Board



Meeting Date	26 November 2019	Agenda Item	3.4
Report Title	Elective Orthopaedic Unit – Strategic Outline Case		
Report Author	Neil Miles, Associate Service Director, Specialist Surgery, Morriston		
Report Sponsor	Deb Lewis, Service Director, Morriston		
Presented by	Chris White, Chief Operating Officer		
Freedom of Information	Open		
Purpose of the Report	<p>This paper prefaces the appended Strategic Outline Case (SOC) for the development of an Elective Orthopaedic Unit in Swansea Bay University Health Board.</p> <p>The SOC is submitted to the Health Board for approval prior submission to Welsh Government for consideration via the Capital Business Case process.</p>		
Key Issues	<p>The SOC has been developed following approval to proceed by the Senior Leadership Team (SLT) in its August 2020 meeting. The report considered by the SLT in August 2020 outlined the case for change and options to improve and recover the orthopaedic and spinal surgery elective service in Swansea Bay.</p> <p>The service was experience significant challenges in terms of extended waiting times for planned orthopaedic and spinal surgery, pressure from the provision of emergency services both in terms of orthopaedic trauma and broader unscheduled care pressures prior to the COVID19 pandemic. The elective position has been further significantly impacted by the pandemic and broader changes to theatre availability.</p> <p>Health Board officers met with Welsh Government officials for a pre-SOC meeting on the 14th September 2020. The proposal was welcomed, feedback on the information provided received and the submission of a SOC for consideration supported in principle.</p>		
Specific Action Required	Information	Discussion	Assurance
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Recommendations	<ul style="list-style-type: none"> • APPROVE the Strategic Outline Case (S)C for submission to Welsh Government. • NOTE subject to scrutiny and approval, the Outline (OBC) and Full (FBC) business cases will be prepared and returned to Board for approval before submission to Welsh Government.
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ELECTIVE ORTHOPAEDIC UNIT – STRATEGIC OUTLINE CASE

1. INTRODUCTION

This report provides introduction of the attached Elective Orthopaedic and Spinal Service Strategic Outline Case for Swansea Bay University Health Board.

2. BACKGROUND

The Orthopaedic Sub Group of the Reset and Recovery Surgical Workstream provided a summary of its analysis of its preferred option for the future provision of Orthopaedic and Spinal electives services to the Senior Leadership Team (SLT) at its August 2020 meeting. This built on the feasibility study of the NPTH site via Capital planning and appointed architectural contractors to the scheme (approved in the June 2020 SLT meeting).

The paper outlined the extensive backlog of elective cases, the risk of the significant reduction in operating pre and during COVID and a number of alternative delivery options. The preferred option of a new build extension to Neath Port Talbot Hospital and reutilisation/designation of the existing theatre block was highlighted along with options to 'bridge' the time until such a unit was approved and constructed via a demountable unit.

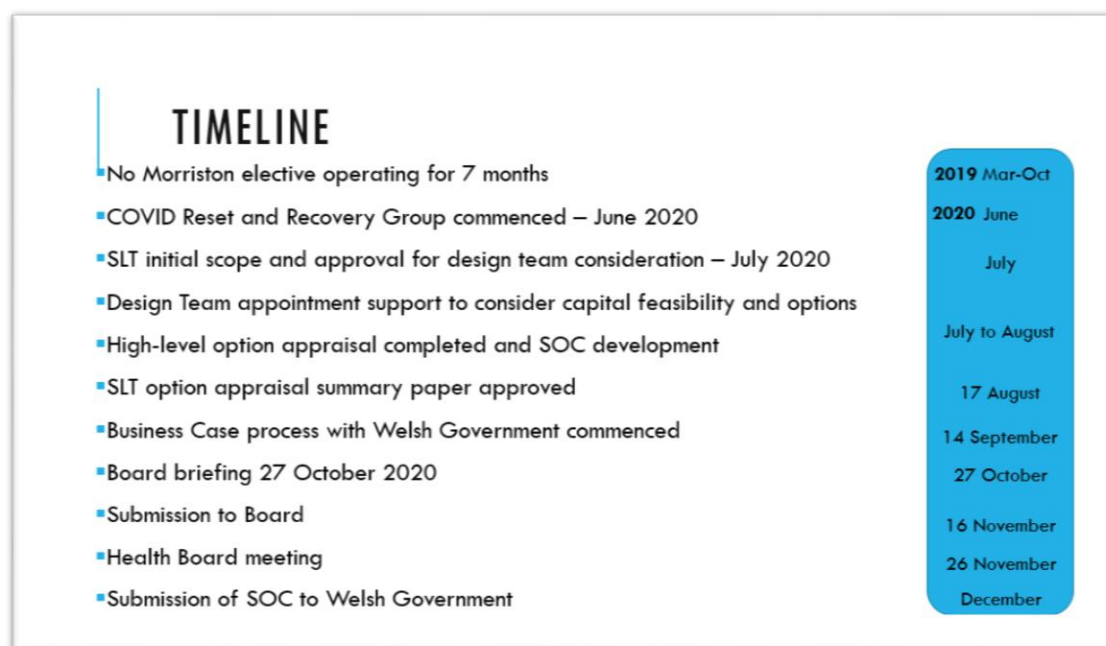
The August 2020 SLT meeting supported the development of a Strategic Outline Case for consideration of Welsh Government capital funding to support the preferred option.

Prior to developing the SOC and submitting for approval to Board, members of the Health Board project team have participated in a scoping meeting with Welsh Government and NHS Wales Shared Services colleagues on Monday the 14th September 2020.

The development of the scheme was supported by Welsh Government and feedback given on the scoping document which has informed the SOC particularly the benefits section. Notably, the feedback encouraged the Health Board to use the business case process to develop the preferred options through the varying appraisal processes and not present a single option particularly at this stage.

A Board Briefing was held Thursday 29th October 2020 which afforded the orthopaedic leadership team (Clinical Director, Spinal Clinical Lead, Associate Service Director and Service Manager) the opportunity to outline the case for change, options development and preferred way forward to Board members.

The SOC timeline is summarised below:



3. GOVERNANCE AND RISK ISSUES

The report aims to mitigate a significant risk for the Health Board, that of not being able to provide timely treatment to thousands of patients awaiting orthopaedic surgery.

Should the proposal not be supported through to implementation there are limited opportunities to mitigate this risk

As the project develops an EQIA and QIA process will be undertaken to underpin the development. Some patients might have surgery in a different location than they would have previously. Overwhelmingly, more patient will receive surgery who otherwise will come to harm on a waiting list whilst waiting increasingly extended times for their procedures.

4. FINANCIAL IMPLICATIONS

The SOC outlines the high level capital and revenue costs within the prescribed format at this stage.

Both are dependent on the option chosen for development through the business case process.

The capital costs range from circa £15m-£60m.

From a revenue point of note is the potential cost of a demountable unit to be utilised to provide some services until the new facility is completed. There are two sub-options depending on the theatre size and method of construction chosen. Both are in the region of £8m for 3 years (not including staffing or consumable equipment). This would not be included in the capital business case but subject to revenue allocation through the Health Board planning process and discussions with Welsh Government on performance delivery of elective care.

Health Board – Thursday, 26th November 2020

A key consideration for the preferred option is how much capacity will be utilised, how quickly for what geographical area. This will drive the pace of the reduction in the waiting times.

Of note is the position with regard to the continued arrangements with Cwm Taf Morgannwg for the proportion of the Neath Port Talbot population who access orthopaedic care via CTM in Princess of Wales and Neath Port Talbot Hospitals. Should the arrangement continue then a proportion of the new facility will treat the CTM activity (as at present). Should it not then demand on the Swansea Bay facilities will increase as it will provide for an increased proportion of the Neath Port Talbot population than it does currently. Financial and workforce scenario's will be developed through the OBC process should the preferred option be progressed.

5. RECOMMENDATION

Members are asked to:

- **APPROVE** the Strategic Outline Case (S)C for submission to Welsh Government.
- **NOTE** subject to scrutiny and approval, the Outline (OBC) and Full (FBC) business cases will be prepared and returned to Board for approval before submission to Welsh Government.

Governance and Assurance		
Link to Enabling Objectives (please choose)	Supporting better health and wellbeing by actively promoting and empowering people to live well in resilient communities	
	Partnerships for Improving Health and Wellbeing	<input checked="" type="checkbox"/>
	Co-Production and Health Literacy	<input checked="" type="checkbox"/>
	Digitally Enabled Health and Wellbeing	<input checked="" type="checkbox"/>
	Deliver better care through excellent health and care services achieving the outcomes that matter most to people	
	Best Value Outcomes and High Quality Care	<input checked="" type="checkbox"/>
	Partnerships for Care	<input checked="" type="checkbox"/>

	Excellent Staff	<input checked="" type="checkbox"/>
	Digitally Enabled Care	<input checked="" type="checkbox"/>
	Outstanding Research, Innovation, Education and Learning	<input checked="" type="checkbox"/>
Health and Care Standards		
<i>(please choose)</i>	Staying Healthy	<input checked="" type="checkbox"/>
	Safe Care	<input checked="" type="checkbox"/>
	Effective Care	<input checked="" type="checkbox"/>
	Dignified Care	<input checked="" type="checkbox"/>
	Timely Care	<input checked="" type="checkbox"/>
	Individual Care	<input checked="" type="checkbox"/>
	Staff and Resources	<input checked="" type="checkbox"/>
Quality, Safety and Patient Experience		
<ol style="list-style-type: none"> 1. To develop a centre of excellence of Musculoskeletal care in Swansea Bay harnessing pre-habilitation, post-operative rehabilitation, diagnostic and operating practice and to act as a focal hub for care across the community utilising digital technologies and empowered patient self care. 2. Reduce waiting times backlog to acceptable levels 3. Provide fit for purpose HBN compliant theatre facilities for orthopaedic and spinal surgery to take place 4. To protect this capacity for elective orthopaedic and spinal care and not compromise it for unscheduled care 5. To improve unscheduled trauma care at Morriston a key part of the South Wales Major Trauma Network 		
Financial Implications		
<p>As outlined the proposal is to secure capital investment from Welsh Government for a dedicated Elective Orthopaedic and Spinal surgical centre in Swansea Bay, The capital cost will depend on the preferred option.</p> <p>Current revenue budget will not support the total amount of elective activity that the proposed centre will develop. The SOC outlines the implications variant on the option chosen.</p> <p>However, it should be noted that the Health Board pre COVID has utilised Welsh Government performance monies on an annual basis providing elective orthopaedic this care in the private sector at significant cost and not insignificant volume to meet demand.</p>		
Legal Implications (including equality and diversity assessment)		
<p>Quality and Equality Impact Assessments will be required on the preferred option to be developed at OBC and FBC stage.</p> <p>Early engagement with the Community Health Council will be required in order to consider whether formal Consultation is required for the preferred option chosen.</p> <p>Initial discussions were shared with the Community Health Council (CHC) Committee in September 2020. An engagement and consultation proforma has been completed and was submitted to the CHC prior to its 27th October meeting. The development of the SOC was supported by the CHC and the steps taken to date to improve the focus on delivering elective orthopaedic surgery welcomed by</p>		

the CHC. Further, the Orthopaedic and Spinal team have been invited to a scrutiny panel by the CHC on the 7th December 2020 where we will be able to share more details of the SOC options and preferred way forward and timescales.

Staffing Implications

The preferred option would increase the number of operating theatres by 1x in NPTH and increase the number of surgeons required to deliver the activity (and maintain current levels of trauma activity that have been enhanced through COVID due to the reduction in elective activity at Morriston). The number required is dependent on the hours and days of operating of the proposed facility.

There will be anaesthetic requirements but how this is achieved will depend on whether there are any changes to the current contractual arrangements with Cwm Taf Morgannwg UHB (CTM)

Ward staffing for the preferred option will come from both NPTH (Ward A) and Morriston (Ward W elective orthopaedic ward). This situation is currently in place to support Ward B2 in NPTH and facilitate moves of specialist orthopaedic staff from Morriston Ward W. Organisational change is underway. Recruitment to vacancies will be key in line with the commencement of the new facility.

