GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

Canolbarth a Gorllewin Iachach
Cenedlaethau'r dyfodol yn byw bywydau iach

Date: January 2022 **FINAL DRAFT**

SAFE, SUSTAINABLE, ACCESSIBLE AND KIND

Hywel Dda University Health Board's

A Healthier Mid and West Wales : Our Future Generations Living Well

Programme Business Case

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1. Introduction

1.1 Introduction

1.1.1 This Programme Business Case – the "PBC" - sets out our proposition to realise the vision we articulated in our Health and Care Strategy A Healthier Mid and West Wales: Our Future Generations Living Well and create an integrated, patient centric, community based and social model of care – "the Programme".

1.1.2 In so doing we will address a number of long-standing problems: our workforce and financial unsustainability (we have been in deficit almost since our establishment in 2009/10 as we inherited financial challenges from our predecessor organisations and carry structural vacancies of nearly 1,000WTE); service duplication and fragile services; a legacy of underinvestment across our region; and unfit and carbon inefficient buildings in some of the oldest hospitals in Wales. Our Programme offers a solution to all of these long-standing issues for our organisation, our public and for NHS Wales.

1.1.3 ***"Together we are building kind and healthy places to live and work in Mid and West Wales"*** is our mission statement. Our Programme will enable us to achieve it, together with our Strategic Objectives:

1. Putting people at the heart of everything we do	**4. The best health and well-being for our communities**
2. Working together to be the best we can be	**5. Safe, sustainable, accessible and kind care**
3. Striving to deliver and develop excellent services	**6. Sustainable use of resources**

1.1.4 Our Strategic Objectives will be realised through the implementation of our health and care, workforce, estates, digital and environmental strategies, bringing:

- Improvements to our services and better health and wellbeing to our population.
- Better conditions and opportunities for our workforce.
- Services provided closer to home and made more accessible and efficient through digitisation.
- Alignment with the 2030 decarbonisation target.

1.1.5 Through our Programme we will also:

- Generate Social Value and support the foundational economy as a significant employer and buyer of services.
- Contribute to the regeneration of towns and communities across Mid and West Wales.
- Play our part in responding to the challenges identified in The Future Trends Report 2021.[1]

1.1.6 The PBC articulates the outcomes of a long period of development which started in 2017 when we launched our Transforming Clinical Services programme. Through extensive internal and public engagement and a rigorous process of options development and assessment, we identified our optimal solution as **"Proposal B+"**, which will see the

[1] Available at https://www.futuregenerations.wales/news/future-trends-report-it-has-never-been-more-important-to-understand-the-world-around-us-and-the-projected-world-of-tomorrow/

construction of a new Urgent and Planned Care Hospital at a site to be identified between Narberth and St Clears; repurposing (either by refurbishment or rebuild) of our Glangwili and Withybush Hospitals; refurbishment of Bronglais and Prince Philip Hospitals; and the restructuring of our community estate. We published our Health and Care Strategy, which describes the system we want to put in place in 2018.

1.1.7 We went on to develop our Strategic Objectives and have put in place a set of Planning Objectives and a Board Assurance Framework to support their delivery. The Spending Objectives described in this PBC align with our Strategic Objectives, and we are therefore confident that we are internally aligned and equipped to deliver them.

1.1.8 Proposal B+ remains our chosen option. Successful transformation needs the new Urgent and Planned Care Hospital we propose between Narberth and St Clears, but without wider transformation to a more integrated, community-based and person-centred health care model, the new hospital will not on its own help us to achieve the transformation required to serve the needs of our population over the medium and longer term. We have reflected as a consequence of our experience through the pandemic (and documented this in our "Strategic Discovery Report - Understanding the staff experience in Hywel Dda University Health Board during the 2020-21 COVID 19 Pandemic" - July 2020) and this has reinforced the importance of us delivering on our strategy by realising Proposal B+ (although engagement with stakeholders has led us to refine/give higher priority to some aspects of the Programme, including virtual outpatients, single rooms, separate protected elective capacity).

1.1.9 It is also important to recognise that we will not be able to implement our Strategy only by addressing backlog maintenance and shortcomings in our infrastructure – our estate needs to be upgraded and reconfigured to support the changes we want to make to our clinical practice, workforce, digital infrastructure and environmental performance.

1.1.10 We have a clear vision and the ambition and organisation to achieve it. We have set up a Programme Group and Programme Team as our delivery structure, accountable to the Board. This PBC demonstrates that the emerging solution supports the University Health Board's objectives for transformation and has been developed with wide and meaningful consultation and engagement. It has, and will continue to be, subject to rigorous testing and assurance.

1.1.11 This PBC sets out our Programme and the baseline for the Outline Business Cases to follow. It provides a range of capital costs to set the broad parameters for what we will need to do to implement our Health and Care Strategy.

1.1.12 We have envisaged this PBC to be a live document, which we will return to, to check our progress as to how we are meeting the Spending Objectives and Critical Success Factors.

1.1.13 Following approval of this PBC, our focus will move to Outline Business Case stage, where we will further develop the Economic, Financial and Commercial Cases on the basis of better defined scopes, costs and procurement strategies for each element of the Programme and reach a decision on the site for the new Urgent and Planned Care Hospital. Our ambition is to achieve approval of the Full Business Cases for the new Urgent and Planned Care Hospital and all other elements of the Programme by March 2026. This date will enable us to deliver improvements to our populations as soon as possible, and progress at pace to align with the 2030 decarbonisation target.

1.1.14 Developing this PBC has equipped us with the internal organisational structures and clarity of vision and purpose which will take us forward into the next stage.

1.2 Introducing Teulu Jones

1.2.1 Teulu Jones, the Jones Family, is our Mid and West Wales family that we created during an early stage of our work on our strategy to test and challenge our ideas and models of health and care. They are not a real family, but we had real people living in our communities whom we come into contact with in mind when we created them. They have been designed using information about health and well-being across the Hywel Dda area and they are typical of many people in our population. There are seven family members, spanning each of the key life phases.

1.2.2 We developed Teulu Jones to test what different changes to our health and care system could mean for families living in our area, and they accompanied us through our public consultation in the summer of 2018.

1.2.3 You will see stories from members of Teulu Jones throughout this document as their circumstances will help demonstrate how the health and care system will look and feel for families 20 years from now when the changes that we describe in our Programme Business Case are fully embedded.

Teulu Jones/ The Jones Family

Sioned's story

What will the future look like for our Hywel Dda family?

Hello, my name is Sioned, my family and I live in West Wales. As a Health Board employee, I was asked about my experience of working in Hywel Dda, and what it's like to live and work in West Wales. My family are members of Siarad Iechyd / Talking Health and were also regularly asked for their experience of health and care services over the last two decades. I can see how both my views and their views have helped shape the Health Board and the services we deliver today. This got me thinking about how much has changed. The way things are today is so much better for me and my family.

My mum, Mari, has dementia and is getting quite frail. All care settings in the Hywel Dda area are dementia friendly, and all staff and volunteers have been trained to spot and assist people with dementia. Mum is listened to and respected, which means she is confident to ask questions and feels in control of her care. It's not just health and care services supporting mum, it's the whole community, as well as mum doing things to help herself. Over the past several years, we have realised the importance of our communities in proactively supporting population health, building on the strength of our communities during the COVID pandemic.

Mum's village is a dementia friendly community. She does a number of things as part of her 'Stay Well' plan, which help her to stay independent and to keep involved in activities that support her health and well-being. Mum enjoys going to the Memory Cafe where she meets up with others of her generation and their carers. She also loves her Knit and Natter group and would go every day if she could, her great grandson is never without a new jumper! We all benefit from the new baking recipes she learns at the community centre. It's great to see mum living well and being a valued member of her community.

My dad, Alun, had a fall and broke his hip earlier this year. We were so pleased that he had access to all the different specialists he needed and that he was treated in a timely manner and received high quality care within an excellent, modern environment. His transfer to his local hospital for rehabilitation services was seamless and the local hospital facilities supported him to start to regain his independence. Being supported locally was a weight off my mind as visiting was so much easier with him being close by. He was cared for by a large team, including nurses, a physiotherapist, occupational therapist, dietitian and a social worker. No matter who he saw, he didn't need to repeat his story because his single electronic health record, which can be accessed by all the different services, was updated every step of the way. He stayed in the local hospital for five days, until he was fit enough to return home with a bit of help from me and my daughter. As a family we were involved throughout in supporting him to get back home, and we were also glad that he didn't have to go to a hospital site for his outpatient follow up appointments and that these could be undertaken virtually from his home or with assistance at the local integrated care centre. There is no stopping him now and following

advice from the fracture liaison service he has since joined the healthy activity sessions in the local community centre, where he's met up with people he hasn't seen for years, and also made new friends. The advisers there have had a real impact on his daily routine, and he's much more conscious of his diet and daily activity.

My husband Rhys has always struggled with his weight and years of me nagging had no effect. Last year, after a heart scare, he started seeing a lifestyle coach and gradually gained the confidence to change. He has now lost three stone and given up smoking! As part of his health and well-being plan he now takes our grandson, Ben, swimming and the two of us have started dance classes. We have so much fun, we haven't laughed so much in ages, it's a real happiness boost. We won't be entering Strictly Come Dancing any time soon, but we've really benefitted from this quality time together and it's good for Ben to see us being active and taking care of ourselves. Rhys is also a convert to using technology. The COVID pandemic really sped up the adoption of technology enabled care supporting our population, and people have now got used to using more devices to support their health. Rhys wears a device that constantly measures his heart rate, blood pressure and breathing. His lifestyle coach has explained how it works: data are processed, and this clever piece of kit sends information to his care team, building up a complete picture of his health that means that even a subtle change is immediately picked up and acted upon. Twenty years ago we could just never have imagined all the technology and gadgets we have now to help support us to keep healthy and well. It's been great to see the Health Board's digital vision become a reality in supporting care in our communities. Rhys feels more in control and able to manage his own health. It means that his care is personalised, and his GP has all the information she needs at her fingertips in Rhys's electronic notes. Rhys has even learned how to interpret the information himself, which helps him feel in control of his health. It's great to have the option of having a face to face appointment if needed, or by phone or video call if not, which cuts down on travel and takes much less time out of his day. It's also meant that Rhys has started to get us outdoors for a walk much more, out into nature and it's amazing how he's become a real advocate for the environment and the sort of things we can do to help look after it for future generations. This makes us feel like we are doing our bit to reduce our carbon footprint, which is important to us as a family.

I was discussing with my daughter Lianne about how much more information and support is available now to live healthier, happier lives. She said that she's had messages all around her (in school and college, on the television, in magazines) about the importance of the early years to lifelong health, which is why she tries to be a good role model to her son, Ben. He has a mild

developmental delay which is likely to mean he will not be as quick to learn as others his age. We have lots of appointments to help him with his needs, and his difficulties are always considered when we need help and support. But he enjoys school and it's great to see the focus in school on how food is produced locally and healthy eating and preventing illness as well as the more traditional subjects. Even at age three Ben knows what helps us stay mentally and physically well.

The changes in our neighbourhoods have also helped; it's now much easier and safer to be active outdoors. We have family friendly cycle routes, and we know where all the great walks are close by and near the beautiful seaside. We know how hard the walks are, how to get there if you don't drive and even what to wear on your feet! In the town the fast food outlets have made way for healthy options. The healthy choice is now the easy choice! It is positive to see in the development of all of our new facilities that the Health Board has embraced the connection to the natural environment and has used nature in the design of them all. There is so much green space now, we have realised the benefit of this approach, and it really helps the well-being of staff as well as patients.

I think we now take more responsibility for our own health and well-being and a local community spirit has built up with people looking out for each other and the environment around us. At the same time, access to information, advice and support is readily available. If we need care or treatment, it's easy to access and most things are provided near to home. We hardly ever need to go to the main hospital now, whereas years ago the hospital seemed to always be the first port of call.

As a member of staff working in the new hospital, it's exciting to work at a building with the latest facilities, and to see centres of excellence being developed in rural West Wales – it is reassuring that my family has access to high quality treatments. It is hard to believe the environment we had in the old hospitals and the harm this did to our patients.

The facilities in the new hospital also allow me to deliver better care for my patients, including patients being able to access healthy drinks and snacks on each ward, and space to promote social connection. It also allows easy access for patients with differing levels of needs, promoting their independence and respecting their dignity and privacy. It is great to see we are delivering better outcomes now.

For me personally, as a member of staff I appreciate having plenty of space in the new building to make my notes, to have supervision with my manager, to have a quiet space during lunch breaks, and to change in and out of my uniform. This makes me feel supported and valued as a member of staff. There is a different culture now, which shows kindness and compassion towards us as staff, so that we can deliver the high quality care that our patients deserve.

Seeing all this development has made me want to learn and develop my own skills, and as a result I am now part of the local 'grow your own' development scheme for nursing in the Health Board. I am so pleased the Health Board has a clear plan to train local people to build and maintain our new hospital, our local hospitals and all our integrated community care centres. It is positive to see these opportunities for our future generations to work and live in beautiful West Wales supporting our population.

Maria Battle, Chair

Steve Moore,
Chief Executive

2. Executive Summary

2.1 Introduction

2.1.1 This PBC seeks approval for spend to implement the A Healthier Mid and West and Wales Programme – Proposal B+.

2.1.2 If approved, the Programme will include:

- Construction of a new Urgent & Planned Care Hospital on a site to be identified between Narberth and St Clear.
- Repurposing or rebuild of Withybush and Glangwili General Hospitals.
- Refurbishment of Bronglais and Prince Philip Hospitals.
- Development of our community estate in line with our strategic vision.

2.1.3 The capital and revenue costings we have undertaken indicate the following funding requirements:

2.1.4 **Capital costs:** Capital spend within a range of £1,342 - £1,392m without optimism bias / £1,677 - £1,740m if optimism bias of 25% is included.

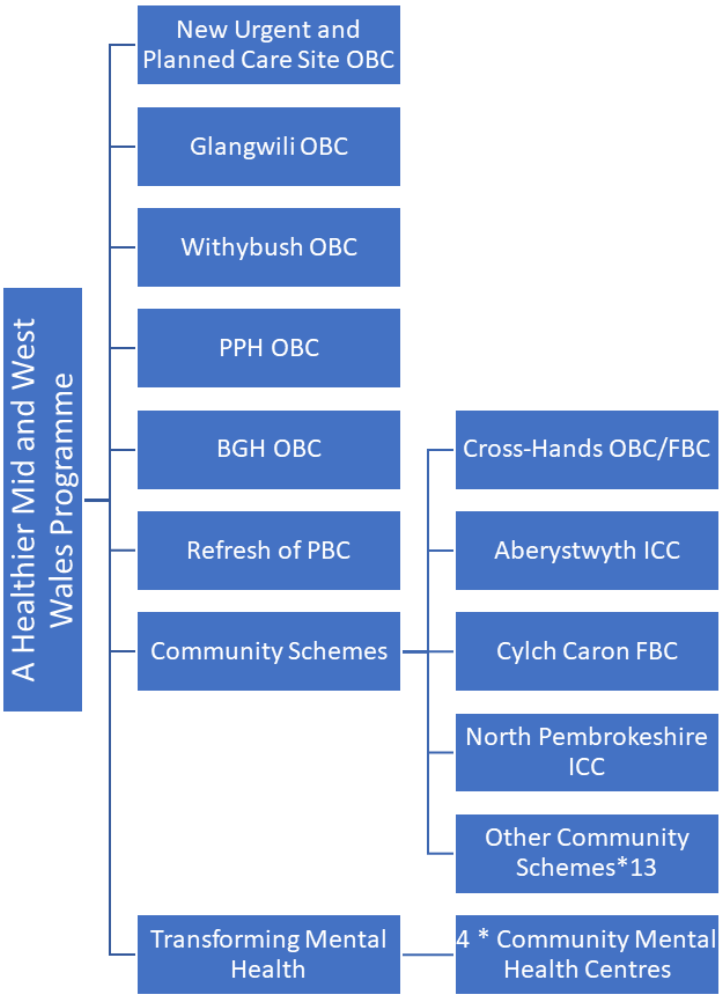
2.1.5 We have also costed "do nothing" and "do minimum" scenarios: these would incur capital costs of £58m and £655m respectively, however we have tentatively rejected these scenarios at present as they would not enable us to implement our Strategy.

2.1.6 **Revenue costs:** Under our "Likely Efficiency" scenario, incremental revenue funding will be in the region of £33m per annum. However, given the stage of development and re-design of the service model yet to be agreed, together with delivering the benefits from digital technologies, we believe this can be aligned to a sustainable position (in line with the £10m premium we believe will need to remain in place associated with Prince Philip Hospital).

2.1.7 All figures are subject to more detailed costing and modelling at OBC stage.

2.1.8 Following review and approval of this PBC by Welsh Government, we would progress to OBC stage, which would involve drafting of the business cases shown below:

2.1.9 Key points of this PBC are set out below.



2.2 Strategic Assessment and Strategic Case

2.2.1 The Programme described in this PBC is the outcome of:

- A period of option analysis and extensive public consultation from 2018, which identified Proposal B+ (the core elements of which are described in paragraph 2.1.2 above) as the proposal which would best enable us to meet our Case for Change at that time. We articulated this in our Health and Care Strategy, published in late 2018.
- Further public consultation and clinical engagement we have undertaken since then, which has enabled us to both develop and refine the scope of the Programme and build our thinking around the shift to digital, virtual wards and outpatients, infection prevention and control considerations from the ground up.
- Learning from the pandemic which has demonstrated that separation of planned and unscheduled care will make us much more resilient and reduce the harm to patients in a future pandemic.

2.2.2 We remain cognisant of the 18 CHC recommendations in response to the Health and Care Strategy following public consultation. We are committed to honouring these and while some will be evidenced at a later stage of business case and service development proposals for others the PBC clearly shows commitment and that we remain consistent to this approach. Our response to the recommendations is attached at Appendix 23.

2.2.3 The Strategic Case articulates our Health and Care, Workforce, Estates, Digital and Environmental Cases for Change as follows:

2.2.4 **Health and Care:** our population's profile presents us with five key (but not exclusive) health and care challenges:

- Historical configuration of services.
- Demographics and ageing population.
- Stalling life expectancy and health inequalities.
- Recovery and learning from Covid.
- Balance of system and learning from other health systems.

2.2.5 In order to make a generational shift to a wellness system we need to invest in primary and preventative care to reduce need over the long term, whilst simultaneously investing in a community model to increase efficiency of the system and improve patient experience. At present a lot of our resources are locked up in an inefficient hospital system which is unsustainable both clinically and financially. Therefore we need to put a model in place whereby only those patients whose care cannot be provided at home will be admitted to our acute sites, and those that are admitted receive timely and high quality care before safely returning to a community setting at the earliest opportunity.

2.2.6 Our Programme addresses this combination of factors in the following ways:

- The new Urgent and Planned Care Hospital will provide design separation between planned and urgent care, enabling us to ring-fence and reduce waiting times and respond to unscheduled care. Changes in the function of Glangwili and Withybush Hospitals (these sites will operate as local community hospitals, with beds being therapy and nurse led, focusing on rehabilitation and less acute needs) will strengthen our ability to deliver same day emergency care for ambulatory sensitive conditions, including GP led services for minor injuries and illness, as well as provide step-up and step-down beds for patients requiring additional support in a non-acute hospital setting.
- Improvements to Bronglais and Prince Philip Hospitals and our community facilities will support the right care at the right time in the right place with the goal of increasing time spent at home and improving the experience of those patients whose needs can only be met in the acute setting.
- Better environments will improve quality of care, patient experience and outcomes.
- Consolidating services onto fewer sites (e.g. Accident & Emergency, stroke care, emergency surgery, trauma) will improve standards, service resilience and a shift towards 24-hour, 7-day models of care.

2.2.7 **Workforce:** our workforce is at the very heart of our organisation; however, we know that getting the right mix of skilled staff to provide our services is one of our biggest challenges. We run with a deficit of approximately 950 WTE, which produces an unsustainable reliance on agency staff, bank and overtime. In addition, 60% of our staff are over 40 and 34% are over 51.

2.2.8 In the immediate term we are taking very positive steps to address these issues - through our Health Care Apprentice programme and progressive recruitment, building on the experience gained by the 2,000 people we recruited on temporary contracts during the pandemic to give them long-term opportunities and strengthen our capacity.

2.2.9 In the long term we need to spend our allocation differently on workforce and reskill our staff to both support the community model and address gaps in secondary care, so that our staffing model is sustainable.

2.2.10 We are in the process of developing our Workforce Plan for the 2022-2025 Integrated Medium Term Plan. This will be a strategic workforce plan which will be looking at a supply and attrition model over ten years. It will be submitted to Welsh Government as part of the Integrated Medium Term Planning process. Given that it will be crucial for us to get our workforce right in order to deliver our Programme, this PBC and the Workforce Plan are closely linked.

2.2.11 **Estates:** our estate encompasses four acute sites, two specialist hospitals, four community hospitals, twenty treatment centres (which includes both the Aberaeron and Cardigan ICCs), three non-hospital patient centres and twenty-three support facilities across Carmarthenshire, Ceredigion and Pembrokeshire. Many of our clinical areas are non-compliant against current healthcare design guidance, and this has an impact on both service delivery and patient experience. Facilities do not currently support rehabilitation: there are no rehabilitation areas on most wards, and it is not possible to fully support patients to self-care. 56% of our estate is more than 37 years old, and 19% of it is more than 57 years old.

2.2.12 In 2021 we submitted our Business Continuity (Major Infrastructure) PBC. This business case drew on feedback we received from senior consultants and clinicians on how deficits in the condition of our hospitals - water ingress, leaking roofs, power outages - affected their experience of delivering care. None of the issues they described compromised the quality of treatment patients received, but they did make it more difficult for staff to deliver that treatment.

2.2.13 To be clear however, these investments are those necessary to enable us to continue with a safe and functional Estate for up to approximately seven years, i.e., until the capital investments contained in this AHMWW PBC start to come on line. They do not represent a service redesign programme which will give us an estate sustainable in the long term from the perspective of us meeting modern healthcare standards, and we will not be able to sustainably implement our Health and Care Strategy without very significant investment in new and improved estate infrastructure.

2.2.14 **Digital:** The creation of Hywel Dda University Health Board in 2009 saw the coming together of six organisations and three quite dissimilar Informatics Departments with poor underlying infrastructure due to funding and resourcing difficulties.

2.2.15 We have done a great deal to address and overcome these issues, however we do not yet have a technology infrastructure which will enable us to meet the vision of our Health and Care Strategy by providing inpatient healthcare services in the home, community and outpatient ambulatory facilities; and meet the needs of the complex and very ill patients who will continue to need acute inpatient services. We need a digital infrastructure which will enable us to connect with patients / citizens and integrate digital technologies into traditional hospital services to create a health system without walls, through innovations such as wearables and microfluidic sensors; cloud-based, interoperable electronic health records; and use of technology to simplify admission, discharge, and other processes.

2.2.16 We want to establish a Hywel Dda Digital Ecosystem comprising Digital Home, Digital Ward, Digital Hospital and Digital Community, with partners from health and social care, industry, academia, local authority and third sector organisations.

2.2.17 **Environmental:** Our net energy consumption of 491kWh/m² and carbon dioxide emissions of 107kg/m² rank highest compared to all other Health Boards in Wales. Our hospital heating systems – at Glangwili Hospital in particular - are highly carbon inefficient and will have to be replaced ahead of 2030 if we are to meet the NHS Wales 2030 decarbonisation commitment.

2.2.18 Our well-being objectives for 2019/20 onwards recognise the need to increase the scale and pace of work to support decarbonisation and biodiversity by:

- Planning and delivering services to further our contribution to low carbon.
- Promoting the natural environment and capacity to adapt to climate change.
- Planning and delivering services to enable people to participate in social and green solutions for health.

2.2.19 In response to the All Wales NHS Decarbonisation Strategy 2021 we have produced our Scoping and Modelling Assessment for Building & Transport Decarbonisation (October 2021) – attached at Appendix 12 - which includes analysis conducted by the Carbon Trust. This sets out the evidence to support our Planning Objective 6G, which is to develop a strategic roadmap for the Health Board's decarbonisation programme during Q1 of 2022/23.

2.2.20 The designs for projects within the Programme will be developed to work towards a net zero carbon estate. We will incorporate principles of biophilic design into the new Urgent and Planned Care Hospital and other sites: principles of biophilic design extend from access to daylight, views and fresh air to consideration of site specific issues such as micro-climate, landscape characteristics and the social, historical and cultural relationship to the local community. The benefits of a design approach which reflects biophilic principles can include a calmer environment for staff, patients and their families, increased creativity, productivity and reduced stress, reduced post operation recovery times and reduced medication use. We are committed to learning from the successful implementation of biophilic design principles in healthcare settings in the UK and overseas.

2.2.21 The Strategic Case also details our Spending Objectives and the outcomes and benefits we want to achieve. At this PBC stage these are aligned to our corporate Strategic Objectives, outcomes and benefits. We set out our current thinking on how the Programme maps to these, and this will form the basis for more detailed work at OBC stage, which will show how

individual elements of the Programme will help us to meet our Strategic/Spending Objectives and the specific outcomes and benefits related to them.

2.2.22 The Strategic Case also provides a detailed description of the Programme, including scopes for the new Urgent & Planned Care Hospital, the four main hospitals and community network. These scopes are based on the Design Assumptions we developed through consultation. We have developed three scenarios based on the application of the Design Assumptions, named "Minimum", "Likely" and "Maximum Efficiency" scenarios and described in the Economic Case. The proposed areas and bed numbers under each scenario are shown in the table below.

	MINIMUM		LIKELY		MAXIMUM	
	Proposed area (sqm)	Proposed beds	Proposed area (sqm)	Proposed beds	Proposed area (sqm)	Proposed beds
Bronglais Hospital	28,479	160	28,673	152	27,514	138
Glangwili Hospital	0	0	0	0	0	0
Prince Philip Hospital	30,571	205	27,367	169	25,245	129
Withybush Hospital	0	0	0	0	0	0
Urgent & Planned Care Hospital	74,507	401	82,918	506	80,289	454
Mental Health (see note below)	8,161	98	8,161	98	8,161	98
Community sites	84,622	344	72,391	209	72,391	209
Totals	**226,340**	**1,208**	**219,510**	**1,134**	**213,600**	**1,028**

1. Proposed UPC campus figures include standalone administration/teaching and residential accommodation
2. Proposed Mental Health figures based on new unit at the Urgent and Planned Care Hospital site
3. Proposed community areas are estimated and include sqm areas and beds at both Glangwili and Withybush

2.2.23 The University Health Board currently has 1,172 beds and occupies a total estate area of 189,613m². Under the Likely Efficiency scenario the number of beds would decrease by 38, to 1,134 beds and the estate area would increase by approximately 29,897m² (15.8%) to 219,510m². The bed numbers reflect a projected increase of 194 bed demand due to demographic pressures, offset by an efficiency of 184 beds as a result of the University Health Board delivering on our Design Assumptions. The increase in estate is as a result of compliance with bed spacing standards where that is possible, noting that achieving that objective within the current estate would likely require a further 30% of floor area.

2.2.24 The Strategic Case also sets out the extensive work we have done to identify potential sites for the new Urgent and Planned Care Hospital. We ran a six-week period of public engagement from 10 May 2021, which invited public and landowners to nominate suitable sites. With advice from the Consultation Institute and participation from Local Authorities, the Stakeholder Reference Group, Healthcare Professionals Forum and Staff Partnership Forum we identified a shortlist of five sites. We anticipate that we will be in a position to deliver a report and recommendation on our preferred site to Welsh Government in June/July 2022.

2.2.25 We have also done extensive work to identify the Transport needs to support our Programme.

2.2.26 We have developed the Programme and this PBC whilst working in alignment with a framework of Welsh and UK Government strategies, and are confident that our Programme is consistent with them and advances their ambitions, particularly the Ministerial Priorities, Welsh Government Programme for Government (June 2021) and the Well-being of Future Generations (Wales) Act 2015 where, in order to meet the Well-being Goals, we have developed a set of Well-being Objectives which help us to think through how our Programme will deliver against them. Our analysis and mapping of the Programme against government strategies and plans is provided in the Strategic Assessment at Appendix 1.

2.3 Economic Case

2.3.1 The Programme articulated in this PBC is the outcome of options analysis and selection which engaged the whole organisation and is described in detail in the Economic Case. Further analysis has been undertaken to assess options to be applied to Proposal B+ for:

- service scope, drawing on clinical engagement undertaken in late 2020/early 2021;
- the optimal combination of solutions (new-build/refurbishment);
- the optimal sequencing of the different elements of the Programme;
- how services might be delivered; and
- how the Programme might be funded.

2.3.2 All options have been assessed against the Spending Objectives and four Critical Success Factors.

2.3.3 This analysis indicates an Implementation Plan comprising:

- New build Urgent and Planned Care Hospital in single phase construction available by Winter 2029.
- Concurrent with the new Urgent and Planned Care Hospital, deliver new build community hospitals in Carmarthen and Haverfordwest also by Winter 2029.
- Once the Urgent and Planned Care Hospital and two new community hospitals are operational, reconfigure Prince Philip Hospital by Winter 2032.
- Bronglais Hospital is reconfigured concurrent with the new Urgent and Planned Care Hospital by Spring 2031.
- Phased rollout of construction/repurposing of the network of community hubs to be completed by end of 2029.

2.3.4 We have then assessed capital and revenue costs for five scenarios: do nothing; do minimum; and three scenarios based on different interpretations of the Design Assumptions developed through consultation. Our core scenario is the Likely Efficiency scenario, which implements the Design Assumptions. Two Minimum and Maximum Efficiency scenarios reflect more cautious/aggressive approaches to realisation of the Design Assumptions which reduce/increase the requirement for beds at the Urgent and Planned Care Hospital and increase/reduce the requirement on community hospital sites.

2.3.5 The range of capital cost estimates at this PBC stage is:

- Between £1,342m for the Maximum Efficiency/New Build (rather than repurposing solutions at Withybush and Glangwili Hospitals) scenario and £1,392 for the Minimum Efficiency New Build scenario without optimism bias.
- Between £1,677m for the Maximum Efficiency New Build scenario and £1,740m for the Minimum Efficiency New Build scenario if optimism bias is included.

2.3.6 It can be seen that there is little difference in terms of capital costs and bed numbers between the Minimum, Likely and Maximum Efficiency scenarios: the differentials between scenarios lie within a cost range of approximately £50m without optimism bias; and within a range of approximately 180 beds.

2.3.7 Under our "Likely Efficiency" scenario, incremental revenue funding will be in the region of £33m per annum. However, given the stage of development and re-design of the service model yet to be agreed, together with delivering the benefits from digital technologies, we believe this can be aligned to a sustainable position (in line with the £10m premium we believe will need to remain in place associated with Prince Philip Hospital).

2.3.8 For the Do nothing" scenario we have assumed no changes to our current model. For the "Do minimum" scenario we have estimated that, if no design assumptions were applied, an additional 194 beds compared with the current base would be required. However this would not be possible in the existing footprint.

2.3.9 Therefore, whilst potentially more attractive in capital cost terms, significant additional capacity would need to be sourced from elsewhere and it is likely that performance would deteriorate to unacceptable levels.

2.3.10 Furthermore it would not be possible to achieve efficiencies from implementation of the digital, workforce, estates and decarbonisation strategies, therefore the long-run costs would potentially be higher than under the Minimum, Likely or Maximum Efficiency scenarios.

2.3.11 Finally the "Do nothing" and "Do minimum" scenarios do not provide a long-term solution to the ageing estate within the University Health Board and therefore would only temporarily delay the inevitable: the capital costs of these scenarios range from £58m to over £650m (see Economic Case section 5.5); our Business Continuity (Major Infrastructure) Business Case (2021) identified a cost of more than £200m to keep our current sites going. Consequently, over a 20-year time horizon, these scenarios mean it is likely we would effectively pay twice - the costs of these scenarios now plus the costs of fully addressing the estate issues later.

2.3.12 Our initial conclusion at this stage – to be reviewed, modelled in more detail and confirmed at OBC stage – is therefore that the "do nothing" and "do minimum" scenarios are to be rejected.

2.4 Commercial Case

2.4.1 The Commercial Case sets out a framework which will help us to structure our procurement strategies in the OBCs.

2.4.2 We are very clear that procurement is a lever through which we can achieve Social Value, therefore our procurement strategies will be based on:

- The Well-being of Future Generations (Wales) Act 2015: we will incentivise our contractors to further the aims of the Act through our tender evaluation criteria and the performance criteria we place in our contracts.
- A commitment to generating opportunities for local businesses, for example by:
  - Increasing the proportion of spending with local suppliers, and in particular more generative suppliers – SMEs, social businesses, worker-owned organisations and mutuals.
  - Where possible ring-fencing contracts for providers which support job opportunities for more vulnerable citizens.
  - Seeking Social Value commitments for suppliers to:
    - create new jobs for South West Wales residents;
    - create new apprenticeships for South-West Wales residents;
    - upskill their workers and ensure talent is retained in South-West Wales.
- Adopting a hierarchy of intent for procurement spending:
    - South-West Wales first;
    - If not possible, wider Wales;
    - If not possible, outside of Wales.
- Publishing our medium-to-long-term spending plans and engaging early and regularly with potential local suppliers.
- Adopting social value weightings for larger contracts, linked to local needs analysis; committing to being as bold as we can be without impacting adversely on the financial affordability of the scheme.

2.4.3 We will develop a Community Benefits schedule at OBC stage.

2.4.4 At this stage we are keeping all potential procurement and funding routes open to consideration.

2.4.5 The Programme may produce opportunities for the University Health Board to release landed assets, including sale and/or use of surplus land to advance carbon offset/biodiversity drives and policies. Where opportunities are identified we will discuss the most appropriate action with Welsh Government.

2.5 Financial Case

2.5.1 Our actual financial performance for FY20/21 was a deficit position of £24.9m.

2.5.2 Each scenario described in the Economic Appraisal will require significant levels of capital investment and increases in revenue costs.

2.5.3 This means that substantial efficiencies will be required if capital investment and revenue cost increases are to be combined with a requirement for the University Health Board to deliver a sustainable financial position. PwC have reviewed our assumptions at this stage of development and have assessed that our position is reasonable. Given the current high-level modelling and re-design of the service model yet to be agreed, together with delivering the benefits from digital technologies, we believe this can be aligned to a sustainable position (in

line with the £10m premium we believe will need to remain in place associated with Prince Philip Hospital).

2.6 Management Case

2.6.1 We have established a delivery and governance structure to generate this PBC, including:

- **Programme Group:** The governing body for the Programme which reports to the Board. Chaired by the Chief Executive in his capacity as SRO.
- **Programme Team:** The delivery vehicle, reporting to and seeking guidance from Programme Group and responsible for risk monitoring and management. Chaired by the Assistant Director of Strategic Planning in his capacity as Programme Manager, supported by the Capital Planning Team. Comprises Workstreams focused on Digital, Communications and Engagement, Land, Finance and Workforce, Transport and Clinical and Non-Clinical Modelling. The group is supported by advice from the University Health Board's estates, land and business case advisers.
- **Strategic Advisory Group:** Chaired by the Strategic Programme Director, with membership comprised of service leads from the Mental Health & Learning Disability, Primary Care & Community, Acute Services, and Transformation lines of service, amongst others. Its role is to provide clinical input to the development of the Programme and assure consistency with the principles and design assumption set out within A Healthier Mid and West Wales: Our future generations living well (the "Health and Care Strategy" or "AHMWW Strategy").

2.6.2 This structure has been tested through development of this PBC, and the University Health Board is confident that it forms the basis for a governance and delivery structure for the more demanding OBC stage.

2.6.3 We have developed the milestones timelines shown overleaf:

Milestone	Urgent and Planned Care Hospital	Glangwili Hospital (new build)	Withybush Hospital (new build)	Prince Philip Hospital	Bronglais Hospital	Community
PBC Submission	End January 2022	End January 2022	End January 2022	End January 2022	End January 2022	End January 2022
PBC Endorsed (for purposes of progression)	March-May 2022	March-May 2022	March-May 2022	March-May 2022	March-May 2022	March-May 2022
OBC team selected (BfW framework)	May – July 2022	May – July 2022	May – July 2022	May – July 2022	May – July 2022	Timelines to be confirmed on a scheme-by-scheme basis, but all FBCs to be submitted by Mid March 2026
Preferred site confirmed (potentially subject to consultation and heads of term)	By June 2022	Not applicable	Not applicable	Not applicable	Not applicable	
Option to purchase	July/August 2022	Not applicable	Not applicable	Not applicable	Not applicable	
Outline Planning Application*	Dec 2023	Dec 2023	By Dec 2023	By Dec 2023	By Dec 2023	
OBC Submission	End January 2024	End January 2024	End January 2024	End January 2024	End January 2024	
Outline Planning Approval	End May 2024	End May 2024	End May 2024	End May 2024	End May 2024	
OBC Approval (WG)	Mid July 2024	Mid July 2024	Mid July 2024	Mid July 2024	Mid July 2024	
Reserved Matters Discharged (Planning)	September 2025	By September 2025	By September 2025	By September 2025	By September 2025	
FBC Submission	Mid March 2026	Mid March 2026	Mid March 2026	Mid March 2026	Mid March 2026	
FBC Approval (WG)	Early June 2026	Early June 2026	Early June 2026	Early June 2026	Early June 2026	
Purchase Site completion	Mid July 2026	Not applicable	Not applicable	Not applicable	Not applicable	
Period of site preparatory/demolitions/ enabling works	Not applicable	July 2026 – July 2027	July 2026 – July 2027	July 2026 – October 2028	Not applicable	
Start on site	August 2026	August 2027	August 2027	November 2028	July 2026	July 2024 onwards
Construction Completion	End May 2029	End June 2029	End June 2029	July 2032	January 2031	Various as schemes delivered
Commissioning	June – October 2029	July – October 2029	July – October 2029	Ongoing throughout refurbishments / repurposing	Ongoing throughout refurbishments / repurposing	Ongoing as schemes delivered
Opening	End October 2029	End October 2029	End October 2029	Not applicable	Not applicable	All open by October 2029

* For the new Urgent and Planned Care Hospital there is an estimated period of eighteen months between option to purchase and submission of Outline Planning Application, with Outline Planning Applications for other sites being submitted simultaneously. This is because the work needed to inform and prepare the planning application (including all environmental surveys and assessments and the required pre-planning consultation) will take a minimum of eighteen months and can only commence once we have a preferred site / option and the full OBC stage design commences.

2.6.4 This timeline will enable us to deliver improvements to our populations as soon as possible, and progress at pace to align with the NHS Wales 2030 decarbonisation target.

2.6.5 We are conscious of the significant amount of work we have to do to build on the solid foundations provided by A Healthier Mid and West Wales: Our Future Generations Living Well, and we are developing a programme which will commence in advance of OBC to provide the service detail that will underpin the OBCs. We know that from a service perspective the OBC will be divided into RIBA Stage 1, RIBA Stage 2 and we are in the process of defining the outputs required to commence that process.

2.6.6 The University Health Board will work with Welsh Government to agree the funded resource schedule for the next stage of Programme development. In parallel the University Health Board is considering the additional resources required for the successful development and delivery of the Programme, which might sit outside Welsh Government capital funding parameters.