There will be a modest increase in support services staff required (again outlined)

A workforce plan including rebalancing of existing resources and any organisational change process would have to run in tandem to the development of the facility.

The workforce schedules will be further detailed at OBC stage

Long Term Implications (including the impact of the Well-being of Future Generations (Wales) Act 2015)

Briefly identify how the paper will have an impact of the “The Well-being of Future Generations (Wales) Act 2015, 5 ways of working.

Report History

August 2020 Senior Leadership Team consideration initial scoping options for Orthopaedic Elective services

Appendices

SOC Draft appended



Strategic Outline Case (SOC)

Development of an Elective Orthopaedic & Spinal Surgical Unit at Swansea Bay University Health Board



Document control sheet

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Executive Summary

Introduction

This Strategic Outline Business Case (SOC) seeks support from Welsh Government (WGov) of between £15.662m and £60.726m (including non-recoverable VAT) for strategic capital investment to develop an Elective Orthopaedic and Spinal Surgical service at Swansea Bay University Health Board's (SBU HB's) Neath Port Talbot Hospital (NPTH).

Background

Swansea Bay UHB provides trauma and orthopaedic and spinal surgery to Swansea Bay and Hywel Dda residents. This specialty deals with acute injuries, congenital and acquired disorders and chronic arthritic or overuse conditions of the bones, joints and their associated soft tissues, including ligaments, nerves and muscles.

The Strategic Case

A. Strategic Context

In recent years health services across the United Kingdom have been subject to significant pressures including unscheduled care pressures, an aging co-morbidity population with increasing chronic conditions and more complex health and social care needs.

Locally, these pressures have placed significant pressure on Swansea Bay's elective orthopaedic services - As early as 2014/15 Swansea Bay's Trauma and Orthopaedic and Spinal service lost the capacity to deliver routine elective cases due to the loss of its ring-fenced elective orthopaedic clean ward status as a result of unscheduled care pressures on the Morriston site; For several months during 2019 further capacity when all elective orthopaedic and spinal surgery was cancelled to alleviate unscheduled care pressures. This has resulted in a steep rise in waiting lists compared with other Swansea Bay specialities and other Health Board orthopaedic positions across Wales. There is significant variance between the Swansea Bay orthopaedic and spinal waiting lists and other areas of the United Kingdom.

Most recently, the COVID pandemic has escalated pre-existing unacceptable waiting times for orthopaedic and spinal surgery patients. This is deleterious for patients who are facing longer and longer delays for treatment and worsening of their condition. It damages the moral of staff who deliver elective services. Currently, elective orthopaedic activity within Swansea Bay and spinal theatre access is severely limited. Essential clinical adjacencies have been compromised and capacity compromised by relocating the orthopaedic services' Fracture Clinic and Outpatient facilities to NPTH site.

Responding to COVID is an opportunity to improve the strategic organisation of Orthopaedic and Spinal services in Swansea Bay. The British Orthopaedic Association (BOA) has long encouraged the organisation of services to separate emergency/trauma work and elective planned care for orthopaedic patients, ideally on different hospital sites. This is to protect the efficiency and delivery of planned care and ensure adequate trauma services are also developed and protected and that planned elective care is not cancelled in favour of emergency cases. Both are delivered, consistently and effectively. In Swansea Bay whilst some elective care is delivered in Neath Port Talbot and Singleton sites the majority of elective and emergency services are delivered on the Morriston site in insufficient capacity and to the detriment of both services.

B. The Case for Change

The residents of Swansea Bay and Hywel Dda need a sustainable and clinically acceptable long term solution to address its urgent elective orthopaedic service pressures.

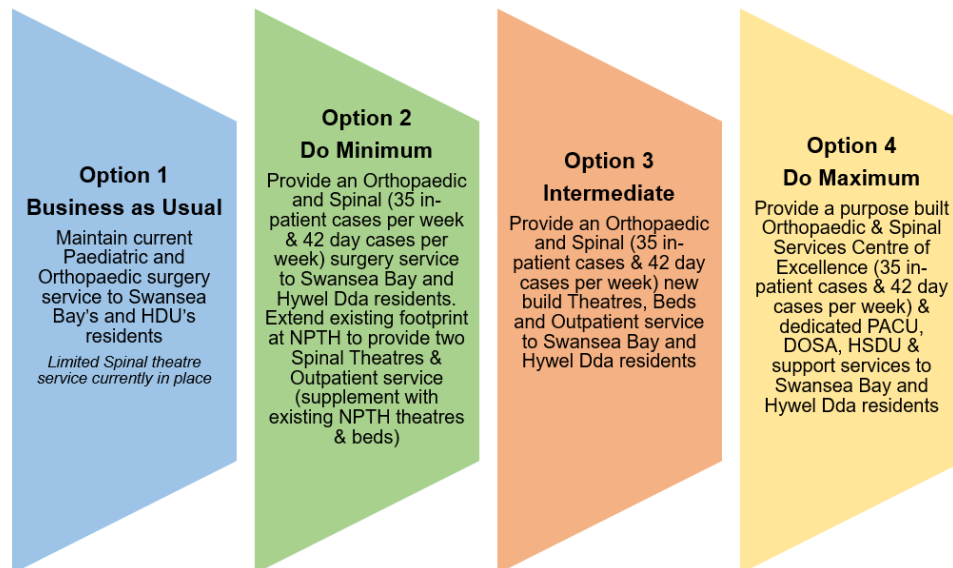
This business case details a range of potential long term options support key national and regional strategic drivers for investment; 'fit' with Swansea Bay's *Organisational Strategy: Better Health, Better Care, Better Lives* 2019 - 2030, *Clinical Services Plan* 2019-2024 and Annual Plan, and with the Masterplan for NPTH, and 'fit' with Hywel Dda HBs' clinical strategy *A Healthier Mid and West Wales: Our Future Generations Living Well Strategy*.

An interim 'service bridging' revenue solution to address immediate needs is at initial planning stage. The latter solution involves development of a modular ('Vanguard-style') theatre unit to 'bridge' the three year interval required to develop a longer term/permanent new build solution. Under both arrangements,

theatres' and wards' facilities would be 'ring fenced' for complex elective orthopaedic cases to avoid 'breaches'.

The potential service scope for this investment are as follows:

Figure – Potential Service Scope Options

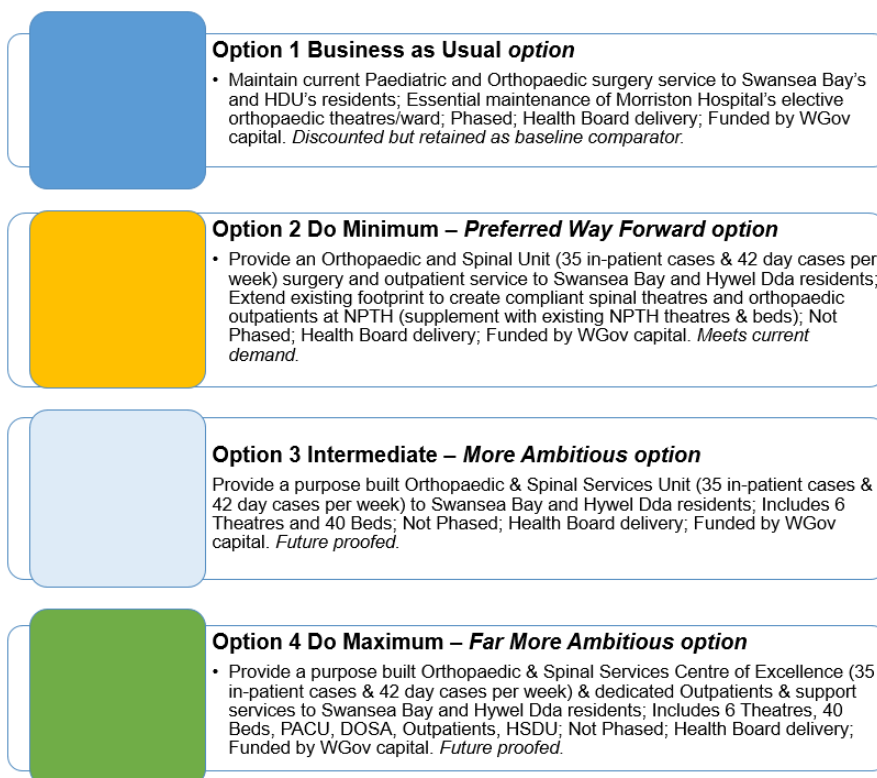


The Economic Case

The spend objectives were agreed as follows (please see Section 3):

- To provide a clinically acceptable/fit for purpose elective orthopaedic and spinal service to Swansea Bay's and Hywel Dda University Health Boards residents.
- To access to fully compliant theatres and support services.
- To improve the quality, efficiency, effectiveness and economy of Swansea Bay's elective orthopaedic & spinal surgical services.

A long list of framework options were developed as per business case guidance. Each long list option was compared against the spend objectives and Critical Success Factors (CSFs) for the project and four options were shortlisted (please see **Appendix F – Framework Options**):



Following hi-level analysis the Project Board (please ref to **Appendix A – Project Board Membership**) agreed the preferred way forward option at this stage is Option 2.

The Commercial Case

This project's procurement strategy will follow the *Designed for Life; Building for Wales*³ procurement route and be publicly funded. The required services comprise the development of two spinal theatres and an Outpatients dept., enabling works and technical commissioning.

Funding and Affordability

The indicative financial implications of the proposed investment for each shortlisted option are as follows:

Figure – Capital Requirements (£000 incl. VAT)

	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Departmental Costs	1,144	10,849	42,712	45,629
Works Costs Total	1,144	10,849	42,712	45,629
Fees	289	3,088	6,795	7,257
Non Works Costs	32	693	2,916	2,916
Equipment Costs	24	75	401	502
Planning Contingency	149	1,471	5,283	5,631
Total	1,638	16,176	58,107	61,935
Less recoverable VAT	- 48	- 514	- 1,132	- 1,209
Base Project Cost	1,590	15,662	56,975	60,726

The overall revenue affordability of each shortlisted option are as follows:

Figure – Revenue Impact (£000's above baseline)

	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
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	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Pay	£4,735	£8,249	£8,249	£8,249
General Non-Pay	£1,917	£5,248	£5,313	£5,313
Hotel Services	£138	£207	£287	£360
Estates	£0	£122	£502	£629
Total	£6,790	£13,827	£14,351	£14,550

A full assessment of capital and revenue affordability shall be made at Outline Business Case (OBC) stage.

The Management Case

To ensure successful project delivery a robust project management reporting structure has been established. The Health Board's experience of developing and delivering complex projects in a Prince2 environment ensures diligent management and thorough clinical involvement throughout all parts of the development. The indicative milestones are set out below:

Figure – Key indicative milestones

Activity	Due Date
Project Board signs off SOC	October 2020
Investments and Benefits Group (IBG) endorses SOC	October 2020
Submit SOC to WGov for approval	October 2020
WGov approve SOC	December 2020
Appoint Supply Chain Partner, Health Board Cost Advisor & Health Board Project Manager from Designed for Life Regional Framework	February 2021
Health Board approves OBC	October 2021
Submit OBC to WGov for approval	November 2021
WGov approve OBC	January 2022
Health Board approves FBC	September 2022
Submit FBC to WGov for approval	September 2022
WGov approve FBC	October 2022
Agree target Cost & Mobilise	November 2022
Handover (subject to contractor's programme)	October 2023
New build commissioning	November 2023
New build operational	November 2023
Technical Project Evaluation (approx. 3 months post new build handover)	February 2024
Benefits Realisation (approx. 12 months post operational)	November 2025

Please see **Appendix H - Management Control Plan**.

Recommendation

This SOC presents a compelling case for change and we recommend on this basis that WGov approve this SOC and that this project progress to Combined Outline Business Case (OBC) stage. This scheme can be undertaken as a separate contract and building services could start at the end of 2023, subject to funding approval.

Signed & Dated:

Mr Chris White
Chief Operating Officer
 Senior Responsible Owner, SBU HB

1 The Strategic Case

1.1 Introduction

This Strategic Outline Business Case (SOC) seeks support from Welsh Government (WGov) of between £15.662m and £60.726m (including non-recoverable VAT) for strategic capital investment to develop an Elective Orthopaedic and Spinal Surgical service at Swansea Bay University Health Board's (Swansea Bay UHB's) Neath Port Talbot Hospital (NPTH).

1.2 Part A - The Strategic Context

Swansea Bay UHB provides trauma and orthopaedic and spinal surgery to Swansea Bay and Hywel Dda residents.

In recent years health services across the United Kingdom have been subject to significant pressures including unscheduled care pressures, an aging co-morbidity population with increasing chronic conditions and more complex health and social care needs. Morriston Hospital, in addition to being designated as the Major Trauma Unit for Swansea bay plays a key role in the newly formed Major Trauma Network for South Wales through the provision of Plastic Surgery Trauma services in conjunction with local orthopaedic trauma care.

Locally, these pressures have placed significant pressure on Swansea Bay's elective orthopaedic services - as early as 2014/15 Swansea Bay's Trauma and Orthopaedic and Spinal service lost the capacity to deliver routine elective cases due to the loss of its ring-fenced elective orthopaedic clean ward status as a result of unscheduled care pressures on the Morriston site;

For several months during 2019 further capacity was lost when all elective orthopaedic and spinal surgery was cancelled to alleviate unscheduled care pressures. This has resulted in a steep rise in waiting lists compared with other Swansea Bay specialities and other Health Board orthopaedic positions across Wales.

In orthopaedic care Morriston Hospital provides all unscheduled trauma care for Swansea Bay and at significant volume. For example, in 2019/20 over 6,000 fractured neck of femur operations took place in Morriston (#NOF) the most in any hospital in South Wales.

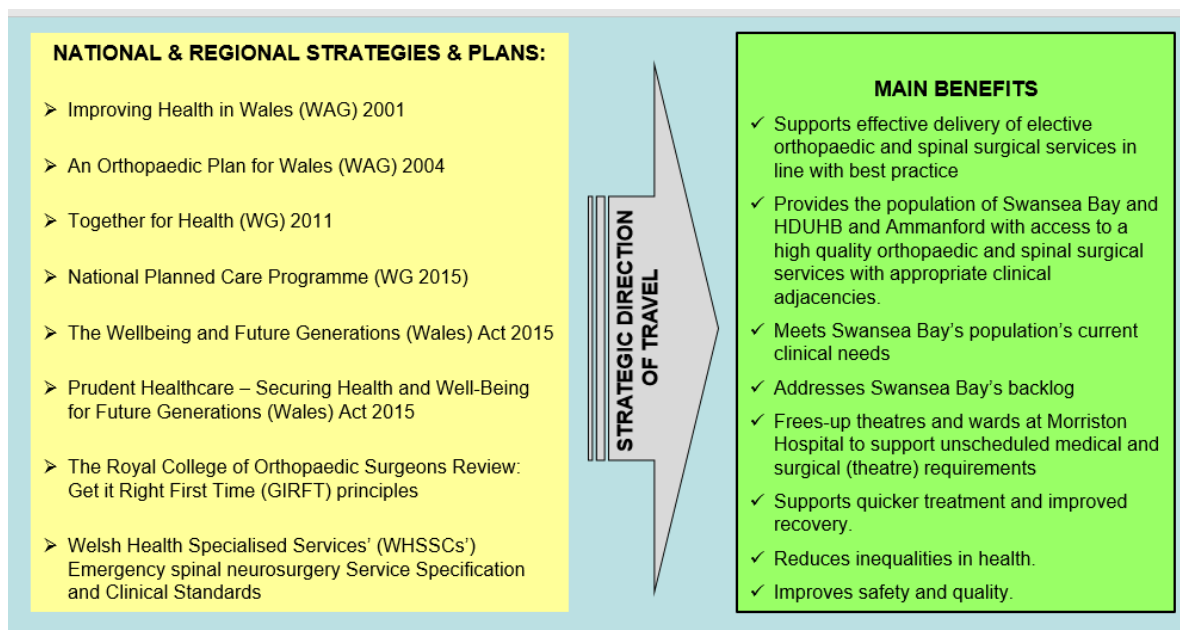
Most recently, the COVID pandemic has escalated pre-existing unacceptable waiting times for orthopaedic and spinal surgery patients. This is detrimental for patients who are facing longer and longer delays for treatment and worsening of their condition. It is damages the morale of staff.

Currently, there is limited elective orthopaedic activity within Swansea Bay and spinal theatre access is severely limited. Essential clinical adjacencies have been compromised and capacity compromised by relocating the orthopaedic services' Fracture Clinic and Outpatient facilities to NPTH site.

This business case includes a 'business as usual' (baseline comparator) and three long term options for resolving the Health Board's elective orthopaedic service pressures. An interim 'service bridging' revenue solution is also at planning stage within the Health Board. The latter solution involves development of a modular ('Vanguard-style') theatre unit to 'bridge' the three year interval required to develop a longer term/permanent new build solution at NPTH. Under both arrangements, theatres' and wards' facilities would be 'ring fenced' for complex elective orthopaedic cases to avoid 'breaches'.

1.3 Business Strategies

This business case supports the following national, regional and local strategies plans and drivers for change and delivery of the main benefits:

Figure 1 – Business Strategies

This business case seeks to deliver a sustainable and clinically acceptable solution. It 'fits' with Swansea Bay HB's *Organisational Strategy: Better Health, Better Care, Better Lives* 2019 - 2030, *Clinical Services Plan* 2019-2024; the Health Board's Sustainability Plan for 2019/20 by seeking to address 'gaps' in outpatient and surgical capacity and was included within the overall financial framework for the Health Board's Annual Plan, and; with the Masterplan for Morriston Hospital. It 'fits' with Hywel Dda HB's clinical strategy *A Healthier Mid and West Wales: Our Future Generations Living Well Strategy*.

The longer term, trauma services' ambitions are to develop an Orthoplastics speciality service as part of the Major Trauma Network (MTN) co-located with the Fracture Clinic (recently relocated to NPTH), and develop an Arthroplasty Service as part of the Major Trauma Unit (MTU), improve provision for Day Case Ambulatory care and to improve pathways for Fracture National Osteoporosis Foundation (NOF) patients, reducing mortality and improving outcomes.

1.4 Swansea Bay Health Board's Elective Orthopaedic & Spinal Surgical Service

Orthopaedic and spinal services are designated as a tertiary service for the population of South and West Wales. These services are provided by directly employed staff (medical, nursing, therapy, technical, clerical and managerial), who work closely as a multi-disciplinary team (MDT) with support services.

Elective orthopaedic & spinal surgery services forms part of Swansea Bay's Surgical Services Directorate, which is staffed by consultant surgeons who are responsible for providing on-call cover for orthopaedic and spinal patients on two separate rotas.

Until early 2020 Swansea Bay's Trauma and Orthopaedic service was delivered across the following Health Board sites:

- Morriston Hospital provides complex and routine inpatient clean elective cases/trauma.
- Neath and Port Talbot Hospital provides day case/ semi elective day case trauma.
- Singleton Hospital provides day case elective activity and semi elective day case trauma running through 2 on site facilities a dedicated Day Case Unit (hand surgery) and main theatre/hospital activity.

Each site provides surgery for patients from all geographical areas based on clinical condition and the level of surgery conducted at each hospital, not based on the residence/location of the patient.

Currently, there is currently elective orthopaedic activity within Swansea Bay and spinal theatre access is severely limited.

1.5 Current Activity

The orthopaedic department at Morriston Hospital delivers work across three sites: The main trauma, arthroplasty surgery as well as more complicated surgery is based at Morriston. Additional activity is undertaken at Neath Port Talbot Hospital, Singleton Hospital main theatres and Singleton surgical day unit. On average, 60 spinal operations carried out per month, including 35- 40 unscheduled cases. The current work is largely scheduled surgery for degenerative conditions (cervical myelopathy, radiculopathy, lumbar radiculopathy, stenosis, spondylolisthesis). Intra-dural tumour, adult spinal tumour and adult deformity surgery is carried out occasionally.

Morriston theatre lists have totalled 4 to 5 theatres per day. Traditionally demarked a 1x trauma (3 session), 1x spinal (3 session) and the remainder elective on 2 or 3 sessions varying. However, even though the elective beds haven't been available the elective theatre lists have been used to deal with the trauma demand which is significant. Therefore, any 're ringfencing' of beds would require a significant uplift in theatre space allocated to orthopaedics and spinal surgery to the detriment of other specialties.

1.6 Current Staffing

The current orthopaedics staffing profile at Morriston, NPTH and Singleton Hospitals (2020) is as follows:

Figure 2 – Current Service Profile of SBU's Orthopaedic & Spinal Services' Workforce (WTE)

Site	Morriston		NPTH		Singleton		Total	
	no.	w.t.e	no.	w.t.e	no.	w.t.e	no.	w.t.e
Consultants	27	26.5	3	3			30	29.5
Locum consultants	2	2					2	2
Associate specialist								
Middle grades	2	2					2	2
Training grades	23	21					23	21
SHOs	1	1					1	1
Nurse Practitioners	6	5.8					6	5.8

1.7 Part B - The Case for Change

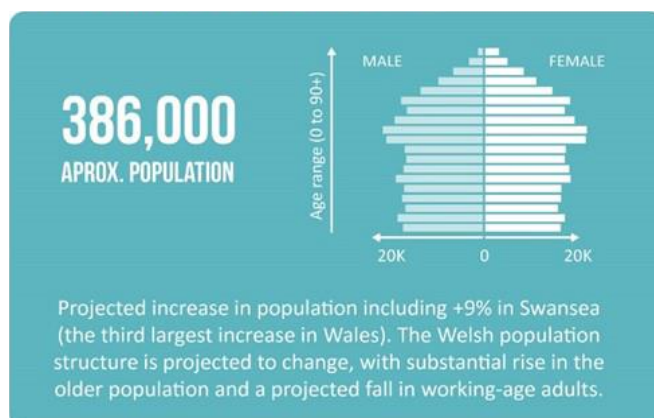
The residents of Swansea Bay and Hywel Dda need access to a sustainable and clinically acceptable long term solution if it is to address its urgent elective orthopaedic service pressures.

Access to a ring-fenced 'clean' unit would allow elective patients to be seen, would help address the backlog of patients on the waiting list, and would allow Swansea Bay to deliver a sustainable service model for Orthopaedics and Spinal services. The current physical theatres and ward infrastructure within Morriston Hospital are sub-optimal compared to current standards, site constraints do not allow for co-location of elective orthopaedic and spinal cases. Investment is needed to provide appropriate infrastructure for elective surgery to improve the quality of care and the patient experience. Development of capacity off the Morriston site would release bed and theatre capacity on the Morriston Hospital site to more effectively support unscheduled care trauma, medicine and surgery demand, helping support Morriston's playing a critical role within the Health Board and within the region as a regional hub for South West Wales.

1.8 Needs Assessment

A GIRFT review was conducted across six health boards in Wales in 2014. The review focused on reviewing quality and output metrics relating to adult elective orthopaedic and spinal activity. The review was supportive of developing dedicated 'stand-a-lone' units citing this solution, which brings together groups of surgeons undertaking significant volumes of routine and complex cases within completely ring-fenced beds, as being safer, more cost effective, improving the quality treatment for patients than "merged" units. The review concluded that benefits of this model should include reductions in referral to treatment times and reduced infection rates. The GIRFT review specifically recommended that (the then ABMU) Health Board should establish an elective orthopaedics unit to provide access to a 'world-class' critical mass of routine and specialised orthopaedic services orthopaedic service for its residents. The review concluded adoption of this model would support align demand and capacity more effectively than the current 'merged' arrangement; improve productivity; reduce waiting times; improve outcomes; improve training and workforce challenges, and; reduce costs. This business case supports the key messages of the GIRFT review by delivering a dedicated 'stand-a-lone' elective orthopaedic and spinal unit.