3. Strategic assessment

3.1 This PBC sets out our Programme of investments for delivering our Health and Care Strategy – A Healthier Mid and West Wales.

3.2 We are mindful at all times and in everything we do of the need to align with and contribute towards the realisation of national strategies. We constantly and consistently challenge ourselves as to how we are reflecting the requirements of *The Social Services and Well-being (Wales) Act 2014*; *The Well-being of Future Generations (Wales) Act 2015;* the *Equality Act 2010*, and the recently enacted *Socio-Economic Duty*; and how we are contributing to a Prosperous Wales by developing the *Foundational Economy* of the communities we are a part of. We have reflected the principles and spirit of these Acts and strategies in our Strategic and Planning Objectives, and our culture and strategy mean that we are well placed to provide a lead in these areas - social model for health, decarbonisation, foundational economy - within NHS Wales.

3.3 We have engaged closely with the Future Generations Commissioner for Wales and are committed to implementing *The Well-being of Future Generations (Wales) Act 2015* through the Programme described in this PBC. In order to meet the seven Well-being Goals of the Act, we have developed a set of Well-being Objectives which help us to think through how our Programme will deliver against the Goals. These are shown in full in Appendix 1 – Strategic Alignment.

3.4 We also ask the Workstream Leads who are collectively responsible for delivering the Programme through the delivery structure described in the Management Case to actively use these Objectives to help them to consider the National Well-being Goals in their work. This is reinforced through the Programme Group and Programme Team responsible for governing and delivering the Programme (also described in the Management Case).

3.5 The newly enacted Socio-Economic Duty within the Equality Act 2010 requires public bodies like us, when making strategic decisions such as deciding priorities and setting objectives, to consider how their decisions might help to reduce the inequalities associated with socio-economic disadvantage. The aim of the Duty is to deliver better outcomes for those who experience socio-economic disadvantage. We have incorporated socio-economic considerations into our Equality and Health Impact Assessment (attached at Appendix 5) to

ensure that all opportunities are taken to consider socio-economic impact and intersectionality. And in the Commercial Case we describe how we will make this live and breathe through our procurement and employment actions and decisions.

3.6 We further recognise that the Programme gives us an opportunity to play our part in growing Wales' Foundational Economy, in particular through our procurement and employment strategies and demonstrate our commitment to a Prosperous Wales – we also reference this in detail in the Commercial Case.

3.7 We are committed to the NHS Wales Decarbonisation Strategic Delivery Plan 2021-30. We have published our Scoping and Modelling Assessment for Building and Transport Decarbonisation (dated July 2021 and attached at Appendix 12), which sets out how we will reduce our Scope 1, 2 and 3 emissions. Our Programme will encompass changes to our estate, workforce and ways of working which will deliver Welsh Government ambitions far beyond 2030. Indeed, the Programme is a critical enabler to us meeting the NHS Wales decarbonisation target for 2030. Our commitment also demonstrates that we are meeting the Welsh Government Programme for Government commitment to "Embed our response to the climate and nature emergency in everything we do".

3.8 In Appendix 1 we provide a table which shows in detail how our Programme will play a part in meeting the National Well-being Goals, the aims and objectives of the legislation described above, the Welsh Government Programme for Government, Ministerial Priorities and NHS Wales Planning Framework; and wider Welsh and UK Government policies, strategies and plans.

4. Strategic Case

4.1 Opening statement

4.1.1 Hywel Dda University Health Board ("the University Health Board") has made a clear commitment to a wholesale transformation of its culture and practice to deliver a social model of health and well-being.

4.1.2 Whilst this will rely heavily on developing strong and sustainable primary and community services that focus on prevention and early intervention, our vision goes well beyond this. As well as shifting resources decisively towards care delivered in the home or near to home unless it is medically inappropriate to do so, it is requiring us to change our whole approach and thinking from largely biomedical interventions in favour of actions which support resilient self-supporting communities and health and wellbeing for individuals and their support networks. To date a great deal of focus has been on the need to ensure sustainability of traditional models of acute services to our population. In order to fulfil the vision set out in our Health and Care Strategy - which we discuss in more detail in this Strategic Case - focus must shift to shaping our community response and remodelling our resources to meet the challenge.

4.1.3 The success of this primary and community care model relies on an integrated and interconnected web of partnerships and relationships, rooted firmly around the voice and choice of our population. Our definition of community needs to include everyone and everything that is part of a community. A successful model of health and well-being recognises the diversity that exists in terms of health needs, within a population.

4.1.4 The University Health Board is comprised of three localities based on the three counties that sit within the Health Board footprint. Whilst there is a variance in the manner in which

health and care is integrated, the guiding principles of an integrated locality structure remain the same for all.

4.1.5 The vision set out in A Healthier Mid and West Wales: Our Future Generations Living Well - detailed in the section below - has started to be implemented, and the COVID-19 pandemic response has resulted in a quickening of that pace, as well as reinforcing the strategic case set out in our Health and Care Strategy.

HYWEL DDA UNIVERSITY HEALTH BOARD INTEGRATED COMMUNITY MODEL OF HEALTH AND WELL-BEING

Strong coterminous partnerships through Public Service Boards

Consistent standards and outcome frameworks through the Regional Partnership Board

Accountability for the health & wellbeing with our whole population throughout their life

Ensuring seamless planning, delivery and equitable outcomes which are place-based

Integrated pathways based on need and our social model for health & wellbeing

Workforce : Structures based on whole pathways & local delivery. Flexible working models based on delivery of need. Devolving delivery and authority to innovate, solve problems and flex.

Estate & Technology : Integrated community hubs supported by technology to support virtual care, connectivity and one to many model

Values, Principles & Standards : Regionally established & monitored outcome metrics, valuing time spent at home and experience for our population & staff.

Growing Older Well
Every older person will be supported to sustain health and wellbeing across older age, living as well and as independently as possible within supportive networks

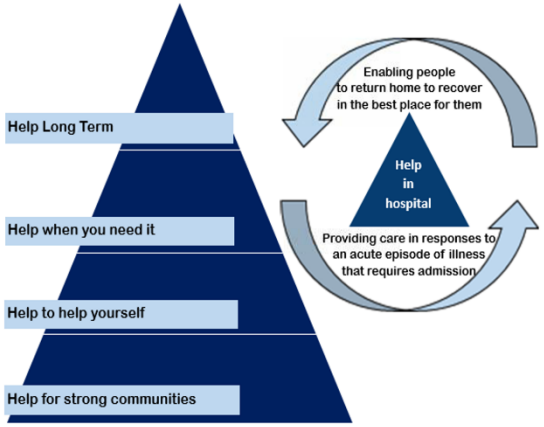
Living and Working Well
Every adult will live and work in resilient communities that empower personal and collective responsibility for health and wellbeing

Starting and Developing Well
Every child will have the best start in life through to working age, supporting positive behaviour and outcomes across the life-course

Living life to the full

Region	•Standards, principles and frameworks for all integrated pathways •Assurance, governance and oversight of delivery
Integrated Locality	•Whole system planning, assurance and strategic oversight of population outcomes – ensuring equity •Coterminous with the Local Authority and Third Sector co-ordination organisations •Synchronicity of the health and social care ecosystem
Cluster	•*"A cluster brings together all local services involved in health and care across a geographical area, typically serving a population between 25,000 and 100,000. Working as a cluster ensures care is better co-ordinated to promote the wellbeing of individuals and communities."*
Integrated Community Network	•Co-ordinated delivery around a small geography / patient list •Offers continuity, professional trust & relationships & strong communication •MDTs linked to GP practices, stratifying patient need and proactively care planning

Pathway Development across whole system – prevention to specialist care



4.1.6 Improving health outcomes in Mid and West Wales and creating a sustainable healthcare system for the future requires strong and effective partnerships. We are committed to developing strong partnerships with patients, public, stakeholders and partner organisations from the statutory, voluntary and independent sector, with a focus on facilitating and supporting collaboration and integration of services, both internally and externally, by:

- Nurturing relationships with key strategic partnerships to drive needs-led, outcome focused planning, activity and participation.
- Ensuring alignment between well-being plans and strategies between the University Health Board and partners.
- Leading corporate planning and commissioning of information, advice and assistance for unpaid carers to meet their needs in an equitable way across the area.
- Leading, supporting and contributing to a range of multi-agency projects for vulnerable groups in order to create a pace of change and support service improvement.
- Delivering publication of the University Health Board's Well-being Objectives and Annual Report.
- Providing a range of awareness-raising opportunities and targeted training to increase staff knowledge, understanding and competency in key legislative responsibilities and how to provide equitable services and inclusive working environments.

4.1.7 Our key partners in developing and delivering our Integrated Community Model of Health and Well-being are:

- ***County based Public Service Boards - Partnerships to take forward the Well-being of Future Generations (Wales) Act:*** The three Public Service Boards (PSBs) active in the Hywel Dda region provide a formal, statutory partnership structure to take forward the aims and objectives set out in the Well-being of Future Generations (Wales) Act. With a focus on population well-being, the PSBs in Carmarthenshire, Ceredigion and Pembrokeshire assess, plan and deliver programmes of work that involve a wider cohort of partners, many of which are not directly linked to health and care but allow health to make connections that further prevention and early intervention and focus on environmental sustainability. Whilst not partnerships with assigned funding, the PSBs provide the opportunity for the University Health Board to influence areas of population well-being that would otherwise be more challenging to establish links.

- ***West Wales Care Partnership (WWCP) – our Regional Partnership Board – and Public Service Boards:*** the WWCP is our Regional Partnership Board within West Wales and the mechanism through which we meet the statutory requirements of the Social Services and Well-being (Wales) Act (the SSWBA) and integrate with Social Care and housing services in Carmarthenshire County Council, Ceredigion County Council and Pembrokeshire County Council. It includes representatives from the third and independent sector. The WWCP is the formal channel through which much of the joint funding made available by Welsh Government is dispensed, including Transformation Funding and Integrated Care Funding. It is charged with producing a Wellbeing Assessment, targeting the strategic areas of focus that underpin the SSWBA and regionally agreed strategic goals. The WWCP has reviewed, validated and signed off on our Health and Care Strategy and Strategic Goals (described in more detail later in this Strategic Case).

  We worked closely with the WWCP to develop a West Wales Population Assessment (as required by the SSWBA) and with our three Public Service Boards to develop a Well-being Assessment for each of our local authority areas (as required by the WFGA). The

Well-being Assessments are due to be published by April 2022. The Carmarthenshire and Ceredigion assessments have been issued for public consultation.[2] Detailed consideration of the health needs of our population has informed the work of our Transforming Clinical Services programme, and we have referred to the findings of the West Wales Population Assessment in particular. Our assessment has included the needs of our current population, but also detailed consideration about our future needs, based on projections.

We will continue to work with WWCP and the Public Services Boards as we further develop our needs assessments and gap analyses to inform our Programme.

- ***Primary Care:*** Our seven Clusters (Amman Gwendraeth; Llanelli; Towy/Taf (2Ts); North and South Ceredigion; North and South Pembrokeshire) set the platform for engagement on service development and transformation. Work has begun to develop the Cluster model to align to the emerging national work on Accelerated Cluster Development (ACD) which fits with the local development of three Integrated Localities. Currently we have four University Health Board GP managed practices serving almost 10% of the overall resident population, and whilst the ambition would be to return some of these back into independent contractor practices, there has been a benefit to maintaining some managed practice presence across the geography in the delivery of more specialised and time limited services. In addition they are a valuable 'test bed' for how the Primary Care Model for Wales can be transacted in alignment with our Health and Care Strategy. Over 50% of the primary course of the COVID-19 vaccination was administered through GP Practices and Community Pharmacy and their engagement has continued throughout the development of the vaccination programme.

- ***ARCH:*** ARCH is a long-term transformational collaboration between Hywel Dda University Health Board, Swansea Bay University Health Board (SBUHB) and Swansea University which aims to improve the health, wealth and wellbeing of the South West Wales region. Its aim is to tackle health and well-being challenges within the region through collaborative approaches, specifically around Skills & Workforce, Research, Enterprise & Innovation, Service Transformation and Well-being. We want our Programme to bring benefit to the whole of South West Wales, not just the Hywel Dda region, and ARCH is one of mechanisms through which we will achieve this. Through ARCH we have a very strong working relationship with SBUHB, which includes working on a range of integrated clinical pathways such as neurology, ophthalmology, dermatology and cardiology; and we will be commencing conversations with SBUHB to explore opportunities to work together on non-clinical and additional clinical services.

- ***Mid Wales Joint Committee on Health and Care:*** As a formally designated regional planning area within Wales, covering the counties of Ceredigion, Powys and South Gwynedd, the Joint Committee was set up to address the identified challenges facing health and care in a profoundly rural area of the country. This whole system approach to health and social care which focuses on health and well-being and on preventing illness, recognises the significant strategic interest of the Hywel Dda secondary care estate for the three counties and two health boards (Hywel Dda and Powys). The Committee's vision statement aims to ensure that "The population of Mid Wales is

[2] https://www.thecarmarthenshirewewant.wales/media/jkcbckz0/draft-assessment-of-local-well-being-2021.pdf; https://www.ceredigion.gov.uk/media/10312/draft-ceredigion-assessment-of-local-well-being.pdf

provided with equitable access to high level, safe, sustainable, bilingual and high quality integrated health and care services". ***Mid Wales Healthcare Collaborative (MWHC):*** we are a member of the MWHC together with Betsi Cadwaladr University Health Board, Powys Teaching Health Board and the Welsh Ambulance Service NHS Trust, together with a range of other relevant bodies in Mid Wales. MHWC was established in 2015 to address concerns identified in the Mid Wales Healthcare Study (2014) regarding the (then) current delivery models to provide safe, accessible and sustainable healthcare in mid Wales, including delivery of care across multiple scales, governance and the need to improve access and interconnectivity.

- ***Swansea Bay City Deal:*** The Swansea Bay City Deal (SBCD) is a partnership of eight regional organisations made up of local authorities, universities and health boards within the Swansea Bay City Region that aims to accelerate economic and social advancement through regional infrastructure and investment funds. The framework for the SBCD is provided by the Swansea Bay City Region Economic Regeneration Strategy which identified the need to increase GVA and productivity throughout the region. The Deal was signed with UK and Welsh governments in 2017, releasing £241m of government funding to deliver major regeneration initiatives for the region. The SBCD portfolio consists of 9 programmes and projects that will collectively create over 9,000 jobs, increase GVA by £1.8-2.4 bn and deliver a total investment of £1.15-1.3 bn in the South West Wales economy by 2033.

  The Healthier Mid and West Wales Programme will contribute both directly and indirectly to the five Strategic Objectives of the Swansea Bay City Region Economic Regeneration Strategy, including:
  - Business Growth and Specialisation.
  - Skilled and ambitious for long term success – e.g. opportunities for skills development, increasing skills levels across the region.
  - Maximising job creation for all – e.g. creating new job opportunities within the communities of the region.
  - Knowledge economy and digital innovation.
  - Distinctive places and competitive infrastructures – e.g. high quality in design and operation of new and repurposed buildings.

  The delivery of the Healthier Mid and West Wales Programme will also support the headline investment objectives of the SBCD by contributing to the creation and retention of jobs, generation of additional GVA and attraction of significant investment to the region. There will also be direct synergies and linkages with the following SBCD programmes and projects:

  - ***Digital Infrastructure Programme:*** This £55m programme will deliver the latest connectivity infrastructure throughout the region ensuring that hard to reach communities will be able to access high quality services (although this does not currently cover Ceredigion). This will be a crucial element in enabling the delivery of a social model for health and ensuring accessibility for all to digital connectivity.

  - ***Skills and Talent Programme:*** This £30m programme for South West Wales has been approved by the UK and Welsh Governments. The regional programme will provide opportunities for thousands of people to access skills opportunities and will support businesses to grow through developing a talented workforce across the

Swansea Bay Region focusing on industries with high demand for workers. Opportunities will be aligned to areas of growth and regional strengths such as the health and well-being, digital, construction, energy and smart manufacturing sectors with opportunities for upskilling the current workforce as well as preparing the next generation for jobs of the future in the locality.

- ***Pentre Awel Well-being Village:*** This £200m project will include life sciences research and assisted living units on one site in Llanelli, alongside state-of-the-art leisure, well-being and business incubation facilities. The development will include a well-being skills centre and a clinical delivery centre (Community Health Hub). The

project will have a significant positive impact on health and well-being in the region and could be an important base for training and skills development.

- ***Life Science, Well-being and Sports Campuses:*** This £160m project will see the phased development of business, innovation and skills space based around Med Tech and Sports Tech specialism at sites at Morriston and Singleton.

- ***Homes as Power Stations:*** This is a co-ordinated project across the City Region to deliver energy-saving technologies to thousands of homes as part of a smart, low carbon new-build and retrofit programme. The project will help tackle fuel poverty and reduce the burden on regional health and social services and will facilitate the move towards the social model for health.

4.1.8 ***Bronglais Strategy:*** the Programme set out in this PBC also supports delivery of our strategy for Bronglais General Hospital, "Delivering Excellent Rural Acute Care" (the Bronglais Strategy), which we published in 2021. The Bronglais Strategy describes how the hospital will support sustainable integrated service provision for Mid and West Wales.

4.1.9 Located in Aberystwyth, the hospital is a strategically important provider of accessible high quality emergency and elective health care services to a largely remote, rural population who would otherwise experience significant disruption to their lives and for whom we would otherwise be challenged to achieve the best possible outcomes. Bronglais' unique position in Wales means that a significant part of its role is providing care to residents from other Health Boards. Because Bronglais serves both a remote urban population and residents of three health boards (Hywel Dda, Betsi Cadwaladr and Powys) from a geographically large

rural area, pathways need to be able to access the most appropriate specialist care that ensures patients who need to be transferred, are transferred to the most local centre to their home. For some this will be Cardiff and Swansea, for others possible destinations include Bangor, Wrexham, Stoke, Shrewsbury, Manchester and Liverpool. In addition, Bronglais' adjacency with the University of Aberystwyth and National Library creates, in effect a "Penglais Campus of Learning, Information and Health" which presents significant opportunities to develop partnerships that will promote the delivery of healthcare to remote rural populations and promote Aberystwyth and Bronglais General Hospital as an employment location of choice for health care professionals.

4.1.10 The Bronglais Strategy reflects close and ongoing partnership working with Betsi Cadwaladr University Health Board and Powys Teaching Health Board, and it is also consistent with the North Powys Programme Business Case being developed by Powys Health Board.

4.1.11 We are also closely involved in the Mid Wales Growth Deal and work in partnership with a number of universities, described in more detail in sections 4.4.24-34.

4.1.12 ***Community based:*** across our three localities we have one vision of delivering care on a "home first" basis, one model and a Hywel Dda-wide programme led by one of our County Directors. The operational shape of this vision might differ across the seven clusters reflecting different geographies, needs and assets (e.g. a "bed-less" model in one locality, with community beds being available in others), but the traditional default to hospital is understood to be a poor outcome for our populations, and an unsustainable use of precious resources, across all our clusters. The model promotes people being cared for at home or, where this is not suitable, in community beds, in extra-care, residential or nursing homes depending upon a patient's specific needs. Acute care will be only for those patients who need a higher level, more specialist support that cannot be delivered at home or in the community. To support this change we must develop integrated, multidisciplinary teams wrapped around the person or community across the whole life course. The community model requires us to continue the journey to reimagine our community estate to better meet the place-based needs of our population. We are looking at NHS Lanarkshire's virtual hospital model as part of this. (The Virtual Hospital Model allows patients to have their care managed at home with oversight from their clinical team. This in turn frees up bed capacity whilst ensuring patients are getting the right care, in the right place at the right time. The model will allow patients to be transferred from an admission in an acute or community bed or directly from primary care / community).

4.1.13 ***Integration:*** A successful and sustainable social model for health and well-being requires access to and integration with the widest pool of resources within the community. We know that the responsibility for health and well-being does not solely (or even mostly) sit with statutory health and social care services. Prudent healthcare principles dictate that we should provide services only when such needs present that can only be provided by the health service. Adopting a social model for health however requires us to work with our populations, to understand the specific - often localised needs - and recognise the assets that exist in the communities. An important role for our community model is to support the population to develop assets in their communities that meet underlying need where these do not exist. By becoming an active partner within the wider community network, we will empower and enable people to make the best choices for them so that they can achieve their own vision of a good life. Reinforcing the role and resources of the health service will

meet the challenges of addressing the social determinants of health, and positively impact on the prevention of poor health and well-being.

4.1.14 Throughout 2020 and 2021 the communication and the strength of our partnerships with our three local authorities and other public bodies in West Wales has been key to the success of the collective response to the pandemic, particularly with providing personal protective equipment across health and social care, the Test, Trace and Protect programme, provision of field hospitals, roll out of the biggest mass vaccination programme in the history of the NHS and supporting care homes.

4.2 Our vision, mission and strategy

4.2.1 In late 2018 we published our Health and Care Strategy - *A Healthier Mid and West Wales: Our future generations living well* - which set out our long-term vision for the delivery of health and care services to our current and future populations.

4.2.2 Our Strategy is attached at Appendix 2, together with the document titled Our "Future Generations Living Well: A Health and Well-being Framework for Hywel Dda" published in January 2019 at Appendix 3. This sets out the framework for looking beyond what happens in our hospitals. The University Health Board as a key anchor institution, has a meaningful role to play through collaboration with our citizens and partner organisations to optimise health and well-being for all, recognising the wider determinants of health and well-being.

4.2.3 The Framework stated the University Health Board's objective as being to:

"…establish a climate that enables and promotes new ways of working, and create a movement for change that:

- ***Shifts the way we behave, have conversations and connect with people***
- ***Enables us to know we have made a difference (and how we measure this)***
- ***Empowers and enables our communities to create health***
- ***Creates and grows an environment of energy, hope and aspiration."***

4.2.4 We undertook extensive staff and public engagement and consultation as we developed our Strategy. At an early stage our clinicians stated their commitment to designing services that are **safe, sustainable, accessible and kind** for today and for future generations.

4.2.5 Time and again we heard these themes echoed by patients and members of the public during our engagement and consultation exercises. These four words have become our guiding principles, they keep us focused on how we meet the changing needs of our local population both now and in the future, and we have used them to structure this PBC. We define them as follows:

SAFE

We will provide safe services and high quality care by:

- Involving staff and communities in the design of facilities
- Including the latest innovations to support clinical effectiveness, to provide the best possible outcomes for patients
- Ensuring that education is a cornerstone of all new facilities and supported by the design
- We will build safety into the design of all new and re-developed facilities from the ground up – learning from the best examples around the world and our own staff experience
- Our clinical pathway design will build safety, quality and patient/family experience into every interaction a patient has with our services

SUSTAINABLE

We will provide sustainable services fit for future generations by:

- Future proofing the build and ways of working, so that the environment supports flexible and agile services
- Building in operational flexibility to cope with any future health risks
- Maximising carbon efficiency
- Enabling patients and staff to gain the benefits of connecting with nature
- Ensuring that the new facilities are part of a healthcare system encompassing community, primary care services and specialist services
- Through the design of our clinical pathways and facilities, we will make Hywel Dda University Health Board a great place to work for our staff and partners

ACCESSIBLE

We will provide accessible services by:

- Maximising our use of digital technology
- Ensuring that the location of the new hospital is easily accessible, with options for public transport
- Fostering a sense of our hospitals belonging to our wider communities
- We will maximise the opportunity for patients to receive care in, or near their homes and when travel is required ensure that public transport options are available
- We will ensure that our facilities are fully accessible to all groups within our population including those will reduced abilities and specific challenges

KIND

We will provide kind services by:

- **Ensuring that our facilities and ways of working enable us to provide compassionate services and promote wellbeing for both patients and staff**
- **Our pathways will be designed around the specific needs of patients and their families**
- **Our staff will always be kind in their interactions with patients, their families and our wider partners/stakeholders – bringing our values to life**

'As a staff member what's important to our patients drives us. I can see how the guiding principles of safe, sustainable, accessible and kind care were developed from what our patients told us they wanted. They're really powerful and I can see how our staff are living them every day, and how they're informing the development of our model going forward.'

4.2.6 Our Strategy articulates our vision for services fit for current and future generations, and invests in primary and community services that create a shift from the existing and predominant medical model:

4.2.7 As our planning has progressed and we have learned from the experience we gained through the pandemic, we have continuously reviewed and updated our vision, so that it articulates what implementation of our Strategy will mean in practice. We use it to keep our Programme Group (the team tasked with delivering our Strategy through the Programme described in this PBC and on which we say more in the Management Case) true to our overarching objective:

"Our vision for a programme business case for a new urgent and planned care hospital and repurposing two of our existing hospitals uses the experience and changes brought about by the COVID pandemic to minimise the need for patients and staff to attend hospital, but for those who do, to have the shortest clinically appropriate length of stay.

We will provide adaptive, connected and mutually supportive environments for patients and staff, enabling us to achieve our strategic vision of providing, safe, sustainable, accessible and kind health and care services."

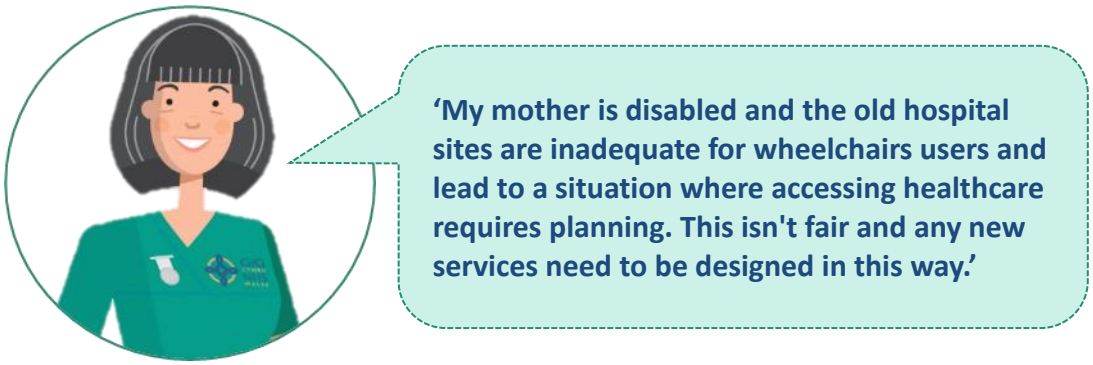
4.2.8 We have also developed a mission statement:

"Together we are building kind and healthy places to live and work in Mid and West Wales"

which shows our appreciation of the fact that we play a central role in meeting the aspirations of *The Social Services and Well-being (Wales) Act 2014*; *The Well-being of Future Generations (Wales) Act 2015;* the *Equality Act 2010*, and the recently enacted *Socio-Economic Duty*; and our aspirations as a key public service anchor organisation which can contribute to a Prosperous Wales though our work to develop the *Foundational Economy*.

4.2.9 Realising our Vision and Mission means implementing an ambitious and innovative programme of whole system change to realise our population health ambitions, which signals a fundamental shift from our current emphasis on hospitals to a focus on working in partnership with people and communities to keep people well in or close to their own homes.

4.2.10 It means a commitment to a whole system approach where primary and secondary care are not seen in isolation but work together to provide seamless care for local people. In line with a social model for health, our Strategy demonstrates our recognition that health is about far more than healthcare and, instead, requires contributions from across the whole system as an integrated population health and wellness system spanning multiple settings and delivering care and support that fits around the person and what matters to them.



4.2.11 It means the development and implementation of an enhanced community model, based on an integrated social model for health and well-being, and its implementation at pace as a long term commitment focused on prevention, well-being and early intervention to help build resilience and enable people to live well within their own communities.

4.2.12 It means a future hospitals model with a new Urgent and Planned Care Hospital located in the south of our region, which will operate as our main site for all specialist children and adult services, supported by a network of hospitals which will provide more locality-based care, including Bronglais General Hospital in Aberystwyth, Glangwili Hospital in Carmarthen, Prince Philip Hospital in Llanelli and Withybush Hospital in Haverfordwest.

4.2.13 It means the increased use of digital technologies to support our communities, allowing patients to be treated at home by clinicians who have the right information, at the right time to improve their outcomes. We intend to integrate digital solutions into every patient interaction and will use them to improve the quality of care and experience of our patients and support our workforce by providing safe and efficient tools.

'The biggest change during the pandemic has been the virtual clinic work in outpatients ... We're now looking at providing this across all the services for all the sites.'

4.2.14 And it requires a sustainable workforce model that supports local employment, promotes community wealth building with fewer emergency rotas and reduced use of locum and agency staff, and meets the central aim of our Purpose and Strategic Objectives to make Hywel Dda University Health Board a great place to work (we say more about this in the Workforce Case for Change below).

4.2.15 Since publishing A Healthier Mid and West Wales: Our Future Generations Living Well we have been through the experience of the Covid-19 pandemic, from which we have learned many lessons. We have also undertaken further extensive internal and public engagement, explored site options for the new hospital, undertaken design and modelling work and strengthened our capability to manage, govern and deliver a programme of this scale. This work is reflected in this PBC.

4.2.16 Since 2018 we have also engaged in extensive discussion with Welsh Government to agree an approach to the business case process, which resulted in the development of a Pre-Programme Business Case in early 2020; identification of resources required to manage this PBC; and subsequent agreement that this first stage would be funded by the University Health Board.

4.2.17 We are in no doubt that we have a historic, once-in-a-generation opportunity to transform our health and care system and we want to get it right for everyone who relies on us now or will rely on us in the future. Whilst Covid-19 has delayed implementation of our Strategy, it has strengthened our Case for Change: it has demonstrated even more clearly that we cannot deliver services in the way our population needs through our current service model and our current estate infrastructure.

4.2.18 We want our transformation to be creative and innovative. We want to achieve an estate which is carbon-efficient and as operationally and financially efficient as possible. We want to move to a paperless, integrated digital environment.

4.2.19 We want our communities to be involved in the design, and when the new Urgent and Planned Care Hospital is built and the rest of our estate improved we want our buildings to feel like they are public assets, open to the community; and connected to the local natural environment through the application of principles of biophilic design. We think that one of the ways we will do this is by having the community fully involved, through continuous engagement, in our journey to design our new health and care system, and in particular the buildings where they will access care. And we will need construction and maintenance skills – we see our programme as an opportunity for these skills to be developed and sustained locally so that we can maximise our contribution to the foundational economy and building social value.

4.2.20 Within the remainder of this Strategic Case, we provide an overview of the University Health Board in Section 4.3. Section 4.4 then describes our strategic direction and how it has evolved. We know we cannot do it alone, so this section also sets out the network of partnerships of which we are a part. Section 4.5 sets out the Case for Change from clinical, workforce, estates, digital and environmental perspectives. Section 4.6 shows our Spending Objectives and the outcomes and benefits related to them. Section 4.7 provides a high-level description of our Programme. Section 4.8 then identifies the Programme's risks, constraints and dependencies.

4.2.21 This PBC is the crystallisation of a very long period of discussion and a further stage in our long-term journey. Our objective is to reach submission of Full Business Case stage across all elements of our Programme by March 2026, which we hope this PBC brings closer. This timeline will enable us to deliver improvements to our populations as soon as possible, and progress at pace to align with the decarbonisation target.

4.3 Organisational overview

4.3.1 The University Health Board was established on 1 October 2009 from the merger of Hywel Dda NHS Trust and the Pembrokeshire, Ceredigion and Carmarthenshire Local Health Boards. It is one of seven health boards in Wales and serves the population of Mid and West Wales. Covering a quarter of the landmass of Wales it is the second most sparsely populated health board.

4.3.2 We plan, organise, commission and deliver healthcare for 393,600 people in Carmarthenshire, Ceredigion and Pembrokeshire, managing and paying for the majority of care and support that people receive in hospitals, health centres, GP surgeries, dentists, pharmacists, opticians and other settings, including within the community.

4.3.3 The table below provides a high-level overview of our current service model:

Facilities	Description
Four main hospitals	Bronglais Hospital in Aberystwyth Glangwili Hospital in Carmarthen Prince Philip Hospital in Llanelli Withybush Hospital in Haverfordwest
Five community hospitals	Amman Valley and Llandovery in Carmarthenshire Tregaron in Ceredigion Tenby and South Pembrokeshire Hospital Health and Social Care Resource Centre in Pembrokeshire
Two integrated care centres	Aberaeron and Cardigan in Ceredigion
Community Facilities	48 General Practices (4 of which are managed by the University Health Board) 49 Dental Practices (including 3 orthodontic) 98 Community Pharmacies 44 General Ophthalmic Practices (44 providing Eye Health Examination Wales and 30 low vision services) Numerous locations providing Mental Health and Learning Disabilities Services Highly specialised services commissioned by Welsh Health Specialised Services Committee

Source: Hywel Dda University Health Board, Annual Report and Accounts 2020/21

4.3.4 Key statistics on the profile of the population we serve are as follows:

- Ageing population: The average age of people in our three counties is increasing steadily, with all three local authority areas projected to have an increase of people aged 65 and over by 2028. Nearly a quarter of our population is aged over 65.
- As our population ages there are an increasing number of people in our area with one or more chronic condition;
- There are areas of deprivation including parts of Llanelli, Pembroke Dock and Cardigan. Within less deprived areas there are often pockets of hidden deprivation.

4.3.5 Primary care services account for more than 90% of people's contact with the NHS in Wales[3], and we believe that this is representative of Hywel Dda. When it works well it is often taken for granted; when it struggles and changes it generates high levels of public and political anxiety; when it fails it has a profound systemic impact, with the capacity to undermine and destabilise the rest of the healthcare system.

4.3.6 Primary Care encompasses General Medical Services (GMS), Community Pharmacies, General Dental Services and Community Optometry. These services offer holistic clinical care and deliver the majority of care for the population across the whole health and care system. They are cradle-to-grave and do not differentiate between people by age, condition or care need. They are relied on within communities; they have long legacies and are, in the vast majority of instances, the first port of call.

4.3.7 Health staff, such as GPs, district nurses and therapists, pharmacists, optometrists, dentists and support staff also provide care in people's homes. In addition some specialist care is provided outside of the Hywel Dda area in regional centres by other health boards via the Welsh Health Specialised Services Committee (WHSCC) and other independent providers. This includes hospitals such as Morriston Hospital in Swansea and the University of Wales Hospital in Cardiff.

4.3.8 Seasonal variation is accounted for within the activity modelling provided in the Economic Case. There are three main reasons for the increase demand for GMS services namely:

- On-the-day demand – This can be for everything from a bruise to new cancer diagnosis, physical and mental health, young and old. It can be overwhelming but provides vital support to patients and aids in building trust between those providing and those receiving healthcare services.
- Planned chronic condition & prevention needs – This care is usually nurse-led. It often sits apart from daily need but can be vulnerable to patients not attending planned appointments and/or workforce shortages.
- Complex and frail need – This is the key group of people who can deteriorate rapidly, require emergency admissions with long lengths of stay requiring care packages on discharge. They and their families or carers require care planning, coordination and continuity of care.

4.3.9 Any future solution therefore needs to be able to respond to these key drivers, ensuring that on-the-day demand is managed by the right person at the right time, that more time is devoted to complex and frail individuals, and that the planned elements of care can be effectively coordinated and supported in a sustainable way.

[3] A Picture of Primary Care in Wales, Auditor General of Wales (2018), p.5

4.3.10 Community and dispensing GP practices are a key element of the delivery mechanism for more care close to home. There are 98 community pharmacies and 6 dispensing GP practices within Hywel Dda UHB, which provides a ratio of approximately 2.5 pharmacies per 10,000 population. This is higher than the average for Wales which is around 2.25. Essential Community Pharmacy activity includes the dispensing of prescriptions - with over 9.8m items dispensed in 2019/20 – and activities such as promoting healthy lifestyles, providing a place to return unwanted medicines, signposting people to other services and supporting people to care for themselves. In addition to this there is a move to increase the number and range of advanced (e.g. medicines use reviews, discharge medicines reviews and appliance reviews) and enhanced (e.g. Triage + Treat, INR monitoring, palliative care medication and Just in Case packs, influenza vaccination, substance misuse services) services offered by Community Pharmacies.

4.3.11 The most recent Pharmaceutical Needs Assessment (October 2021) found that access to essential, advanced and enhanced pharmaceutical services and GP dispensing services is good to very good and no gaps in the current provision of these services has been identified[4].

4.3.12 ***Financial Overview:*** Historically the University Health Board has been in deficit almost since its creation, having inherited this position from the West Wales system which preceded it.

4.3.13 A great deal of work has been done over recent years to understand and improve this position. This work has identified that £20m of additional costs result from our current configuration (£10m from at least one additional A&E and £10m from having at least one additional medical take relative to other Health Boards).

4.3.14 The University Health Board had a deficit position of £24.9m in FY20/21. Revenue funding of £116m to offset the costs incurred due to COVID-19 during FY20/21 was received from WG. The University Health Board has failed to meet its statutory duty to breakeven over the latest 3-year period. However, improvements in financial control, alongside the financial recognition of the demographic challenges in 2018/19 together with additional £10m recurring funding in 2020/21 have contributed to a reduction year-on-year in the deficit position.

4.3.15 Our revenue resource performance for the last three years is summarised below:

	2018/19	**2019/20**	**2020/21**	**Total**
	£'000	**£'000**	**£'000**	**£'000**
Net operating costs for the year	**862,414**	**928,650**	**1,054,279**	**2,845,343**
Less general ophthalmic services expenditure and	1,722	1,400	1,889	5,011

[4] Hywel Dda University Health Board Pharmaceutical Needs Assessment (October 2021), pp.9-10, available at https://hduhb.nhs.wales/about-us/your-health-board/board-meetings-2021/board-agenda-and-papers-30th-september-2021/agenda-and-papers-30th-september-2021/item-6-2-1-pharmaceutical-needs-assessment/

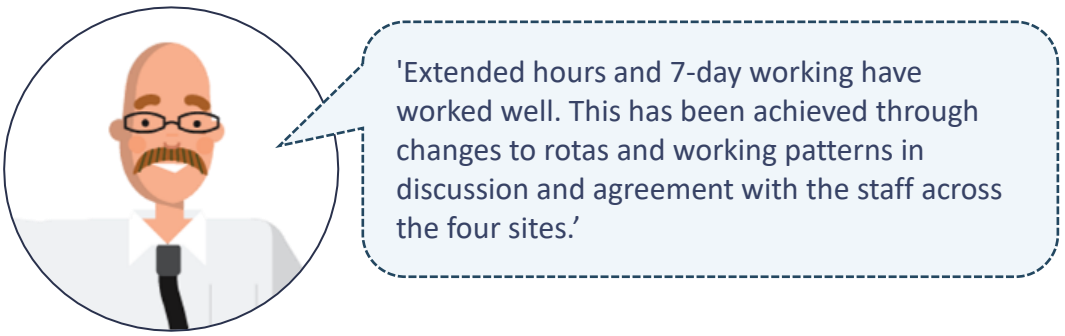
other non-cash limited expenditure				
Total operating expenses	**864,136**	**930,050**	**1,056,168**	**2,850,354**
Revenue Resource Allocation	828,698	895,107	1,031,258	2,755,063
Under/(over) spend against Allocation	***(35,438)***	***(34,943)***	***(24,910)***	***(95,291)***

Source: Hywel Dda University Health Board, Annual Report and Accounts 2020/21

4.3.16 Our experience during the pandemic has taught us that the NHS and we are capable of transforming the services we provide at pace. The agility and responsiveness of our colleagues across the organisation and our partner organisations, the scale of recruitment, the rapidity of planning and deployment, the responsiveness of services and the embrace of technology and innovation all show that when change is needed it can be delivered. We must now bring that same energy to address the long-term challenges we face.

4.3.17 There are three key disruptors which will be critical to the University Health Board's transformation journey:

1. **Workforce** - Continuing to work with long term staffing issues across many of our services is unsustainable, and consequently new models of care must be identified and delivered which build upon recent successes - including our "Grow Your Own" workforce philosophy, which has had a number of successes, including our Apprentice Academy for clinical and non-clinical roles; the Primary Care Pacesetter programme for



Physician Associates including a rotational model across secondary care provision; a joint induction programme for health and social care as well as "bespoke" training modules with social care and carers to build specific competencies such as "wound care"; creation of new roles such as the Surgical Practitioner and other roles aligned to the "Assistant Practitioner" role design model; and the "CHEF" programme to enable student nursing placements within the care home environment. This gives a flavour of our activity for workforce development which cuts across all professional groups and sectoral agencies – third sector, local authority - and is striving to orchestrate a regional response.

2. **Digital** - Recognising there are demand side issues in delivering our services (the majority of the excess cost of care in the University Health Board, when compared to the Welsh average, is driven by excess activity, particularly for A&E and unscheduled care, and that volume variance as opposed to cost variance is driving the excess expenditure due to the need to deliver services across multiple sites); and that there are supply-side issues (workforce constraints and duplication of services across our region) mean that digital is a key enabler to improvement. Our digital strategy will be critically important. We will ensure that the service changes arising from digital must be embedded and the benefits of investment fully realised. Our road to embracing digital will see us remove digital friction and reduce digital inequality, implement enabling

'I now wear a device that constantly measures my heart rate, blood pressure, and breathing. My lifestyle coach has explained to me how it works. My data is sent to my care team, so that I don't need to tell my GP of any changes when I see here. She has all the information at her fingertips in my electronic notes. My data is also collected for research purposes and is used to plan services.'

technologies, ensure technology is aligned to roles, and enable high quality data at the point of care. Examples of this include the Nursing Health Record, Attend Anywhere, development of partnership to facilitate local and regional access to services, for example Delta Wellbeing.

3. **Value** - A relentless focus on value, ensuring the consistent capture of outcomes across our services, will ensure that we allocate resources within the right part of our pathway that enable value through a prudent model of healthcare and associated workforce design and development. We will focus effort in ensuring that there are integrated locality models and integrated pathway models which enable workforce and financial alignment through a "value lens", ensuring our services and systems enable a financial benefit in line with positive patient outcomes by measuring the impact of resource allocation and utilisation. We will use these to work with clinical and operational colleagues to:
   a. *Identify and address unwarranted clinical variation.*
   b. *Identify and implement new models of care and clinical pathways.*
   c. *Identify and implement preventative models and social models of intervention.*
   d. *Create opportunities to increase social value and population health and well-being.*

4.3.18 During FY21/22 we have been developing a Roadmap that outlines how we could deliver financial sustainability – which aligns with the University Health Board's six Strategic Objectives (see below) and longer-term strategy. It will follow the direction of travel set out in the AHMWW Strategy, with a view to securing transitional funding to support our excess A&Es and medical takes as we look to secure long term financial sustainability through the delivery of the revised service model and way of thinking outlined in this PBC.

4.4 Strategic context

4.4.1 This section describes the strategic drivers behind the development of our Health and Care Strategy and sets out how our organisational strategy has evolved since the Strategy was

published in late 2018. This development directly informs our strategy-related spending objective.

4.4.2 ***The Transforming Clinical Service Programme and The Big Conversation:*** In our 2016/17 Integrated Medium Term Plan we signalled our desire to be recognised as a population health organisation and established the Transforming Clinical Services (TCS) Programme to achieve this. The TCS Programme comprised three Phases, described below:

4.4.3 **Phase 1 – Engagement:** Phase 1 was the foundation of Our Health and Care Strategy - an intensive round of engagement with approximately 4,000 stakeholders in 2017 which we called the "Big Conversation".

4.4.4 The Big Conversation provided the opportunity for staff to debate, discuss and share their views through consultant meetings, GP cluster meetings, the Local Negotiating Committee, senior nurse and midwifery meeting, senior leadership meetings, partnership forums and drop-in sessions at acute and community hospitals. Wider stakeholders included Community Health Councils, Public Services Boards, county councillors, scrutiny committees, Stakeholder Reference Group, Mid Wales Healthcare Collaborative, county equality groups, People First, Deaf Club, sheltered accommodation, veterans' network, youth forums, gypsy traveller community and 50+ forums, to ensure there was a broad spectrum of views to inform the exercise.

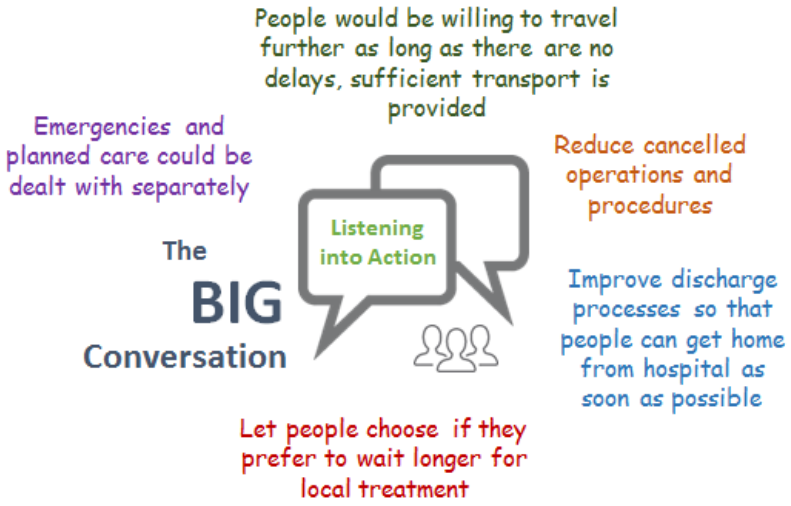
4.4.5 We commissioned Opinion Research Services to independently analyse all of the inputs gathered throughout the process. The graphics below show the common themes they identified about community care, planned care and urgent and emergency care[5]:

What people said about community care:

[5] Source: Phase 1: Discover Output Report, The Case for Change (November 2017)

What people said about urgent and emergency care:

What people said about planned care:



4.4.6 **Phase 2 – Design:** Phase 2 of the TCS Programme – the design phase - saw 27 options for the design of future services translated into three proposals with different configurations of service models, which were put forward for a 12-week public consultation exercise in April 2018 - described in detail in the Economic Case. This appraisal formed the basis for our decision that the optimal option for implementing our Health and Care Strategy was "Proposal B", which consists of three main hospitals (one of which is a new Urgent and Planned Care Hospital), two repurposed community hospitals and a network of community hubs. Proposal B was subsequently amended to include retention of acute medical services at Prince Philip Hospital and renamed **"Proposal B+"**. Proposal B+ is the cornerstone of our Health and Care Strategy and therefore this PBC.

4.4.7 ***Setting our Strategic Objectives:*** Following the Strategy we developed our Strategic Objectives. These form the basis of our 3-year Plan for the Period 2021/22 – 2023/24 and our planning objectives which are set out in a public board paper published in September 2020.

4.4.8 Our Strategic Objectives are founded in our values and place humanity at the centre of what we wish to be as an organisation. They bring together our ambitions to focus on population health and well-being in its widest sense – the need to deliver now and for the future and to manage all resources in a sustainable manner. They are underpinned by 63 detailed Planning Objectives which give us focus for the next 3 years. They are shown below and are reflected directly in the Spending Objectives we set out at Section 4.6:

1. Putting people at the heart of everything we do	**4. The best health and well-being for our communities**
2. Working together to be the best we can be	**5. Safe, sustainable, accessible and kind care**
3. Striving to deliver and develop excellent services	**6. Sustainable use of resources**

4.4.9 Development of this PBC and longer-term business case production are mentioned in the following Planning Objectives:

- By March 2023, develop and implement Integrated Locality Planning groups, bringing together Clusters, Health, Social and Third Sector partners with a team of aligned Business Partners. Establish a clear and agreed set of shared ambitions and outcomes for the population aligned with national and regional priorities across the Whole System triangle model articulated in a co-owned Integrated Locality Plan. The Integrated Locality Planning Groups will agree a collective shared budget to support delivery of the Plans, including commissioning of services, and will demonstrate delivery of the following priorities. The Integrated Locality Planning groups will operate within a revised framework of governance which will be developed in conjunction with the national Accelerated Cluster Programme:
  - Connected kind communities including implementation of the social prescribing model.
  - Proactive and co-ordinated risk stratification, care planning and integrated community team delivery.
  - Single point of contact to co-ordinate and rapidly respond to urgent and intermediate care needs to increase time spent at home.
  - Enhanced use of technology to support self and proactive care.
  - Increased specialist and ambulatory care through community clinics.

Planning Objective 5C:

Produce and agree final business cases in line with the vision and design assumptions set out in 'A Healthier Mid and West Wales' for:

- the repurposing or new build of Glangwili and Withybush Hospitals;
- implementation of a new urgent and planned care hospital (with architectural separation between them) within the zone of Narberth and St Clears.

Work with partners to develop and address access, travel, transport and the necessary infrastructure to support the service configuration taking into account the learning from the COVID pandemic (See specific requirements 5ci, 5cii).

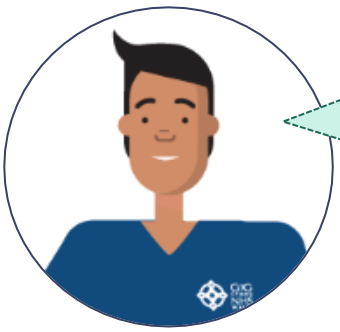
Develop plans for all other infrastructure requirements in support of the health and care strategy.

5C(i): Ensure the new hospital uses digital opportunities to support its aims to minimise the need for travel, maximise the quality and safety of care and deliver the shortest, clinically appropriate lengths of stay.

5C(ii): Implement the requirements of 'My charter' to involve people with a learning disability in our future service design and delivery.

- **Planning Objective 5F:** Fully implement the Bronglais Hospital strategy over the coming 3 years as agreed at Board in November 2019 taking into account the learning from the COVID pandemic.

4.4.10 ***Clinical focus groups – November and December 2020:*** With our Health and Care Strategy written, the question before us in mid-2020 was how to progress to a list of options for analysis in the Economic Case of the PBC. We took advice from the Consultation Institute as to how best to do this, and during November and December 2020 we held a series of focus group meetings with clinicians from Community and Primary Care; Critical Care; Diagnostics; Emergency Medicine; Learning Disabilities; Medicine; Medicines Management; Mental Health; Scheduled Care; Surgery; Therapies/Rehabilitation; and Women and Children.



'As a staff member I was glad to be engaged and involved in the process, and I can see that our views have been used to influence the design of the rehabilitation facilities at the repurposed hospitals and community venues.'

4.4.11 The clinical focus groups were an opportunity to re-engage with our clinicians and front-line staff on the Health and Care Strategy following their experience during the pandemic; and gave us a structured way of generating insights from them to help us to develop the long list of options and inform our Spending Objectives and Critical Success Factors.

4.4.12 The questions posed to each group were:

1(i). Are there materially different options for the delivery of your services, i.e. service model / configuration and service scope?

1(ii). Are there any impacts for those in groups with characteristics protected under our equality duties?

2. What does the guidance / guidelines or advice from your professional bodies say, e.g. Royal College / NICE guidance, etc. regarding the future delivery of your service(s)? i.e., will services be delivered differently?

3. What are the key dependencies and requirements for the design of the new hospital, existing hospitals and community facilities?

4. How do the design assumptions (noted in A Healthier Mid and West Wales) impact on any possible service configurations?

5. What do you see as the critical success factors (attributes essential for the successful delivery of the programme) and are there any issues you want to flag?

4.4.13 Insights gained from the clinical focus groups can be summarised into the following themes (please note that participants were facilitated towards a clinically-focused discussion,

therefore feedback in relation to transport, net zero carbon and biodiversity was not generated). These themes have influenced the development and scoping of options described in the Economic Case.

Theme	Description
1. Integrated, collaborative, partnership working	• Co-location, integration • Seamless continuum of care model • Rehabilitation must be whole Multi-Disciplinary Team: 'the team around the person'
2. Community based services	• Opportunities for more community-based services to be delivered in existing community infrastructure such as town halls • Focus and Resources • Co-design • Evolution of localities
3. Repurposed sites	• Opportunity to maximise ambulatory (local Anaesthetic), treatment room surgery on all sites including repurposed Glangwili and Withybush Hospitals. But must be sustainable from a workforce perspective • Not to be constrained in thinking about design and configuration of services on repurposed hospital sites as estate solutions will need to follow service needs • Priority for the concept of space: Pharmacy, Rehabilitation • Repurposing of Glangwili and Withybush Hospitals and confirming what services are at each site e.g. Blood Science Labs, 2 or 3
4. Workforce	• Pharmacist, pharmacy technicians and ATOs (critical staff) • Reliance on shared staff to cover a number of specialties • All staff groups should practise to the top of their licence • Skill gaps analysis – aim to grow our own

5. Opportunities	• Opportunities for more midwifery led services in Llanelli • Location of outpatients • Central hub (Delivery option) Pharmacy • What services will be where • Our ambition around repatriation

Theme	Description
6. Technology enabled care	• Pharmacy - Satellite Dispensary Ward Automation, Air Tube System, Aseptic Unit, Radio-pharmacy, Electronic Prescribing, Nuclear Pharmacy • Digitally enabled confidential rehabilitation suites • Use of artificial intelligence to passively monitor data to alert clinical staff of any issues that may cause harm to a patient (It was recognised that any developments in this area will align with relevant All Wales programmes)

7. Working digitally	Importance of developing digital infrastructure:
	• Technology will be a key enabler to allow for care closer to home or where the patient requires it– Point of Care Testing (POCT), diagnosis and treatment at site of emergency (Welsh Ambulance Service NHS Trust and other community provision) prior to transfer to Emergency Department (if required)
	• Need to maximise digital opportunities
	• Concept of providing access to systems, and data to without the need to attend University Health Board sites – care settings without walls
	• Embedding the key digital themes
	  • Digitally Connected Patients,
	  • Digitally Enabled Workforce
	  • Business Intelligence and Analytics
	  • Digital Infrastructure
	• Development of a robust cyber and information governance assurance framework

8. Services	• Rehabilitation services, balance between New Urgent and Planned Care Hospital and repurposed hospitals • Mainstreamed services with reasonable adjustments and liaison support where needed for Learning Disabilities
9. To scope further	• Further work on Paediatric catchment • Opportunity to maximise ambulatory (local anaesthetic), treatment room surgery on all sites including repurposed Glangwili and Withybush Hospitals, but must be sustainable from a workforce perspective

4.4.14 ***Internal and external stakeholder and public engagement – February to June 2021:*** We undertook a six-week engagement exercise - 'Building a healthier future after COVID-19' - between May and June 2021, as an opportunity to check in with staff, patients and their families, and the wider public to find out how their lives had been impacted by the global pandemic.

4.4.15 In addition to the general public, respondents included County councillors, organisations, town and community councillors, politicians and Hywel Dda Community Health Council. Of the 271 respondents (including online and paper questionnaire responses), 209 have requested to be kept informed as the work progresses.

4.4.16 The aim was to learn how the Covid-19 pandemic has affected the public's health and care, and access to it. We also wanted to understand the implications of these experiences in relation to our long-term Health and Care Strategy, 'A Healthier Mid and West Wales: Our Future Generations Living Well'.

4.4.17 We also invited people to respond to a questionnaire and nominate possible sites for the proposed urgent and planned care hospital in the south of the area, within the zone between and including the towns of St Clears (Carmarthenshire) and Narberth (Pembrokeshire), and asked them to give their top priorities when considering the location of the new hospital. We engaged with NHS Lanarkshire in Scotland to learn lessons from their experience.

4.4.18 The following summary outlines the feedback received. The responses have been split into six themes:

1. **The impact of the pandemic on our population** - agglomerated feedback on the access to services, health and well-being of our population due to the pandemic. Many felt the pandemic highlighted the importance of more services being available at a local level, such as in the community. There was praise and acknowledgement of the hard work staff are doing in difficult circumstances.

2. **The Strategy** - feedback on the population's reflection of the Healthier Mid and West Wales: Our Future Generations Living Well strategy. Some people expressed frustration at the lack of detail in the strategy, particularly regarding what services would be provided at existing hospitals and at the new one. Many commented favourably on the plan for increased integration of services and more services delivered in the community.

3. **The Social Model of Health and Well-being, and the wider determinants of health** - the population's view on how they felt their health and well-being could be supported in their communities. Many said community activities and support groups were important. Some people focused on education and the need for self-management and self-care of conditions. There is a recognition of the importance of different organisations across health, social care and third sector, working together for the benefit of the people.

4. **Hospital site nominations** - the population's preferences on the hospital site, with a concern for distance from their home and the site's accessibility to public transport being a prevailing theme of the feedback.

5. **Key priorities for location of new Urgent and Planned Care Hospital** - this section focused on people's responses to what is important to them for a hospital site, and what they feel should be considered. The feedback highlighted distance to the hospital, improved public transport links, free parking and the importance of attracting/retaining staff. The cost of building a new hospital was raised, and whether it would be more cost effective to invest in existing sites and buildings, instead of building a new hospital.

6. **Understanding impacts** - this section sought feedback for information on equalities and socio-economic impact. Some recurring themes in their responses were around rurality, difficulties accessing transport, poverty, and mental health.

4.4.19 This exercise also encompassed engagement with the local authorities of Pembrokeshire, Ceredigion and Carmarthenshire to discuss how health and social care should work together to deliver community-based care. As part of these discussions we have outlined how the pandemic has reinforced our ambition while giving us the opportunity to consider the following key areas:

- Reflect and reset the integrated community model to strengthen and embed preventative, proactive, intermediate, rehabilitation, unscheduled care and long-term care delivery.
- Review our organisation structure to ensure we have the right and best mechanisms in place to support an integrated approach to planning and delivery which reflects cluster, locality and regional needs.
- Use our resources in a values-based way which embraces the holistic care and support offered by primary and community services.
- Strengthen and further develop new approaches to care delivery utilising digital technology.
- Sustainably embed multidisciplinary teams wrapped around the person or community across the whole life course.
- Redesign our community estate to better meet the place-based needs of our population whilst connecting care across the region and between primary, community and secondary care.
- Ensure that the most frail and complex members of our communities have safe, sustainable, kind and timely access to the care that they need to enable them to remain in their own home or care home.
- That we can demonstrate improving outcomes and experience for our populations, patients, carers and staff.
- That working with people in their communities is a diverse, rewarding and attractive opportunity for our staff where teamwork, career progression and excellence of care are central to our culture.

‘Under the counselling team in Pembrokeshire, because I'm anxious of phone calls they have gone out of their way to see me face to face’

‘Many people who live on or below the poverty line/reduced income may have experienced mental health, anxiety issues and well-being over the COVID period. Further support services need to be available to address these issues before they escalate.’

'During the pandemic our neighbors and wider community really pulled together to support each other with shopping and we relied on our local charities and community groups. It would be great to see us build on this in future, giving us all a stronger role in supporting our own health and well-being in our own communities.'

4.4.20 Our engagement has demonstrated to us that the key enablers of workforce, digital, infrastructure and finance will need to be aligned to enable effective delivery of our Programme, and we say more about this in the Case for Change below.

4.4.21 We have included summaries of the Consultation Feedback at Appendix 6 (in English and Welsh). These were distributed to 2,897 stakeholders by post and email during the week commencing 13 December 2021.

4.4.22 Our communications and engagement has also encompassed briefing local Members of Parliament on the development and key messages of the PBC, with our Chair and Chief Executive holding regular meetings with our Senedd Members and Members of Parliament.

4.4.23 We remain cognisant of the 18 CHC recommendations in response to our Health and Care Strategy following public consultation. We are committed to honouring these and while some will be evidenced at a later stage of business case and service development proposals for others the PBC clearly shows commitment and that we remain consistent to this approach. Our response to the recommendations is attached at Appendix 23.

Links with Regional Growth Deals / Strategic Partners

4.4.24 The Healthier Mid and West Wales Programme has strong links with, and is complementary to, the Mid Wales Growth Deal. also work closely with a number of universities, described below.

4.4.25 ***Mid Wales Growth Deal:*** Growing Mid Wales is a regional partnership and engagement arrangement between the private and public sectors, and with Welsh Government. The partnership is led by Ceredigion and Powys County Authorities and seeks to represent the region's interests and priorities for improvements to our local economy.

4.4.26 The vision of the partnership is that by 2035 Mid Wales will be "*An enterprising and distinctive region delivering economic growth driven by innovation, skills, connectivity and more productive jobs supporting prosperous and bilingual communities".*

4.4.27 The partnership aims to:

1. Encourage interaction with businesses, higher and further education, and with public and private sector stakeholders.
2. Identify key themes and sectors, and priorities for investment.
3. Support business led innovation, enterprise and investment in Mid Wales.
4. Secure wider collaborative and transformational working with key partners organisations and the business community.
5. Agree roles, responsibilities and improved delivery arrangements in the promotion of economic development.
6. Ensure broad input and engagement that will help advise on the Growth Deal.

4.4.28 In December 2020, both Governments together with Ceredigion and Powys County Councils signed the Heads of Terms of a £110m Growth Deal - casting the commitments of all parties to work in partnership to deliver a Deal to support the Mid Wales economy. The Growth Deal, setting out programmes and projects to be funded over a ten year period, was signed in [December 2021].

4.4.29 The Mid Wales Growth Deal is a capital programme aimed at supporting economic development projects. The Deal itself is yet to be signed (imminent) but will commit UK and Welsh Governments to investment £110m in Mid Wales. The local projects that will eventually be funded will need to also contribute their own funding (private or public sector).

4.4.30 The Growth Deal is based on the 'Vision for Growing Mid Wales' which is the strategy document that provides the background to why funding is required and how it can help grow the region. The aim is to achieve "An enterprising and distinctive region delivering economic growth driven by innovation, skills, connectivity and more productive jobs supporting prosperous and bilingual communities". The Vision focuses on 8 strategic growth priorities:

- Digital.
- Applied Research & Innovation.
- Strengthened Tourism Offer.
- Agriculture, Food & Drink.
- Supporting Enterprise.
- Skills & Employment.
- Energy.
- Transport.

4.4.31 The three Health Boards in Mid Wales – Hywel Dda University Health Board, Powys Teaching Health Board and Betsi Cadwaladr University Health Board - are represented by the Mid Wales Joint Committee Programme Director. The Mid-Wales Growth Deal is important for us because, as a capital programme, it will provide economic infrastructure which will support jobs and boost productivity, and therefore create employment opportunities and growth potential for the foundational economy. All of these are relevant to the wider determinants of health and we would anticipate seeing improvements in population health as a result.

4.4.32 ***Collaborative partnerships with Universities:*** The University Health Board has collaborative partnerships with a number of universities, including University of Wales Trinity Saint David (UWTSD), Swansea University and Aberystwyth University to support the delivery of A Healthier Mid and West Wales through research and innovation opportunities. We also work with other universities across Wales and the UK on defined research projects.

4.4.33 With UWTSD we are strengthening our partnership to provide greater opportunities for collaboration in relation to workforce development, research, enterprise and innovation, particularly post-COVID-19. Activities will see both organisations undertaking collaborative research projects and maximising opportunities for commercialisation particularly in relation to new device and technology development.

4.4.34 Our Research and Innovation Strategy 2021-24 sets out our ambitions to:

- Increase the number and diversity of honorary posts, aligned to mutually beneficial research and innovation projects.
- Increase the number of joint research and innovation endeavours with HEIs and industry, seeking to optimise the University Health Board's involvement in nationally supported schemes, including Accelerate and the new funding schemes to emerge following the UK's exit from the European Union.
- Increase the number and diversity of joint university and University Health Board-funded posts in areas of academic and clinical strength.
- Strengthen our alignment to the expertise and facilities offered by universities. E.g. The Joint Clinical Research Facility (JCRF) at Swansea University; the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University; and the Assistive Technologies Innovation Centre (ATiC) at UWTSD. This will include joint projects involving our biobank and enhanced clinical engineering, research and innovation capabilities, as well as social and green models of healthcare.
- Increase the number of fellowships and studentships, aligned to the University Health Board's challenges and opportunities.
- Develop a strong partnership and joint projects with the three new intensive learning academies (ILA) in Wales (i.e. the Value-Based Health and Care Academy, the Spread and Scale Academy, and the All-Wales Academy for Innovation in Health and Social Care Management).

4.5 The Case for Change

4.5.1 Our Health and Care Strategy signals our ambition to transform how we deliver health and care services in Hywel Dda by moving to a Social Model of Health. The Social Model of Health considers a broader range of factors that influence health and well-being, for example, environmental, economic, social and cultural. It sets out a case for change based on the realities that more people are living longer with multiple co-morbidities and chronic physical and mental health conditions, such as diabetes, heart disease, chronic obstructive pulmonary disease and dementia, often in combination; and that we expect demand for care to grow even further because the population across the region is predicted to increase from 385,615 in 2018 to 396,159 in 2043.[6]

4.5.2 Our Strategy acknowledges that our workforce challenges remain at a critical level in spite of our sustained efforts and innovative approaches to recruiting and retaining permanent staff so that we can deliver our services in the way in which they are currently configured. Our

[6] Source: Stats Wales 2018-based projections for Local Authorities in Wales, Welsh Government, at 11 January 2022

dependency on locum and agency staff is discussed in further detail in the 'Workforce Case for Change' section. It remains one of the biggest reasons that we have not been able to provide our services within budget and we have identified premium spend as an issue in the Roadmap.

4.5.3 It also recognises that we have an ageing estate with many outdated buildings, facilities and digital systems, making it difficult to provide care within a modern environment, increase our contribution to decarbonisation, or capitalise on the opportunities, technological developments and advances that have already developed momentum during the Covid-19 pandemic.

4.5.4 We developed our case for change in 2017-18 as part of the work which produced our Health and Care Strategy. The purpose of this section of the Strategic Case is to present our case for change in a way which reflects the learning we have gained since then through our experience of the pandemic and to better articulate the detailed changes and investments that we will need to make within our workforce, estates and digital infrastructure to ensure we are able to deliver the ambition of our Health and Care Strategy.

4.5.5 The delivery of our Strategy, and indeed the shift to a Social Model of Health, is intertwined with and cannot be separated from our associated workforce, estates, digital and environmental challenges. We know that our current model does not allow us to provide the safe, sustainable, accessible and kind care that we strive for. Heavy reliance on bank and agency staff across ageing facilities which are not fit for purpose to deliver the digital requirements and environmental standards we want to achieve negatively impacts our ability to recruit and retain staff. This has a significant impact on our economic state, driving costs higher to maintain poorer standards and unavoidable inefficiencies and quality and safety concerns. The environment also increases the likelihood of known causes of healthcare harm, e.g. healthcare associated infection, failure to respond to acute illness, and difficulty in meeting recognised standards.

4.5.6 Now that our Health and Care Strategy is in place, we have strategic direction as to how we want to develop our workforce, estate and digital infrastructure and have great staff who consistently demonstrate their skill, capacity for innovation and commitment. What we need now is that capital to enable us to invest.

4.5.7 This case for change therefore considers what we need to do to align our workforce, estates and digital infrastructure so that all our working seamlessly together to deliver our new health and care model in an environmentally sustainable way. For each element – Health and Care, Workforce, Estates, Digital and Environmental - we provide an understanding of the current position ("existing arrangements") and what we need to do in order to realise our ambitions ("business needs").

The Health and Care Case for Change

Existing Arrangements

4.5.8 Our current position presents us with five key (but not exclusive) health and care challenges:

- Historical configuration of services.
- Demographics and ageing population.
- Stalling life expectancy and health inequalities.
- Recovery and learning from Covid.
- Balance of system and learning from other health systems.

4.5.9 The impacts of these health challenges are detailed below.

4.5.10 ***Historical configuration of services:*** The current configuration of services in Mid and West Wales is based upon the health care system of over 50 years ago. At the time the model of health care was based upon a network of District General Hospitals, of 600-800 beds, serving populations of 100,000 – 150,000. Since that time the reliance on hospital beds has reduced substantially across the UK - around 75% fewer beds occupied - as services have become more efficient and care has shifted towards prevention and community settings. At the same time, increasing life expectancy, higher clinical standards and the emergence of new treatments and technologies has meant greater acuity and complexity for those patients in hospital, more clinical specialisation and a trend towards consolidation of services to provide higher quality and more timely services.

4.5.11 The University Health Board has four small to medium-sized acute hospitals, each with its own medical take, and three Emergency Units plus a busy 24/7 Minor Injury Unit. No other part of Wales has a higher number of acute sites per capita, and across the UK a population of under 400,000 would typically be served by 1-2 Emergency units and the same number of medical takes. The inevitable consequence of this is duplication, a diluted workforce, non-compliance with modern standards and fragile services. Equally the lack of scale on any of our hospital sites makes it difficult to develop new service models which could benefit our population, instead producing an over-reliance on Swansea Bay and reduced access for Hywel Dda residents (recognising that travel times can have a bearing on take up).

4.5.12 Comments we heard from staff and patients during consultation in 2018 made it clear how these issues make themselves felt in people's experience and how people wanted things to change:

- It was evident that the safety and quality of our services can vary significantly depending on where and when our patients receive their care and treatment.
- There are differences in the services provided and in the way in which they are managed and delivered across our three counties.
- There was widespread support for care in the community rather than in hospital, with particular enthusiasm for hubs or 'one stop shops', under one roof in the local community.
- There was significant support for more community services by creating a more flexible, multi-skilled workforce.
- People said they were willing to be treated by nurses and non-medical staff (rather than doctors) for some conditions (although there was some concern about staff not being sufficiently trained or equipped).
- Some of the general hospital sites (Glangwili in particular) were considered not fit for purpose.
- We heard that informal carers are a vital resource and more should be done to support them.
- There was widespread support for a centralised repository of electronic patient records

to allow healthcare professionals across a range of disciplines to access notes readily, underpinned by secure IT infrastructure with sufficient back-up systems.

4.5.13 Over the past decade some key services have been teetering on the edge of sustainability, in particular at Withybush Hospital where recruitment challenges have been most acute. Severe medical staffing shortages have meant significant challenges for A&E services; Paediatric services were reduced to daytime only and then ceased entirely during the pandemic; Gynaecology was centralised in Glangwili. At the same time there are some surprising aspects to the configuration of services across Hywel Dda: for example Ophthalmology has not been provided in Pembrokeshire for decades and the University Health Board does not directly employ any Dermatologists.

4.5.14 Over the medium-term it is difficult to envisage this trend changing: standards and expectations will continue to rise; hospitals will become more acute and complex; and modern services will need a higher intensity of staffing, greater expertise and access to specialist equipment. Our Strategy sought to recognise both this reality and our unique geography and set the health system of Mid and West Wales up for the next 50 years.

4.5.15 ***Demographics and ageing population:*** In common with the rest of the UK our demographic profile has changed significantly over past decades with a 'narrowing' of the middle age bands, lower birth rates and more people living into their 80s and 90s. In the last two decades, there has been a steady rise in the number of people over the age of 65 years - those over the age of 65 currently comprise a quarter of the University Health Board's population and projections suggest that this will rise to 31.4% by 2043. In particular, the number of the very elderly (85+ years) will increase by 6%. The increase in the number of older people is likely to lead to a rise in the prevalence of chronic conditions such as circulatory and respiratory diseases and cancers. Meeting the needs of these individuals will be a key challenge for the University Health Board and its local authority partners.[7]

4.5.16 In addition the transition of the generation born between 1946 and 1964 into older age categories, partially offset by higher immigration, has meant the typical population 'pyramid' now resembles more of a beehive shape. For Mid and West Wales these changes are even more pronounced with fewer people aged 25 – 44 and more people aged 55 – 79 than other places in Wales. In the current economic climate, the relative (and absolute) increase in economically dependent and, in some cases, care-dependent populations will pose particular challenges to communities.

4.5.17 These changes, combined with the changes in hospital bed utilisation, have meant the hospital inpatient population is now heavily skewed towards the older age groups with associated comorbidities and complexity. Frailty syndrome, for example, is now attributed to approximately 78% of the acute hospital bed base at any one time. At the same time the reduction in working age population means our workforce challenges are at a critical level, as despite huge effort we continue to find it difficult to recruit and retain the number of

[7] Hywel Dda University Health Board Pharmaceutical Needs Assessment (October 2021), p.30

permanent staff that we need to deliver our health and care services as they are currently organised (an issue discussed in more detail in the Workforce Case for Change below). This directly impacts on the services we provide and creates specific challenges for how we organise and deliver care across the Hywel Dda area.

4.5.18 We anticipate that frailty will become increasingly important in Hywel Dda over the next 10 years and is projected to increase by 4% per annum if we continue to apply the same operating model, i.e. if we do nothing. Dementia, diabetes, obesity and chronic conditions also represent a large and increasing proportion of our unscheduled care work. For example, the number of people aged 65+ in Hywel Dda with dementia in 2020 was 6,884. This is expected to increase by 31.0% to 9,020 in 2030, and 62.8% to 11,210 in 2040.[8]

4.5.19 In March 2021 Welsh Government announced a £25m recurrent revenue fund - the Urgent & Emergency Care (UEC) Transformation Fund - to enable accelerated delivery of asmall number of key deliverables across the whole system related to six UEC Policy Goals centred around ensuring that our population has access to the Right Care at the Right Place First Time, with the ethos that this should ideally be at home and not in hospital:

- Policy Goal 1 Co-ordination, planning and support for people at greater risk of needing urgent or emergency care
- Policy Goal 2 Signposting to the right place, first time
- Policy Goal 3 Access to clinically safe alternatives to admission to hospital
- Policy Goal 4 Rapid response in a physical or mental health crisis
- Policy Goal 5 Optimal care following admission
- Policy Goal 6 Homefirst approach and reduce the risk of admission

4.5.20 The University Health Board has established a UEC Operational Delivery Group (ODG), with a Senior Responsible Officer, which will oversee implementation of the Policy Goals and associated key deliverables to ensure that this transformational change is being driven forward at pace. The University Health Board and the UEC programme mandate acknowledge that our frail adult population contributes significantly to UEC demand, andtherefore delivery of the programme also ensures that we implement best practice to improve outcomes for this vulnerable group. Adopting an integrated 'whole system' andpopulation approach to programme delivery, the programme will be embedded within operations across primary care, community health and social care and acute hospital structures.

4.5.21 The West Wales Care partnership is also instrumental to shaping and implementing our vision for Urgent and Emergency Care in West Wales. There are mutual benefits to all four statutory organisations in terms of improving outcomes for our population. Our common aspiration particularly related to Urgent Emergency Care is to 'Increase Time Spent at Home and Independent'. This recognises 'what matters' to the population and also thaturgent care in hospital compromises our organisational ability to deliver this.

4.5.22 The partnership working we have established and the actions we are taking through the structures established are the foundation for the next 1-3 years, to get us and our partners in a position to deliver the Strategy over the long-term.

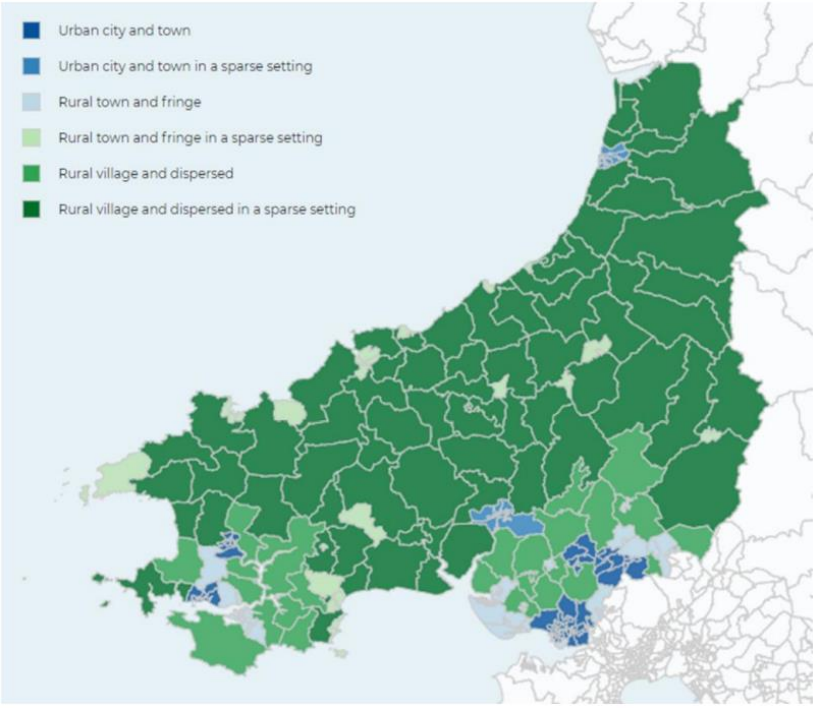
[8] Source: www.daffodilcymru.org.uk - Social Care Wales Population Projections Platform

'I am really worried about having to go into a care home because I can't cope any longer. I worry that it's a lot of work for Sioned to look after me and Alun, my husband. If I could get early support when I'm not well it would make a difference, because I could stay at home where everything is familiar to me and I feel safe.'

4.5.23 Rurality and deprivation contribute significantly to the health requirements of our population.

4.5.24 The map below provides an overview of the rural-urban classification for Hywel Dda University Health Board by Lower Super Output Areas (LSOA). Much of the area is categorised as 'rural village and dispersed in a sparse setting.' In Carmarthenshire, Llanelli and the old mining communities of Gorslas, Betws, Tycroes, Saron, Penygroes and part of Llannon are classified as 'urban city or town' while Carmarthenshire is classified as an 'urban city and town in a sparse setting.' Milford, Merlin's Bridge and Haverfordwest are the only areas of Pembrokeshire classified as an 'urban city and town' with many of the other areas along the coast being classified as rural towns or villages on the fringe of a sparse setting. In Ceredigion, Aberystwyth and the surrounding communities of Faenor, Penglais, Llanbadarn Fawr are classified as an urban city and town in a sparse setting. All other areas apart from Lampeter, Aberaeron, New Quay and Llanybydder are classified as rural villages and dispersed populations in sparse settings.

Rural Urban Classification of the population of Hywel Dda University Health Board[9]



[9] Office for National Statistics (ONS) Rural Urban Classification

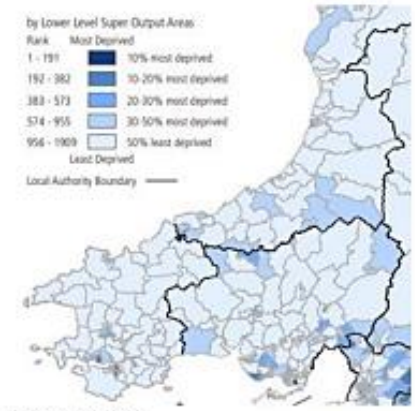
4.5.25 The Welsh Index of Multiple Deprivation (WIMD) is the official measure of relative deprivation for small areas in Wales. It is made up of eight domains of deprivation: income; employment; health, education; access to services; community safety; the physical environment; and housing.