The population of Wales is projected to increase by 2.7% to 3.22 million by 2028. The number of people aged 65 and over is projected to increase by 16.3% to 758,600 between 2018 and 2028. The number of people aged 75 and over is projected to increase by 29.3% to 378,100 between 2018 and 2028.¹ Swansea Bay's population is approx. 386,000:



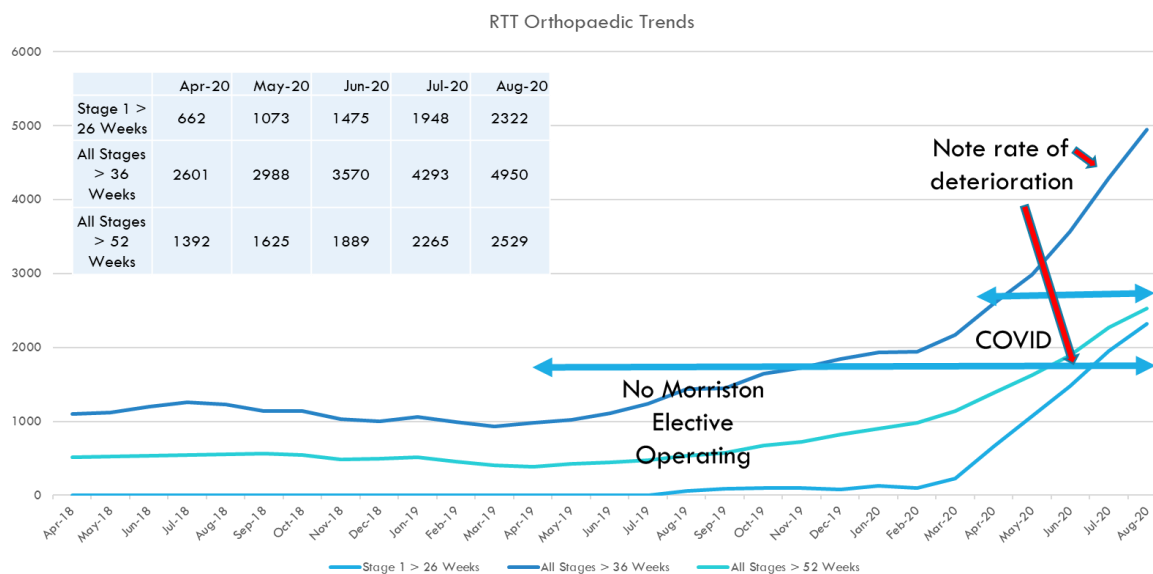
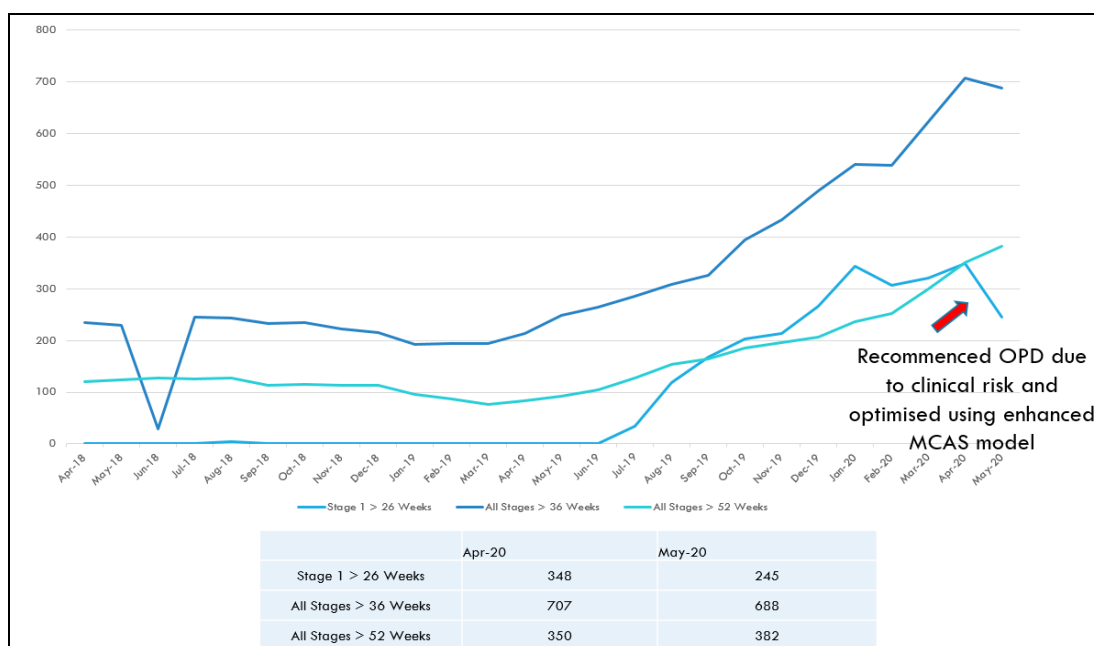
In August 2017 the Health Board appointed an independent health care planner, 2020 Delivery Ltd, to undertake demand and capacity modelling to inform the development of a regional Elective Orthopaedic Centre.² This modelling looked at current demand and projected future activity, physical capacity, workforce. The results of a number of 'what if' sensitivity tests provided informed the 'do maximum' option (i.e. Option 4) proposed in this business case.

1.9 Performance and Waiting Times

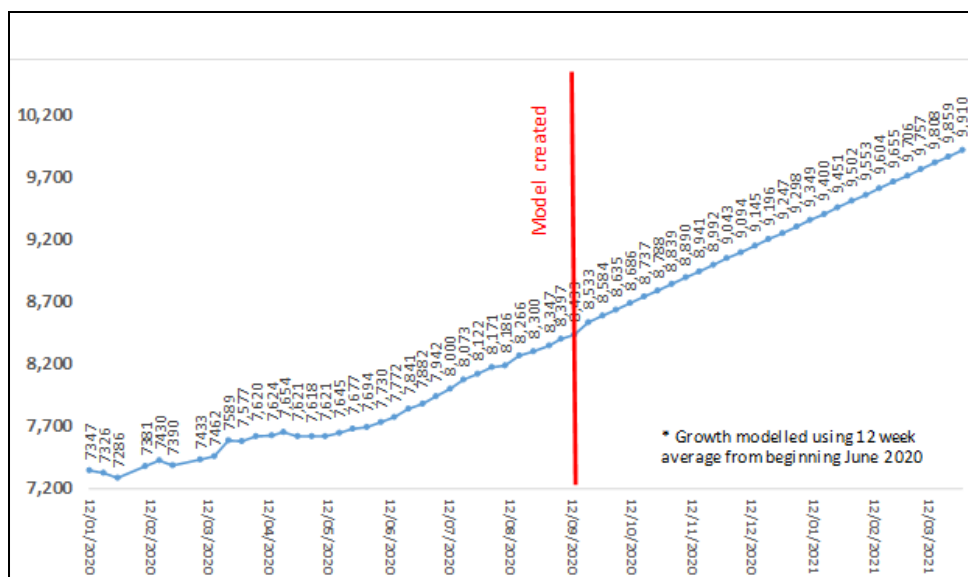
The number of people on the Health Board's orthopaedic surgical waiting lists is unprecedented and is continuing to increase. In June 2020 waiting lists for shoulder replacement was 189 weeks, hip arthroplasty was 169 weeks, and knee arthroplasty was 163 week (169 people have been 2 years for the above procedures). Similarly, waiting lists for spinal fusion was 171 weeks (53 people have been 2 years for the above). These issues are illustrated in the following Right to Treatment graphs (see Figures 3 & 4):

¹ <https://gov.wales/national-population-projections-2018-based>

² ABMU Elective Orthopaedic Centre *Demand and Capacity Modelling* (2020 Delivery: 4th August 2017)

Figure 3 - Orthopaedic Surgery waiting times (RTT April 2018 – August 2020)**Figure 4 - Spinal Surgery waiting times (RTT April 2018 – August 2020)**

Modelling of future waiting list growth has been undertaken using the existing backlog, current rates of referral and activity (i.e. minimal).

Figure 5 - Swansea Bay Orthopaedic Waiting List growth

The above figure illustrates a significant increase in patients waiting projected over the next 12 months based on current levels of activity. This will accelerate further prior to any commencement of a capital capacity solution.

Consideration has been given to the implication of both the lead in time to a facility being built on the waiting list (assuming current minimal level of activity remains for the period and demand is as at present) and the reduction trajectory for the waiting list depend on the activity numbers delivered.

Trajectories have been developed as follows using the following modelling assumptions:

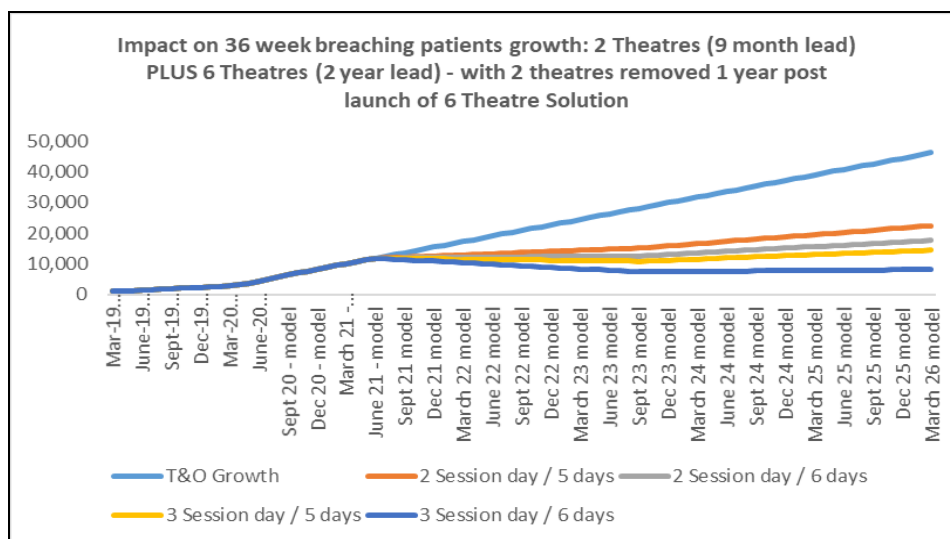
- Actual growth until Sept 2020
- Modelled growth from September 2020 onwards
- Baseline growth based on 6 month average growth, April-Sept 2020
- Model assumes future demand, and removal rates, to be stable post-September 2020
- Model assumes additional removal rates, for each solution presented, to also be stable.