4.5.26 The health domain measures a lack of good health. The indicators are:

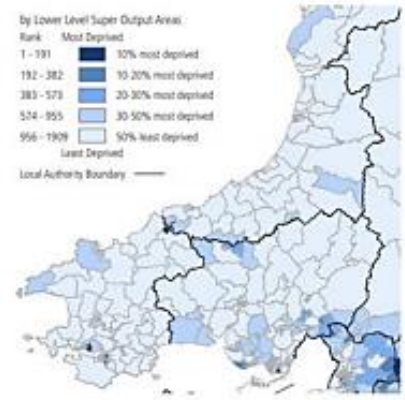
- People with a GP-recorded diagnosis of a Chronic condition (indirectly age-sex standardised).
- People with a GP-recorded diagnosis of a Mental health condition (indirectly age-sex standardised).
- Cancer Incidence (indirectly age-sex standardised).
- Limiting Long-Term Illness (indirectly age-sex standardised).
- Premature Death Rate (death of those under the age of 75).
- Children aged 4-5 years who are obese.
- Low Birth Weight, single births (live births less than 2.5kg).

4.5.27 The map below shows deprivation across the eight domains in the Hywel Dda University Health Board region.

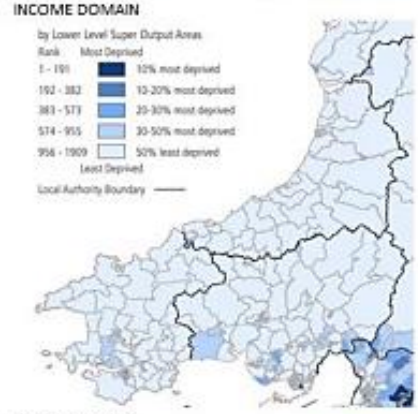
WIMD Domains for Hywel Dda University Health Board[10]



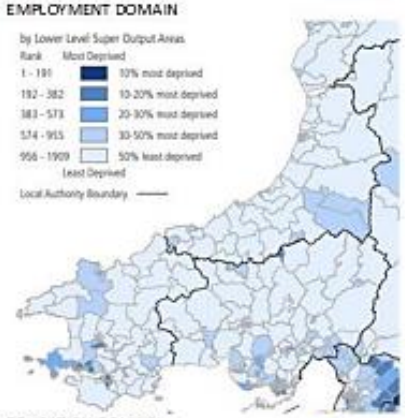
INCOME DOMAIN



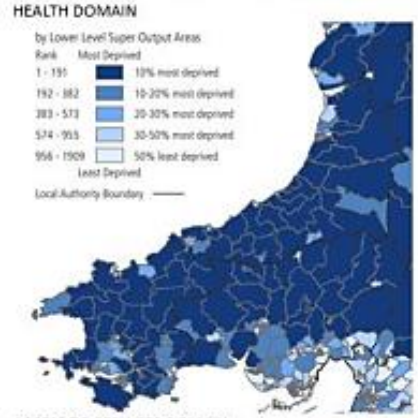
EMPLOYMENT DOMAIN



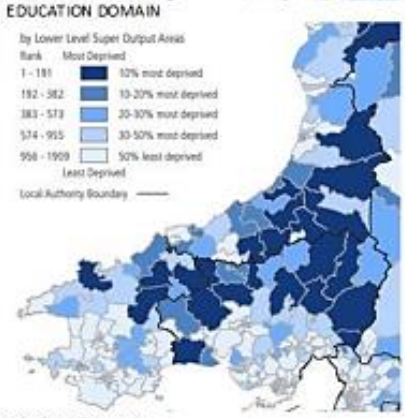
HEALTH DOMAIN



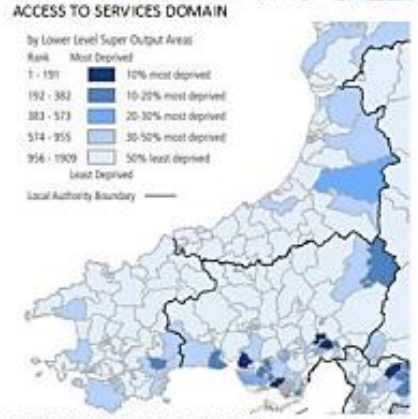
EDUCATION DOMAIN



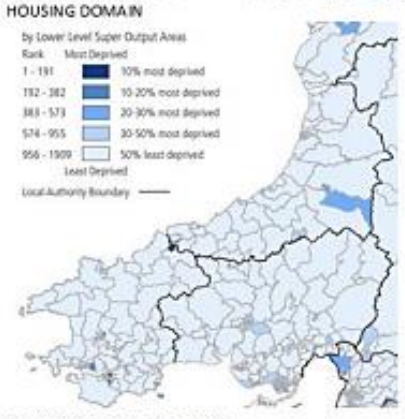
ACCESS TO SERVICES DOMAIN



HOUSING DOMAIN



PHYSICAL ENVIRONMENT DOMAIN



COMMUNITY SAFETY DOMAIN

[10] Hywel Dda University Health Board Pharmaceutical Needs Assessment (October 2021), p.35

4.5.28 ***Stalling life expectancy and health inequalities:*** Life expectancy is an estimate of the average number of years new-bornbabies could expect to live, assuming that the current mortality rates for the area in which they are born apply throughout their lives. The length of people's lives will differ substantially, and life expectancy can be used to compare death rates between and withincommunities and other countries over time. It is also important to consider quality of life,which is calculated using the Healthy Life Expectancy measure. Healthy Life Expectancy atbirth represents the number of years a person can expect to live in good health. It is perhaps a better indicator of overall health, since it looks at the period lived in good health and excludes the period when quality of life may be poor.

4.5.29 According to a recent report by Public Health Wales[4], life expectancy in Wales, together with other countries, has been stalling and is a marked change to the steady increases inlife expectancy seen since the end of the Second World War. Some of the key findings include:[11]

- Male and female life expectancy in Wales has only increased by 0.2 years and 0.1 years respectively since 2010-12. Prior to this, the increases had been 2.6 years and2 years respectively between 2001-03 and 2010-12.
- The all-cause mortality rate for Wales decreased by almost 20% between 2002 and 2011, however there has been very little change since 2011.
- The gap in mortality rate between deprivation quintiles have slightly widened inrecent years.
- Life expectancy decomposition analysis shows that for both males and females,those aged around 60-84 years were the main contributors to increasing life expectancy, but these improvements slowed considerably between 2002-04 to2015-17;
- Similarly, improvements in circulatory disease mortality rates have slowed;
- Increased mortality from respiratory disease and dementia and Alzheimer's disease have had a negative contribution on life expectancy improvement.
- It is of note that the gap in healthy life expectancy between the most and leastdeprived parts of the University Health Board area continues to increase.

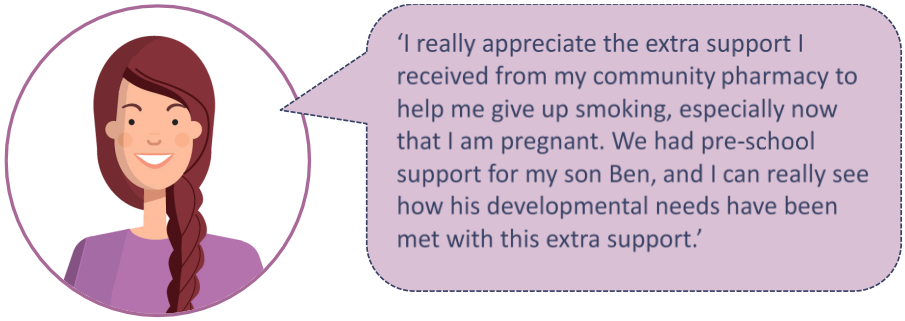
4.5.30 According to Public Health Wales, there has been no substantial change in the gap between male and female life expectancy and healthy life expectancy during the period 2009-11 to 2015-17. The table below provides an overview of life expectancy and healthy life expectancy for the counties in Hywel Dda.

	Males			Females		
	Life Expectancy	Healthy Life Expectancy	Percentage of Life Expectancy in good health	Life Expectancy	Health Life Expectancy	Percentage of Life Expectancy in good health
Ceredigion	80.1	67.9	84.7	83.9	69.7	83.1
Pembrokeshire	79.5	66.9	84.1	82.9	69	83.3
Carmarthenshire	78.6	65	82.7	82.6	66	79.9

[11] Life Expectancy and Mortality in Wales, Public Health Wales Observatory, 2020

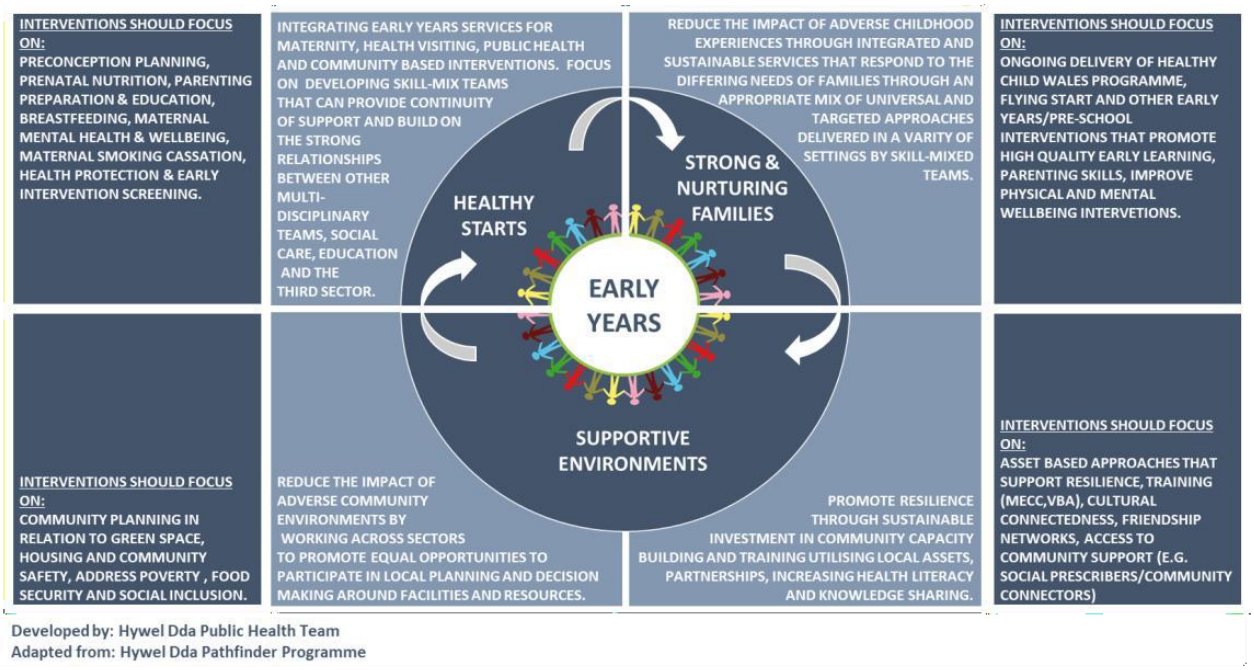
4.5.31 The life expectancy deprivation gap widened for both males and females from a difference of just over 5 years for females in 2002-04 to just over 6 years in 2015-17. The pattern is similar for males with the difference in life expectancy between the most and least deprived fifth being just over 6.5 years in 2002-04 to approximately 7.5 years in 2015-17

4.5.32 **Early years:** The 'early years' are defined as the period spanning conception through to seven years of age. It is considered a critical period in terms of setting the foundation for long term improvement in population health as early years interventions not only promote health equality during an important period of child development, but they can also improve physical and mental health, promote the conditions necessary to ensure our children become confident, ambitious and capable learners able to reach their full education potential and play a full part in life and work.



4.5.33 Therefore, investing in a holistic approach to the health and well-being of our early year's population is paramount if we are to improve outcomes for future generations. We recognise that we need to invest in primary prevention to build resilience and create conditions in which ill-health is less likely to arise. We also recognise the need to support the delivery of interventions that will ensure that every child aged 1 to 7 receives a consistent range of services delivery thorough statutory and voluntary organisations and will included supporting the following broad aims:

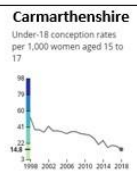
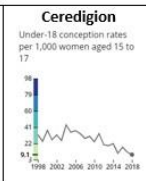
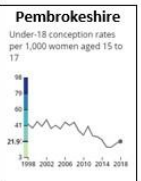
1. Tackle child health inequalities through ongoing delivery of the Healthy Child Wales Programme, Flying Start, Home Start, Healthy Pre-school Schemes and the Hywel Dda Pathfinder project to ensure that all children living in poverty have their needsassessed and have access to enhanced services when required.
2. Improve child health outcomes across Hywel Dda through focusing prevention. This includes the delivery of programmes that promote health enhancing behaviours related to obesity, dependant behaviours (e.g. smoking, substance misuse), emotionaland mental well-being and childhood immunisation and vaccination.
3. Address the wider determinants of health through the development of a whole system approach to the early years which focuses on sustainable service developmentand alignment. The Early Years model presented below provides an overview of this intention



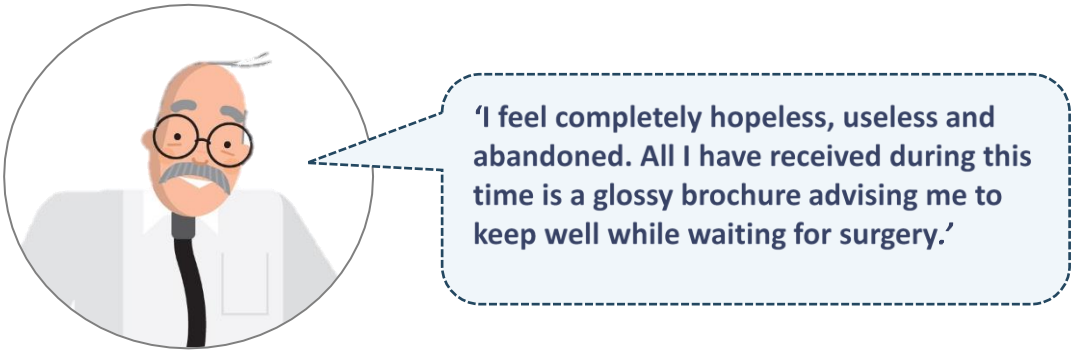
4.5.34 model acknowledges that the potential to influence future outcomes through early interventions is widely accepted and addressing the wider determinants of health during this period forms part of a wider commitment to review and realign traditional boundaries between health, education, social and community services. Doing so will require a move away from single institutions towards a whole systems approach organised around networks of care that highlight the importance of acting not only at an individual level but also within communities and at an organisational level to address the social, material and cultural circumstances of people's lives

4.5.35 The following outcomes framework is aligned to the model presented above (please note that the framework is "draft" as it is a multi-agency document which has not been fully finalised and approved at time of writing):

EARLY YEARS OUTCOMES FRAMEWORK (*DRAFT*):							
INDICATOR		Hywel Dda	Wales	Lowest UHB	UHB RAG STATUS		Highest UHB
Years of life and years of health	Life expectancy at Birth (Males) - years	79.2	78.3	76.6		●	80.2
	Healthy life expectancy at birth (Males) - years	66.2	65.3	61.2		●	68.2
	Life expectancy at Birth (Females) -years	82.9	82.3	80.9		●	83.6
	Healthy life expectancy at birth (Females) - years	67.6	66.7	62.6		●	69.2
	Inequality gap in life expectancy between the most and least deprived (Males) -years	4.8	8.8	4.8	●		10.3
	Inequality gap in healthy life expectancy between the most and least deprived (Males) - years	12.2	18.7	10.4	●		23.2
	Inequality gap in life expectancy between the most and least deprived (Females) -years	4.5	7.2	3.7	●		9.2
	Inequality gap in healthy life expectancy between the most and least deprived (Females) - years	12.2	18.2	12.2	●		21.9

Healthy Starts	Trend in under-18 conception rates per 1,000 women population aged 15 to 17 years (2018)	**Carmarthenshire** 		**Ceredigion** 		**Pembrokeshire** 		
INDICATOR			**Hywel Dda**	**Wales**	**Lowest UHB**	**UHB RAG STATUS**		**Highest UHB**
Healthy Starts	Teenage pregnancy rate per 1,000 females aged under 18 years (2018)		17.6	20.2	17.4			24.2
	Percentage of women who had an initial assessment carried out by 10 completed weeks of pregnancy (2020)		80.8	76.0	71.4			80.8
	Smoking in Pregnancy (at birth) 2020		16.7	16.8	12.3			27.2
	Percentage of women who stopped smoking during pregnancy (2020)		27.7	18.1	9.5			27.7
	Maternal BMI 30+ (2020)		29.4	29.2	15.4			35.6
	Breastfeeding at 10 days (%) 2020		54.9	51.7	40.9			66.1
	Percentage of women at initial antenatal assessment who had reported a mental health condition. (2020)		24.5	27.1	5.5			37.4
	Low birth weight (%) 2020		6.2	7.2	6.2			7.8
	Vaccination rates at age 4 (%) 2019-20		86.7	88.0	86.6			90.3
	Children age 4-5years at a healthy weight 2019-20		70.9	73.1	70.7			78.1
	Tooth decay among 5 year olds (2005-06) (%) *(UHB estimate based on county rates)*		44.1	47.7	40.2			58.8
	Vaccination rates at age 4 (%) 2019-20		86.7	88.0	86.6			90.3

INDICATOR		**Hywel Dda**	**Wales**	**Lowest UHB**	**UHB RAG STATUS**		**Highest UHB**
Strong and Nurturing Families	Percentage of eligible children with recorded Healthy Child Wales contacts at 10-14 days (2019-20)	92.2	93.5	88.2			95.5
	Percentage of eligible children with recorded Healthy Child Wales contacts at 6 months (2019-20)	78.5	81.6	48.8			90.5
	Percentage of eligible children with recorded Healthy Child Wales contacts at 3.5 years (2019-20)	52.0	50.2	24.5			66.0
	TBC						
Supportive Environments	TBC						



4.5.36 ***Recovery and learning from Covid:*** Our experience through the pandemic has caused us to reflect on our strategy and brought into sharp focus some of the transformational opportunities and limitations of our current system. Over the past two years we have seen a dramatic acceleration in the utilisation of digital technologies, far exceeding what we had previously envisaged. This reinforces our strategic intention to move services closer to home and in particular our design assumption to reduce physical outpatient attendances and, where they are required, provide the majority in community settings

4.5.37 Equally it has never been clearer that extended hospital stays are potentially harmful to patients and the system has demonstrated the opportunity for alternatives to admission and early discharge to community settings. It has however exposed the vulnerabilities in the current system. Most notably: the infection risks and poor patient experience associated with outdated and cramped estate; the limitations of physically constrained and inflexible buildings; the lack of surge capacity; the workforce deficits and lack of resilience; and the inability to protect and segregate elective pathways from emergency pressures.

4.5.38 One of the ambitions of our new model is to provide a separation of planned and unplanned care. Additionally the changes to other acute and community facilities are designed to bring care closerto home and reduce waiting times for appointments and interventions/treatments.

4.5.39 Before the pandemic the University Health Board was on target to eliminate waiting times over 36 weeks. The Performance Assurance Report for Hywel Dda University Health Board dated 31 October 2021 reported that 31,769 patients waited beyond 36 weeks. Whilst we anticipate this will have been addressed significantly by the time we implement it, the Programme will help us to resolve this sustainably through transforming the model of care. However it should be noted that waiting times are not the key driver for change. The proposed scope of our new model does not include additional capacity - the aim is to improve flexibility to cope with fluctuations in demand.

4.5.40 There is growing evidence however that the pandemic will have a longer-term impact on health. Long Covid and the direct and indirect health consequences of the pandemic are likely to leave a lasting impact on the physical and mental health of the population. This may exacerbate existing health inequalities, impacting more on deprived and rural areas and individuals with existing health conditions. Consequently, without change, it is possible that the pandemic will have a longer-term impact on both healthy life expectancy and health inequalities within our population.

4.5.41 In response to the Covid-19 pandemic, the University Health Board commissioned nine and operationalised three Field Hospitals across the three counties. Over the eleven months they were operational, the field hospitals treated 382 patients. Key lessons which came out of this experience included:

- Use of Point of Care Testing (POCT) capability to support clinical decision making onsite, reducing the need to unnecessarily transfer patients back to the acute setting, thereby minimising harm to the patient and reducing demand on the acute sites.
- Embracing of D2RA (Discharge to Recover and Assess) principles emphasis on early diagnosis, early intervention and senior decision making to reduce admissions to acutehospitals.
- How to address challenges on our existing sites of red/green separation and ring fencing of planned care capacity.

4.5.42 Our field hospital experience has demonstrated the value of the step down and a multi- professional approach to patients no longer requiring their care to be provided at an acute site and had a profound impact on our thinking, confirming that the model we want to moveto is right.

4.5.43 ***Balance of System and Learning from Other Health Systems:*** As part of us developing our strategy we have learned a lot from the experience of other health systems where a focus on wellness and well-being has helped to reshape traditional ways of delivering services and reduce the number of admissions to a hospital setting, including the following examples:

- ***Bromley-by-Bow:*** We have visited and engaged with the Bromley by Bow Centreintegrated health and community hub in east London.

  At Bromley by Bow, it is recognised that health is primarily driven by social

factors, notmedical ones. Their main strategic goal is to deliver an enhanced well-being offering byintegrating the community centre and health partnership. They have strategic partnerships with a wide range of organisations and funders and deliver effective programmes that improve people's quality of lives.

Over the years, the Centre has grown its facilities, including a social enterprise café, encompassing a range of available support across the themes of communities, health and well-being, and employment, skills and enterprise. Activities focus on welfare benefits, housing, debt and legal advice, training opportunities and careers advice, art and horticulture, healthy lifestyles and more, tackling social isolation while increasing personal well-being.

- ***Northumbria Healthcare NHS Foundation Trust:*** We have visited and engaged with Northumbria Healthcare NHS Foundation Trust, which provides hospital and communityhealth services in North Tyneside and hospital, community health and adult social care services in Northumberland and which we believe to be comparable to Hywel Dda in terms of population and rurality.

  We noted the emphasis the Trust placed on improving patient and staff experience: they put in place a Chief Experience Officer with board-level responsibility for improving patient and staff experience; and collect real-time patient feedback.

  In the National Inpatient Survey the Trust moved from 111th of 160 in the country in 2009 to 10th in 2020, beaten only by nine single specialty Trusts. And in the National NHSStaff Survey, the percentage of staff agreeing that high quality care was the Trust's top priority rose from 43% in 2007 to 91% in 2020 (please see British Medical Journal article referenced here[12]).

  Our perception is that the Trust has shifted their culture, made their workforce resilient,created an environment which fosters innovation and as a result is seen as an attractive place to work. Following a number of investments the Trust has also moved into the top quartile across a range of national audit indicators, including cancelled operations, ambulance waiting times, NICE guidance compliance and locum and agency use.

- ***Dorset Integrated Care System:*** Another case study which we consider relevant is the Dorset Integrated Care System, formed in June 2017 with a CCG, three acute trusts, a community and mental health trust, an ambulance trust and three localauthorities, serving a population of 800,000.

  In 2014 the CCG recognised that Dorset would face a deficit of £229m per year by 2020/21 for local healthcare services if significant changes were not implemented. In response the CCG initiated the Clinical Services Review, a three-year, clinician-led process with extensive input from the community to develop a system-wide transformation plan. The final vision, decided in September 2017, was a more community-centric, integrated system to better meet the local population's needs andremain sustainable for the future.

[12] "Using patient experience to run a hospital", published 31 March 2021, BMJ 2021;372:n755 http://dx.doi.org/10.1136/bmj.n755

Their vision for the future required a more community-centric workforce, but workforce shortages, acute bias, and site-specific employment made it difficult for Dorset to shift staff to community settings. In response, Dorset developed a moreflexible workforce by:

- shifting portions of hospital staff's time to support community settings, since shifting entire FTEs was not feasible;
- developing the 'Our Dorset Passport', a technology platform that enables staff to move seamlessly across system locations.

- ***NHS Lanarkshire Virtual Hospital Model:*** A Virtual Hospital Model allows patients to have their care managed at home with oversight from their clinical team. This in turn frees up bed capacity whilst ensuring patients are getting the right care, in the right place at the right time. The model allows patients to be transferred from an admission in an acute or community bed or directly from primary care/community. Before patients are admitted to the Virtual Hospital, they have a multi-disciplinary team meeting and a personalised care plan is put in place. They are given an information pack and equipment to monitor their status. This equipment transfers information back continually to the central monitoring hub and the clinical team. Patients then receive virtual consultations with their clinical team as per their management plan. If the patient is identified as needing input or advice from other teams, a referral is sought.

  Virtual hospital uses healthcare workers including consultant staff, respiratory physiologists and physiotherapists not involved directly with the front-line care to enable a specialist model allowing admission prevention or early discharge aiming to reach patients with specialist care at home. The service is supported by a medical administrative team and volunteer medical students.

  NHS Lanarkshire has been operating a Virtual Hospital Model through its "Hospital at Home" service since 2011, which serves a population of around 500,000, with a staff of approximately 38 WTE and a budget of just under £2 million and 64 virtual beds across three geographic hubs. To the end of April 2019, Hospital at Home had received 15,001 referrals, with approximately 80% being managed entirely at home.[13]

4.5.44 Our Community Care Group also looked into a number of community care models and initiatives from elsewhere in the UK and internationally. The models examined included: Greater Manchester Primary Care Strategy, Buurtzorg Community Nursing, Healthy Prestatyn, Healthy Liverpool Care Model, Chase Farm Hospital, Enfield (virtual hospital model), Nuka System (Alaska), Valencia Alzira (Spain), Canterbury (New Zealand), "Call and Check", Jersey.

Business Needs

4.5.45 The evidence above demonstrates that, in addition to our buildings requiring significant modernisation (see later section), the configuration of services and the model of health care for Mid and West Wales needs to change to meet the population needs of the next 20-30 years. This was considered in depth through the

[13] https://www.hospitalathome.org.uk/lanarkshire-hah

development of our strategy in 2018, including through extensive consultation with our population. In order to make a generational shift to a wellness system there is a need to invest in primary and preventative care to increase efficiency and coverage, whilst simultaneously investing in a community model to reduce the need over the long term. At present a lot of our resources are locked up in an inefficient hospital system, with the main issues being:

- A significant proportion of admissions being the result of the current system not maximising opportunities to prevent ill health and promote wellness and well-being atthe earliest stage in the lift course and subsequently.
- Patients being in hospital longer than they should be because primary and communityservices are not sufficiently developed so they can be supported at home or in their local community.
- The current workforce model and clinical rotas requiring significant resource.

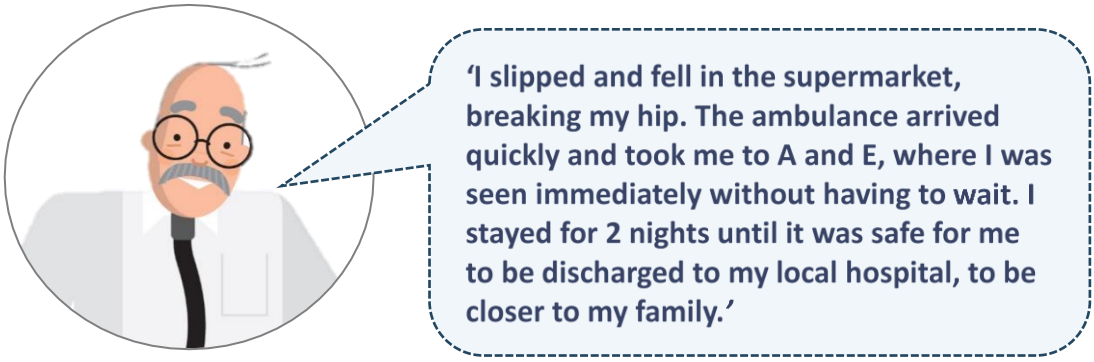
4.5.46 This is unsustainable both clinically and financially, therefore, we need to invest in pre- emptive measures and joint working with primary and community care so that we have avery strong process of early pre-emptive recognition of:

- frailty;
- end of life;
- dementia;
- obesity; and
- chronic conditions.

4.5.46 Bringing care closer to both the community and people's homes is crucial to improving thehealth of future generations of children, setting them up for a healthier life and improvingadults' long-term health and well-being. The model we articulated in our Health and Care Strategy will allow us to achieve this, but requires changes to our acute and community facilities including:

- A new Urgent and Planned Care Hospital, with design separation between planned careand urgent care to enable us to ring-fence and reduce waiting times and to respond to unscheduled care.
- Repurposing of Glangwili and Withybush Hospitals as community facing facilities to maximise the opportunity to maintain people in their own homes, including a range of diagnostic and outpatient services.
- Improving the estate for both Bronglais and Prince Philip Hospitals and our communityfacilities to support the right care at the right time in the right place with the goal of increasing time spent at home and improving the experience of those patients whose needs can only be met in the acute setting.

'I'm excited about improving patient care here, by developing a centre of excellence here in the new hospital. This means we can still support the majority of our population to have their care needs met close to their own homes, but also provide highest quality of care for those people with urgent or complex needs.'



4.5.47 In addition to the medical element, it is important thatthe two repurposed hospitals are established as community facilities, integrated into the community with a focus on wellness which has been demonstrated elsewhere to improve outcomes for patients and reduce acute admissions.

4.5.48 This will therefore require investment in facilities and in education and development to facilitate workforce redesign to reform and rationalise the current system. It will also require a significant investment in technology as the future generation is not going to be satisfied interacting with the health service in the way people do now – they will expect an increased digital interaction, with more control over their healthcare. There will also be a need to invest in cultural change, change management and digital skills development, some of which has already begun (for example, the introduction of the OD Relationship Managers, and a Digital Champions Network and Forums).

The Workforce Case for Change

Existing Arrangements

4.5.49 Our workforce is at the very heart of our organisation, however we know that getting the right mix of skilled staff to provide our services is one of our biggest challenges. The risk of increased demand and an unsustainable workforce model is ever increasing; the pandemic and Brexit have placed new challenges on us (for example, mass testing and vaccination and diminished supply routes).

4.5.50 As at 30 November 2021 the University Health Board employed 9,541.4 whole time equivalent (WTE) staff. Our current funded is 10,498.5 WTE, resulting in a deficit of 957.2 WTE. These figures can be split across the following categories:

Category	Budget	Actual	Vacancies
Additional Professional Scientific and Technical	364.0	339.2	24.9
Additional Clinical Services	2,164.8	2,091.2	73.6
Administrative and Clerical	1,969.0	1,980.4	(11.4)

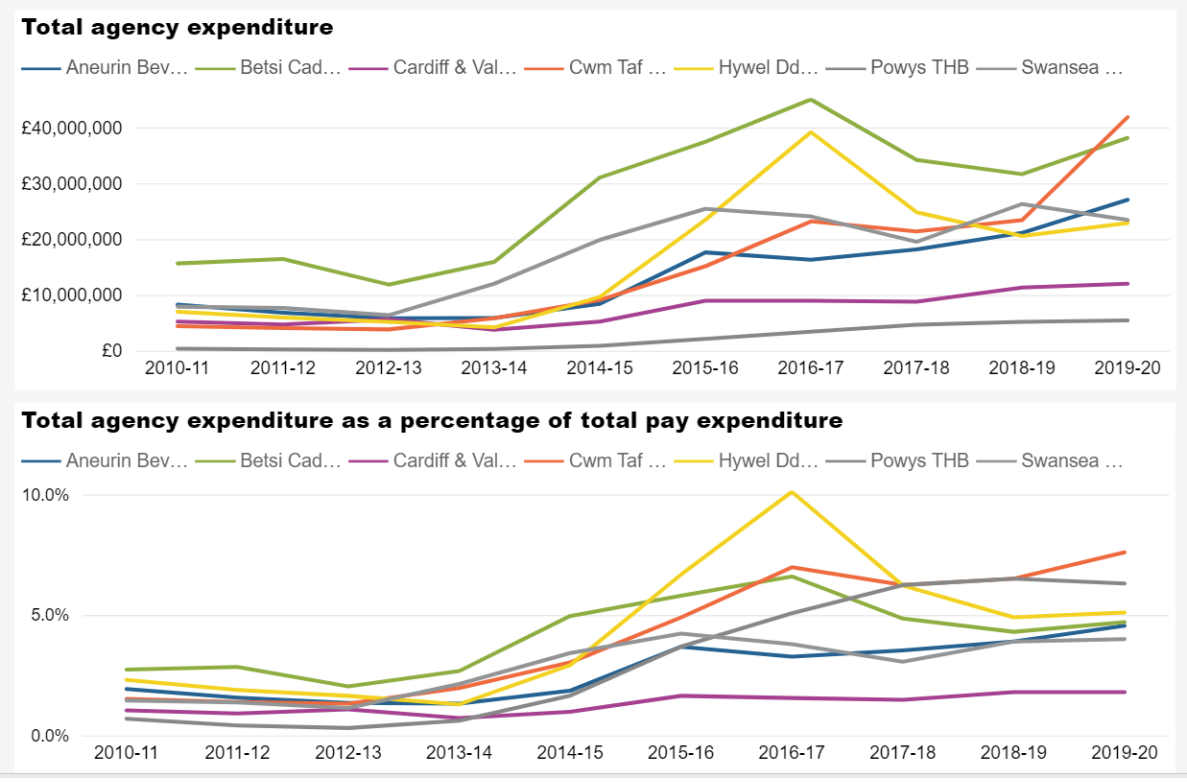
Allied Health Professionals	648.4	613.4	35.0
Estates and Ancillary	888.2	884.6	3.7
Healthcare Scientists	199.5	197.3	2.2
Medical and Dental	924.9	608.4	316.5
Nursing and Midwifery Registered	3,327.6	2,826.9	500.7
Other	12.2		12.2
Total	**10,498.5**	**9,541.4**	**957.2**

Source: Establishment Control Tool November 2021

4.5.51 We are currently facing a number of key challenges:

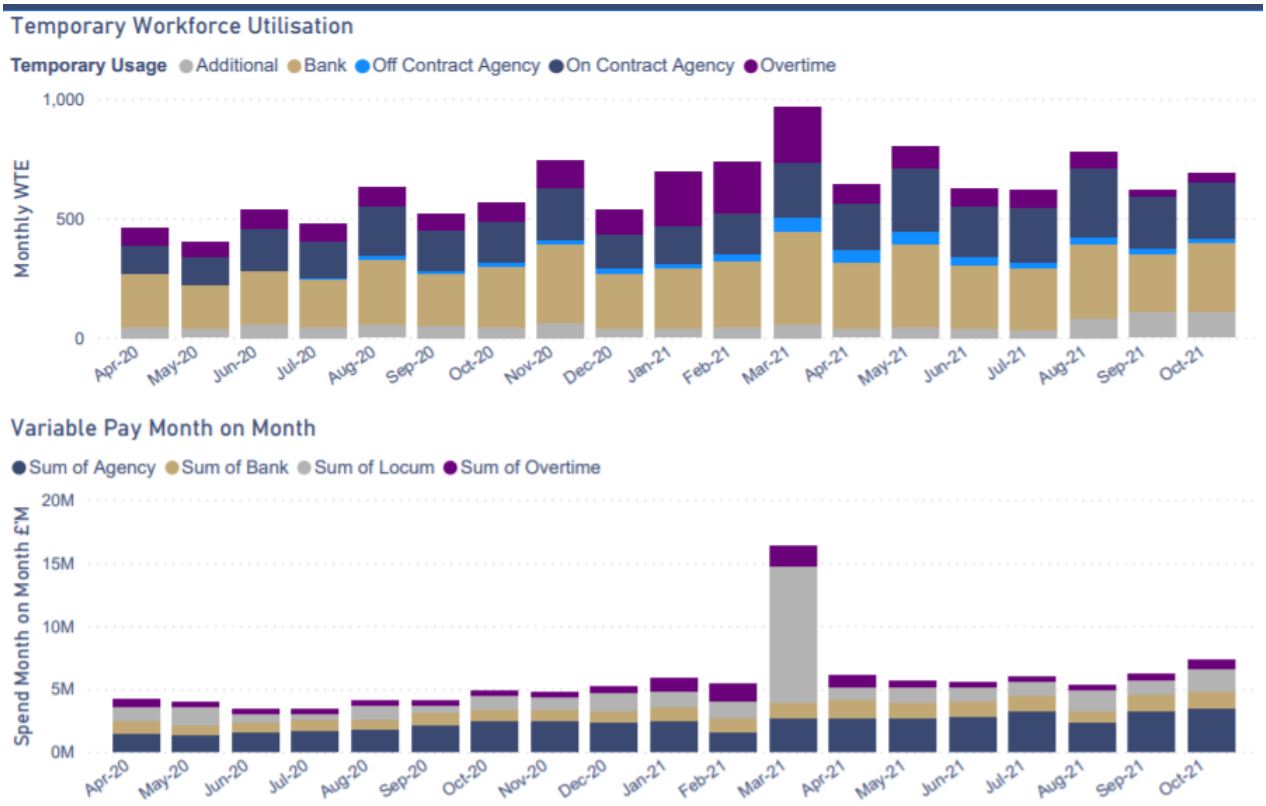
4.5.52 **Reliance on contingent workforce:** We have significant total staff vacancies every month. One of the ways we bridge this gap is through use of agency staff where we cannot recruit permanent staff.

4.5.53 The graphics below show that we spent between £20-40m per annum on agency staff during the period 2015-16 to 2019-20, and this amounted to between 5-10% of our total pay expenditure. This has increased since approximately 2014-15 from a fairly constant level, although this can be seen across Wales (we believe this is tied to retirement from the generation born between 1946 and 1964, which will continue and hence explain why agency has maintained its current level).



Source = Expenditure on agency staff by NHS Wales, Audit Wales, Jan 2019 (using data from Workforce, Education and Development Services, NHS Wales Shared Services Partnership).

4.5.54 In addition we rely on additional hours, bank and overtime. The charts below show that during the period April 2020 – October 2021, we used temporary workforce equivalent to between approximately 500 – 1,000 WTE, at a monthly cost of between approximately £5 – 17m (although these figures were impacted somewhat by the pandemic).



4.5.55 ***Ageing workforce:*** As at 31 January 2021 almost 60% of our total workforce is over 40, 34% is over 51 and 19.1% over 55. This has significant implications for our workforce model, as the option for taking early retirement within the NHS can and often does take place as early as 55.

4.5.56 Our workforce instability significantly contributes to our less than optimum performance and financial deficit in a number of ways:

- ***Quality of care:*** Locum and agency use leads to an inability to provide the highest quality of care in all aspects - safety, timeliness, equity, efficiency, effectiveness, patient centred care – as a result of unfamiliarity with local guidance, procedures and policies and other team members. Impacts include reduced effectiveness of team working, poor flow, reduced ability to achieve service development, poor morale, reduced levels of retention, difficulties in staff development and recruitment.

- ***Poorer trainee or student experience:*** The fact that locum and agency staff are generally less committed to teaching leads to poorer trainee or student experience, and poorer student or trainee ratings make it difficult for us to increase trainee numbers and risks student/trainee posts being removed by HEIW (we have examples of this happening locally). Trainees and students are the lifeblood of our future workforce, therefore losing trainees means reduced opportunity to build our future workforce. In addition, the highest calibre consultants, senior nurses, therapists, pharmacists and other HCPs will

want to work in an educational environment that involves training, therefore without this there is a negative effect on recruitment.

- ***Increased training burden on permanent staff:*** Another issue with high locum, bank and agency use is that the training burden on permanent staff increases. Our experience aligns with research, which has found that locums enable healthcare organisations to maintain appropriate staffing levels and flexibility, but they also gave rise to concerns about continuity of care, patient safety, team function and cost.[14]

- ***Difficulties for individuals to develop specialist areas of expertise:*** Our thinly spread specialist workforce means that it is generally more difficult for individuals to develop specialist areas of expertise as they all need to be generalist. This means that access to specialist expertise locally for the population and for consultant members of staff is reduced. This can lead to either a lower standard of care, or more specialist advice being required from distant specialists in other providers. A thinly spread specialist workforce also leads to less peer support; less ability to be involved in educational and research activity; and less time to be involved in service development leadership activity, including both developing the specialist service within the University Health Board but also in developing its integration with community services. These points relate as much to senior / specialist therapies, diagnostic and nursing workforce as they do to the specialist medical workforce.

- ***Impacts on research:*** Activity in research is associated with higher quality of care, and innovation is required for continuous improvement. Locum, bank and agency staff rarely contribute meaningfully to research or innovation activity, and permanent staff who are either thinly spread across sites or working alongside temporary staff often have little time to involve themselves meaningfully in research or innovation activity.

- ***Impacts on investment and care:*** Our ability to invest in additional resources, higher value activities and better technology, all of which has the potential to significantly improve our services, is reduced. More importantly, it also means that our care and treatment is more costly, less joined-up and results in more variable outcomes for patients. This lack of continuity also has the potential to impact on the safety and quality of the health care services we provide. None of this is what we want for people living in our local communities.

- ***Impacts on individuals:*** Workforce pressures also take their toll on our individual members of staff. Trying to provide health care services with insufficient staff, and relying on a temporary workforce, is stressful and impacts morale.

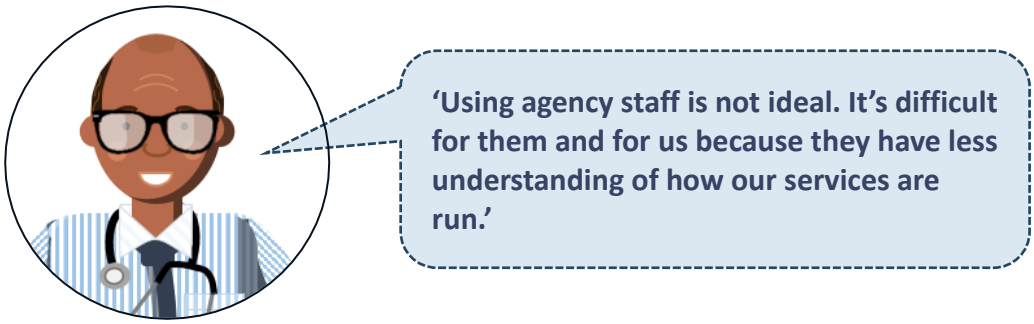
4.5.57 Each of these issues is individually impactful, however they work synergistically to have a pervasive effect on all services as a system, so services where the workforce is relatively more sustainable are affected by unsustainability in other linked services. Our workforce planning for the future must alleviate these issues through the creation of a workforce pipeline with a breadth and depth of skill aligned to the tasks required in a changing context and setting and aligned to our values and aspiration to create a culture that focuses on safe sustainable, accessible and kind services. We want our staff to be able to experience what a

[14] The quality and safety of locum doctors: a narrative review Jane Ferguson and Kieran Walshe, Journal of the Royal Society of Medicine; 2019, Vol. 112(11) 462–471

great day at work feels like and we need to design work in that way and enables leaders to embody a compassionate culture to deliver this.

4.5.58 Our aspiration is also for our staff to be able to experience what a great day at work feels like and we are committed to listening and learning from the experiences of our staff as we develop our culture together. We want our leaders to embody compassionate behaviours which bring this aspiration to life and overtime we also need to design work in a way that enables more staff to have more great days at work more often.

Business Needs



4.5.59 Our workforce is unsustainable. We need to reorganise the way we do things and attract more highly motivated and skilled people to work with us. Furthermore, our professionals have traditionally been trained and developed to work in a system that is primarily based on hospital-based care, whereas our future aspirations are to achieve a system change with greater emphasis on primary and secondary preventative services. The majority of current and future demands for health and social care will come from an increasingly elderly population with multiple conditions. They will require care and support from staff with a wide range of skills, working in an integrated environment across professional and organisational boundaries and across different settings.

4.5.60 From both a clinical and financial perspective, it is critical that we reduce excess payments to temporary staff. The aim is to concentrate on recruiting permanent staff and to spend the allocation differently on workforce, to support both the community and acute models of care so that the staffing model is more sustainable. We recognise that this may entail a more complex model than the "traditional" workforce model, bringing in resource from different sources including third sector, independents, regional arrangements, social care. A practical example is the development of "mutual aid" arrangements across Health Boards which enabled the deployment of NHS staff across Wales to the areas of greatest need during the pandemic and which could have ongoing application as workforce gaps increase due to demographic changes in some places.

4.5.61 In the remainder of this section we explore what we are doing in the near term to address the issues we are facing now, to add social value and to build a foundation for the AHMWW Programme; and what we want to do longer-term to equip the University Health Board with the right workforce to implement the Programme.

What we are doing now

4.5.62 ***Facilitating Social Value:*** The University Health Board is a major local employer – across Carmarthenshire, Ceredigion and Pembrokeshire our employees represent just over 10.04% of total employment. This means we have the potential to generate significant Social Value. The document attached at Appendix 4 - Hywel Dda University Health Board Key Workforce Findings – is part of the work we are exploring to create positive impact and social value. It therefore looks at geography and employee demographics in detail.

4.5.63 We have identified a number of ways in which we can, through our workforce strategies, support local communities and tackle underlying health inequalities at source:

- ***Targeting deprived geographical areas/ensuring geographical inclusion.*** As a caveat it is worth highlighting that low-band jobs are currently heavily oversubscribed, and so the social value rewards to be had by redistributing these towards the residents of deprived postcodes are in a sense limited. However, as the geographical analysis of the workforce described in Appendix 4 reveals, there are opportunities to develop more targeted approaches with respect to the most deprived LSOAs[15]. This type of activity could be undertaken in conjunction with other public sector anchor organisations across the three local authority areas to effectively create an internal health and care labour market.

- ***Investigate the recruitment pathway for different demographic characteristics.*** In terms of the University Health Board's overall recruitment approach, it may also be revealing to look not just at the profile of the existing workforce and how that changes over time, but to also analyse by geography and demographic characteristics the various stages of the recruitment process – applications, shortlisted, and successful. This could reveal if there are any process barriers relevant to different parts of the population.

- Continue to focus on ***opportunities for progression*** and seek to further understand any issues or barriers for specific cohorts, including in relation to employees who identify as black or black-British.

- Finally, ***consideration of the social value of employees as citizens in their local communities***. Developing the University Health Board's approach as an anchor organisation and key economic agent in place as a whole-organisational agenda provides an opportunity to stimulate wider discussions with employees about the impact they can have individually and collectively as citizens and consumers outside of their work roles.

4.5.64 We have also put a number of programmes in place to develop the ways in which we add Social Value through our practices as a major employer:

[15] Lower-layer Super Output Areas - small areas designed to be of a similar population size, with an average of approximately 1,500 residents or 650 households

- ***Apprenticeships and "Grow your own":*** Our Health Care Apprentice programme, also known as the Apprenticeship Academy (Academi Brentisaeth), has aimed to increase the number of registered nurses to fill vacancies within the University Health Board, by offering an affordable route into nursing. The programme takes people from the age of 16 upwards, without requiring any specific qualifications. It takes apprentices through a Foundation Apprenticeship in Health Care Support Services (level 2) and an Apprenticeship in Clinical Health Care Support (level 3), before embarking on part-time university education (starting at level 4). When an apprentice finishes the programme, they become a qualified Registered Nurse. While most organisations offering apprenticeships offer a 12-month level 2 apprenticeship with no guarantee of employment at the end, the Hywel Dda Health Care Apprentice programme allows apprentices to progress through levels 2, 3 and 4 through a managed programme of assessment and development.

  We took on 53 apprentices in the first year of the programme, and 77 in the most recent wave. We received 637 applications in 2021. In the first year, 53% of those offered jobs were Welsh-speakers and 17% of those offered were male (which significantly exceeds the 7.8% ratio for male nurses in Hywel Dda). Whilst in the first year most applicants were aged 16-21, in the second year many have been in their 30s and 40s. A number seem to be coming from the hospitality sector, perhaps a reflection of the impact of Covid-19.

  The success of the Apprenticeship Academy in the area of nursing has led to the development of apprenticeships in other areas, such as digital services, engineering and corporate governance. Also currently being explored is a bespoke apprenticeship programme for people with disabilities. Creating an asset based approach that focuses on positive development of current skills and abilities (including values) rather than a deficit based approach.

  In addition to apprenticeships as an accessible pathway into employment with the University Health Board, a number of "Grow your own" initiatives have been developed which are designed to help the existing workforce progress and become more flexible - for example by enabling nurses currently working in non-acute areas to move into acute areas. One of the many ways we are increasing access locally to the clinical profession is for example, working with Aberystwyth University to develop part time courses in nursing and therapies (physiotherapy, speech and language therapy etc). Previously, to access such courses, people were obliged to go to Cardiff or Bangor, which inevitably undermined the ability to develop those skills locally. In addition, hundreds of current staff are accessing a variety of courses to enable their progression to higher paid roles. These include, for example, staff working as porters who are given access to courses in IT, as well as supervision and management skills, in order to support them to progress into administrative and clerical roles. We are also keen with HEIW support to consider the use of medical apprenticeships.

For certain apprenticeship programmes, geographical exclusion might currently be a factor. While nursing apprenticeships take place at a range of locations, a lot of corporate services are based in Carmarthenshire. There are indications that the majority of apprentices entering into these apprenticeships (for example digital services) are themselves based in Carmarthenshire. There is therefore a need to ensure that there are opportunities for different kinds of apprenticeships for residents of all districts, to tackle this geographical imbalance. A quantitative analysis of the profile of applicants and successful candidates to the apprenticeship programmes will be of value in this respect, to provide a baseline and assist in future targeting.

We have also identified a potential to **extend the successful apprenticeship approach** to mental health, and to develop innovative multi-skilled apprenticeship pathways, which will contribute to our ability to provide whole-person care.

- ***Progressive recruitment:*** During the peak of the pandemic the University Health Board recruited c2,000 people from the local population into newly created temporary posts, covering roles from cleaners, porters to healthcare support workers. While traditional person specifications for many of these roles might have included criteria such as "experience of being a carer" or "working in the NHS", the decision was taken this time to focus on values and behaviours. This opened up opportunities to a large number of individuals working in sectors suffering from lockdown, for example hospitality. A strategic decision was also taken ***not*** to recruit workers from the local adult social care sector, to avoid destabilising this sector.

  We are undertaking various initiatives to transfer as many of those on temporary contracts into permanent positions. Strategically, we are striving to retain all staff on different contracts to enable our workforce to be more sustainable and develop talent pipelines. Our thinking has shifted to a "health and social care labour market" and how we can facilitate opportunities to retain all staff to enable our workforce to be more sustainable and develop talent pipelines.

  We are proud of our work to widen access to individuals through direct employment or learning opportunities, as outlined below: undertaking a wider programme of work around reviewing person specifications for jobs. This has involved redesigning specifications to make them less intimidating for local applicants by, for example, emphasising the requirement for certain kinds of experience rather than a Masters degree for band 7 jobs that officially require one. Redesigning job specifications in this manner across all departments is an objective for this financial year.

  We also have initiatives in place to promote recruitment among particular underrepresented groups. For example, prior to the pandemic we were working with All Wales People First - an umbrella group of self-advocacy groups for people with learning disabilities - to identify vacancies for individuals with learning disabilities who may be excluded by the current electronic application process. This work has been interrupted by the pandemic, but we intend to re-start it.

A further set of initiatives are carried out with various external partners, including DWP (job centre plus) and Careers Wales, and aim to support NEETS and the unemployed through traineeship and engagement programmes. These provide work experience, which is combined with employability skills training and support to complete applications. If the individual has done well they are invited to join a "Talent Pool", which means they can be treated as an internal candidate and guaranteed an interview when applying for a post. We are also about to launch a Kickstart programme in collaboration with DWP, which will identify vacancies for individuals currently claiming job seekers allowance or income support, many of whom are considered "harder to reach" and often lack the confidence to apply.

Finally we also have various initiatives to improve Black, Asian and Minority Ethnic representation outside the medical workforce (where they are strongly represented). We made particular efforts to recruit Black, Asian and Minority Ethnic candidates for the Apprentice Academy. A Black, Asian and Minority Ethnic community has been established within the organisation, which serves to advise the board. They are also analysing statistics around disciplinaries, grievances, absences, etc. We now have 67 identified champions across the organisation, and also a reverse mentoring scheme for the board, whereby each board member has been allocated a staff member from an under-represented group as a mentor.

- ***Future workforce***: A further notable set of initiatives falls under the heading of "Future Workforce". These are part of a strategy which aim to secure the long-term future of the workforce by engaging with schools (both primary and secondary). This has involved careers fairs, organising engagement activities with doctors and nurses, and creating opportunities for health-related experience as part of the Welsh Baccalaureate.

  This work has put a particular emphasis on breaking stereotypes - for example, work to tackle stereotypes around traditional gender roles for doctors and nurses, starting from primary school. It has also involved raising awareness of the wide range of potential job roles available in the NHS, beyond medical roles, for example plumbing and carpentry.

- ***Collaboration:*** Our staff engage in a wide range of collaboration with other anchors and key organisations on workforce issues. Within NHS Wales there are regular meetings of workforce directors and assistant directors, the workforce and a whole series of working groups who make sure that the whole of NHS Wales is collaborating on a local level. The University Health Board is also represented on a regional workforce board (the other members being the three county councils). This has developed a set of priorities based on issues of shared concern across the organisations. It is also aligned with the Welsh 10 Year Workforce Strategy for Health and Social Care.

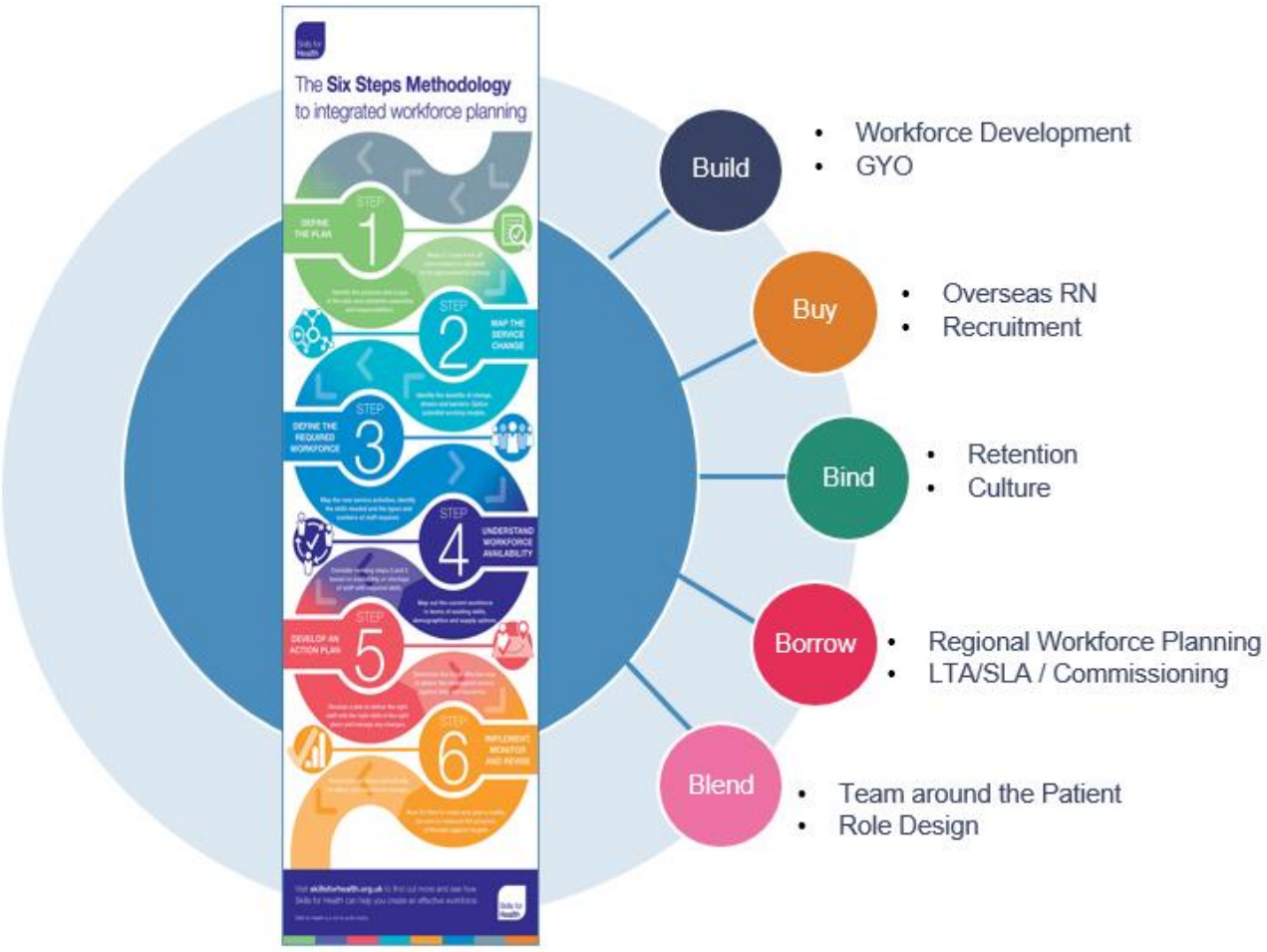
  Workforce planning is a key priority. This aims to achieve a better overarching understanding of the current workforce and future needs, to explore how future apprenticeship models might enable rotation across health, social care and care homes. Another priority is joint training, under which the possibility of a "passport" is being

created that would enable workers across anchor institutions to attend shared training and recognise training carried out within other anchors. A final priority is around recruitment, and is exploring the possibility of joint recruitment fairs that might give people the opportunity to explore careers such as social work, alongside nursing etc.

We also see a potential for closer, imaginative collaboration with VCS organisations, to go a step further in the work of improving opportunities for local communities. There is an opportunity to develop shared hubs for lifelong learning, which could combine training in nursing, speech and language therapy, social care etc by day, with artistic activities and other forms of community education at night. Working in collaboration with VCS organisations with a strong basis and reach into communities could enable the University Health Board to go much further in this kind of work than it could alone. As well as creating employment opportunities, it could also contribute towards the preventative medicine agenda, for example by offering healthy eating courses.

Workforce planning:

4.5.65 A number of pieces of workforce planning activity are in development, at an emergency, operational and strategic level. That said, our focus is to be "tactical" to bridge the gap between what is happening now to align to our future strategic ambitions. The graphic below illustrates in principle our approach to tackling the workforce challenges we face:



4.5.66 The first three critical areas we are currently focusing on are:

1. Retention (Bind)
2. Recruitment (Buy)
3. Workforce development (Build)

4.5.67 Our initial work on which is described below and focusing upon our registrant nursing workforce, however we will apply the principles across all professional groups.

1. **Retention (Bind):** Hywel Dda currently has one of the highest reported turnovers across NHS Wales, at 9.8% (as at May 2021). The current Welsh average for 12 month rolling turnover (headcount) is 8% (as at May 2021). Out of the other University Health Boards in Wales, we are currently 0.9% below the current best rate of 8.9%. To address this, we will aim to reduce our current turnover rate by 1%. This translates to approximately 100 people over 12 months, or 50 people not leaving us within the next 6 months, who otherwise would have. Within an 18 month period we aim to reduce our turnover by 3%, thus helping to minimise our growing workforce deficits.

2. **Resourcing (Buy):** As at November 2021, we have a vacancy factor of c.960 WTE across all staff groups - the Medical and Dental staff group accounts for c.315 WTE and the Nursing & Midwifery staff group accounts for c.500 WTE. Interventions to address this focus predominately on the Overseas Registered Nurse Resourcing programme, which offers a significant opportunity to scale up nurse resourcing and concerns relating to nurse staffing levels. Our intent is to start "safely" using Medacs Healthcare as provider/contractor to onboard 30 WTE as a pilot and build up to 100 Registered Nurse WTE in the first year and extend from there to 150 to 200 WTE.

3. **Workforce Development (Build):** Recognising the increasing need to 'Grow Our Own' workforce, we must design opportunities to provide additionality to the external supply of a skilled workforce. Our focus will be to:
   a. Provide an ambitious expansion of our apprenticeship scheme.
   b. Increase the pipeline of the Band 4 Assistant Practitioner roles.
   c. Increase the pipeline of nurses through our internal part-time programmes.
   d. Create a support system that recognises the pastoral needs of the future workforce pipeline.

4.5.68 This is a complex piece of work to model through and deliver for two reasons: a) to balance supply and attrition against a changing service profile; and b) to manage the education and commissioning pipeline as they are interdependent educational pathways, subject to personal choice, service need, local labour market supply and funding/places from HEIW/HEI respectively. It is our aspiration that to manage this complexity we will work to strengthen and facilitate operational and strategic workforce planning capacity and capability within our corporate and operational teams to work synergistically.

4.5.69 **Strengthening and Facilitating Strategic and Operational Workforce Planning ("Boost" and "Borrow"):** We are taking steps to strengthen Regional Partnership Working, we will explore the potential for regional centres of excellence in health and social care to facilitate economies of scale and new ways of working for Cancer, Pathology, Pharmacy, Ophthalmology and other areas with critical deficits which require short term immediate interventions and longer term strategic workforce planning.

4.5.70 We recognise that this may entail a more complex model than the "traditional" workforce model tied to a single employer, geographic location or a single professional identity – the

solutions we foresee are far more complex. We will need to reflect on professional boundaries, regional partnership/employer arrangements, integrated roles that cut across a number of contexts, i.e. sectors (private, public, third), health, social care, education and others. We are alert to a model of care being needed that goes to the heart of the public health agenda and tackles health inequalities and social deprivation.

Our Workforce Plan

4.5.71 We are in the process of developing our Workforce Plan for the 2022-2025 Integrated Medium Term Plan. This will be a strategic workforce plan which will be looking at a supply and attrition model over ten years. It will be submitted to Welsh Government as part of the Integrated Medium Term Planning process and will incorporate the principles outlined above with the detail of the interventions proposed below. Details and/or drafts are available on request.

4.5.72 Key elements of the Plan are:

- To create a "greater volume" of Band 4 Assistant Practitioner roles via the Level 4 programme either through funding of courses, development of processes to create roles and management support; and the inclusion of Overseas Registrants joining at Band 4 whilst completing their OSCE training until able to take up a Band 5 post, to enable us to facilitate the Team around the Patient model.
- Continued investment in the Apprenticeship Academy for Nursing & Therapy Apprentices focused on Level 2, 3, 4 roles to support across acute, community and COVID related services.
- A review of educational practice within Pharmacy and pathways to facilitate Technician roles and access to Level 5 & 6 qualifications for progressions and to support any transitional arrangements that may be required as a result of the Transforming Access to Medicines programme (if applicable to the University Health Board).
- Growth in the medical workforce and alternative roles i.e. Physician Associates, Surgical practitioners.
- Growth in psychology and alternative practitioners delivering different interventions in different settings i.e. physical and mental health.
- Growth in alternative Primary Care and community practitioners/connectors to support the social model of health i.e. community connectors, social prescribers alongside movement of therapy and pharmacy colleagues moving into primary care.

4.5.73 In reality the elements noted above will take a number of years to achieve and only with significant financial investment. Currently, we have gaps in our workforce in secondary care. If we do not reskill our staff to support the community model, there is a risk that there could be gaps in community care in the future. There are two-three training cycles to retrain staff under Education & Commissioning guidance i.e., outturn for 24/25, 25/26 and 26/27 within the timeframe we wish to have the programme of transformation underway. Therefore, if we need to change from the existing model to service a new model, it is vital to start thinking and evolving our approach to training and education as soon as possible. In short, new and repurposed facilities are only part of the Strategy implementation, it also depends on workforce restructuring.

4.5.74 Our current registrant nursing workforce deficit is c.400 WTE. Within our Workforce Plan we outline an approach to reducing this deficit within 3-5 years through a number of initiatives as outlined above to build our workforce. Fundamentally however, it will be workforce design that will have the greatest impact on our ability to remodel our services. We are progressing ideas on the Team around Patient, Team around the Family concept, which will see new workforce models and new roles designed to enable us to facilitate patient care. It is the hope we will be able to translate the workforce design for a social model of health wider to inhabit other public, third sector and citizen spaced to increase the quality of life for our population. A great deal of work remains to be done around clinical pathways and precise service delivery in each of the areas.

4.5.75 Continued collaborative working with Health Education Improvement Wales (HEIW) and Further Education and University providers will play a fundamental role in delivery of the Education Strategy to facilitate the learning requirements for our workforce. It is also essential for us to continue building and exploring partnership workforce planning on a local, regional, and national level, to provide greater understanding of our workforce, developing our staff appropriately to meet the requirements of a new social model for health. We have learned a great deal from the Dorset experience, referred to under the Health and Care Case for Change, around how we can create a flexible health and social care labour market and how skills can be transferred across agencies to create a health and social care labour market.

4.5.76 A further lesson that has emerged from the workforce planning space, is the need to reflect on how we organise ourselves to plan. Aneurin Bevan had a number of service and workforce route maps to enable then to facilitate the change; we must reflect on how we manage this, our content will have similarities and differences. Managing the tension and need for short term emergent planning versus the long term strategic planning ambitions. The need for iterative cycles of learning and improvement to be embedded in our working philosophy and methodology. This will require a system wide approach – as in Dorset.

4.5.77 From April 2021 we have implemented a plan to roll out Organisational Development Relationship Managers and Assistants to every directorate in the Health Board. Their role is to influence the culture to be the best it can be, helping our people to offer their best selves at work and feel valued and supported to be well, be happy and thrive in life too. This will look after our patients and create a great place of work for our staff in a transformational and compassionate culture. This new role reflects a lesson we learned from Aneurin Bevan University Health Board – the value of investing in more Organisational Development resources to support transformation of this scale. We will track the changes they bring.

4.5.78 BSI Standard PD ISO/TR 11219:2012 for Library buildings will inform the design of a modern Library and Knowledge Service. Our libraries fall short of what is required, and a new integrated hospital provides the opportunities to ensure we have library space that is fit for the 21st Century. The Library and Knowledge Service can add value to the organisation through enabling organisational innovation & knowledge mobilisation, meeting the changing

needs of University Health Board staff, learners and educators in relation to study and reflection, health and well-being, collaboration, and as a technology hub.

4.5.79 We need to provide facilities to accommodate self-directed learning and enable collaborative working and learning. Library space invites reflection and offers a place of sanctuary away from the work environment and provides 24/7 access. Training labs for teaching digital literacy skills and training in evidence searching & evidence synthesis, critical appraisal and health literacy all support the overarching principle that supports patient care.

The Estates Case for Change

Existing Arrangements

4.5.80 The University Health Board's estate encompasses 4 acute sites, 2 specialist hospitals, 4 community hospitals, 20 treatment centres (which includes both the Aberaeron and Cardigan ICCs), 3 non-hospital patient centres and 23 support facilities across Carmarthenshire, Ceredigion and Pembrokeshire. 32 properties are freehold and 24 are leasehold. The freehold land area is 50 hectares. The buildings range in age from 19th century to modern day and with varying degrees of functionality, condition and performance. Almost 40% of the estate is over 50 years old and this age profile has implications on backlog maintenance and on the ability to deliver safe, modern healthcare.

4.5.81 The Estates Annex attached at Appendix 9 provides a description of the current estate.

4.5.82 Many of our clinical areas are non-compliant against current healthcare design guidance and this has a significant impact on service delivery, patient experience and staff recruitment and retention. The fabric of our estate also affects our ability to contribute fully to addressing climate change and decarbonisation.

4.5.83 In 2021 we submitted our Business Continuity (Major Infrastructure) PBC. This business case drew on feedback we received from senior consultants and clinicians on how deficits in the condition of our hospitals - water ingress, leaking roofs, power outages - affected their experience of delivering care. None of the issues they described compromised the quality of treatment patients received, but they did make it more difficult for staff to deliver that treatment.

4.5.84 Our Business Continuity (Major Infrastructure) Programme Business Case sought funding of £87.25m to enable us to make investments over a four year period necessary to continue with a safe and functional estate at Glangwili, Withybush, Bronglais and Prince Philip Hospitals, as follows:

Glangwili and Withybush Hospitals:

- System Infrastructure: Lifts, Power Systems, Ventilation Systems, Medical Gasses, Heating, Drainage
- Building Infrastructure:
  - Roof Coverings, Soffit Systems, Curtain Walls, Rain Water Goods, Drainage etc.
  - Cosmetic Internal Refurbishment, including Bathrooms, Showers, Floors and Decoration

Prince Philip and Bronglais Hospitals:

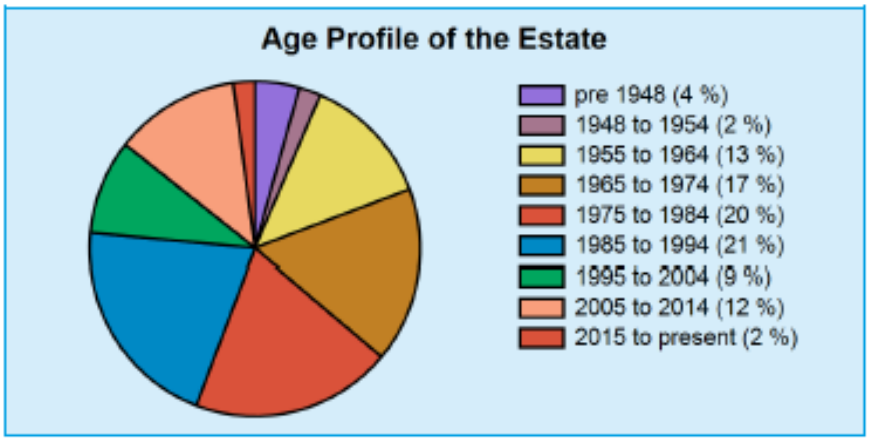
- System Infrastructure: Lifts, Power Systems, Emergency Generator, Water Supply Systems, Boiler Plant
- Building Infrastructure: Roof Replacement/Repair, Fire Precaution Upgrade Work

4.5.85 To be clear however, these investments are those necessary to enable us to continue with a safe and functional Estate for up to approximately seven years, i.e., until the capital investments contained in this AHMWW PBC start to come on line. They do not represent a service redesign programme which will give us an estate sustainable in the long term from the perspective of us meeting modern healthcare standards.

4.5.86 They do not address the fact that our theatres are too small, we do not have enough single rooms, we are unable to accommodate suitable diagnostic equipment, nor that our facilities do not currently support rehabilitation: there are no rehabilitation areas on most wards, and it is not possible to fully support patients to self-care, e.g., patients cannot make their own drinks. The Ward Refurbishment Prioritisation - Summary of Audit by Site, undertaken in 2016 showed that 45% of the University Health Board's wards are of "poor" standard requiring major investment to rectify, e.g., non-compliance with safe and secure medicine storage; poor and insufficient staff and patient sanitary facilities; infection control issues related to ward configuration; and flooring requiring upgrading.

4.5.87 Following are descriptions of the age profile, backlog maintenance and running cost positions of our estate.

4.5.88 ***Age Profile:*** The pie chart below shows the age profile of the whole University Health Board estate, including main and community hospitals:



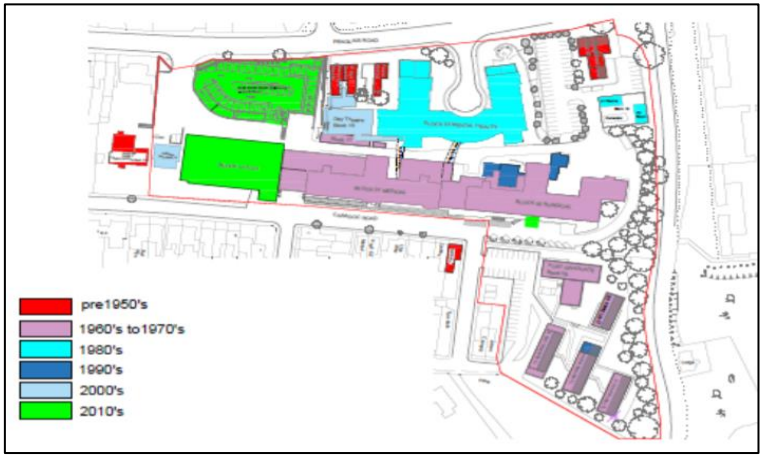
Source: Hywel Dda University Health Board, Estates and Facilities Performance Breakdown 2020/21

4.5.89 56% of our estate is more than 37 years old, and 19% of it is more than 57 years old. This presents considerable challenges in terms of running costs and maintenance. The age profile of each of the four main hospitals is shown in the diagrams overleaf. A summary of each hospital is as follows:

- ***Bronglais Hospital:*** Despite being built predominantly in the 1960s the hospital has benefited from significant investment in a new build in the 1980s and more recently a

new-build Front of House development and extensive repurposing schemes. Whilst this investment has addressed some major deficiencies, continued investment will be necessary to tackle some of the outstanding physical building and engineering concerns within the older estate and non-refurbished areas, as well as ward improvements.

Bronglais Hospital

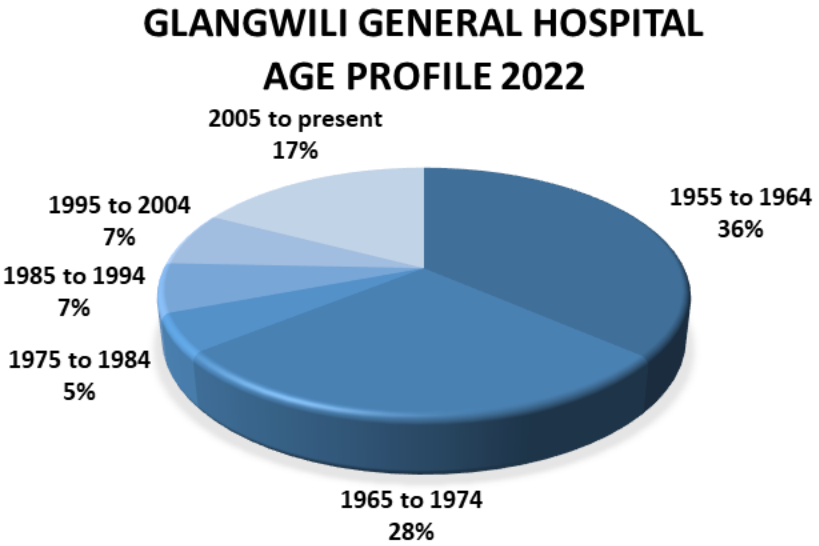


Glangwili Hospital

Prince Philip Hospital

Withybush Hospital

- ***Glangwili Hospital:*** Glangwili Hospital is the oldest acute hospital in Wales, with 64% of the site circa 50 years in age, and 36% nearing 70 years in age, as shown in the chart below. A significantly higher percentage of the Hospital's estate dates from the 1950s and older, when compared with the wider Acute Hospital estate in Wales.



- A large proportion of the estate was constructed in the late 1950s. Developments since 2008 include new Renal and Cardio-Respiratory units, Accident & Emergency and Critical care units, Mortuary, Clinical Decisions Unit and the Women & Children project phase 1. Whilst all building and engineering assets will require maintenance, repair and replacement based on life cycles and risk prioritisation, the age profile often impacts on wider issues such as space standard requirements, functionality and energy performance. As the oldest estate, this hospital has the highest backlog of our four acute hospitals.

'It's really difficult for me to give the care to my patients that they need and deserve because the hospital estate is so old, and there is no space to rehabilitate patients. I'm really hopeful the new hospital will have better facilities for my patients and will support me as a member of staff to deliver great care, because there will be green spaces, staff rest areas, and excellent training facilities.'

- ***Prince Philip Hospital:*** This is the newest of our main hospitals. The hospital has also benefited from significant build developments including the Hospice development, new Breast Care unit and more recently the Mynydd Mawr Rehabilitation unit and Acute Medical Assessment unit. Whilst the building assets are in reasonable condition continued

capital investment is necessary to address engineering, patient and ward programmes. Due to the consistent age of the estate a large proportion of the site engineering infrastructure assets are either approaching or have exceeded their intended lifespan.

- ***Withybush Hospital:*** The main hospital and majority of the estate was constructed in the mid-1970s based on an early nucleus design model. This will necessitate considerable investment in the site, in both the site engineering infrastructure and the buildings – for example, the main roof is around 30 years old and has reached the end of its operational life and requires significant ongoing maintenance. Capital investment is also necessary to address patient and ward refurbishment programmes.

4.5.90 Our ***community hospitals*** vary in age, which results in challenges linked to space standards and functionality. A summary of their age profile[16] is as follows:

- Amman Valley – around 50% of the hospital is pre-1950s, with the remaining 50% being built in the 1990s.
- Llandovery Hospital – over 50% of the hospital was built in the 1950s.
- South Pembrokeshire Hospital – roughly 50% of the hospital was built in the 1950s and the remainder between the 1980s - 2000s.
- Tenby Cottage Hospital – the whole facility was built in 2004.
- Tregaron Hospital – around 50% of the hospital is pre-1950s and the remaining 50% was built in the 1960s and 1970s.