Figure 6 - Growth in waiting list during any approval of construction phase

Sept '20 over 36w 6410	Mar '21	Mar '24		Mar '26	
Do Nothing	10,222	31,694		46,142	
2 Theatres (9 mth lead in)		5d 2 sess 27,734	6d 3 sess 25,358	5d 2 sess 39,302	6d 3 sess 35,198
6 theatres (2 year lead in)		5d 2 sess 25,214	6d 3 sess 21,326	5d 2 sess 31,022	6d 3 sess 21,950
2 theatres for 3 years (9 month lead in) PLUS 6 theatres (2 year lead in)		5d 2 sess 16,574	6d 3 sess 7,502	5d 2 sess 22,382	6d 3 sess 8,126

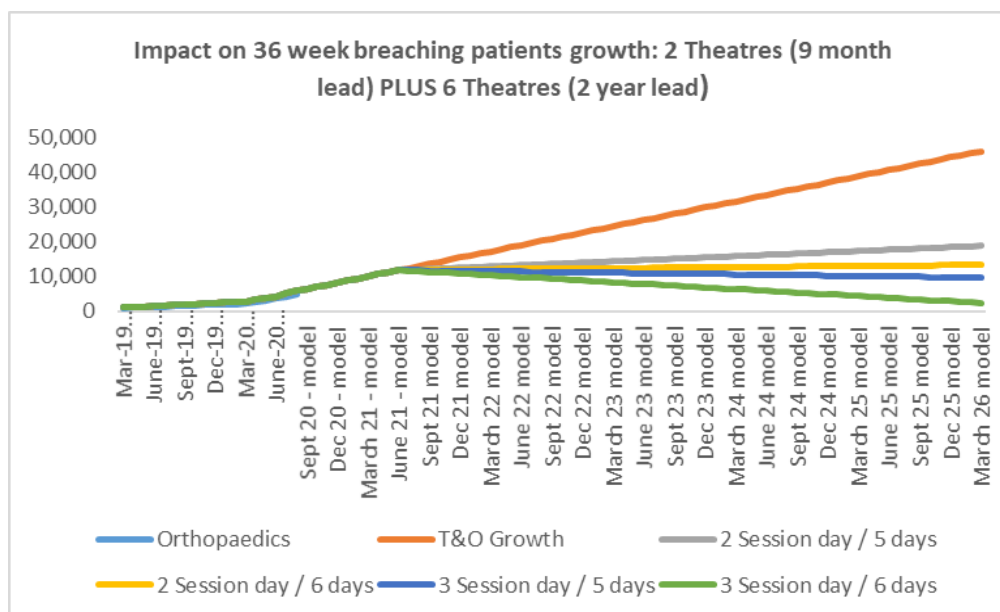
The above table illustrates the growth in waiting list during any approval of construction phase and subsequent variance in time taken to reduce the waiting list to more 'acceptable levels' (not to 26 week target levels).

This high level modelling table outlines how an immediate increase in available capacity for elective orthopaedic and spinal cases is required and that it is vital to ensure that opportunities are taken to arrest waiting list decline prior to the establishment of the new facility in order to mitigate waiting list growth when it is established.

Figure 7 – Patients waiting above 36 weeks (March 2019 to March 2026)

The waiting list trajectory of the Business as Usual option (Option 1) shows a significant increase of the patients waiting above 36 weeks to over 45,000 before March 2026.

Should the Health Board retain the two additional theatres alongside the preferred 6 theatre model until March 2026 then waiting times reduce to 2,366 and reduce by around 150 per month i.e. before March 2028 the service should be within balance (36 weeks) within the 6 theatre complex.

Figure 8 – Impact on 36 week breaching (March 2019 to March 2026)

Long waits for patient who require orthopaedic surgery cause significant additional harm. There is growing evidence of the risks of delay to surgery but the literature is not mature and the magnitude of current waits is not considered in the literature. A recent seminal study out of Edinburgh of over 2000 THRs and over 2000 TKRs looking at the effect of co-morbidity such as COPD and peripheral vascular disease demonstrated that 12 % of all TKR “waiters” and 19% of all THR “waiters” had a score on the EQ-5D global health instrument of “worse than death [WTD]”. Petr O, Glodny B, Brawanski K, Kerschbaumer J, et al. *Acute Motor Deficits. The Impact of Surgical Timing on Functional Outcome.* SPINE 2019 ; 44(7): 454-463.

Within Swansea Bay since 2017 89 patients 51 of who had already waited over 52 weeks for elective surgery had trauma operations as emergencies. The hypothesis is that patients required emergency surgery due to the length of wait for their elective procedure and could have suffered poorer outcomes

as a result as the rate of deterioration meant their condition had deteriorated to the point that immediate emergency surgery was required. Detailed clinical analysis is being undertaken.

Long waiting times and lack of access to elective orthopaedic surgery provides an extremely poor patient experience. Based on analysis for the period of August 2019 to August 2020 there has been 357 complaints recorded on Datix for Orthopaedics. The table below shows 56% of complaints are in relation to admissions and a further 10% in relation to appointments.

Subject of Complaints	% of Total Complaints
Admissions	57.42%
Communication issues	12.04%
Clinical Treatment	11.76%
Appointments	10.36%
Referrals	2.80%
Discharge issues	1.40%
Test Results	0.84%
Attitude and Behaviour	0.56%
Patient Property/Expenses	0.56%
Medication	0.56%
Nutrition and hydration issues	0.28%
Transfers	0.28%
Patient Privacy, Dignity and Respect	0.28%
Patient Records	0.28%
Appliances/Equipment	0.28%
Pressure Sore	0.28%
Grand Total	100.00%

Focusing on admissions and appointments complaint subjects, the table below shows us a lower categorisation of the complaints for understanding.

Subject and Sub-Subject of Complaints	% of Total Complaints
Admissions	57.42%
No admission date	26.61%
Delay	16.81%
Cancelled admission-elective	13.73%
Wait for bed for emergency admission	0.28%

Appointments	10.36%
Delay in receiving outpatient appointment	5.04%
Appointment cancelled	3.92%
Continuity of staff	0.56%
Delay in appointment	0.56%
Validation Issues	0.28%

A selection of comments from the above complaints are below:

“Complainant's husband has been waiting for a total knee replacement surgery, which has been cancelled. Complainant is frustrated as they know that Ward W is currently not taking orthopaedic

surgery patients, however they have not been told when it is likely to re-open nor how long to expect to wait for the surgery to take place.”

“Patient is on the routine waiting list for neck surgery. She has already been waiting a year and now been told she will have to wait another year because they are not doing any routine operations and she feels this is too long to wait.”

“Patient says he has been waiting 4 years for a knee replacement. His original consultant left, so he was transferred to a different consultant's list. He had an appointment with his new consultant who said he would see him in a year, as the list is long and he has more urgent cases. The patient called the booking office but still doesn't know when he will be seen and he is now housebound and having to use crutches.”

In the period, August 2019 to August 2020 there has been four Orthopaedic cases referred to the Ombudsman. Two cases (50%) are in relation to the delay in treatment. Details of these cases are evidenced in the (below) table:

Description	Current Stage	Subjects
Complaint regarding the delay in receiving corrective knee surgery	Ombudsman	Clinical Treatment
Patient has been on the waiting list for a hip replacement since 2017. The patient has a disabled daughter and a husband with stage 4 oesophageal cancer who relies on them.	Ombudsman	Admissions

1.10 Problems with Status Quo

Insufficient elective bed and theatre capacity. Swansea Bay has failed to manage increasing demand for orthopaedic trauma inpatient beds particularly on the Morriston Hospital site for the last six years. In 2014/15, 29 elective beds were reduced from 29 to 23 beds. In 2019, all routine elective orthopaedic and spinal cases were first reduced to only 16 beds and then all elective surgery at Morriston was stopped for five months. Spinal theatre capacity at Singleton Hospital is ad hoc and only two elective wards rather than four are ordinarily available Morriston Hospital. Pre-assessment services at Morriston are also working at reduced capacity. A lack of spare capacity in Wales/neighbouring Health Boards limits our Health Board's ability to address these pressures (the Health Board has historically outsourced a regular level of orthopaedic and spinal activity to manage the increasing waiting times for treatment). Even allowing for a return to 'normal' (post Covid-10), clearly, this situation is operationally and clinically unacceptable and financially unsustainable.

Repeated 'breaches' of ring-fenced elective scheduled orthopaedic services. Unscheduled care services and winter pressures have repeatedly 'breached' elective scheduled orthopaedic surgery reduced elective bed capacity. Initially these 'breaches' were occasional and for short periods to manage winter pressures but in 2019, all routine elective orthopaedic and spinal surgery at Morriston was stopped for over five months. Then again, in March 2020, in response to Covid-19 pressures, all routine elective orthopaedic and spinal cases surgery was again stopped (with only one spinal list recently having been reinstated per week at Morriston Hospital to deal with emergency spinal referrals).

Waiting Times. Current orthopaedic waiting lists (as at July 2020) for Shoulder Replacement Arthroplasty was 189 weeks; Hip Arthroplasty was 169 weeks, and; Knee Arthroplasty was 163 weeks. The number of orthopaedic patients waiting over 2 years was 169. Current spinal waiting lists for Spinal Fusion was 171 weeks. The number of spinal patients waiting over 2 years was 169. Long waiting have a deleterious effect on patients' health. Patients waiting for hip or knee replacements and spinal procedures, etc. have reduced mobility and rely on large doses of medication to manage pain. We are not able to reduce waiting lists and to promote wellbeing and return to work ambitions of individual patients without significant investment in ring-fenced elective surgical services, which we can guarantee will not be 'breached'.

Harm to patients from extended waits. The impact of a delay in the provision of an elective orthopaedic or spinal procedure will vary depending upon the severity of the index pathology at the time of placement on the waiting list (priority classification on clinical grounds), the effect of co-morbidities and the length of the delay amongst many other factors. Increased harm related to the delay can be assessed by physical metrics in terms of extended pain suffering; deteriorating function; associated co-morbidity decline; specific events (such as fracture or peptic ulceration or bleeding secondary to NSAIDs, etc...); and / or the need to change the procedure.

Psychological decline secondary to chronic pain effects; suicidal thoughts and intentions or actions; depression and lack of self-worth will also occur. The socioeconomic impact in terms of lost work days; earlier retirement; increasing financial burden to society; and the associated burden of care to family & friends is often understated. There is an ever spiralling increase in workload created by the numerous complaints (including in SBUHB recently 4 such Ombudsman cases) related to delays and increased morbidity, pain and loss of function, as is the impact from a litigation and legal costs point of view.

Insufficient orthopaedic outpatient capacity. In response to Covid-19 pressures the outpatients' service at Morriston was stopped. There is limited capacity on the Singleton and NPT Hospital sites to ensure effective service delivery and patient recovery, MDT working and training opportunities being adversely affected.

Best Practice and Royal College Guidelines. An estates solution is only part of the answer to maintaining British Orthopaedic Association (BOA and Royal College of Surgeons (RCS) clinical standards, we need to provide access to appropriate and fully WHBN/WHTM compliant and not 'breachable' elective orthopaedic and spinal surgical facilities. Guidance suggests that the optimum arrangement of orthopaedic services to separate elective activity on to a different hospital site than the trauma provision.

Winter pressures. During the last six years' winter months there has also been a requirement to breach the screened elective orthopaedic ward due to bed pressures. This has an adverse effect on the access times for patients waiting for elective orthopaedic and spinal operations.

An aging population, increasing chronic conditions and more complex health and social care needs. Pressures on elective surgical services have been unprecedented, adversely effecting access times for patients waiting for elective orthopaedic and spinal operations. Delays to treatment for orthopaedic and spinal patients is significant, older, incapacitated patients are losing their rehabilitation potential due to muscle-loss, compromising their long-term health benefits and increasing recovery time.

Please see **Appendix D – Clinical Evidence for detrimental effects of delays in waiting lists; concept of harm.**

Swansea Bay's population needs access to safe, sustainable and effective orthopaedic surgical services which can offer the best experience for patients requiring orthopaedic surgery and maintain best practice standards of care. The Royal College of Surgeons have recommended that to ensure the future sustainability and quality of orthopaedic surgery in South Wales, there should only be one hospital delivering the service. As Morriston Hospital continues to expand as an 'acute hub' the need for a permanently 'clean' orthopaedic surgery centre is now essential if we are to maintain resilient and sustainable elective services.

Training status and ability to retain skilled staff. As a University Health Board we provide training for junior doctors. In the last 18 months our junior doctors have had limited access to elective surgical training due to repeated and finally extended 'breaches'. This situation threatens our 'University' status and could lead to fewer numbers of trainees at Morriston Hospital. Coupled with four of our consultant surgeons have retired from Morriston in recent years, this could make future delivery of elective surgery unsustainable.

Pressures on the elective service are likely to increase in Morriston Hospital once the Major Trauma Network (WTN) commences in August 2020, and Morriston becomes the 'gateway' for re-patriating west Wales' patients more so than it currently does. Centralisation of the medical intake (from Singleton Hospital) on the Morriston site will exacerbate these pressures.