4.5.91 ***Backlog Maintenance:*** The table below shows our Backlog Maintenance Cost position at 31 March 2021:

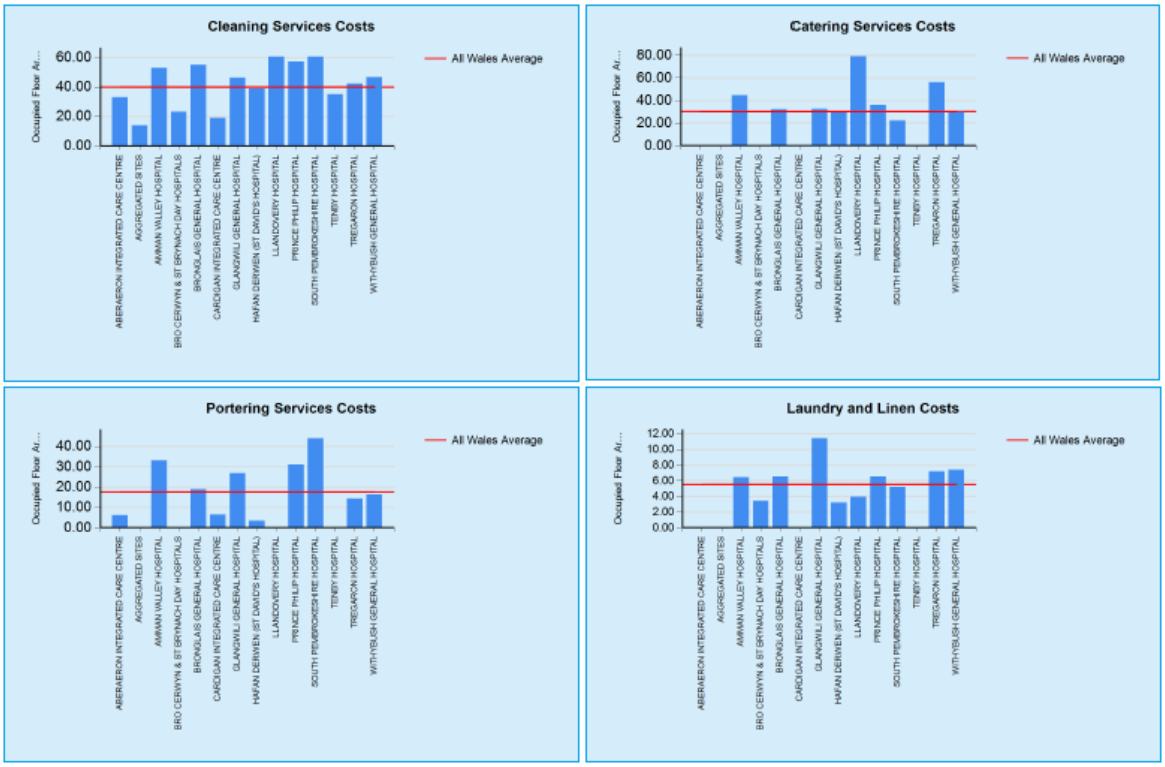
HDUHB - Backlog Maintenance Costs 01/04/2020 to 31/03/2021					
Site	**Physical Condition Costs (£)**	**S & S Costs (£)**	**Fire Safety Costs (&)**	**DDA Costs (£)**	**Backlog Maintenance (£)**
Amman Valley Hospital	£273,639.95	£179,250.61	£300,000.00	£142,356.30	£752,890.56
Bro Cerwyn & St Brynach Day	£187,103.40	£63,041.88	£500,000.00	£57,101.88	£750,145.28
Bronglais General Hospital	£5,039,011.24	£444,389.88	£2,500,000.01	£19,089.84	£7,983,401.13
Hafan Derwen (St David's)	£618,888.15	£33,171.60	£400,000.00	£18,981.60	£1,052,059.75
Llandovery Hospital	£176,882.26	£70,706.79	£300,000.00	£59,912.62	£547,589.05
Prince Philip Hospital	£4,971,816.01	£662,597.76	£1,750,000.01	£389,269.32	£7,384,413.78
South Pembrokeshire Hospital	£403,966.20	£62,230.08	£500,000.01	£39,064.08	£966,196.29
Tenby Hospital	£69,960.00	£0.00	£5,000.01	£0.00	£74,960.01
Tregaron Hospital	£1,529,068.20	£138,732.00	£200,000.99	£40,194.00	£1,867,801.19
Glangwili General Hospital	£21,446,552.62	£1,461,755.66	£12,000,000.00	£950,520.12	£34,908,308.28
Withybush General Hospital	£9,986,203.92	£689,092.80	£12,000,000.00	£521,183.52	£22,675,296.72
Aggregate Sites	£1,181,823.89	£984,347.61	£369,012.60	£807,332.63	£2,535,184.09
Health Board Totals	**£45,884,915.84**	**£4,789,316.66**	**£30,824,013.63**	**£3,045,005.91**	**£81,498,246.14**

4.5.92 Addressing our maintenance backlog is a core element of our Programme: we will not be able to implement our Health and Care Strategy in sub-standard accommodation. At the same time

[16] Source: Hywel Dda, Our Big NHS Change, What We Have at Present, Technical Document to Support the Public Consultation Document

it is important to recognise that we will not be able to successfully implement our Health and Care Strategy only by addressing our maintenance backlog.

4.5.93 ***Average Running Costs:*** The graphics below show that, whilst performance is not uniform across the estate, cleaning, catering, portering and laundry costs for the majority of the main sites are higher than the All Wales average: the University Health Board's average running cost for facilities management services in 2020/21 was c. £182.67/m². (We anticipate that



additional cleaning standards will add further cost and affect us disproportionately given the size of our estate).

Source: Hywel Dda University Health Board, Estates and Facilities Performance Breakdown 2020/21

Business Needs

4.5.94 Our estate continues to evolve and adapt to the changes in requirements to keep pace with the changing face of healthcare needs and service delivery. However it must be recognised that a lot of our estate is old, some parts are not fit for purpose and overall it needs significant investment and reconfiguration to enable us to meet the evolving needs of our population, to implement and realise our Health and Care Strategy and to reduce our operating and maintenance costs. However, it is also important to recognise that we will not be able to implement our Strategy only by addressing shortcomings in our infrastructure – our estate must work together with changes we make to our clinical practice, workforce, digital infrastructure and environmental performance.

4.5.95 The investments described in this PBC will enable us to put a modern healthcare environment in place for our population. They are entirely distinct from the investments set out our Business Continuity (Major Infrastructure) Programme Business Case, which, while needed, will only enable us to continue to deliver the status quo.

4.5.96 Detailed investment propositions for each site are included in the Estates Annex at Appendix 9.

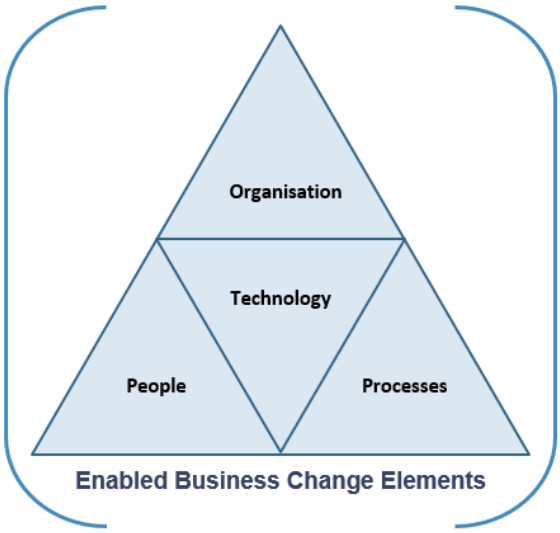
The Digital Case for Change

4.5.97 Digital is the means by which we all interact with each other and with everything around us. In healthcare, using digital technology, citizens and patients will be able to receive and share information online about their health and well-being, communicate by audio, video, secure email and messaging, and participate in peer-to-peer patient support groups, in trials, and in health and care decision-making with their clinicians. Health and care teams will use digital technology to become more data-driven and evidence-based, with a robust and ever-expanding decision-support capability.

4.5.98 Our digital vision is an ambitious approach that presents the need for changing the culture through digitally enabled transformation combined with an opportunity for accelerated delivery and a focus on collaboration.

4.5.99 At the same time, almost everything we can think of will be made digitally-interactive, with sensors, displays, moving parts and controls, on-board analysis and memory, and the ability for remote control, introducing the concept of passive monitoring. Most importantly, they will be connected to us, either attached or implanted for a specific purpose or more casually wearable, and able to transmit to central units for storage of data or further analysis possibly in real time to provide targeted advice, or to raise an alert about an urgent need or situation.

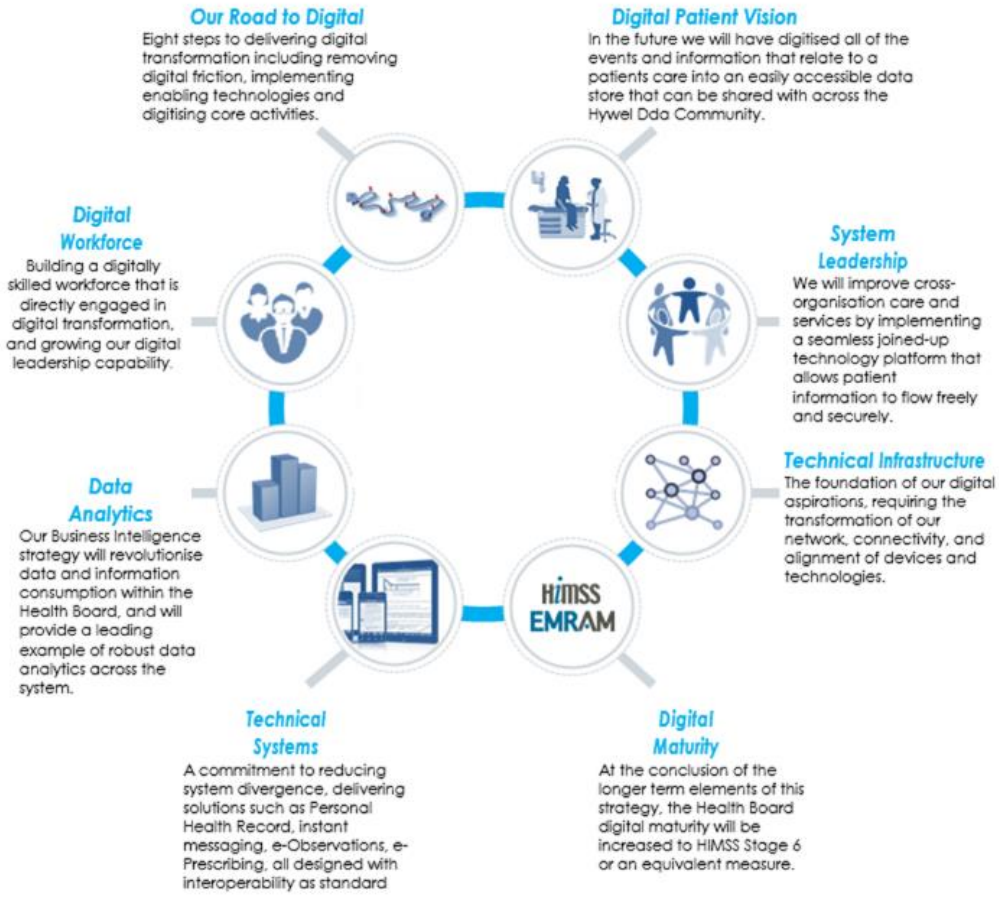
4.5.100 Management of our health and well-being is ideally suited to being served, and supported sustainably, by digital technology. Digital technology can provide the capability for professionals to serve citizens and citizens to support themselves, at times and in places which are more convenient for them and their families or carers. Specifically, we will seek to enable care closer to home, particularly in our rural areas, and to use digital technology to assist in equalising access to services.



4.5.101 To become a digitally-enabled organisation we will need to adopt new health and care digital-related behaviours, in terms of the way we do things, and in terms of those with whom we work or interact. People's different life experiences with digital are vital to us helping each other to achieve the new health and care system that digital technology enables.

4.5.102 Digital is a means to an end, an enabler of improved health and care, it is not an end in itself. A digital plan is intended to fit with other strategies, supporting the organisation's clinical and population health strategies, and contributing to a portfolio of long-term organisation-wide changes.

4.5.103 The shape of our digital journey will look to support our organisation and enable innovation, transformation and turnaround. Figure 1 outlines that technology is at the centre of how we as an organisation can modernise, in that people with access to digital technology will become more empowered, people following digital processes will become more effective, and digital processes powered by digital technology are more efficient.



4.5.104 In a society that is rapidly embracing and adopting technology, the NHS cannot stand still. Our digital vision outlines how we intend to integrate digital solutions into every patient interaction and how, through clinical leadership, we will use these to improve the quality of care and experience of our patients and support our workforce providing safe and efficient tools.

4.5.105 Our road to embracing digital will see us remove digital friction, implement enabling technologies, ensure technology is aligned to roles, and enable high quality data at the point of care. Additionally, we describe the digitisation of patient interactions and the automation of related processes, enabling the sharing of our data across the systems.

4.5.106 Finally, we will reflect our growing wealth of data and how we will feedback to decision-makers at all levels of the Health Board through compelling self-serve Business Intelligence (BI).

4.5.107 Our aim is not to simply "go paperless", although this will be a by-product of digitisation, but to ensure that the information our teams require is available in the right place, at the right time and on the right device. With the information needed to hand, our teams will be able to perform to their maximum potential, leading to increased quality, safety and efficiency which will in-turn will drive down costs.

4.5.108 The need to collaborate and interoperate with our local partners is also key to our digital vision and reflects that we are part of a wider team of organisations and that patient care will be greatly improved if we all have sight of each other's actions.

4.5.109 The University Health Board already has a good working relationship with our local partners. We currently collaborate with partners at various levels including across the Hywel Dda Community. We will look to develop a Digital Roadmap, which will outline the ambition for the design, implementation and wide-scale adoption of digital and technology solutions for health and care services within the Hywel Dda Community. The roadmap will highlight how digital will address key local challenges, including delays in leaving hospital, increasing wellbeing, creating greater ownership of health care and information, providing quality acute care across the University Health Board area, and care closer to home.

4.5.110 As a University Health Board we will collaborate to realise the possibilities of digital transformation. This cannot be delivered by any one team, department or individual. We will be open and transparent about issues, and work with pragmatism and creativity to create solutions that are right for the University Health Board, our patients, communities and staff. Digital healthcare technology is an important enabler and can only be successful where it is developed closely with clinicians, staff, patients and with the other enablers in the University Health Board to transform the way we do things. Along with our partners, such as Welsh Ambulance Trust, and our local authorities, we will utilise all the new and latest technology and become a test bed for new digital solutions, with the emphasis on implement, test, adopt and review before a wider rollout would be considered. Placing technology in real life situations will not only test the products/systems, but also the maturity of the organisation to adopt the technological, cultural and system change.

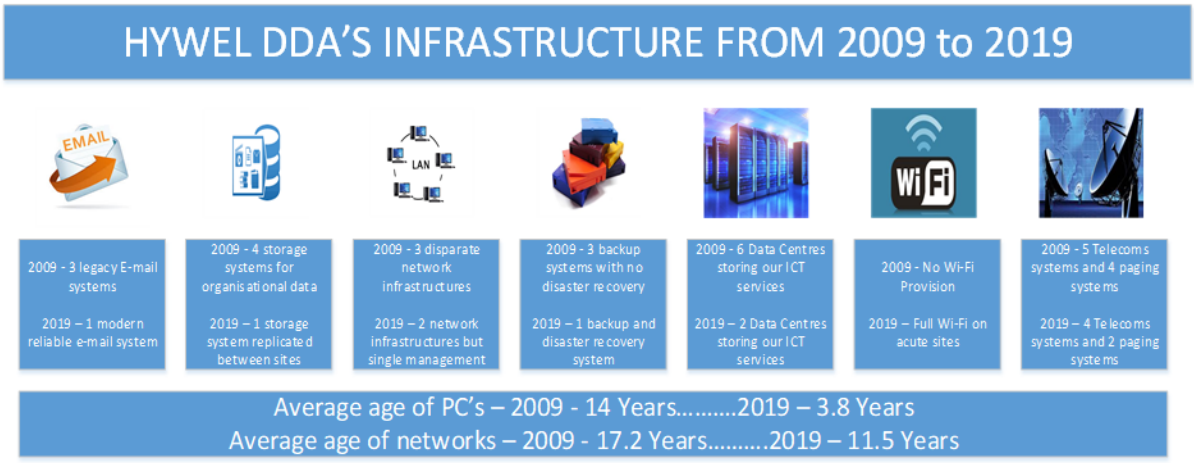
4.5.111 Working together as a single health community is vital to create a safe and holistic view of our citizens' health. Along with other providers in the region, our teams are already able to view GP records, current medications, mental health information and correspondence, and

the future vision of a "Virtual Hospital", moves this thinking forward to allow all partners a view the health challenges across the community. This approach will bring together disparate data sources into one area where, via a central monitoring hub, primary care, community teams, mental health, voluntary sector and Social Care will be able to view patients and provide the necessary support.

Existing Arrangements - our Digital Baseline

4.5.112 To fully appreciate where we need to go (the vision), we need to understand where we have come from. The creation of Hywel Dda University Health Board in 2009 saw the coming together of not only 6 organisations but also three quite dissimilar Informatics Departments, with different ICT support by the Business Services Centre, now part of the Digital Health and Care Wales (DHCW). The most telling feature though was the poor underlying infrastructure that was in use in the previous organisations due to funding and resourcing difficulties.

4.5.113 ***The University Health Board's Infrastructure Journey:*** The illustration below depicts the infrastructure within each of the former Local Health Boards and Trusts when Hywel Dda University Health Board was formed. We had old E-mail systems that were unreliable. Our data was stored across many storage systems that had different backup systems and no disaster recovery capability. Our network was from three different suppliers with no single management platform and there were no Wi-Fi networks. Our servers and data were poorly protected in many data centres some of which required significant investment and our telecommunications equipment was eight years old and paging was separate in each acute hospital. The progress made is summarised below:



- Our email environment is now a single, stable platform and over the period in this strategy, we will fully migrate to the cloud and Office365 and update all users to the latest version of Microsoft Office.
- We have a single storage provider where all our data is stored (databases, systems, documents) and this is replicated between our two Data Centres.
- Our network is now predominantly Cisco and we have a single management system to monitor and maintain that network.
- We have a brand new Data Centre in Glangwili General Hospital that is state of the art and this year we are modernising our second Data Centre.

- We have full Wi-Fi on all our sites for staff and visitors and provide free Wi-Fi for our patients and visitors.

4.5.114 The progress around the implementation of national systems has been a challenge, however, with closer synergy between the DHCW roadmap for systems, and the University Health Board's approach we will be able to build upon our digital maturity. Our Digital Maturity will be a key driver for transformation. We aim to achieve HIMSS Level 3 within two years of publication of the Digital Strategy (attached at Appendix 11) and to progress to Level 5 by the end of the strategic journey. This will enable us to become a Digital Exemplar.

4.5.115 Over the past few years there has been a shift in technology focus where Internet based Cloud Computing has come to the fore in the public sector (we are behind the curve on Cloud Adoption compared with the private sector).

4.5.116 ***Smart Hospital:*** The smart hospital of the future may look quite different to the hospital of today, and we should be planning for this event. The technology infrastructure contained within the PBC provides a look forward for the next 3, 5 and 10 years, noting that technology is rapidly evolving and growing consumerism, along with demographic and economic changes, is expected to affect how hospital services are developed and delivered. This is an important enabler in order to meet the priorities outlined within our Health and Care Strategy and the 20 year vision for population health outcomes set out in our Health and Well-being Framework, 'Future Generations: Living Well' to provide inpatient healthcare services in the home, community and outpatient ambulatory facilities. However, many complex and very ill patients will continue to need acute inpatient services. As part of this work we should be looking to see how to best connect with patients / citizens, and how to integrate digital technologies into traditional hospital services to truly create a health system without walls.

4.5.117 Digitalisation offers an opportunity to contribute to all of the University Health Board's Strategic Objectives, and the research shows a wave of investments in technology-led initiatives will help with the adoption of digital. One of the fundamental concepts of smart hospitals is not just to solve individual problems by implementing technology led solutions, but to drive large additional benefits by integrating these new digital investments and the disparate legacy systems and devices within an open ecosystem. Only by integrating these different systems and ensuring the data is available hospitals can create large-scale benefits from digitalisation rather than a collection of tactical initiatives.

4.5.118 The following is a case study of how a digital hospital could work in 5 years' time:

A virtual receptionist console welcomes Mr Alun Jones and provides information on his appointment, the clinician he will be seeing and shows directions to his room.

Mr Jones is automatically admitted to the hospital and a notification is sent to the ward staff to let them know he has arrived.

This information is also pushed to his Hywel Dda app on his smartphone through the pervasive Wi-Fi / 5G so that he can use the navigation features in his app to move through the hospital to get to where he needs to go via wayfinding.

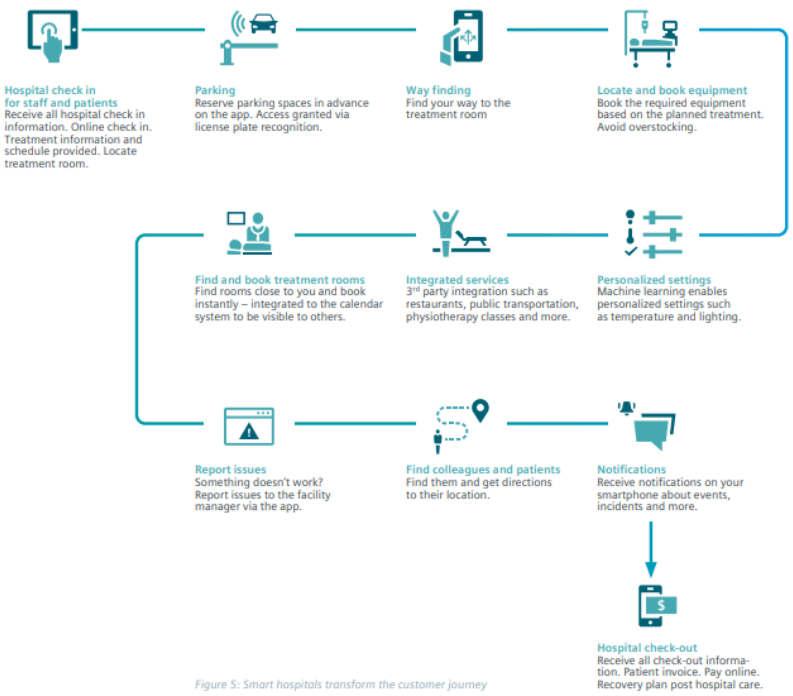


Figure 5: Smart hospitals transform the customer journey

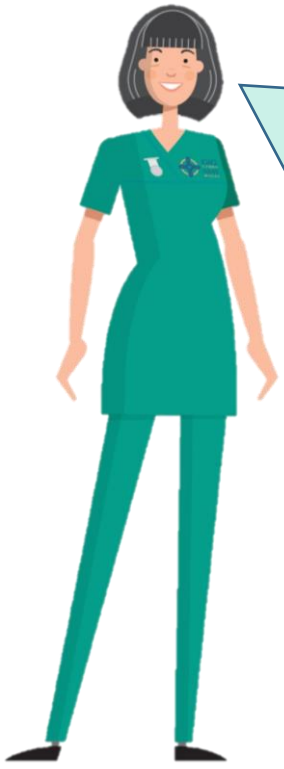
When he arrives at his room and settles in, he is given a tablet so we can login and view his personal health record and the facilities of the hospital, e.g., hospital menus etc. This information is stored securely on a cloud service, and on his record he can find out more about the professionals providing his care and when they will be visiting him as well as the procedure he is having and order his meals during his stay (which are delivered via the hospital's robotic infrastructure). He can also use his tablet to keep in touch with his family and friends on social media and video apps and to complete any information required for his stay in hospital such as updating his general health and how he is feeling along with family support available.

Mr Jones' vital signs are automatically taken by sensors, and others are collected electronically by the nurses providing his care. This is used to automatically determine his current health and notify the clinical team of any abnormalities or concerns that need to be addressed. Various investigations are ordered electronically by the clinical staff using voice recognition such as Pathology and Radiology tests and the results are automatically populated in both the hospital's record and Mr Jones' personal record. When Mr Jones has a query about a particular issue that is concerning him he can use the chat feature on his tablet and automated chatbots will answer the most common concerns about his procedure and ensure his clinical team are notified of concerns that cannot be answered. He can also watch a 3-D video of his procedure to provide further information.

Mr Jones' procedure goes well, and machine-learning technologies enable the most suitable care plan moving forward which is electronically adjusted and signed off by the clinical team and Mr Jones. This is downloaded to his personal record and sent electronically to his GP. He now gets notifications when he needs to undertake actions associated with his care plan and his GP can keep an eye on how he is doing and contact him if he feels he needs more support and help in undertaking any of these activities.

A district nursing team makes a follow-up visit to see how he is getting on and, using the community care system, they are able to see all the information about Mr Jones' stay in hospital. Using this system they capture post-operative assessments, images and video, all of which are reviewed by Mr Jones' consultant. Spotting an area of concern, his consultant arranges a video consultation with Mr Jones to discuss this and advise on suitable courses of action without the need for him to travel and visit the hospital. Medicines prescribed by the consultant are automatically delivered to Mr Jones' house and his signature or biometrics are captured to ensure he has received it. The Hywel Dda app will notify him when he needs to take his tablets, so he doesn't forget.

All the data captured from Mr Jones' stay is anonymised and stored to the national data repository. Cloud analytical technology enables learning to be extracted from his care and outcomes to improve future care plans for our patients.



I recently took Dad to our new hospital and we had such a positive experience supported by all the digital changes. Firstly, he was welcomed by a virtual receptionist who directed us to the ward where he was given a tablet so he can view his personal health record, order his meals during his stay and keep in touch with us.

He had some investigations during his stay and the results were automatically transferred to his hospital record and his personal record so Dad could see the result on his tablet. Dad had some questions during his stay and the chatbots really helped relieve some of his concerns.

His procedure went well and the community nursing team are supporting him and can easily access all his information using the community care system. They were concerned on one of their visits so they sent an image to Dad's consultant who arranged a video consultation. This avoided the need for Dad to travel to the hospital and the medicines the consultant prescribed were automatically delivered to his house.

4.5.119 The digital hospital of the future can leverage technologies that transform care delivery, patient experience, staff management, operations management, and hospital design. In summary some of the following is either in development or operational globally and will form the ambition of the Health Board for the next 5-10 years.

4.5.120 **Custom Patient Rooms for Healing:** The well-being of patients and staff members with an emphasis on the importance of environment and experience in healing will likely be important in future hospital designs. Customised patient rooms have the potential to promote good physical, spiritual, and mental health, and contribute to quicker patient recovery.

4.5.121 **Redefined care delivery:** These technologies can create new ways to continually monitor patients and to integrate the data to chart the "flight paths" of individual patients and operational units. For example, wearables and microfluidic sensors can be placed near patients and at locations frequented by patients (such as washrooms) where there is a fall risk or other hazards. The real-time data from such devices can form the clinical command centres foundation, allowing staff to be fully aware of where patients are for safety. Artificial Intelligence (AI) can constantly monitor the data to alert clinical staff of any issues that could cause additional harm to the patient. Through big-data analytics, machine learning, and AI, patient harm—or unintended consequences could be reduced.

4.5.122 **Personal and portable care:** An array of new technology advancements, including 3-D printing, robotics, nanotechnology, genetic coding, and therapeutic options can permit more personalised and accessible patient care, some of which are in development. Many devices and equipment are getting smaller and more portable, and treatments will likely become more targeted—all of which can make future health care more mobile and precise. This, in turn, should increase staff and process efficacy and improve patient outcomes, as clinicians will be able to quickly find the best treatment option rather than try multiple interventions. Furthermore, as medical equipment and sensors become smaller and more portable, clinicians may be able to perform various tests and procedures at a patient's bedside rather than transporting the patient to different areas of the hospital. Robots can be used to deliver medications to patients. Patient rooms can be built to include more equipment options, or the equipment can easily be moved to the patient.

4.5.123 **Cloud-based, interoperable electronic health records:** An Electronic Health Record (EHR) populated by interoperable data from different sources will likely be a reality in the hospital of the future. Comprehensive, real-time patient data at the point of care can improve patient outcomes, which means that sharing standardised data is likely to be part of future care delivery.

4.5.124 **Digital and artificial intelligence technologies**: have the functionality to better inform and educate patients, ease their anxiety, and empower them to actively participate in care before, during and after the hospital stay. Digital technology may improve the patient experience by providing real-time access to medical knowledge: imagine an AI-powered, bedside virtual care assistant for an impatient patient who can answer or direct queries to the most appropriate person at the hospital. This virtual assistant can answer the patient's routine questions about diagnoses, expected recovery experiences and times, and daily medication schedules. In addition, the virtual assistant can act as a data repository for the patient's medical history, test results, consultation times, appointment schedules and even stories from other patients with a similar diagnosis. Such accessible AI technologies are starting to exist and can help empower patients and their families.

4.5.125 **Simplifying admission, discharge, and other processes:** Patients often complain about being asked to fill out multiple forms that ask for similar data or receiving conflicting discharge instructions. As hospital processes go digital, staff can use AI to learn from and improve these processes. Once a patient's physician advises admission, they can receive a

personalised welcome package — an application on their own or a hospital device which helps to direct their experience.

4.5.126 **Intelligent scheduling:** Technology - specifically Internet of Things (IoT), radio-frequency identification (RFID) - can be used to improve functionality within a digital hospital. IoT and RFID devices can track when staff members arrive, determine how many patients they see, and determine the amount spent on patient care versus administrative tasks, to improve the scheduling of staffing.

4.5.127 **Virtual learning and development:** Virtual training will likely become more prevalent in the future. Whilst hands-on, in-person medical training can never go away, virtual training can become more prevalent among students and seasoned clinicians. Virtual training can help surgeons map out their surgeries before conducting them - they can also share footage of the actual surgery with students and colleagues.

4.5.128 **Operational efficiencies through technology:** Using robotics to automate hospital ancillary and back-office services can generate considerable cost and time efficiencies and improve reliability. By simply touching a screen, nurses and other medical staff can summon robots for specific tasks. For instance, robots can deliver medications, transport blood samples, collect diagnostic results and schedule linen and food deliveries, either as a prescheduled task or a real-time request.

4.5.129 **Safety and security - by design:** Hospitals can systematically tag patient wristbands and employee and visitor badges with RFID tags that allow appropriate levels of access. The intent of RFID tracking is to be able to respond appropriately to an urgent situation, and to locate people in real time. The same tagging system can be extended to certain pieces of equipment, including any robotic helpers within the hospital. Additionally, security cameras monitored by AI—using facial recognition and empathic expression detection—can identify dangerous situations as—or even before—they occur.

4.5.130 As part of the digital journey within the Health Board, the Hywel Dda Digital Ecosystem will be run in partnership, bringing together partners from health and social care, industry, academia, local authority and third sector organisations. We will focus on improving health across Hywel Dda through the spread and adoption of digital health solutions. As part of the Ecosystem we have developed the following concepts that will be foundational:

- Digital Home;
- Digital Ward;
- Digital Hospital; and
- Digital Community;

all of which will have a defined framework which uses analytics across a number of key layers of healthcare, from population health to individual packages of care.

4.5.131 Progressing on the next steps towards a smart hospital may seem complex, but this vision will provide momentum towards our overarching strategic goals. By targeting investments

and developing open and proactive technology ecosystems, the tangible benefits of the smart hospital vision can be truly realised.

4.5.132 Our Digital Strategy is attached at Appendix 11 and has informed the designs included within the Estates Annex.

4.5.133 ***Case study - Humber River Regional Hospital, Toronto:*** We have studied the Humber River Regional Hospital, Toronto precedent in some depth. The success of this digital hospital in realising efficiency gains, improving the quality of care for patients and reducing costs has helped to guide us in our thinking about our Digital Strategy.

Humber River Regional Hospital, Toronto – case study of a digital hospital

Humber River Regional Hospital is one of the largest regional acute care hospitals in Canada, serving a population of 850,000. The hospital underwent a transformation ten years ago, from having limited facilities and ageing equipment to becoming recognised internationally as a leading innovator for its development and design, in addition to being North America's first fully digital hospital. It has implemented a holistic, state-of-the-art hospital Command Centre that will enable it to realise quality and efficiency gains.

The hospital partnered with GE Healthcare Partners to conceive, design and build a 4,500 square foot Command Centre which processes real-time data from multiple source systems across the hospital. The aim of the Command Centre is to empower a team of co-located staff to monitor, prioritise and expedite activities, whilst driving far greater efficiencies. By using complex algorithms, engineering and predictive analytics, the hospital will improve the quality of care and patient access and reduce costs.

New software empowers patients to review their own health records; doctors can receive lab test results in under one hour (free from the risk of labelling or other manual errors); and fully automated robots deliver supplies and dispense medication. The patient pathway in the hospital system is now much easier to monitor, more interactive and much more patient-focused.

4.5.134 The University Health Board will look to adopt the latest thinking around creating a digital twin approach to the development of the new hospital. A Digital Twin provides a safe environment in which you can test the impact of potential change on the performance of a system by experimenting on a virtual version of the system that is fed by abundant data from the real system. In other words, to play "what if?" with system dynamics.

4.5.135 Digital Twins build a bridge between the physical and digital world by enabling us to understand the past and present processes and make predictions for the future. In the field of health, it refers to concepts such as predicting and early diagnosis of diseases that may occur by examining organs or symptoms in the body. Digital twin technology with such things as the Internet of Things (IoT), Artificial intelligence (AI) and data analytics is a powerful recipe for complex systems. Hywel Dda will be looking to explore the use of a digital twin to demonstrate the importance of smart hospitals and allow patients to see and feel the developments via vitrail reality.

4.5.136 Not only can utilising digital twin technology help improve patient care (the primary goal), but it can also allow clinicians to determine the right therapy and enable cost reductions at hospitals through efficiency optimisations.

4.5.137 At the micro-level, patient monitoring is a prime space to build digital twins that would enable personalised care. The process of obtaining real-time data from patients would start with a remote patient monitoring device that captures vitals (e.g., heartbeat, blood pressure), streaming it into the cloud, feeding it into a platform and analysing it using algorithms (based on parameters/thresholds) to predict the probability of potential risks, with an alerting protocol for clinicians as needed. This process can be virtually modelled as a digital twin. Expanding on this, decision support for chronic diseases would also be a good use case, as the digital twin could help earlier disease detection through the analysis of data (e.g., from radiology, genetics, labs). Other use cases include the use of early warning signs to reduce the number of code blue calls and early intervention for sepsis, both major cost areas for hospitals.

4.5.138 At the macro-level, hospitals represent a complex ecosystem of clinicians, patients and equipment. Using a combination of digital twin and AI technology, you can simulate efficiency improvement areas and their impact on the interconnected system. There are a host of significant challenges that hospital systems face with respect to operational efficiency, which could be alleviated. These include the lack of coordination, transcription errors, equipment and device downtime and long waiting queues. Digital twins combined with other emerging technology can be used to improve clinical outcomes, lower operating costs and optimise resource allocation.

4.5.139 A completely smart hospital, or a real-time health system, requires full integration or interoperability, which is a challenge for Hywel Dda. Data is often very siloed with repositories that lack integration; the addition of IoT or wearable device data amplifies that problem. There are still many vendor-specific technologies that are challenging to integrate to obtain the maximum efficiencies presented by transitioning to a smart hospital. The other challenge is around aging digital infrastructure not being updated regularly.

4.5.140 The challenge for the University Health Board will be to ensure that we continue with our current refresh programme(s) to enable the newer equipment and IoT sensors to synchronise seamlessly. However, a good starting point is to leverage what data we do have about patients, operational building systems, connected devices that can provide real-time data for context and clinical information systems. This will determine the current state or base. Then we will be able to place AI or machine learning models that contain rules/rationale to provide recommendations on how to improve outcomes and apply this to the data for scenario planning and to identify improvement areas to target. By creating a digital twin of our hospital, we can conduct scenario tests for any changes or expected changes with respect to operational strategy, staffing and care delivery models.

The Environmental Case for Change

Existing Arrangements

4.5.141 We fully recognise that Welsh Government has declared a climate emergency and nature emergency, and this is the context in which the Programme is being developed. We therefore aim to demonstrate that the Programme will fully deliver on Welsh Government's aspirations and where possible deliver best practice and set the benchmark for future NHS programmes.

4.5.142 We have a Planning Objective on Decarbonisation as follows:

"By first quarter 2022/23 develop and endorse a strategic roadmap to respond to the Welsh Government ambition for NHS Wales to contribute towards a public sector wide net zero target by 2030. The Health Board will set out a work programme and implement this plan to meet the targets established in the NHS Wales Decarbonisation Strategic Delivery Plan in the areas of carbon management, buildings, transport, procurement, estate planning and land use, and its approach to healthcare including promoting clinical sustainability. Where feasible through the opportunities presented via the Health Board's transformation journey it will look to exceed targets and establish best practice models and pilots, as exemplars for the NHS and wider public sector. The overall aim will be to reduce the Health Board's carbon footprint to support the wider public sector ambition to address the climate emergency."

4.5.143 We are taking a number of actions in order to meet this Objective:

- **Decarbonisation Task & Finish group established –** the principal aim of this group is to implement the Welsh Government NHS Decarbonisation Strategy, which includes an aspiration for public bodies in Wales to be net carbon neutral by 2030 in key areas of Procurement, Travel & Transport, Buildings and healthcare.
- **Commissioned Carbon Trust** - authors of the Welsh Government Strategy and supporting the Health Board to implement its aims and objectives through baseline work, option review and development of costed actions plans for our sites.
- **Development of a Carbon Literacy programme and community strategy to support awareness and whole organisation change** – this will be a key priority to ensure that everyone contributes towards the carbon agenda.
- **Engaging with the Welsh Government Energy Service:** We are engaging with the Welsh Government Energy Service to benefit from the technical, commercial and procurement experience, advice and support they can offer across regional energy planning, energy efficiency, renewable energy and fleet.

4.5.144 Via the Task & Finish group we are currently scoping how **clinical innovation** can support the decarbonisation agenda. The National Programme for Climate Change and Decarbonisation for Health and Social Care in Wales has been established to drive delivery of the Programme five expert Project Groups have been established - Social Care / Transport / Buildings, Estate Planning and Land Use / Procurement / Approach to Healthcare / Service Design. Clinical leaders for the decarbonisation programme and a mechanism/group for them to influence clinical change have been identified. Our Executive Medical Director / Deputy CEO is Chair of the Approach to Healthcare Project Board. Examples of areas being explored include:

- Ensuring that medical gas capture technology is integral to all new builds and major refurbishments (for example, we have seen a gas used in Newcastle which "cracks" the Entonox Nitrous Oxide into harmless Nitrogen and Oxygen; this could potentially be trialled in the University Health Board).
- Encouraging pharmacists and prescribers to stress the importance of responsible disposal to their patients, and the fact that even low carbon inhalers need to be disposed of properly.
- Making use of the existing Respiratory Health Implementation Group digital app to effectively communicate with patients.

4.5.145 To ensure we deliver on best practice and innovation we have established working groups with our public partners, Specific and Active at Swansea University.

4.5.146 The University Health Board's well-being objectives for 2019/20 onwards also recognise the need to increase the scale and pace of work to support decarbonisation and biodiversity. These are:

- To plan and deliver services to increase our contribution to low carbon;
- To promote the natural environment and capacity to adapt to climate change; and
- To plan and deliver services to enable people to participate in social and green solutions for Health.

4.5.147 We have commenced a significant programme of capital investments to improve the energy efficiency of our clinical estates. This includes:

- Installation of roof top solar power generation, car park solar power generation, installation of LED lighting for energy efficiency and installation of a solar array for power generation at management offices.
- The University Health Board is commencing the journey of changing inefficient fossil fuel boilers to modern energy efficient low carbon heat sources.
- We have commenced scoping to support electrical vehicle recharging capability at all sites and engaging staff to use electrical vehicles for their personal and professional use. We are also taking part in the use of a Hydrogen powered car trial for Community Nursing Staff.

4.5.148 We are developing an Agile Working and Hybrid Working Strategy and Delivery Plan (discussed in more detail in the Management Case). Expert Consultants are assisting the University Health Board to develop a detailed business plan to maximise benefits from agile working and optimal utilisation of existing clinical estates. Primary benefits include decarbonisation as well as efficient and effective use of clinical estates for optimal clinical services and which improve patient access to services, as well as reducing unnecessary travel which improves staff wellbeing and patient experience.

4.5.149 The University Health Board is also commencing the journey of developing Community Hubs to provide local health services. Premises within town centres will provide easier patient access through public transport and reduce demand upon Hospital sites. Developments in Llanelli and Carmarthen are leading the way with several other locations currently under active consideration.

4.5.150 We are in the process of developing our University Health Bard Decarbonisation Strategy, to be published in Q1 2022. This will reflect decarbonisation as a core and link into other wider agendas including Green Health, Sustainability and Climate Change, and our Well-being Objectives.

4.5.151 A breakdown of the net energy consumption and carbon emissions per site within the University Health Board during 2020/21 is shown in the table below.

Site name	Net Energy Consumption (kWh/m^2)	C)2 Emissions Target (kg/m^2) (to be agreed)
Aberaeron Integrated Care	152	27

Centre		
Aggregated Sites	217	44
Amman Valley Hospital	498	98
Bro Cerwyn & St Brynach Day Hospitals	306	64
Bronglais General Hospital	515	108
Cardigan Integrated Care Centre	232	47
Glangwili General Hospital	540	120
Hafan Derwen (St David's Hospital)	308	62
Llandovery Hospital	555	106
Prince Philip Hospital	574	132
South Pembrokeshire Hospital	270	56
Tenby Hospital	245	46
Tregaron Hospital	515	133
Withybush General Hospital	474	102
Health Board Average	491	107
Energy Consumption Key:		
Below 75%		480kWh/m² or more
Within 75% - 89%		Within 411 - 479kWh/m²
Above 90%		410kWh/m² or less

Source: Hywel Dda University Health Board Estates and Facilities Performance Breakdown 2020/21

4.5.152 In totality, the University Health Board has achieved a 'red' rating.

4.5.153 Energy performance is calculated by net energy consumption (kWh/m²). The table above shows that the following hospitals have very poor energy and carbon results and are 'red' rated: Amman Valley, Bronglais, Llandovery, Glangwili, Prince Philip and Tregaron. There are many reasons for this, including the age of the estates, high levels of backlog maintenance and a range of site challenges, for example poor fabric insulation, old infrastructure (i.e., old boilers, long service runs, single glazed windows), use of oil as the principal fuel source and poor controls. Although Prince Philip Hospital is the newest acute site (approximately 30 years old), it suffers from similar issues, including poor insulation, and ageing and inefficient infrastructure. However a number of our newer sites are in the 'green' category

4.5.154 Bronglais and Withybush Hospitals, both of which were constructed in the 1960s and 1970s (and have fabric and insulation issues), have undergone improvements, including new build developments on site and a new boiler house and gas supply.

4.5.155 A number of sites on the list are subject to disposal or repurposing. For the remaining sites action plans have been developed to deliver a reduction in carbon and energy in line with the Welsh Government Decarbonisation Strategy.

4.5.156 The *NHS Estate Dashboard Report 2020/2021* illustrates that the University Health Board's net energy consumption of 491kWh/m² and carbon dioxide emissions of 107kg/m² rank highest compared to all other Health Boards in Wales. Swansea Bay University Health Board ranks second highest with net energy consumption and carbon dioxide emissions of 440kWh/m² and 91kg/m² respectively.

Business Needs

4.5.157 In April 2019 Welsh Government declared a climate emergency and requires all public sector organisations to develop plans to decarbonise over the next 9 years to achieve the ambition for the public sector in Wales to be carbon neutral by 2030. As such, Welsh Government has developed an All Wales NHS Decarbonisation Strategy, published on 26 March 2021. Decarbonisation is also one of NHS Wales' Ministerial Priorities.

4.5.158 The Welsh Government Strategy sets out a 'roadmap' and delivery plan for decarbonising the NHS estate. The overall ambition by 2030 is:

- To reduce carbon emissions by 34%; and
- For every building to have undergone an energy efficiency upgrade.

4.5.159 This has been reflected in the University Health Board's Strategic Objective no 6: Sustainable use of resources; and also aligns to our Well-being Objectives. Working with The Carbon Trust we have produced a report titled "Scoping and Modelling Assessment for Building & Transport Decarbonisation" (October 2021), attached at Appendix 12. This report provides an initial high-level assessment of Scope 1 & 2 opportunities for the University Health Board to scope target areas and next step activities for the Health Board to fulfil its requirements in contributing to a net zero public sector.

4.5.160 The Carbon Trust conducted the foot printing and baseline validation in accordance with the greenhouse gas (GHG) protocol – the most widely used and accepted methodology for GHG accounting. The GHG protocol categorises emissions into three scopes: Scope 1: All direct GHG emissions (i.e. 'on-site' emissions, such as gas from a gas boiler or tailpipe emissions from a vehicle); Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam; and Scope 3: All other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc.

4.5.161 The report found that the University Health Board's footprint for FY 18/19 was calculated to be 98,854 tCO2e. The composition of the footprint aligns to NHS Wales overall footprint, with the majority of emissions (~80%) attributed to our value chain. Energy consumption at University Health Board-operated sites is still a substantial emission source, totalling 19,227 tCO2e. The three largest emission categories make up 86% of the total footprint: 1. Procured goods and services (57,109 tCO2e) 2. Employee commuting and patient/visitor travel (18,067 tCO2e) 3. Natural gas consumption in Health Board operated buildings (2,066 tCO2e).

4.5.162 Our footprint is across annual procurement spend of approximately £177 million; an estimated 57 million miles of employee commuting and patient/visitor travel per annum; and over 180,000 m2 of occupied floor space.

4.5.163 Analysis has been performed to project the University Health Board's emissions out to 2030 and determine our expected progress against decarbonisation targets. The analysis has identified decarbonisation projects to be implemented between now and 2030 – either planned (e.g., disposal of existing sites, on-site renewable generation) or theoretical – and estimated the changes in fuel consumption associated with their implementation.

4.5.164 The scenario presented is ambitious and far-reaching. If implemented, it is expected that the University Health Board will achieve a reduction in scope 1 and 2 emissions of 58.2% by 2030 relative to the baseline year. This would exceed the scope 1 and 2 emissions target set out in the NHS Wales strategy (the 'target') by 2,426 tCO2e. However, transformational change will be required to realise this projection. Extensive energy efficiency upgrades will be prerequisite across the estate and significant fuel switching (including the decommissioning of all CHP plants at acute sites) will be a necessity. Large-scale and multi-million pound projects form the backbone of the scenario, and only pursuing 'like-for-like' upgrades of current technologies established within the University Health Board and requiring financial returns will not be sufficient. Whilst this projection shows that the target is achievable, the scale of change required to achieve it should not be underestimated.

4.5.165 The report sets out next steps for development of a University Health Board Action Plan to report to the NHS Wales Decarbonisation Programme Board. The Action Plan will seek to address some of the following initiatives for buildings and fleet (as per scope of this assessment) as well as developing the wider approach for Scope 3 emissions.

4.5.166 The University Health Board's Action Plan will form its 'route map' to being a carbon neutral organisation by 2030, allowing the exploration, progression and delivery of a wide range of measures including but not limited to energy efficiency, renewable technology, low carbon heat technologies, introduction of low carbon vehicles and charging points, IM&T technology enhancements and changes to the way we procure goods and services. It will use the 2018/19 carbon footprint data as the benchmark for setting carbon reduction targets going forward in line with the targets defined in the All Wales Decarbonisation Strategy.

4.5.167 The University Health Board's Estates Annex (attached at Appendix 9) is aligned to the Scoping and Modelling Assessment: the design strategies address the route to zero carbon, which includes the impact on new build and repurposing; residual retained estate; decarbonising existing energy infrastructure; decarbonising existing retained buildings; decarbonisation of the grid and green electricity procurement; electrical heating and cooling generation; and air quality.

4.5.168 We also recognise that there is a clinical element to the decarbonisation agenda: articles published in the September and October 2021 editions of The British Medical Journal[17] report on "in use" carbon production, which is very topical in medical literature: the point that comes through these papers is that the Value-Based Healthcare (VBHC) policy and plan that is in place in NHS Wales and is a "design principle" in the A Healthier Mid and West Wales Programme, can be tied into the decarbonisation agenda. VBHC calls for reducing

[17] Grimmond TR, Bright A, Cadman J, et al. Before/after intervention study to determine impact on life-cycle carbon footprint of converting from single-use to reusable sharps containers in 40 UK NHS trusts. BMJ Open 2021;11:e046200. doi:10.1136/ bmjopen-2020-046200; and
Sherman J et al. Net Zero Healthcare: a call for clinician action BMJ 2021;374:n1323 http://dx.doi.org/10.1136/bmj.n1323; and
Wilkinson E. NHS in England on track to hit first year carbon reduction target BMJ 2021;375:n2466 http://dx.doi.org/10.1136/bmj.n2466

over-medicalisation, reducing interventions that do not meet patients' need and are therefore of very low value, such as:

- operations that do not "fix the problem" and never will;
- the approximately 20-30% of outpatient appointments that are without any point or value;
- medicines that are manufactured and dispensed and transported but are not necessary, particularly inhalers; and
- duplicated scans because the result is not available to the clinician.

4.5.169 Reduction of carbon emissions can be achieved through, for example, extending the use of virtual care over video, asynchronous care using patient held records and messaging, home monitoring and point of care testing. We therefore recognise that it is important to engage clinicians and help them to rethink how and what care is delivered because it could significantly contribute towards the reduction of our carbon footprint. We are linking measures to our Strategic Objectives (e.g. one of our measures against Strategic Objective 6 – Sustainable Use of Resources – is usage of carbon-friendly inhalers).

4.5.170 Furthermore, the ethos of our Strategy and Programme is to reduce the requirement for patients, staff and visitors to travel, by carefully considering:

- Public transport links to the new Urgent and Planned Care Hospital to minimise car use; and
- The location of our corporate functions: minimising the need for staff to travel and meeting the ambitions of **Regenerating Town Centres in Wales (2021)**, will be core planning principles as we think through whether to locate corporate functions at the new Urgent and Planned Care Hospital or elsewhere.

4.6 Spending Objectives

4.6.1 This section sets out our Programme Spending Objectives. We have aligned these with our Strategic Objectives (see section 4.4.8). We have used them to help define the outcomes and benefits we want to achieve, and they also provide a basis for appraising options in the Economic Case together with the Critical Success Factors, and for conducting post-project evaluation.

4.6.2 We have classified benefits as follows:[18]

- cash-releasing benefits (CR);
- monetisable non-cash releasing benefits (non-CRB);
- quantifiable but not readily monetisable benefits (QB);
- qualitative but not readily quantifiable (Qual).

4.6.3 The quantification of benefits is considered in the economic appraisal section of the Economic Case.

4.6.4 There is an emphasis on qualitative benefits at this stage because the Programme represents whole system change over a long period of time.

[18] Welsh Government and HM Treasury, Guide to developing the Programme Business Case (November 2018) pp.19-20

4.6.5 In 2020, our Chief Executive led a piece of work to take stock of the decisions made by the Board over the previous three years. From this, the Board agreed a refreshed set of Strategic Objectives which set out the aims of the organisation– the horizon we are driving towards over the long term. It allows us to all come together and coalesce around a joint ambition.

4.6.6 Aligned to each Strategic Objective are:

- a set of specific (shorter-term) Planning Objectives; and
- outcomes, principal risks and proxy progress measures.

4.6.7 The outcome measures are designed to provide an understanding of whether our actions as a health board are having the desired impact on the Strategic Objectives.

4.6.8 From December 2021, the measures below will be included in the performance assurance report dashboards for each Strategic Objective presented to the Board. This means that Welsh Government can have confidence that all measures cited in the table will be measurable.

4.6.9 The table presented below aligns with this work. We have also shown how the Spending Objectives, outcomes and benefits map against the Health and Care, Workforce, Estates, Digital and Environmental Cases for Change detailed above.

A Strategic / Spending Objective	B Driver for spend (WG PBC Guidance) / Investment Criterion (NHS Wales Infrastructure Investment Guidance)	C Outcomes	D Benefits and Measurement	E Beneficiaries	F Case(s) for Change addressed
1. Putting people at the heart of everything we do	Effectiveness, Efficiency, Compliance **Clinical & skills sustainability**	• Our patients report a positive experience following their treatment and care • Our staff feel valued and involved in decisions • We are actively engaging our population and seek their feedback about current experiences and future needs	**Benefit:** • Patients feel that the environment will enhance their care, safety and recovery (Qual) **Measurement:** • Overall patient experience score from patient surveys **Benefit:** • Staff feel the University Health Board is a great place to work and develop their careers (Qual) **Measurement:** • Overall staff engagement score (OD is giving 1,000 members of staff a month an opportunity to complete a survey, so that the whole staff is surveyed over a whole year) **Benefit:** • Staff and communities have been involved in the design of facilities and therefore feel a sense of community ownership (Qual) • Measurable and sustained improvements in the equality and accessibility of our services (QB) • Patients, staff, carers, families and visitors feel welcome, safe and included (QB) **Measurement:**	Citizens Staff HDUHB	Health and Care Workforce Digital Estates Environmental

			• Percentage who feel able to influence decisions affecting their local area (this is a national Welsh Government well-being measure collected through a national survey, not specifically related to health) • Staff and patient questionnaires to measure the extent to which patients, staff, carers, families and visitors feel welcome, safe and included • Design workshops and their output being included in FBCs, costed and delivered (there will be a number of sessions and people's comments and the University Health Board's actions in response will be recorded) • The art displayed in our buildings coming from and being relevant to the local area		
2. Working together to be the best we can be	Effectiveness, Compliance **Health gain, Equity**	• We are listening to the voices of our patients to ensure that our services deliver the outcomes that are important to them • Our staff feel that they are part of an effective team • As a Health Board, our strategic vision is clear and our objectives are aligned	**Benefit:** • Higher levels of patient satisfaction (QB) **Measurement:** • Percentage of action plans completed at Value Based Health Care service review meeting **Benefit:** • Higher levels of staff satisfaction (QB) **Measurement:** • Staff response to: Team members trust each other's contributions **Benefit:** • Improved alignment between staff's personal objectives and strategic vision (QB) **Measurement:** • Staff response to: I have had a PADR in last 12 months that has supported my development and provided me with clear objectives aligned to team and organisation goals	Citizens Staff HDUHB NHS Wales	Health and Care Workforce

3. Striving to deliver and develop excellent services	Effectiveness, Efficiency, Economy, Compliance **Health gain, Clinical & skills sustainability, Equity**	This Strategic / Spending Objective is about how we continuously improve our services. The Outcomes we want to achieve are therefore: • We are actively involved in research development and innovation • Our staff actively bring improvement and innovation into our thinking • Our staff are empowered and supported to enact change and continuously learn and improve	**Benefit:** • Increased research and technological activity (QB) **Measurement:** • New R&D studies commenced in a year (hosted and sponsored) **Benefit:** • Staff are better informed of our R&D activities and actively use them to make improvements to their area at work (QB) **Measurement:** • Staff response to: I am able to make improvements in my area at work **Benefit:** • Staff continuously learn and improve and feel empowered to enact change (QB) **Measurement:** • The number of staff per 1,000 who have undertaken improvement training	Citizens Staff HDUHB NHS Wales	Digital Workforce
4. The best health and well-being for our communities	Effectiveness, Compliance **Health gain, Equity**	• Our communities feel happy, safe and are able to live life to the full • Our communities have the opportunity from birth to old age to be healthy, happy and well informed • Our communities have a voice and are able to fulfil their potential no matter what their background or circumstance	**Benefit:** • Improved mental well-being for patients and staff (QB) **Measurement:** • Mean mental well-being score, available through the National Survey for Wales **Benefit:** • Improved healthy lifestyle behaviours amongst adults (QB) **Measurement:** • Percentage of adults who have fewer than two healthy lifestyle behaviours, i.e. we are aiming for the	Citizens Staff HDUHB	Health and Care Workforce

			percentage of adults who have fewer than two healthy lifestyle behaviours to be as low as possible **Benefit:** • Improved Healthy Life Expectancy across all demographics of the population (QB) **Measurement:** • Healthy Life Expectancy at birth including the gap between the least and most deprived.		
5. Safe, sustainable, accessible and kind care	Effectiveness, Efficiency, Economy, Compliance **Health gain, Clinical & skills sustainability, Equity**	• We minimise harm for the patients in our care • We have a stable and sustainable workforce • Our patients can access services in a clinically appropriate timescale • We maximise the number of days that people spend well and healthy in their own home	**Benefit:** • Consistent and sustained improvements in patient safety (QB) **Measurement:** • Number of incidents resulting in harm to our patients across the whole system **Benefit:** • Improved sustainability of the workforce (QB) **Measurement:** Our People, Organisational Development & Culture Committee provides assurance to the Board on best practice relating to the workforce and organisational development (OD) agenda, using workforce metrics and key performance indicators which provide assurance of delivery against objectives and nationally set targets. Indicators are grouped as shown below, and many will be relevant to measuring our progress against the Benefit above:1. Workforce Profile 2. Recruitment Activity 3. Job Planning, PADR and Job Evaluation 4. Sickness Absence 5. Annual Leave balances 6. Core Skills Training Framework & other compliance	Citizens Staff HDUHB	Health and Care Workforce

			7. Temporary Workforce Utilisation 8. Staff Psychological Well Being Service 9. Starters and Leavers. The Workforce and Organisational Development Directorate is also developing a dashboard to monitor performance against national delivery framework targets, including for example: • Overall staff engagement score • Agency spend as a % of total pay bill • Percentage of sickness absence rate of staff • Percentage of staff who have had a performance appraisal who agree it helps them improve how they do their job • Variable pay (agency, locum, bank & overtime: monthly position). **Benefit:** • Improved waiting times for high-risk planned care patients (Non-CRB) **Measurement:** • Percentage of high-risk planned care patients are seen within a clinically appropriate timescale **Benefit:** • Decrease in bed day occupancy for patients aged 75+ (Non-CRB) **Measurement:** • Bed day occupancy for those aged 75+		
6. Sustainable use of resources	Effectiveness, Efficiency, Compliance, Replacement	• Our positive impact on society is maximised	**Benefit:** • Increased spend to local and/or Welsh businesses (QB) **Measurement:**	Citizens Staff HDUHB NHS Wales	Estates Environmental

	Health gain, Clinical and skills sustainability, Equity, Affordability, Value for money	• We are making a positive contribution to addressing the climate emergency • We are making progress against the delivery of our "Roadmap to Financial Recovery"	• Percentage of third party spend with Hywel Dda and Welsh suppliers **Benefit:** • Achievement of carbon reduction targets (QB) • reduced energy consumption and costs (CRB); and • improvement of the built environment through maximisation of green spaces (Qual) **Measurement:** • Total carbon emissions **Benefit:** • Improved financial position (CRB) **Measurement:** • Compliance on break-even duty		

4.6.10 When we reach OBC stage we will develop our thinking on outcomes and benefits so that they correlate directly against individual elements of the Programme; and are SMART, i.e. tied directly to capital investment. Our initial view is that benefits related to improvements to our estate and decarbonisation will be directly attributable to discrete projects – e.g. the new Urgent and Planned Care Hospital, repurposing of our existing sites; however, health and care and workforce-related benefits will be generated through the implementation of our Health and Care Strategy through the Programme as a whole and it will not be possible to disaggregate them by project.

4.7 Proposed Scope

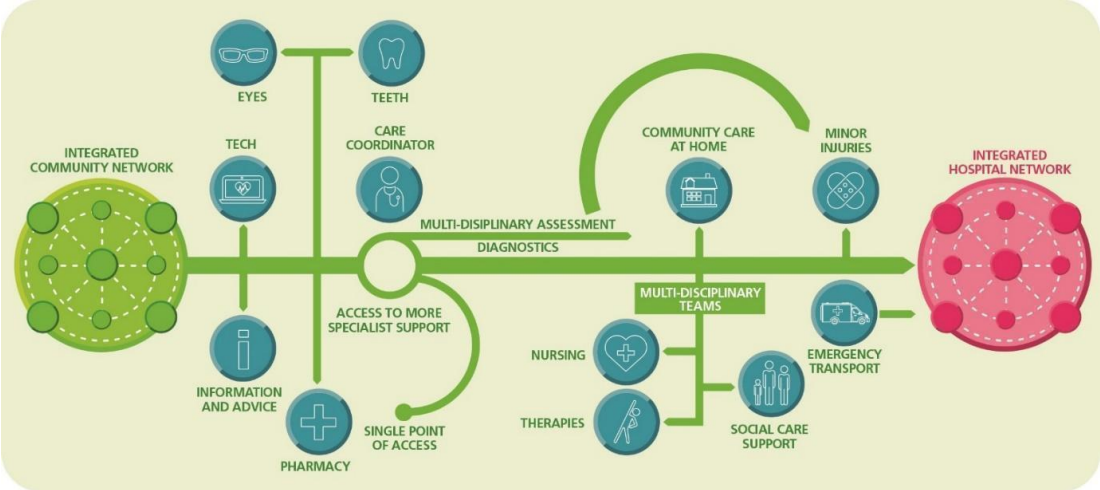
4.7.1 This section provides a high-level description of our programme of change and infrastructure investment to implement the Health and Care Strategy, address the Case for Change identified in Section 4.5 and meet the Spending Objectives described in Section 4.6.

'It has made such a difference to the quality of care I can give my patients with all parts of the system working together. We are now able to support more people to live well in their own communities and when they need hospital care, we are able to provide this specialist care in a timely way and support them to return home as soon as they are able to'

4.7.2 ***Whole-system approach:*** The University Health Board places people and communities at the heart of the whole system. A system-wide transformation will need to take place, with changes made to every aspect of the care and support provided, through an integrated approach that involves health and social care services, working alongside all other public-facing services which actively contribute to healthier communities.

4.7.3 The Board has approved a commitment to a whole-system approach where primary and secondary care are not seen in isolation but work together to provide seamless care for local people. In line with a social model for health, the Strategy recognises that health is about far more than healthcare and requires contributions from across the whole system as an integrated population health and wellness system spanning multiple settings and delivering care and support that fits around the person and what matters to them. Informal carers, and support of them, are a key feature of the whole system.

4.7.4 The diagram below illustrates the whole-system approach to health and care in practice. It shows how the integrated community network supports the wider aspects of health and well-being, supporting lower levels of need. Specialist healthcare will be provided within an integrated network of hospitals that range from minor injuries to urgent and critical care.



Source: 'A Healthier Mid and West Wales, Our Future Generations Living Well'

4.7.5 The objective of adopting a whole-system collaborative approach is to improve well-being, promote independence, prevent ill-health and access specialist care as and when required. The future whole-system approach aims to:

- Deliver integrated care and support, enabled by digital technology with communication of information between health and social care partners across traditional community and hospital boundaries and allows people to access more information about their health and care;
- View mental health and care equally with physical health and care, ensuring that those with mental health problems receive equitable access to the most effective and safest care available;
- Consider the full seven-days of the week, expanding access to the services that will have the most positive impacts;
- Create a single point of access to health and care, linking all areas that contribute to the healthier lives of the people and communities; and
- Increasingly considers carbon footprint to maintain the environment for the health and well-being of future generations.

4.7.6 ***Community Model:*** The Board has approved the development and implementation of an enhanced community model, based on an integrated social model for health and well-being, and its implementation at pace as a long term commitment focused on prevention, well-being and early intervention to help build resilience and enable people to live well within their own communities. The community model and its underpinning elements are described in the Health and Care Strategy, including:

- Supporting community resilience by building on the assets already available (Cormac Russell's Asset-Based Community Development model);
- Strengthening integrated working;
- Developing integrated community networks;
- Co-designing a model for community hospitals and community beds;
- Developing health and well-being centres;

- Enhancing the provision of unscheduled care in the community;
- Ensuring timely discharge from hospital;
- Demonstrating the new community model in action, via early implementer sites.

4.7.7 The community service model envisages a network of local health and well-being centres, described in the graphic below:

4.7.8 ***The Programme – "Proposal B+":*** As noted in Section 4.4, in September 2018, the Board agreed with recommendations following consultation and made a decision to proceed with Proposal B as the preferred way forward, with the inclusion of Prince Philip retaining acute medical services.

4.7.9 The main advantage of this proposal was the ability to deliver services locally within the Hywel Dda area for as many people as possible. Many had concerns that if Prince Philip did not remain a Local General Hospital, then large numbers of residents from the most populated areas would inevitably receive services in the neighbouring Swansea Bay University Health Board (SBUHB). Some also argued that services should be retained as Prince Philip currently networks well with services in SBUHB and alleviates pressure from Morriston Hospital, Swansea.

4.7.10 The outline service model for Proposal B+ is as follows:

Facilities	Description	
Three main hospitals	A major new urgent and planned care hospital centrally located somewhere between Narberth and St Clears	
	Bronglais District General Hospital will continue to provide acute hospital services for Mid Wales	
	Prince Philip Hospital, Llanelli, with acute medicine retained	
Two repurposed hospitals	Glangwili in Carmarthen	These will be repurposed to offer a range of community services to support the social model for health and well-being
	Withybush in Haverfordwest	
Community hubs	A network of community hubs supporting an enhanced community service model	

4.7.11 The service model is described in further detail below. Additional information can be found in the Clinical and Support Service Narratives attached at Appendix 8B.

4.7.12 **Urgent and Planned Care Hospital (new site):** This site will be the main site for the network of hospitals covering urgent and planned care. It will offer a more centralised model for all adult and children services and include specialist mental health facilities. The scenarios described in the Economic Case are based around assumptions as to maximum length of stay. Achievement of these assumptions will require transfer of patients from this site to the step-down beds at Glangwili, Prince Philip and Withybush Hospitals. It is also likely that on occasions there will be a need to transfer patients from these sites to the acute site due to the level of clinical assessment and intervention required. There may also be a requirement to transfer more critical patients from Bronglais Hospital as part of the network approach to delivering care.

4.7.13 The Urgent and Planned Care Hospital site is subject to a land acquisition process described in sections 4.7.51 – 4.7.54. The Hospital will comprise a c.70,000sqm clinical building and will also house corporate functions and support services and a stand-alone administration/education building. Clinical services to be provided include:

- Trauma Unit and Emergency Department.
- 24/7 access to specialties (medicine, surgery, obstetrics and gynaecology, paediatrics, diagnostics, mental health and learning disabilities).
- Critical Care (Levels 1, 2 and 3).
- 24/7 diagnostic support.
- Planned major day case and inpatient operations and treatment.
- Cardiac catheterisation and pacing laboratory.
- Specialist outpatient services.
- Inpatient and limited outpatient therapies.
- Multi-professional health education facility.
- Research and innovation facilities, including Institute for Life Sciences.

4.7.14 **Bronglais General Hospital (existing District General Hospital site):** Bronglais General Hospital will build its reputation as an excellent rural provider of acute and planned care. It will continue to provide the current range of urgent, emergency and planned care services with more specialist cases transferred to the main Urgent and Planned Care Hospital (as well as other regional sites for critical care). Given site constraints there is no new-build option for the hospital.

4.7.15 Services to be provided include:

- 24/7 Emergency Department and Urgent Care Centre.
- 24/7 access to acute specialties (medicine, surgery, obstetrics & gynaecology, paediatrics).
- 24/7 diagnostic support.
- Critical Care.
- Planned major day case and inpatient operations and treatment.
- Day case elective facilities including endoscopy.
- Midwife led unit and low-risk obstetrics.
- Outpatient services including Chemotherapy.
- Older Adult inpatient mental health beds.

4.7.16 Bronglais Hospital will have at least the same range of clinical services as presently, and the University Health Board will be looking to expand services where possible to ensure long-term clinical sustainability.

4.7.17 Our ability to meet current Health Building Note standards is significantly constrained at Bronglais Hospital, however we have explored where we might be able to deliver greater flexibility, including for example the utilisation of additional clinical space to support an expanded catchment area to the south of Ceredigion or to improve the compliance with healthcare building standards for the current clinical capacity.

4.7.18 The refurbishment plans for Bronglais Hospital can be implemented on a timeline independent of the implementation programme for the rest of University Health Board's sites, including the new Urgent and Planned Care Hospital.

4.7.19 The future plans for Bronglais Hospital need to be seen in the context of the development of the integrated community care centre in Aberystwyth and the opportunity to potentially transfer some clinical and non-clinical services to this facility, leading to greater clinical flexibility on the Bronglais Hospital site.

4.7.20 **Glangwili and Withybush Hospitals (existing sites repurposed as community hospitals):** These sites will operate as local community hospitals. Beds will be therapy and nurse led, focusing on rehabilitation and less acute needs (step up from the community /step down from the acute hospital). There will be access to diagnostics and general outpatient clinics with more specialist assessments taking place at the Urgent and Planned Care Hospital. Both hospitals present both refurbishment and new build options, with new-build options being dependent on creating space on site.

4.7.21 Services to be provided include:

- 24/7 GP led urgent care centre.
- Therapy and nurse led step up and step-down beds (less critical needs or rehabilitation) (subject to further exploration when pathway analysis is undertaken).
- Outpatient clinics and specialist ambulatory 'hot' clinics.
- Facilities for an identified range of day case procedures.
- Midwife led units.
- Access to diagnostic support (x-ray, ultrasound, mammography).
- Renal Dialysis and Chemotherapy.

4.7.22 The final service configuration for these Hospitals will take account of the development of Integrated Community Care services in Carmarthen and Haverfordwest Central: we consider that Withybush Hospital will have the option to be part of an ICC site, whereas Glangwili Hospital is likely to be separate from the ICC site.

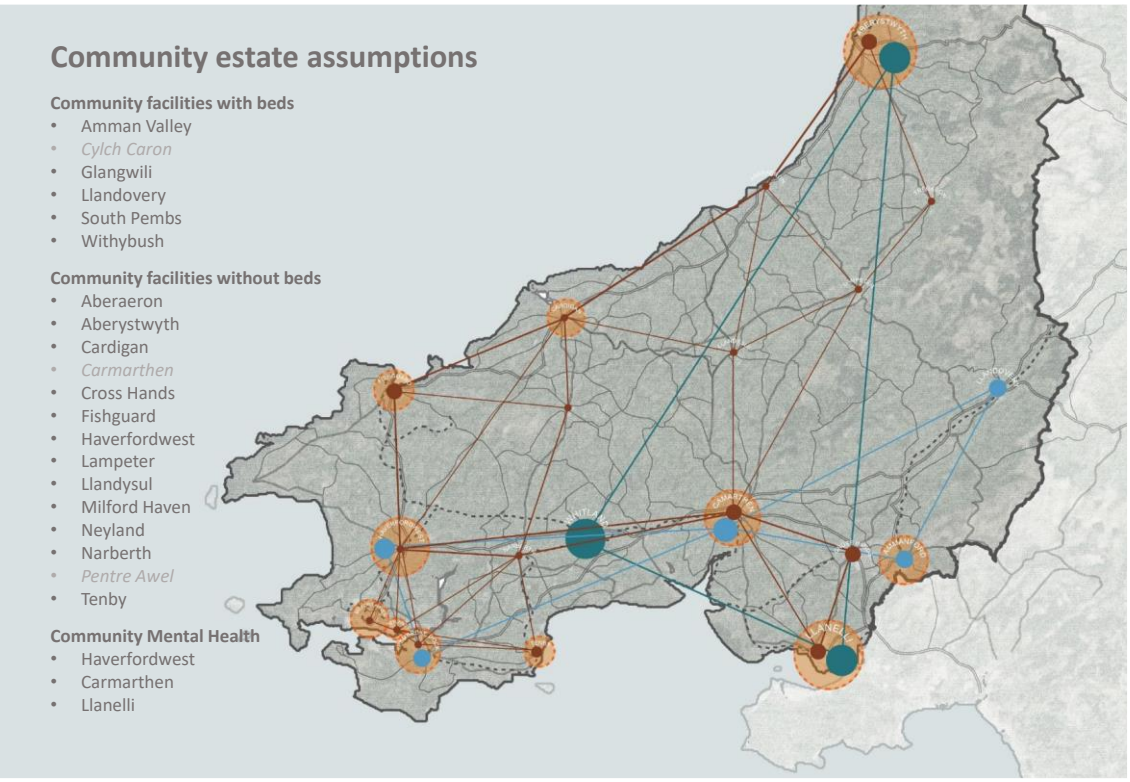
4.7.23 **Prince Philip General Hospital (existing District General Hospital site):** Prince Philip Hospital will operate as a local general hospital, supporting acute medical admissions. The hospital will require consultant-led overnight beds with diagnostic support and will act as a stabilisation and transfer hub for certain specialised conditions. There is also an ambition to build on existing local services that can thrive as centres of excellence. There are no new-build options on this site.

4.7.24 Services to be provided include:

- 24/7 GP led urgent care centre.
- 24/7 access for acute medicine supported by consultants and teams plus high dependency care capability.
- 24/7 diagnostic support.
- Critical Care.

- Day case surgery and endoscopy.
- Outpatient clinics and specialist ambulatory 'hot' clinics plus Chemotherapy.
- Facilities to offer midwife-led deliveries.

4.7.25 **Community Hubs (new and/or refurbished sites):** Each of the seven integrated community networks will be supported by one or more health and well-being centres which will bring a number of people and services together in one place and also provide virtual links between the population and the community network. Multidisciplinary teams and the wider networks will wrap around individuals and families. In addition to providing access to diagnostics and consultations, the service offering within the community network will also include community beds to prevent individuals from needing to go to hospital as well as to support timely discharge. This will include beds within the community hospitals as well as commissioned beds within nursing and residential homes and extra care supported living facilities as well as providing support and care to people in their own homes. These community hubs form an essential element of the whole system approach to delivering care.



4.7.26 A range of services is anticipated to be present within the community hubs, including:

- Outpatient clinics supported by diagnostic tests and scans, including x-rays.
- Treatment for minor illness and minor injury.
- Planned and preventative care for people living with long term conditions.
- Overnight stay for patients unable to remain at home but not requiring a hospital care (step-up care), rehabilitation after a stay in hospital (step-down care) and assisted living.
- Mental health advice and support.

- Advice and support on a range of health and well-being needs including information on preventing and treating illness.

4.7.27 **Design:** This section sets out high level information about design of the facilities described above. It is the foundation for the economic appraisal set out in the Economic Case. The fundamental objective of the design is to reflect the Strategy by moving beds from secondary care to the community.

4.7.28 ***Design assumptions:*** The Health and Care Strategy identified the following strategic design assumptions. These have not changed and have been implemented in all of our design work. They are the basis of the Minimum, Likely and Maximum Efficiency scenarios described in the Economic Case:

Population Impact of increase in the population over 7 years (to 2024/25)	**Site changes** Flow of patients to nearest site providing required service*	**Admission avoidance** 40% Reduction to existing levels of emergency admissions for ACS conditions	**Bed discharge** Reduction in lengths of stay to the median of the peer group	**Outpatient change** 25% Reduction in follow-up outpatient appointments
A&E/MIU change 4.3% Reduction in overall level of A&E & MIU attendance (net 0% change against demographic growth over 7 years)	**A&E/MIU proportions** 30% Attendances currently presenting at A&E will present at MIUs instead	**Acute to community step-down – beds** 50% Patients in an acute bed will step down to a community bed within 72 hours of admission	**Acute to community step-down – outpatients** 90% New and follow-up appointments will take place in a community setting	**Daycase community hub shift** 50% Daycases for medical specialties will take place in a community setting

4.7.29 ***Bed numbers and areas:*** We have developed three scenarios based on the application of the Design Assumptions, named "Minimum", "Likely" and "Maximum Efficiency" scenarios and described in the Economic Case. The proposed areas and bed numbers under each scenario are shown in the table below.

	Existing area (sqm)	Existing Beds	Proposed area (sqm)	Proposed beds
Bronglais Hospital	27,531	155	28,673	152
Glangwili Hospital	51,294	383	0	0
Prince Philip Hospital	29,297	216	27,367	169
Withybush Hospital	39,477	213	0	0
Urgent & Planned Care Hospital	0	0	82,918	506
Mental Health (see note below)	11,818	107	8,161	98
Aggregated community sites	30,196	98	72,391	209
Totals	**189,613**	**1,172**	**219,510**	**1,134**

1. Existing areas taken from 2021 EFPMS data
2. Existing bed numbers from HB activity model with mental health beds added for comparison
3. Mental Health existing areas include Bro Cerwyn & Hafan Derwen.
4. Mental health existing beds include 10 @ Bronglais, 42 @ Prince Philip, 30 @ Hafan Derwen and 25 @ Bro Cerwyn.
5. Proposed acute areas taken from schedule of areas 06.10.2021 based on the likely scenario (residences removed at BGH, Withybush and Glangwili)
6. Proposed Urgent & Planned Care Hospital campus figures include standalone administration/teaching and residential accommodation
7. Proposed Mental Health figures based on new unit at the Urgent and Planned Care Hospital site
8. Proposed community areas are estimated and include 14,515sqm and 72 beds @ Glangwili and 13,793sqm and 48 beds @ Withybush

4.7.30 The University Health Board currently has 1,172 beds and occupies a total estate area of 189,613m². Under the Likely Efficiency scenario the number of beds would decrease by 38, to 1,134 beds and the estate area would increase by approximately 29,817m² (15.8%) to 219,510m².

4.7.31 High-level estates options are provided in the Estates Annex attached at Appendix 9 and form the basis of the economic appraisal in the Economic Case.

4.7.32 We will closely involve community groups in design discussions around site changes.

4.7.33 The Glangwili and Withybush Hospital community hubs will be co-designed.

4.7.34 More detailed work will be done with clinicians and the public at the next stage of the process to test how much day case surgery and outpatients can be done on the existing sites.

4.7.35 The future provision of the renal service will need to be explored but the ambition is to retain the existing locations.

4.7.36 Palliative Care: It is currently proposed to keep the PPH palliative care facility, however we recognise that palliative care provision will be subject to further scrutiny in terms of sustainability.

4.7.37 At this stage we are keeping open the option for providing services that are currently tertiary: in conjunction with Swansea Bay University Health Board, we may choose to provide services which are currently provided as tertiary services, such as radiotherapy, neurology services, cardiac catheterisation services. Each of these services is being reviewed regionally through the ARCH partnership.

4.7.38 ***Biophilic design:*** Design of the new Urgent and Planned Care Hospital and of other facilities will follow principles of biophilic design.

'An innate and genetically determined affinity of human beings with the natural world'

4.7.39 Biophilic design is a relatively new term in the field of healthcare design but the basic principles of designing to better connect people with their natural environment has been around for centuries.

4.7.40 Perhaps the reason why the term has become more prevalent in recent times is a reaction to a 'design by numbers' approach where buildings and spaces are standardised to such an extent that they lose their connection to place.

4.7.41 Principles of biophilia are strongly linked to place and it is important that these factors are embedded in the early design strategies with consideration of site specific issues such as micro-climate, landscape characteristics and the social, historical and cultural relationship to the local community.

4.7.42 Many of the basic principles of biophilic design such as access to daylight, views and fresh air are already regarded as standard practice in healthcare design. The benefits to staff and patients can be quantified thanks to evidence collected over many years by experts such as Roger Ulrich, who has helped to measure the financial benefits of adopting these principles such as reduced use of pain relief medicines and shorter stays in hospital.