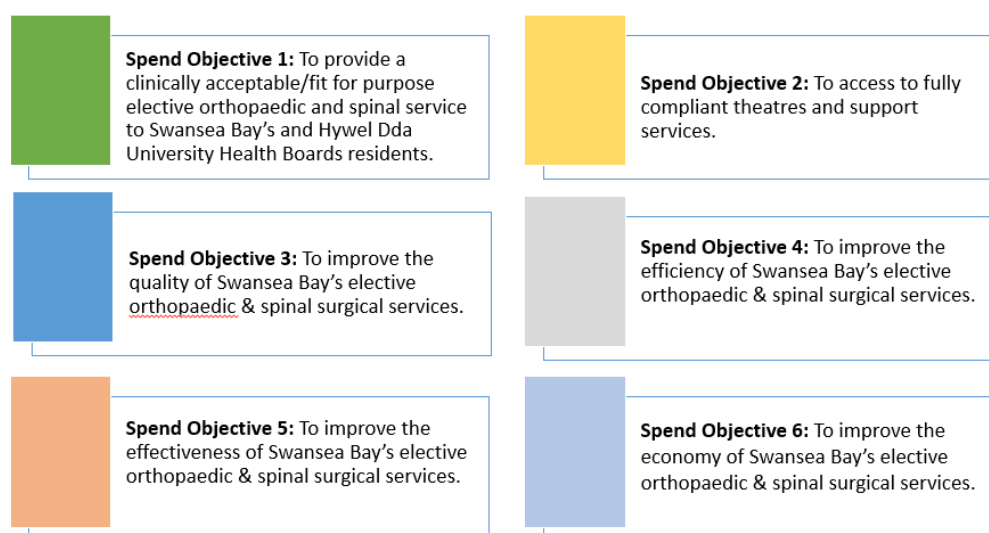
1.11 Best Practice

A 'clean' elective orthopaedics and spinal clinical model has been very successfully implemented elsewhere in the UK and was commended as the most appropriate delivery model in the *Get It Right First Time* (GIRFT) Review of Swansea Bay's Trauma and Orthopaedic Services in 2014. Creating the right environment for clinical teams to practice and deliver consistently, high quality treatments, will allow the service to achieve critical mass volumes.

1.12 Spend Objectives

In accordance with NHS Wales's guidance, the key spend objectives have been identified as follows:

Figure 9 – Spend Objectives



All the above to be achieved by the end of 2023 and evidenced by the end of 2024, subject to funding and planning approvals (please see **Appendix C – Benefits Realisation Register**). Potential dis-benefit: Locating on a single site may result in some patients having to further to travel for their orthopaedic surgery but provision of a dedicated Outpatients Dept. would improve the quality of and service effectiveness.

1.13 Business Needs

Investment is required to support delivery of a new service model and patient pathways in compliance with UK best practice. The aim is to deliver treatment, with the right skilled workforce, the right capacity and the right infrastructure in one place to ensure effective, efficient, consistent high quality care to patients. This will improve the quality of care, provide fit for purpose, dedicated and networked orthopaedic surgical services to the Health Board's population.

1.14 New Clinical Model

The proposed clinical model will continue to provide a regional elective orthopaedic service to Swansea Bay's and Hywel Dda University residents.

The new service will be staffed by a team of orthopaedic surgeons. This service will be supported by specialised MDTs and surgical practices and services will be specialised and standardised. Design of practices and services will be based on an evidence-based approach for optimising service delivery to patients and maximising health outcomes.

A ring-fenced unit will allow more patients to be treated, delivering service sustainability, capacity to address backlog and future growth for Trauma and Orthopaedics and spinal services. This will eliminate the need to outsource activity, which ultimately will reduce the financial burden on Swansea Bay.

The new Unit will operate on patients with a clear intention to discharge home following surgery. The patient journey will be clearly set out from admission to discharge with detailed clear clinical criteria determining the suitability for admission. Only patients meeting these clinical criteria will be treated within the new Unit. The criteria will be based around adult elective orthopaedic and spinal procedures that do not, under normal circumstances, require ITU or HDU post-operative care.

1.15 Planned Staffing Requirements

The new centre's staffing initial future requirements are therefore estimated as follows:

Figure 10 – Staffing (WTE)

Workforce	WTE
Orthopaedic Surgeons	17
Anaesthetic Consultants	12
Additional Scrub Nurses	0
Additional Therapies Staff	8

The workforce requirements for the preferred option will be developed from existing resources moved from other sites. E.g. the Morriston elective ward will support the additional ward in NPTH via organisational change. The existing ward supporting NPTH theatres will be retained to form the required beds for the expanded service. Existing theatre staff are as above due to the increase in theatre numbers. Currently, it is likely that these will be transferred from orthopaedic theatres on other sites to NPTH via organisational change also. Redundancy in those sites will then need to be resourced.

The number of Consultants required will depend on the operating model/times for the proposed facility and whether or not this remains shared with Cwm Taf Morgannwg as per the current SLA arrangements post the Bridgend Boundary change.

1.16 Service Interdependencies

The orthopaedic and spinal surgical service must be integrated or co-located with the following:

- Theatre & Recovery, Anaesthetic and Nursing Teams & Advanced Nurse Practitioners services
- Rheumatology Medicine.
- Out-patient clinic space, including facilities for pre-op assessment and pre-admission.
- Support from all other hospital services including interventional radiology.
- Support from Haematological, Biochemical and Microbiological laboratories and Cellular Pathology & Molecular Services;
- Radiological investigation;
- Dedicated Physiotherapy, Dietetics, Occupational Therapy, Pain Team, and Speech and Language Therapy to deliver rehabilitation, and;
- Support from all other hospital services especially Interventional Radiology.

The following support services are also essential:

- Pain Management and Specialist Palliative Care Service
- Psychology and Psychiatric Liaison Service
- Dietetics, Speech & Language
- Pathology and Pharmacy
- HSDU
- Physiotherapy and Occupational Therapy

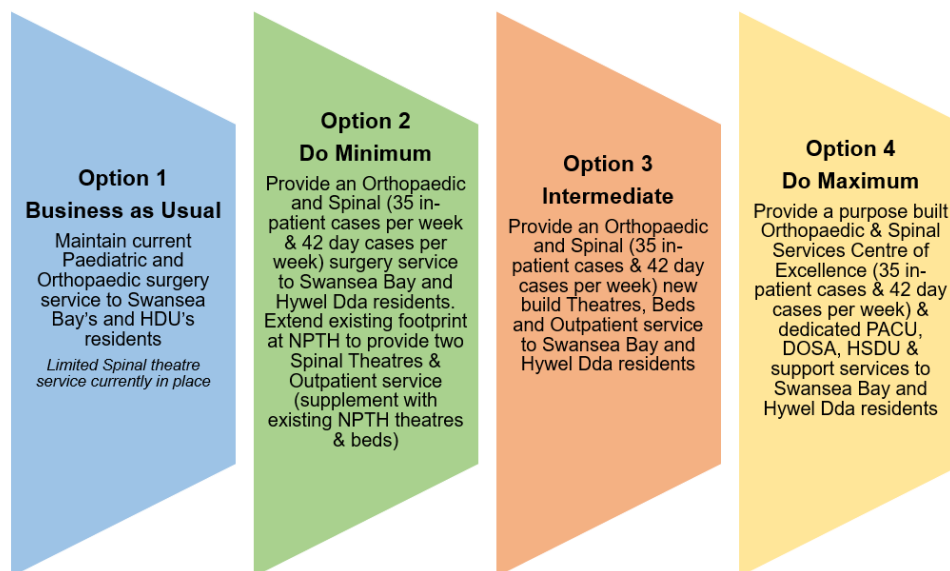
Musculoskeletal Clinical Assessment Service (MCAS) provides a range of services for patients via integrated multi-disciplinary teams of health service professionals, including GPs with a special interest, and specialist therapists. The MCAS service has fundamentally changed patient care pathways in Orthopaedics and spinal services, facilitating improved pathways and alternative care pathways and improved self-management information for patients.

There will be links with approved clinical trials, educational links with University partners, and close links with the Primary Health Care Team.

1.17 Potential Scope

This section describes the potential scope for the project in relation to the above business needs in terms of modalities and service drivers. The potential scope has been assessed against a continuum of need. The potential service scope options within these ranges are described in the figure below:

Figure 11 - Potential Service Scope Options



1.18 Main Outcomes and Benefits

The main potential outcomes benefits to patients, the Health Board and the wider health community would be classified in terms of cash releasing benefits (CRBs), non-cash releasing benefits (NCRBs), quantifiable or quantitative benefits (QBs), and non-quantifiable or qualitative benefits (NQBs). These are as follows:

- Provide a dedicated and fully compliant / 'clean' solution for elective orthopaedic surgery, eliminating further risk of breaches in compliance with WHBN and WHTN and supports best practice, i.e. the Royal College of Orthopaedic Surgeons Review: Get it Right First Time (GIRFT) principles..
- Service and Technical solutions meet current need and could facilitate a reduction in backlog (within 5 years depending on option and bridging option chosen).
- Acceptable and accessible clinical and patient day patient and surgical solution.
- Ensure timely treatment improves health outcomes especially for older patients who experience muscle-loss, pain (and chronic pain) and loss of independence if their treatment is delayed.
- Timely treatment also prevents the irreversible nerve and spinal chord damage leading to permanent disability, paralysis and incontinence. Avoidable harm therefore comes to the patient and a significant impact on other health and care services to support and care for them
- Loss of employment, extended period of work and inability to return to the same employment are all consequences of delays to timely treatment
- Reduction in dissatisfaction from patients resulting from extended waits for treatment and any subsequent litigation.
- Retain junior doctor training and enhances consultant recruitment and retention.
- Retain workforce support for trauma service, Major Trauma Unit status and orthoplastic provision to planned Major Trauma Centre via the Major Trauma Network for Wales.
- Reduce outsourcing and provides a sustainable solution.

- Provide an enhanced and dedicated orthopaedics' outpatients facility.
- Release space in Morriston Hospital for other clinical developments and for unscheduled care pressures.
- Mitigate breaches and cancellations, and reduces infection risks.
- Establish dedicated rehabilitation ward for long term fragility fracture patients in collaboration with current Care of the Elderly services
- Establish an MSK dedicated potential centre of excellence combining streamlined efficiency of care collaboratively with Radiology, Rheumatology, Physiotherapy, Occupational therapy and other allied services such as Podiatry and Orthotics
- Provide a centre of excellence for Regional Anaesthesia reducing risk, potential harm and improving operative and recover times, plus training which is under developed at present and limits service efficiency and recruitment and retention as a consequence.

Please see **Appendix C – Benefits Realisation Register** for details of the main benefits (this will be detailed at OBC stage).

1.19 Main Risks

The main business and service risks associated with the potential scope across all the options for this project are shown below, together with their counter measures, are detailed in **Appendix J – Risk Register**. Please refer to **Appendix I – Option & Risk Appraisal Group Membership** for details of the appraisal team members.

1.20 Constraints

The key constraints are as follows:

- The solution must be affordable in capital and revenue terms and be delivered within project budget (allowing for costs and legal fees associated with capital developments on existing PFI hospital sites).
- The solution must be located adjacent to theatres and wards and be supported by essential services, and allow for re-location of existing services to provide an acceptable estates solution/developable footprint.
- The solution must allow the service to meet planned local demand and surgical targets.
- The solution must allow the Health Board to address backlog within a reasonable timeframe and comply with statutory and regulatory requirement, e.g. delivering pressure gradients in clean canopy ventilated theatres and ensuing compliance with WHBN room size guidance.

1.21 Dependencies

The success of this project is subject to the following dependencies:

- Availability of capital funding from the Welsh Government.
- Commissioner support.

1.22 Summary

This investment presents a compelling case for change given that Swansea Bay must provide a more efficient patient pathway for elective orthopaedic patients if it is to meet current and forecast demand, satisfy targets and eradicate backlog waiting lists.

The release of elective orthopaedic beds within Morriston Hospital, increasing medical bed numbers to meet unscheduled care pressures.

We recommend that approval be given to progress to the OBC stage.

2 The Economic Case

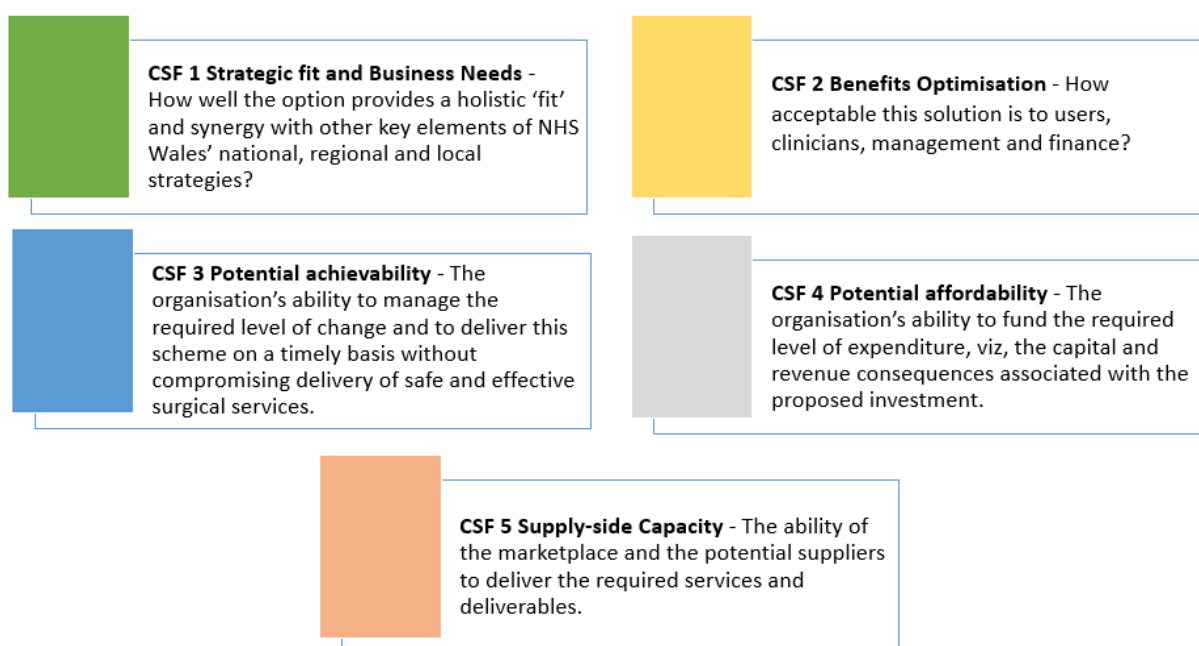
2.1 Introduction

In accordance with the Capital Investment Manual and requirements of HMT's *The Green Book: Central Government Guidance on Appraisal and Evaluation* (2018), this section of the business case demonstrates the wide range of options that have been considered in response to the potential scope identified in this SOC.

2.2 Critical Success Factors

The Critical Success Factors (CSFs) have been identified to allow evaluation of the potential options. These are shown below:

Figure 12 – Critical Success Factors (CSFs)



2.3 Methodology

The Appraisal Group identified a range of framework options (as follows) in accordance with Treasury Green Book and Capital Investment Manual. An Options Appraisal Workshop was held on the (date). A list of participants is attached in **Appendix I – Option & Risk Appraisal Group Membership**.

- **Potential Service Scope Options** – what is the potential coverage of the service to be delivered (the 'what');
- **Potential Technical Solution Options** – the potential technical (i.e. estates) options for delivering the preferred service solution option (the 'how and where');
- **Potential Implementation Options** – the potential timescales options for delivering the preferred service scope, preferred service solution, preferred technical solution options (the 'when');
- **Potential Service Delivery Options** – who will deliver the preferred service scope, preferred service solution, preferred technical solution, preferred implementation options (the 'who');
- **Potential Finance Options** – the potential funding and affordability options for delivering the preferred service scope, preferred service solution, preferred technical solution, preferred delivery options.

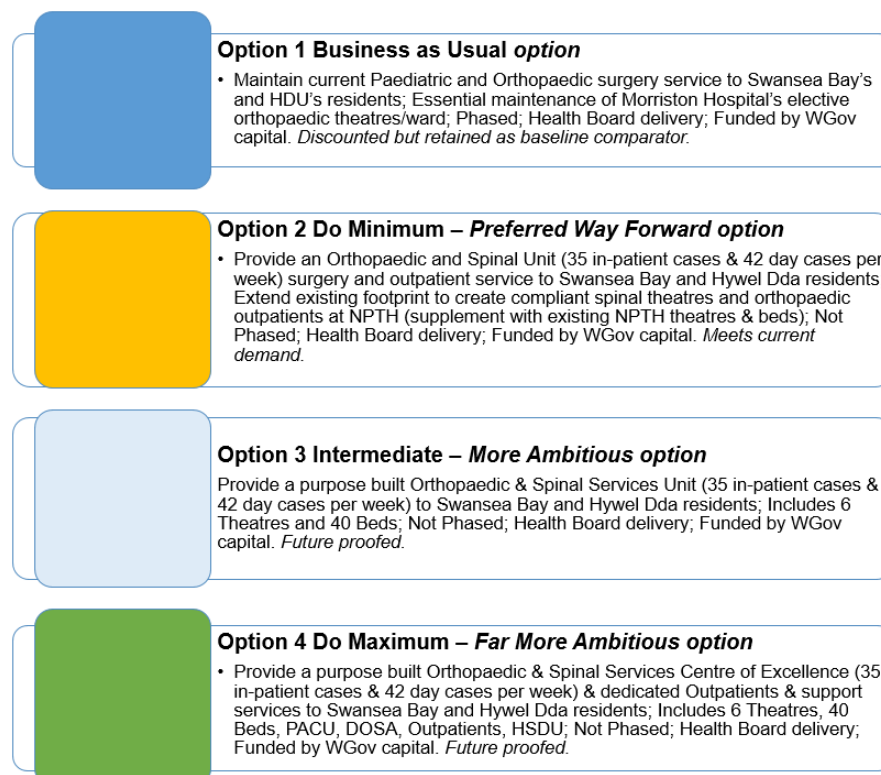
2.4 The Long Listed Options

The long list of options was generated using the Scoping Options framework. The sections below summarise the assessment of each scoping option as they were assessed against the Investment Objective and CSF criteria to determine their short list suitability. The framework options findings are summarised in **Appendix F – Framework Options Long List Summary**. The preferred and possible solutions were carried forward into the short list for further appraisal and evaluation. All the 'discounted' options were excluded at this stage.

2.5 Summary of Short List Options Framework

Based on hi-level non-financial analysis the short list is as follows:

Figure 13 – Range of Short List Options



2.6 Indicative Capital and Revenue Costs of each Short Listed Option

Capital Costs

The project's independent cost advisor, AECOM, has prepared indicative SOC stage capital costs based on the agreed Schedules of Accommodation (please refer to **Appendix K – Schedules of Accommodation**).

No allowance has been made for inflation. Optimism Bias and Capital Cost Forms have been excluded as per guidance from WGov. Planning contingency was assessed as 10% for works costs, non-works costs, equipment and fees.

The indicative capital costs for each shortlisted option are as follows:

Figure 14 – Indicative Capital Costs (excl VAT £000s above baseline)

	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Departmental Costs	954	9,041	35,593	38,023
Works Costs Total	954	9,041	35,593	38,023
Fees	240	2,573	5,663	5,068
Non Works Costs	17	578	2,431	2,431
Equipment Costs	20	63	334	419
Planning Contingency	124	1,225	4,402	4,692
Total	1,355	13,480	48,423	50,633

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

- Capital Cost include works, non-works, abnormals allowances and notional land purchase and disposal income as appropriate. It excludes demolition costs.
- VAT is at 20% except for the professional fee and other vat recoverable elements.
- This SOC excludes a Generic Economic Analysis (GEM) as per agreement with WGoV advisors.

Revenue Costs

The baseline and indicative future revenue cost for each shortlisted option are outlined in the figure below:

Figure 15 – Revenue cost impact of the Shortlisted Options (£000's) above baseline

	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Pay	£4,735	£8,249	£8,249	£8,249
General Non-Pay	£1,917	£5,248	£5,313	£5,313
Hotel Services	£138	£207	£287	£360
Estates	£0	£122	£502	£629
Total	£6,790	£13,827	£14,351	£14,550

The revenue costings include the following assumptions:

- Costed at 2020/21 prices.
- Recurrent costs include the following recurring staff and non-staff costs:
 - 15 consultant orthopaedic surgeons to support 5 theatres 50 weeks p.a.
 - 2 spinal surgeons
 - 12 anaesthetic consultants
 - 2 surgical RMOs
 - 3 anaesthetic RMOs
 - 8 therapists
 - Theatre staff for 6 theatres 5 days a week, 50 weeks p.a.
 - Ward staffing for 24 beds
 - Diagnostics including radiology & pathology
 - Pharmacy costs including pharmacist
 - Nurse Practitioners
 - Physicians Associates
 - Admin support including medical records
 - Prosthetics costs & MSSE
 - Hotel Services – catering/domestics/portering
 - Step up costs for rates and utilities
 -

2.7 The Preferred Way Forward Option

The preferred way forward option is confirmed as (Option 2). This is a long term which involves the development of a new build extension at Neath Port Talbot Hospital (NPTH) to complement existing facilities.

The new Unit will be in compliance with the following Health Building Note/Welsh Health Building Note (HBN/WHBN) & Health Technical Memorandum/Welsh Health Technical Memorandum (HTM/WHTM) NHS design guidance: *HBN 26: Facilities for Surgical Procedures* & *HBN 12: Out-Patients Dept.*

The new unit will employ the latest digital solutions in its new spinal theatres and the dedicated Outpatients dept., and will utilise digital solutions to ensure effective cluster engagement and for keeping patients well, when they are waiting for operations. In addition, digital solutions will be utilised in the new Unit to promote its focus as a 'centralised hub' for community support.

Please see **Appendix K – Schedules of Accommodation** for a hi-level Schedule of Accommodation and **Appendix E – Drawings**.

3 The Commercial Case

3.1 Introduction

This section of the SOC outlines the proposed 'deal' in respect of the preferred way forward outlined in the Economic Case. The SOC is seeking to secure public funding from the WGov's 'All Wales Capital Programme'.

3.2 Required Services

The required services include enabling works at NPTH as required, including the supply of essential infrastructure services (i.e. two spinal theatres and an outpatients dept.), enabling works and technical commissioning.

3.3 Potential for Risk Management

A risk register has been compiled and costed relative to risks that apply over the whole of the project lifecycle at this stage (please see **Appendix J – Risk Register**). The planning contingency has been assessed by an independent cost advisor. The planning contingency is £1.471m, including non-recoverable VAT. This assessment of risk and complies with NHS Wales Shared Services Partnership – Specialist Estates Services (NWSSP - SES) guidance at this planning stage.

3.4 Indicative Timescales

The indicative milestones are set out below (please see **Appendix H – Management Control Plan**):

Figure 16 – Key indicative milestones

Activity	Due Date
Project Board signs off SOC	October 2020
Investments and Benefits Group (IBG) endorses SOC	October 2020
Submit SOC to WGov for approval	October 2020
WGov approve SOC	December 2020
Appoint Supply Chain Partner, Health Board Cost Advisor & Health Board Project Manager from Designed for Life Regional Framework	February 2021
Health Board approves OBC	October 2021
Submit OBC to WGov for approval	November 2021
WGov approve OBC	January 2022
Health Board approves FBC	September 2022
Submit FBC to WGov for approval	September 2022
WGov approve FBC	October 2022
Agree target Cost & Mobilise	November 2022
Handover (subject to contractor's programme)	October 2023
New build commissioning	November 2023
New build operational	November 2023
Technical Project Evaluation (approx. 3 months post new build handover)	February 2024
Benefits Realisation (approx. 12 months post operational)	November 2025

4 Funding and Affordability

4.1 Introduction

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

4.2 Capital

A capital cost assessment of the shortlisted options has been undertaken by AECOM, Cost Advisors based on NHS Departmental Cost Allowances (DCAGs) applied to the proposed schedules of accommodation. The hi-level capital costs of the shortlisted options (incl. VAT) are as follows:

Figure 17 – Capital Requirements (£000 incl. VAT)

	Option 1 Business as Usual (Baseline)	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Departmental Costs	1,144	10,849	42,712	45,629
Works Costs Total	1,144	10,849	42,712	45,629
Fees	289	3,088	6,795	7,257
Non Works Costs	32	693	2,916	2,916
Equipment Costs	24	75	401	502
Planning Contingency	149	1,471	5,283	5,631
Total	1,638	16,176	58,107	61,935
Less recoverable VAT	- 48	- 514	- 1,132	- 1,209
Base Project Cost	1,590	15,662	56,975	60,726

The key capital assumptions are as follows:

- Capital Costs include a breakdown of works and non-works elements.
- Where in-house fees would usually have been outsourced these fees have not been charged against revenue.
- A VAT rate of 20% has been reflected in the capital costs. The level of recoverable VAT would be further assessed by an independent VAT advisor as the project progresses.
- Planning contingency was assessed as 10% (as per WGoV advice) of works costs, non-works costs, equipment and fees.
- Optimism Bias has been excluded as per guidance.

4.3 Income and Expenditure Analysis

The hi-level revenue analysis is below and details the impact on Income and Expenditure is as follows:

Figure 18 – Revenue Impact £000's above baseline

	Option 2 Do Minimum	Option 3 Intermediate	Option 4 Do Maximum
Pay	£3,515	£3,515	£3,515
General Non-Pay	£3,331	£3,396	£3,396
Hotel Services	£69	£149	£222
Estates	£122	£502	£629
Total	£7,037	£7,561	£7,761

The key revenue assumptions are as follows:

- Costed at 2020/21 prices.
- Recurrent costs include the following additional recurring staff and non-staff costs:

- 15 consultant orthopaedic surgeons to support 5 theatres 50 weeks p.a.
- 2 spinal surgeons
- 12 anaesthetic consultants
- 2 surgical RMOs
- 3 anaesthetic RMOs
- 8 therapists
- Theatre staff for 6 theatres 5 days a week, 50 weeks p.a.
- Ward staffing for 24 beds
- Diagnostics including radiology & pathology
- Pharmacy costs including pharmacist
- Nurse Practitioners
- Physicians Associates
- Admin support including medical records
- Prosthetics costs & MSSE
- Hotel Services – catering/domestics/portering
- Step up costs for rates and utilities

A key assumption in the costs are no change in the current provision of activity, patient flow and service support into Neath Port Talbot Hospital from that currently provided by Cwm Taf Morgannwg Health Board.

5 The Management Case

5.1 Introduction

The section of the SOC addresses the achievability of the project.

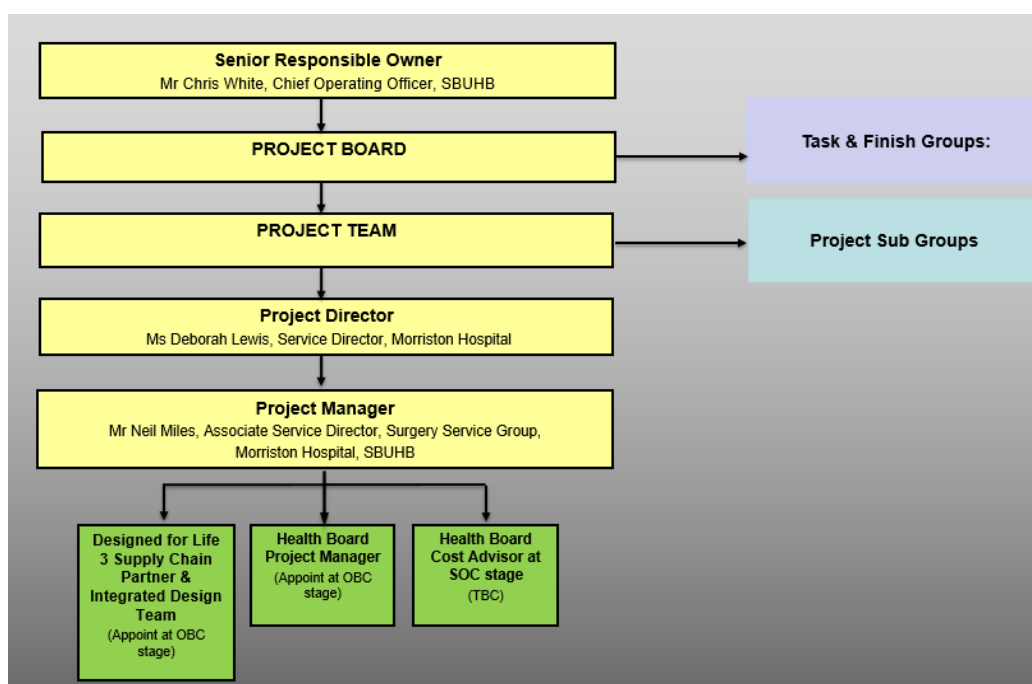
5.2 Project Management Arrangements

To ensure successful project delivery a robust project management reporting structure has been established. The structure is based on the Prince2 principles, with key members of the project team trained in Prince2 methodology. The Health Board's experience of developing and delivering complex projects in a Prince2 environment ensures diligent management and thorough clinical involvement throughout all parts of the development.

- The Senior Responsible Owner (SRO) is Mr Chris White, Chief Operating Officer, SBUHB.
- The Project Director, Ms Deb Lewis, Service Director - Morriston Hospital Delivery Unit has the authority and responsibility to manage delivery of the project on behalf of the key stakeholders. The Project Director reports to the Elective Orthopaedic Project Board to the SRO.
- The Project Manager, Mr Neil Miles, Associate Service Director, Surgery Service Group, Morriston Hospital supports the Project Director.

The reporting structure is shown below:

Figure 19 – Reporting Structure



5.3 Building Research Establishment Environmental Assessment Method (BREEAM)

The pre-construction BREEAM assessment will be provided at OBC stage following confirmation of detailed design and consultation with the BREEAM Advisor and planning authorities following agreement of outline planning permissions.

5.4 Achieving Excellence Design Evaluation Toolkit (AEDET)

An AEDET assessment will be progressed with NWSSP-SES representatives at OBC stage once design proposals has been detailed.

5.5 Arrangements for Benefits Realisation

Please see **Appendix B - Benefits Register Plan** and **Appendix C - Benefits Realisation Register**. These will be detailed at OBC stage.

5.6 Arrangements for Risk Management

A risk framework has been established which outlines the process for managing risk associated with developing this project, including a structure for identifying and mitigating operational and construction related risks. The risk register would use qualitative and quantitative measures to calculate the overall level of risk according to likelihood of any risk occurrence multiplied by the potential impact. The Project Board would formally review the risk register at key stages of the project. A project/operational risk register is attached at **Appendix J - Risk Register**.

5.7 Post Evaluation Arrangements

All projects are subject to post-construction review evaluation in accordance with recognised best practice and NHS guidance. Please see **Appendix L – Post Evaluation Arrangements**.

5.8 NHS Wales Gateway Review (Stage 0 – Business Justification)

A Risk Potential Assessments 1 (RPA 1) has been carried out for this project. A copy is included in **Appendix G - Gateway Review - RPA1**. A Gateway '0' review could be arranged WGov would carry out post submission of this SOC and prior to the submission of an OBC in accordance with WGov Investment Guidance. Further Gateways would be completed according to Office of Government Commerce (OGC) guidelines following further evaluation.

5.9 Contingency Plans

The Health Board can identify two major category of project failure: failure to achieve business case approval to deliver the project; failure of the main contractor to deliver the new build to time.

The contingency plan for the project in the event of failure to achieve business case approval is for the Health Board to continue to revise its plans, working with WGov to develop an Elective Orthopaedic & Spinal Surgical solution for the population of Swansea Bay that is acceptable.

In the event of Supply Chain failure, Swansea Bay would seek recompense in line with the agreed contractual arrangements and other contractor to complete the project.

Appendix A – Project Board Membership



Microsoft Word
Document

Appendix B – Benefits Realisation Plan



Microsoft Word 97
- 2003 Document

Appendix C – Benefits Realisation Register

draft



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- 2003 Document

Appendix D – Clinical Evidence for detrimental effects of delays in waiting lists; concept of harm



Microsoft Word
Document

Appendix E – Drawings

To be attached

Appendix F – Framework Options



Microsoft Word
Document

Appendix G – Gateway Review - (RPA1)



Microsoft Word 97
- 2003 Document

Appendix H – Management Control Plan



Adobe Acrobat
Document

Appendix I – Option & Risk Appraisal Group Membership



Microsoft Word
Document

Appendix J – Risk Register

Draft



Microsoft Excel
Worksheet

Appendix K – Schedule of Accommodation



Microsoft Excel
97-2003 Worksheet 6 theatres & 40 beds



Microsoft Excel
97-2003 Worksheet 6 theatres & 40 beds & PACU & DOSA & HSDU

Appendix L – Post Evaluation Arrangements



Microsoft Word 97
- 2003 Document

Abbreviations

AEDET	Achieving Excellence Design Evaluation Toolkit	HDUHB	Hywel Dda University Health Board
ABMU HB	Abertawe Bro Morgannwg University Health Board	HIA	Health Impact Assessment
AHP	Allied Health Professional	HMt	Her Majesty's Treasury
AME	Annually Managed Expenditure	IMTP	Integrated Medium Term Plan
ARCH	A Regional Collaboration for Health	MDT	Multi-Disciplinary Team
BAU	Business as Usual	NCRBs	Non Cash Releasing Benefits
BIS PUBSEC	Business Innovation and Skills (Firm Price Index) Tender Price Index of Public Sector Building Non-Housing	NEC	New Engineering Contract
BREEAM	Building Research Establishment Environmental Assessment	NICE	The National Institute for Health and Care Excellence
BRP	Benefits Realisation Plan	NWSSP SES	NHS Wales Shared Services Partnership – Specialist Estates Services
CRBs	Cash Releasing Benefits	OBC	Outline Business Case
CRUK	The Cancer Research UK's	OCP	Organisational Change Policy
CSF	Critical Success Factor	OGC	Office of Government Commerce
CSP	(SB UHB's) Clinical Service Plan	OOHs	Out of Hours
CSS	Clinical Support Services	PACU	Post Anaesthetic Care Unit
CT	Computed Tomography	PDP	Portfolio Delivery Plan (ARCH)
CVU HB	Cardiff and Vale University Health Board	PEP	Project Execution Plan
DECAG	Departmental Cost Allowance Guide	PIA	Privacy Impact Assessment
DCC	Direct Clinical Care	PPE	Post Project Evaluation
DGH	District General Hospital	QA	Quality Assurance
DGM	Divisional General Manager	RIBA	Royal Institute of British Architects
DoH	Department of Health	RPA	Risk Potential Assessment
DOSA	Day of Surgery Admission	RTT	Right to Treatment
ECAG	Equipment Cost Allowance Guide	SB UHB	Swansea Bay University Health Board
EIA	Equality Impact Assessment	SDCP	Site Development Control Plan
EQA	External Quality Assessment	SOC	Strategic Outline Business Case
FBC	Full Business Case	SOP	Standard Operating Procedure
GEM	Generic Economic Model	VfM	Value for Money
GIRFT	<i>Get it Right First Time</i>	WAST	Welsh Ambulance Service NHS Trust
HB	Health Board	WGov	Welsh Government
HBCA	Health Board Cost Adviser	(W)HBN	Welsh Health Building Note
HBPM	Health Board Project Manager	WHSSC	Welsh Health Specialised Services Committee
HCSE	Health Care Systems Engineering	(W)HTM	Welsh Health Technical Memorandum
HDU	High Dependency Unit	WTE	Whole Time Equivalent