4.7.43 Biophilic design principles encourage a multi-sensory approach to design. The health and well-being of staff and patients can be significantly impacted by factors such as touch, texture, sound and smells as part of the overall sensory experience. The choice of interior materials has a major impact on a building user's sensory experience and the use of natural materials is recommended as an integral part of a holistic approach to well-being.

4.7.44 A successful multi-sensory environment will also be diverse and dynamic reflecting changes in seasons, natural light, external temperature and weather patterns. This is particularly important to shift workers in healthcare environments.

4.7.45 The benefits of a design approach which reflects biophilic principles can include a calmer environment for staff, patients and their families, increased creativity, productivity and reduced stress, reduced post operation recovery times and reduced medication use.

4.7.46 There is no 'right or wrong' approach to biophilic design and quantifying how well a design responds to the key principles is complicated. Many aspects such as access to daylight and views and environmental comfort are part of good design practice, but how well as design responds to other sensory factors such as smell and touch is more difficult to assess during the design stage. Tools such as BREEAM and WELL offer some quantitative assessment but other elements will require strong design leadership and clear articulation of quality aspirations in the design brief.

4.7.47 We have identified Khoo Teck Puat Hospital in Singapore - a 590 bed public facility which opened in 2010 and which deeply integrates plants in its architecture - as a global exemplar in biophilic design[19]. Greenery takes up nearly four times the size of the plot of land the hospital is built on, and the design makes use of V-shaped massing - shaping a

[19] See article available at https://gbdmagazine.com/singapore-hospital/

building into an angled series of blocks to maximise natural ventilation and reduce energy usage.

4.7.48 Alder Hey Children's Health Park, a project undertaken by Alder Hey Children's Hospital NHS Foundation Trust and completed 2015, is an example of the application of biophilic design principles in a healthcare setting: central to the design idea was ensuring that the majority of rooms (whether for children or staff) enjoy park views and that gardens and terraces are equally accessible to all.[20] There will also be valuable lessons for us to learn from the Whipps Cross Hospital Redevelopment, where the vision is to draw the surrounding landscape of Epping Forest into the site: reconnecting the hospital to the forest will provide therapeutic and healing benefits for patients and an uplifting environment for staff, visitors and the wider community.[21] The principle of "reconnection" with the surrounding environment will be an important design principle for the Urgent and Planned Care Hospital

4.7.49 These examples also show that biophilic design is about making a positive impact on the environment, over and above the positive impacts on patient and staff well-being.

4.7.50 We linked in with the Biophilic Wales Project - a project from the National Botanic Garden of Wales working to increase the well-being of people, wildlife and the environment throughout Wales - at the start of their work. They presented at our 2019 Green Health Network Event and we have held a number of discussions with them over the last two and a half years about their work, feeding this into our Green Health Coordinating Group. The main areas of learning for us have been around engagement, managing volunteers and also how to keep projects alive with the onset of the pandemic. We have also used our experience with them to inform the specification of a Green Health Project Manager role. Our Chief Executive has requested that a Biophilic Advisory Group be set up to ensure that biophilic design principles are fully embedded in the development of our OBCs.

4.7.51 ***Identification of the site for the new Urgent and Planned Care Hospital:***

4.7.52 Through public consultation the University Health Board has identified a zone between Narberth and St Clears as the optimum location for the new Urgent and Planned Care Hospital and the Land Team's objective is, through a staged process, to identify a short list of sites and then a preferred site to be taken forward.

'As a staff member and a local resident, I was pleased to have been regularly asked about my thoughts for the new Urgent and Planned Care Hospital. I can see my community and I have had influence in its design and I am proud that we have this Centre of Excellence in our Health Board to deliver the high quality care our population deserves'

[20] See article available at https://www.bdp.com/en/projects/a-e/alder-hey-childrens-health-park/

[21] https://hoarelea.com/app/uploads/2021/06/Intelligent_Hospitals_Design_Principles.pdf

4.7.53 The Land Team has incorporated lessons learned from experience elsewhere in the UK and is working with the Consultation Institute and appointed specialist advisers to ensure the process is robust and reflects best practice.

4.7.54 The process can be outlined as follows:

Stage 1 [Complete]

- Establish the Land Team - the Team comprises University Health Board staff, specialist advisers and a nominated representative from Local Authorities.
- Confirm site search parameters and criteria for initial selection - for hurdle criteria were agreed as follows:
  (i) The site should be within the identified zone.
  (ii) The site must have a minimum of 35 acres of reasonably developable land.
  (iii) It must have realistic prospects of obtaining planning permission for a new hospital.
  (iv) It must have appropriate transport infrastructure for a major hospital site.

Stage 2 – delivering a long list of sites for appraisal, May – August 2021 [Complete]

- A six-week period of engagement was launched on 10 May 2021, which included the request for suitable sites to be nominated by the public and landowners for consideration against the four hurdle criteria. In parallel, a desktop exercise was also completed to identify potentially suitable sites in order that landowners might be approached to determine their interest. A long list of eleven sites was identified for consideration.
- Within the engagement period the public were also requested to forward the five most important things to be taken into consideration when reviewing the location for the new Urgent and Planned Care Hospital. This information was utilised in the longlist to shortlist appraisal process and will be considered in more detail in the process to appraise the shortlist.

Stage 3 – agreeing the shortlist, August – October 2021 [Complete]

- This was a technical review undertaken at a workshop on 22 October 2021. The approach on the day was in two stages:
  - First, to assess the longlist against the hurdle criteria to establish if any sites could be eliminated on that basis.
  - Second, to appraise the remaining sites to identify the best options to take forward to the shortlist, ensuring the shortlisting of at least one option from the west, central and eastern areas of the identified zone between Narberth and St Clears.
- The workshop on 22 October 2021 was facilitated by the Consultation Institute. As well as the Land Team members, including Local Authorities, there was additional University Health Board and CHC representation, together with the Chairs or representatives of the Stakeholder Reference Group, Healthcare Professionals Forum and Staff Partnership Forum. The CHC and Local Authority representatives on the day did not participate as decision makers: Local Authority representatives were able to assist with technical questions and the CHC representatives were able to ask questions and observe the process.

- The workshop resulted in the identification of one site in the Narberth area, two sites in the Whitland area and two sites in the St Clears area.

Stage 4 – delivering the preferred site, November 2021 – June/July 2022 [In progress]

- The University Health Board will establish a representative Short List Appraisal Group, which will include the public and a wide range of stakeholders as well as University Health Board representatives. The work of this group will include consideration and agreement on the appraisal criteria and of clinical, workforce and technical evidence in relation to the shortlisted sites to ensure that potential sites are viable and sustainable. The process is expected to conclude in June/July 2022 with a recommendation to the Board.
- Further work is needed to detail the process for identifying the members of the public and stakeholders to be included within this Group. The weighting allocated to public representation will be over fifty percent of the total, reflecting our commitment to co-designing our future health system with our population.
- This stage is expected to conclude in June/July 2022 with a report and recommendation to the Board and to Welsh Government.
- A high-level timeline for Stage 4 is shown below:

AHMWW SHORTLIST APPRAISAL GROUP SET-UP DRAFT PROGRAMME OF ACTIVITIES

DESCRIPTION	2021 October	November	December	2022 January	February	March	April	May	June	July
Worshop and approval of output										
Review workshop										
Programme Board approval of Short List										
Board approval										
Election										
Period impacted by election										
Complete Stage 3 Works										
Investigate 2 sites on Short List for retention										
Review output/reconvene Review Workshop if necessary										
Technical Appraisal Collation										
Define/agree appraisal criteria										
Procure surveys/Agree fees										
Complete surveys/report/assess										
Transport Strategy										
Scope requirements										
Support to inform appraisal of Short List										
Site Visits/Walkovers/Intrusive surveys										
Obtain landowner permission for non-intrusive surveys										
Agree survey requirements/scope & procure										
Complete surveys/report/assess										
Obtain landowner permission for intrusive surveys										
Acquisition										
Develop strategy										
Commercial analysis and DV valuations										
landowner agreement to secure site										
Short List Appraisal Group/Board Approval										
1st Meeting - Background, Confidentiality, Purpose										
2nd Meeting - Agree review criteria and weightings										
3rd Meeting - Selection of Preferred site										
Board approval of site selection										
NOTE: A public consultation is likely to be required following the Board approval - content/timeline to be investigated										

Stage 5 will deliver the site acquisition and the necessary legal and contractual processes.

4.7.55 ***Transport:*** Transport was identified as a key area of public concern during the consultation process carried out in 2018. To address these concerns transport forms a core component of the programme planning process.

4.7.56 Transport is the subject of Appendix 13 to this PBC, which addresses at an early stage planning issues that will need to be managed with particular reference to the wider transport infrastructure. It also has a focus on the specific issues relating to the transport planning implications associated with the new Urgent and Planned Care Hospital.

4.7.57 A Transport Workstream was established to support the work of the PBC in April 2021. The workstream aims to identify how transport provision will need to adjust to support the clinical changes proposed as a part of the new model of care.

4.7.58 Key considerations include:

- Ensuring that the objectives of the NHS Wales Decarbonisation Strategy are factored into our future service development and there is an emphasis on low carbon transport and delivering the green health agenda.
- Recognising the vision set out within the Wales Transport Strategy and ensuring that the key principles set out in the strategy are factored into the AHMWW Programme's transport design principles, with particular emphasis on encouraging and helping to facilitate greater active and public transport.
- Ensuring that travel distances and times to access care services are minimised as far as possible and that transport provision reflects the need to develop more integrated and holistic healthcare services across both acute and community sites.

4.7.59 We recognise the importance of staff and patients being able to access services wherever they are located. Whilst the emphasis of our Strategy is care closer to home, there will nevertheless be implications associated with the location of the new Urgent and Planned Care Hospital.

4.7.60 ***Equalities and Health Impact Assessment:*** We have undertaken an Equalities and Health Impact Assessment on the proposed Scope which provides an overview of how the Programme might have positive and/or negative impacts on different groups of people with 'protected characteristics' - attached in full at Appendix 5. The Assessment will be a living document and will provide ongoing assurance that we will seek to minimise the risk of any discrimination against the groups of people with protected characteristics, that any negative consequences can be eliminated or minimised, and opportunities for promoting equality are maximised.

4.7.61 The Assessment identified the potential impacts summarised below:

Distance / travelling times

- Age – Inability for older people to drive or long travel times.
- Age – Increased distance/ travelling times for children's services impacting school education.
- Pregnancy and maternity – Increased distance/ travelling to access maternity services.
- Gender – Increased distance/ travelling times for Women's services.
- Carers – Increased distance/ travelling times impacting on Carers lives.

Access to technology

- Age – Inability for older people to use digital technology.
- Disability – Inability for people with disabilities to use digital technology.

Transport

- Age – Older people do not own private transport or are unable to use it.
- Disability – Disabilities make public transport difficult to use.
- Pregnancy and maternity – Lack of affordable public transportation options.

Mental Health

- Age – Children are unable to access services.
- Disabilities – People experiencing mental ill health unable to use virtual appointments, etc.
- Disabilities – Lack of dementia and learning disabilities training on hospital wards making services less accessible.
- Carers – Carers of those with dementia were negatively impacted during the pandemic.

Flexible Service Provision

- Pregnancy and maternity – Single mothers who are pregnant have difficulties attending appointments with other dependants or during school collection times, etc.
- Age – Working age adults have difficulty accessing services when appointments are within working hours.
- Age – Children miss longer school hours when appointments are made during school time to account for travelling.
- Carers – Carers have difficulty supporting people to attend early appointment times as travel time is not always factored into the appointment time.

4.7.62 These findings will be updated on an ongoing basis as we move through the business case process and taken into account in the design of our facilities as it progresses.

4.8 Risks, constraints and dependencies

4.8.1 **Risks:** The main risks identified are set out below. The University Health Board's approach to management of these risks is described in the Management Case.

- There is a risk of political opposition to the Programme. This is caused by concerns on the selection of the new hospital site which will either be in Pembrokeshire or Carmarthenshire. This will have an impact on potential reputational damage and it has potential to extend programme timelines.
- There is a risk that existing staff are resistant to change. This is caused by finding it challenging to adapt to ways of working to fit the new clinical model and potential relocations. This will have an impact on staff morale.
- There is a risk of limited clinical input to programme activity due to operational pressures, with an impact on the credibility of service plans and pathway changes.
- There is a risk of inadequate estimation/funding of transitional costs. This is caused by poor estimation leading to funds not being secured from Welsh Government. The impact

would be the University Health Board overspending or the failure to implement smooth transitional plans.

- There is a risk of inadequate estimation/funding of capital costs. This is caused by capital costs being underestimated and/or capital receipts overestimated, the impact being insufficient funds planned and available from Welsh Government.
- There is a risk of changed risk profile associated with capital costs. This may be caused by market conditions (inflation), or the involvement of SCP at OBC stage may be different from SCP for procurement phase (in view of the scale of investment). This will lead to changes in capital costs and timescales for delivery.
- There is a risk that the Programme might be delayed. This is due to the process and timescale required for the identification and acquisition of the preferred site for the new Urgent and Planned Care Hospital. The impact is a less robust OBC which could lead to delay in approval or in a delay in completion of the OBC and Programme.
- There is a risk that the OBC and FBC process will be delayed. This is because innovative finance solutions in part or whole may need to be considered for some of the projects being progressed. The processes will include competitive dialogue, preferred bidder negotiation periods as well as market interest from funding / development organisations. This could impact on the OBC and FBC timelines set out in the programme timetable.
- There is a risk that activity capacity modelling cannot be an accurate projection so far in advance of operation implementation. This is caused by changes in clinical practice and by population growth and demographic change assumptions which may be over- or underestimated. This could result in future demand within the modelling being inaccurate, resulting in capacity being too low or too high.
- There is a risk of not having sufficient workforce nor a workforce with the right skills. This is because of the potential mis-alignment of the Health and Care Strategy with the workforce training and education cycles. The impact would be a lack of assurance that we can deliver a sustainable workforce.
- There is a risk of limited capacity to manage and administer programme and project activities, with an impact on delivery of the programme work plan.
- There is a risk that specialist skills and knowledge required to deliver the programme plan, both internally and externally, are not available. This will impact on the successful delivery of the Programme.
- There is a risk that, with no defined planning policy for a new hospital or the existing sites, this may result in a delay to the planning timelines or a requirement to demonstrate compliance with national policy which would result in a delay to the Programme and potential additional capital expenditure.
- There is a risk that the University Health Board will not comply with its decarbonisation responsibilities and targets. This is because of the lack of a fully defined decarbonisation strategy. This will have an impact on Programme and design periods and will need to be aligned with wider strategies e.g. transport and procurement.
- There is a risk that the new Urgent and Planned Care Hospital might be insufficiently accessible to patients and staff. This is because of the limited transport infrastructure in

the identified zone between Narberth and St Clears. The impact would be the lack of staff, public and planning support for the new hospital development.

- There is a risk that development of the main acute site in a rural location, far from a major settlement, is likely to increase commuting requirements and associated CO2 emissions / road network congestion. This is because car will be a more prominent form of transport due to limitations in the public transport network.
- There is a risk that the EHIA will not have fully considered the impact on all protected groups or our socio economic duties. This is caused by insufficient data or evidence. This will have an impact on the quality of data to support the Programme and subsequent timelines of business cases from Welsh Government.
- There is a risk that the University Health Board and external resources cannot support the delivery of the projects within the Programme at the same time. This is caused by unfilled posts and capability of the market and BfW framework. This could impact on the efficiency of the timeline and extend the Programme should projects be staggered.
- There is a risk of becoming unable to deliver services as planned. This is caused by failure to balance demand and capacity in out-of-hospital care. The impact would be failure to shift resources from secondary to primary care and to deliver a social model of care.
- There is a risk of delay to programme delivery in service models. This is because of the scale of transformation required and the impact would be incorrect planning assumptions or delay of business case stages required for programme approval.
- There is a risk that the University Health Board cannot fully predict what the digital technology will be circa seven years ahead. This is because of the pace of technological change, with the impact that we may not take full advantage of latest technology in the development of our healthcare infrastructure.

4.8.2 **Constraints:** The following constraints and exclusions have been identified:

- The Programme needs to complement directorate and locality plans in terms of short term and longer-term deliverables. The end model of care will take several years to implement, therefore during the transitional period, the Programme must complement existing plans within the organisation.
- Existing pressures on services: the Programme requires significant change to our services, whilst said services still need to provide safe, sustainable, accessible and kind care to our population. Therefore, the pace of change may be constrained by the demands on providing care during the same time period.
- Constraints associated with timelines for delivery of national programmes: the Programme requires significant digital & IT infrastructure improvements. Such improvements are often taken forward on a national basis and therefore Hywel Dda's portfolio of works may be constrained by the speed in which national solutions are implemented.
- Any other programmes/projects which the University Health Board is engaged in which have the potential to constrain implementation of this Programme: the end model of care outlined within the portfolio of works will take several years to implement; therefore during the transitional period, it must complement existing plans within the organisation.

- The Programme must ensure that the decarbonisation agenda (or any other relevant Welsh Government policy) is adhered to. This may constrain some design choices.
- Any estate developments need to be developed in line with NHS Wales capital guidelines historically based on number of beds or space rather than a flexible solution e.g to be able to 'flex' dependent on demand.

4.8.3 **Dependencies:** This Programme is dependent on the delivery of commitments set out in 'A Healthier Mid and West Wales', including:

- Improved transport infrastructure across the region (including road, rail, air): The Programme is dependent on a transport infrastructure that is 'fit for purpose' to provide the outlined model of care. This includes the transport of emergency and non-emergency patients, staff and visitors to and from our acute (hospital) and community sites whilst encapsulating public and private transport infrastructure.
- Significant technology investment and appropriate regional connectivity e.g. 5G connectivity across the region: The model of care outlined within the Programme is dependent on a mobile workforce and the care of patients closer to home (and within their own homes). This may include the use of wearable technologies to monitor long term conditions and treatment. Therefore, the transfer of data and improved connectivity is required to ensure appropriate and timely communication between our patients and clinicians.
- Adherence to any decarbonisation agenda as part of the Programme.
- The integration of health and social care and the ongoing involvement of Local Authority partners, particularly through the Regional Partnership Board: The Programme is dependent on an integrated health and social care offering across the region. As such, it is dependent on the integration and ongoing involvement of all partners.
- Dependencies associated with timelines for delivery of national, regional or local programmes: This programme is dependent on the integration with other programmes and regional plans. This may include all Wales IT solutions or regional pathway developments being in place to support the overall model of care.
- There are key interfaces between the Programme and its operational performance, delivery and business continuity to ensure that decisions to be made in relation to short term service sustainability do not impact on the delivery of long-term strategic direction and implementation.

5. Economic Case

5.1 Introduction

5.1.1 The purpose of the Economic Case is to identify and appraise the options for the delivery of the Programme.

5.1.2 The Strategic Case has set out the case for change and identified a set of Spending Objectives linked to delivery of the University Health Board's Strategic Objectives.

5.1.3 This Economic Case provides an overview of the process undertaken by the University Health Board to agree a short list of options that could realistically address the Spending Objectives.

5.1.4 The Case is set out as follows:

- Section 5.2: sets out the options analysis undertaken during consultation in 2017-18 and how this has informed development of the Options Framework in 2021;
- Section 5.3: describes the Critical Success Factors (CSFs) chosen to assess the Options Framework (in conjunction with the Spending Objectives);
- Section 5.4: provides details of the Options Framework assessment conducted for this PBC and the shortlisted scenarios;
- Section 5.5: sets out the economic appraisal of the shortlisted scenarios.

5.2 Options analysis

5.2.1 The Options Framework assessment described in section 5.4 can only be understood in the context of the process which has preceded it. This includes:

- the consultation undertaken in 2017-18 and described in section 4.4 of the Strategic Case;
- the identification of three options taken forward to public consultation during mid-April to July 2018; and
- the identification of "Proposal B+" as the board's preferred way forward in September 2018.

Consultation in 2017-18

5.2.2 An extensive process of options development and analysis was undertaken during this period and is described below:

(i) Following the Engagement Phase, an Options Development Action Group (ODAG) was established. ODAG included fourteen lead clinicians and was responsible for developing a long list of options and providing an initial assessment of the viability of those options.

All options focused on improving the health of the population and making better use of all available resources.

(ii) ODAG's initial long list of sixteen options was reviewed at a workshop in December 2017 which had extensive representation from clinical staff, managers and other key stakeholders.

SWOT analysis of each of the options resulted in the initial long list being increased to twenty options, with seven being recommended for further review.

(iii) ODAG reviewed the outcome of the workshop and decided that the rationale for discounting some of the options needed further evaluation. The group therefore recommended that the shortlist be increased to eleven.

(iv) In early January 2018 an executive review endorsed ODAG's recommendations and noted that some of the options were very similar. Six of the options were therefore merged into four new options.

(v) The above process involved over 150 staff and partners from within and outside the NHS, with the outcome being nine shortlisted options.

(vi) These nine options were then presented at a series of stakeholder challenge and testing events, which reached over 430 staff and other groups, organisations and individuals, culminating in a large workshop involving ninety staff and stakeholders in January 2018.

(vii) Three options were eliminated as a result of this process, and six retained (options 2, 6, 6a, 10b, 21b and 21d).

(viii) Eight weighted evaluation criteria were developed through two criteria-setting workshops involving representatives from across the University Health Board, Local Authorities and Community Health Council members. Affordability and finance were not included as criteria, as it was determined that these could not be assessed until a later stage. Once the criteria had been identified the group was given 100 "credits" which they used to prioritise the criteria. This led to a score for each criterion, which was used to calculate a weighting. These weightings were then reviewed, moderated and finalised, as follows:

Criterion	Weighting
Quality and Safety	18%
Relevance to Need	16%
Integration	14%
Deliverability	13%
Sustainability	13%
Accessibility	11%
Equity	8%
Acceptability	7%

(ix) These criteria and weightings were then used to score the six options in a series of events involving 63 staff and stakeholders in February 2018. These events enabled the six options to be ranked, and high-level costing analysis was also undertaken. This process resulted in three options – options 21b, 21d and 2, renamed as **Proposals A, B and C** – being recommended to be taken forward to Consultation.

(x) Additional detail on the options generation and assessment process described above is available on request.

Public Consultation (mid-April to July 2018)

5.2.3 Each of the options taken forward for public consultation – **Proposals A, B and C** - was founded on a community model, with a commitment to a new urgent and planned care hospital serving the south and Bronglais Hospital serving the north of the Hywel Dda area.

5.2.4 The Proposals invited consideration of the location of planned care services and options for the repurposing of existing hospital sites and the development of community hubs within individual localities, as follows:

"Proposal A" (formerly Option 21B)

- Construction of a new-build integrated Urgent and Planned Care Hospital providing access to all aspects of urgent care and elective care;
- Bronglais Hospital continues as a District General Hospital;
- Glangwili, Withybush and Prince Philip Hospitals are repurposed as Community Hospitals delivering day cases, outpatients, step up, step down and rehabilitation beds, as well as access to diagnostics;
- Provision of ten Integrated Community Hubs and Care Centres, some of which provide access to Minor Injuries Units and step down and rehabilitation beds and including two new builds (Cylch Caron and Aberystwyth).

"Proposal B" (formerly Option 21D)

- Construction of a new-build integrated Urgent and Planned Care Hospital providing access to all aspects of urgent care and elective care;
- Bronglais Hospital continues as a District General Hospital;
- Prince Philip Hospital continues as a Local General Hospital, also offering a rehabilitation centre;
- Glangwili and Withybush Hospitals are repurposed as Community Hospitals delivering day cases, outpatients, step up, step down and rehabilitation beds as well as access to diagnostics;
- Provision of ten Integrated Community Hubs and Care Centres, some of which will provide access to Minor Injuries Units and step down and rehabilitation beds and including two new-builds (Cylch Caron and Aberystwyth).

"Proposal C" (formerly Option 2)

- Construction of a new build Urgent Care Hospital providing access to all aspects of urgent care and the management of high-risk elective surgery;
- Glangwili Hospital is repurposed as a Planned Care Centre delivering elective surgery only;
- Bronglais Hospital continues as a District General Hospital;
- Prince Philip Hospital continues as a Local General Hospital;
- Withybush Hospital is repurposed as a Community Hospital delivering day cases, outpatients, step up, step down and rehabilitation beds as well as access to diagnostics;
- Provision of ten Integrated Community Hubs and Care centres, some of which provide access to Minor Injuries Units and step down and rehabilitation beds and including two new-builds (Cylch Caron and Aberystwyth).

Board selection of Proposal B+ (September 2018)

5.2.5 Following Public Consultation the Board was asked to consider the following recommendations:

1) Discounting Proposal C due to:
   a) Limited support for the separation of planned and urgent care on different sites;
   b) Risk due to Glangwili Hospital's backlog maintenance; and,
   c) Speciality activity being spread over too many sites.

2) A modification of Proposals A and B for delivering hospital services to include:
   a) A new Urgent and Planned Care Hospital in the south of the University Health Board area;
   b) Acute hospital services to be retained at Bronglais Hospital;
   c) Acute medicine to be retained at Prince Philip Hospital;
   d) Glangwili and Withybush Hospitals to be repurposed to offer a range of services to support the social model for health and well-being.

3) The progression of a proposed new Urgent and Planned Care Hospital on a single site within the defined new hospital zone.

5.2.6 In September 2018 the Board agreed with recommendations and made a decision to proceed with Proposal B as the preferred way forward, with the inclusion of Prince Philip Hospital retaining acute medical services, as this was considered to represent the most effective use of existing estate and would enable better staff recruitment/retention. The option was subsequently renamed **"Proposal B+"**.

5.2.7 Proposal A was discounted on the basis that it had a negative impact on Abertawe Bro Morgannwg University Health Board/Morriston Hospital; failed to provide the same level of accessibility of services; and was less cost efficient than Proposal B+.

5.2.8 Since Consultation the University Health Board has continued to develop the clinical model. This has included reflecting on feedback from the engagement exercises, reviewing best practice and embedding the significant learning from the Covid-19 pandemic during 2020/21 (for example, building design has been impacted due to the need for more single rooms). However the pandemic has not led to a change in the decision that Proposal B+ represents the optimal outcome of the Consultation.

5.2.9 Between October 2020 – February 2021 a number of service-based Clinical Focus Groups - described in more detail in the Strategic Case - were held with a remit to consider the service requirements to deliver Proposal B+ and identify where differing choices might be available. This work has been taken into account in the Options Framework assessment, the shortlisted scenarios and the economic appraisal set out in sections 5.4 and 5.5 below.

5.3 Critical Success Factors

5.3.1 The University Health Board has identified four Critical Success Factors (CSFs), shown below:

Critical Success Factor	Description
1. Potential Value for Money	How well the option: • optimises social value (social, economic and environmental), in terms of the potential costs, benefits and risks.
2. Supply Side Capacity & Capability	How well the option: • matches the ability of potential suppliers to deliver the required services; and • is likely to be attractive to the supply side.
3. Potential Sustainability	How well the option: • can be funded from available sources of finance; • aligns with resourcing constraints; and • will help the University Health Board to achieve sustainable environmental, workforce and capital solutions.
4. Potential Deliverability	How deliverable the option is given: • the organisation's ability to respond to the changes required; and • the availability of skills required for successful delivery.

5.3.2 The CSFs broadly align with the example CSFs provided in the HM Treasury/Welsh Government Guide to Developing the Programme Business Case[22], with the following modifications:

(i) We have not included a CSF related to Strategic Fit for the following reasons:

- We have assessed all options generated through the Options Framework shown in section 5.4 below against the Spending Objectives as well as the CSFs. Because the Programme's Spending Objectives align with the University Health Board's Strategic Objectives, this enables us to consider the extent to which each option will enable us to meet our corporate Strategic Objectives.

- We recognise that government guidance suggests that CSFs should also be used to assess the extent to which an option "provides holistic fit and synergy with other strategies, programmes and projects", i.e including the Welsh Government strategies, objectives and policies identified in the Strategic Case.

We have concluded however that the options assessed against the Options Framework represent different ways of delivering Proposal B+ from different perspectives. We are satisfied that Proposal B+ will enable the University Health Board to play its part in meeting Welsh Government strategies, objectives and policies and this is described in the Strategic Case. We have also incorporated this evaluation into the appraisal of the shortlisted scenarios described in section 5.5.

[22] Guide to Developing the Programme Business Case – Better Business Cases for Better Outcomes (2018), p.26

(ii) We have widened the scope of the "Potential Affordability" CSF as described in HM Treasury/Welsh Government guidance so that it encompasses environmental and workforce as well as financial sustainability and renamed it "Potential Sustainability".

(iii) We have renamed the "Potential Achievability" CSF "Potential Deliverability". This slight change in focus makes this CSF particularly helpful in differentiating between Implementation Options.

5.3.3 The Spending Objectives and CSFs map back to the evaluation criteria developed during Consultation and described in point (viii) of section 5.2 above as follows:

2018 Consultation Criterion	Spending Objective(s)	CSF(s)
Quality and Safety	Safe, sustainable, accessible and kind care Striving to deliver and develop excellent services	Potential Value for Money
Relevance to Need	Putting people at the heart of everything we do Striving to deliver and develop excellent services	Potential Value for Money
Integration	Working together to be the best we can be	Potential Deliverability
Deliverability	Sustainable use of resources	Potential Deliverability
Sustainability	Safe, sustainable, accessible and kind care Sustainable use of resources	Potential Value for Money Potential Sustainability
Accessibility	Safe, sustainable, accessible and kind care	Potential Value for Money
Equity	The best health and well-being for our communities	Potential Value for Money
Acceptability	Sustainable use of resources	Potential Deliverability

5.3.4 The CSFs will be revisited throughout the life of the Programme to ensure they remain applicable and relevant.

5.4 Options Framework assessment

5.4.1 Through discussion with Welsh Government it was confirmed that the Options Framework analysis process for this PBC should be based on Proposal B+.

5.4.2 Therefore, the University Health Board has developed an Options Framework which aligns with HM Treasury and Welsh Government Guidance[23] to consider the differing choices in relation to the Key Dimensions of Service Scope, Solution, Delivery, Implementation and Funding of Proposal B+, with the recommendations from the consultation exercise and the

[23] Guide to Developing the Programme Business Case – Better Business Cases for Better Outcomes (2018), p.27-28

insights received during the Clinical Focus Groups held in late 2020 informing the assessment.

5.4.3 The following approach was taken to the Options Framework assessment:

1. We identified a number of options for delivering Proposal B+ under each of the Key Dimensions of Service Scope, Solution, Delivery, Implementation and Funding. These are shown in the tables below.

2. We assessed each option against the Spending Objectives and CSFs using a "Red-Amber-Green" approach, as follows:

   Red **"Discount"** - the University Health Board is content to discount the option even at this early stage of development, on the basis that it is unlikely to help the organisation to achieve its Spending Objectives and CSFs.

   Amber **"Retain"** - the University Health Board has reservations as to whether the option will help the organisation to achieve its Spending Objectives and CSFs but wishes to retain the option for further consideration at OBC stage.

   Green **"Possible"** - the University Health Board is content that the option will help the organisation to achieve its Spending Objectives and CSFs; however the University Health Board recognises that the analysis undertaken within this PBC is preliminary, therefore its view may change at OBC stage.

5.4.4 Tables showing this assessment are attached at Appendix 7.

5.4.5 **Service Scope Options:** The basis of the Service Scope options is to ensure implementation of the clinical service vision as described in the A Healthier Mid and West Wales Strategy and Design Assumptions.

5.4.6 At this PBC stage a high-level assessment of configuration of services across the acute and community infrastructure has been undertaken. It is acknowledged that there are a number of individual service model / location choices, and a "most likely" approach to service delivery has been adopted to support quantification of requirements with the assumption that this will be further tested and refined in the next stage business cases.

5.4.7 Whilst the University Health Board has given detailed consideration to the potential for some services to move towards a more regional approach, these discussions are not sufficiently progressed to support a detailed understanding of impact at this stage: it has not been possible to articulate the impact of regional service delivery as a separate option and the University Health Board has therefore ensured that the assumptions within this PBC allow for a strengthening of regional relationships but not to the detriment of local service delivery (e.g. if orthopaedic services move to a regional approach are there sustainability deliberations for the wider trauma service). It is anticipated that as the business case process progresses this will be reflected within the service model and future option appraisals as required.

Service Scope Option 1	Service Scope Option 2	Service Scope Option 3A	Service Scope Option 3B	Service Scope Option 3C
Do Nothing	**Do Minimum (Business as Usual)**	**Implementation of Proposal B+**		
Current service offering is sustained with no major reconfiguration / transformation to align with the AHMWW strategy.	Current service offering is sustained with minor transformation of services to align with the AHMWW strategy where possible within existing affordability limits, supported with investment to bring the acute hospital estate up to Condition B and targeted investment within the community estate.	Minimum Efficiency Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a more cautious approach to realisation of the design assumptions. This reduces the requirement for beds on the urgent and planned care site and increases the requirement on community hospital sites (Withybush and Glangwili Hospitals). Day-case theatres and endoscopy remain at WGH and GGH.	Likely Efficicnecy Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a "most likely" set of design assumptions to determine bed requirements on the Urgent and Planned Care Hospital site and the supporting hospital (acute and community) and community infrastructure applied.	Maximum Efficiency Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a more ambitious approach to realisation of the design assumptions applied. This increases the requirement for beds on the Urgent and Planned Care Hospital site and reduces the requirement on community hospital sites (WGH and GGH).

5.4.8 **Solution Options:** When considering the solution options it is acknowledged that delivery of Proposal B+ could be achieved via either new build or refurbishment of existing hospital estate. Therefore, within this options framework it is assumed that the term "repurposing of existing hospital sites" could result in either new build or refurbishment solutions or a combination of both.

Solution Option 1	Solution Option 2	Solution Option 3	Solution Option 4	Solution Option 5	Solution Option 6A	Solution Option 6B
Do Nothing	**Do Minimum (Business as Usual)**	**Minor Refurbishments to existing estate**	**Refurbishments to existing estate supporting minor changes in service models**	**Estate changes to support implementation of Proposal B+**	**Partial implementation of Proposal B+**	
Services continue to be delivered within the current estate with no investment in the infrastructure, meaning: • No new hospital provision. • No significant reconfiguration, repurposing or new build of existing hospital sites. • No significant refurbishment of existing primary care and community-based facilities.	Services continue to be delivered with investment in the estate limited to backlog maintenance and statutory compliance only, meaning: • No new hospital provision. • No significant reconfiguration, repurposing or new build of existing hospital sites • Continued development of community-based schemes already in train. • Business as usual capital	Capital investment targeted at minor refurbishment schemes with no fundamental changes to service model, meaning: • No new hospital provision. • Refurbishment of existing hospital sites to improve statutory compliance and space standards. • Refurbishment of the current range of primary care	Capital investment targeted at minor refurbishment schemes which support some minor transformation of service model, meaning: • No new hospital provision. • Refurbishment of existing hospital sites to improve statutory compliance and space standards with minimal provision to support service transformation. • Refurbishment of the current range of primary care and community-	Capital investment targeted at the estate changes needed to support full implementation of Proposal B+, meaning: • Three Main Hospitals: ○ A new build Urgent and Planned Care Hospital. ○ Bronglais and Prince Philip Hospitals are retained as local hospitals with investment to align with service requirements.	Focuses on the acute element of the Strategy, meaning: • Three Main Hospitals ○ A new build Urgent and Planned Care Hospital. ○ Bronglais and Prince Philip Hospitals are retained as local hospitals with investment to align with service requirements. • Two Community Hospitals in Carmarthen and Haverfordwest (assumes investment limited	Focuses on the community element of the Strategy, meaning: • Three Main Hospitals ○ A new build Urgent and Planned Care Hospital. ○ Bronglais and Prince Philip Hospitals are retained as local hospitals with investment limited to improvements in statutory compliance and space standards only. • Two Community Hospitals in Carmarthen and Haverfordwest (assumes significant repurposing of existing hospital sites at GGH and WGH to support

Solution Option 1	Solution Option 2	Solution Option 3	Solution Option 4	Solution Option 5	Solution Option 6A	Solution Option 6B
Do Nothing	**Do Minimum (Business as Usual)**	**Minor Refurbishments to existing estate**	**Refurbishments to existing estate supporting minor changes in service models**	**Estate changes to support implementation of Proposal B+**	**Partial implementation of Proposal B+**	
	investment for backlog maintenance and statutory compliance only within hospital sites and primary care and community-based facilities.	and community-based facilities to 'fit for purpose' standard. • Limited investment in the existing estate to support some development in the service delivery model.	based facilities to 'fit for purpose' standard with minimal provision for service transformation. • No significant reconfiguration, repurposing or new build of the existing estate.	• Two Community Hospitals in Carmarthen and Haverfordwest (assumes repurposing of existing hospital sites at GGH and WGH). • Development of a network of Community Hub facilities.	to bringing GGH and WGH sites to 'fit for purpose' only). • Current range of primary care and community-based facilities are refurbished to 'fit for purpose' standard.	service transformation requirements). • Development of a network of Community Hub facilities.

5.4.9 **Service Delivery Options:** The options identified in the table below consider the different contractual ways in which services provided under Proposal B+ could be commissioned and delivered:

Service Delivery Option 1	Service Delivery Option 2	Service Delivery Option 3
In-house	**Current mixed model**	**Extended mixed model / Strategic Partnership**
The University Health Board delivers all commissioned services in-house.	The University Health Board delivers some clinical and some non-clinical services in-house. Some services are outsourced to external providers.	The University Health Board develops strategic partnerships with Local Authorities, other Health Boards, private and third sector providers to deliver clinical and non-clinical services.

5.4.10 **Implementation Options:** Proposal B+ is a complex programme encompassing a number of elements (the new Urgent and Planned Care Hospital (UPCH), Withybush (WGH), Glangwili (GGH), Bronglais (BGH) and Prince Philip (PPH) Hospitals and the Community Hubs).

5.4.11 At this PBC stage the University Health Board has identified nine high-level implementation options, shown in the table below and to be read in conjunction with the detail provided within the Estates Annex at Appendix 9.

5.4.12 The following should be noted:

(i) Construction periods are based on **estimated** durations only.

(ii) Construction periods are based on estimated durations informed by high level estates options and capital cost assumptions.
- UPCH – 36 months construction
- GGH – new build 24 months construction / refurbishment 42 months construction (mix of new build and refurbishment)
- WGH – new build 24 months construction / refurbishment only 60 months construction
- PPH – 48 months total construction period (mix of new build and refurbishment)
- BGH - 60 months total construction period (mix of new build and refurbishment)

(iii) The only difference between options 1 & 2 is the timing of refurbishment works at BGH

(iv) The only difference between options 3 & 4 is the timing of refurbishment works at BGH

(v) The only difference between options 5 & 6 is the timing of refurbishment works at BGH

(vi) The only difference between options 7 & 8 is the timing of refurbishment works at BGH

(vii) All options assume that the repurposing of GGH and WGH happen simultaneously. Similarly, the approach to repurposing on both sites is the same i.e both new build or both refurbishment.

(viii) The assumption in all options is that refurbishment / reorganisation works of existing accommodation at PPH cannot substantially commence until the UPCH is complete and there is a shift to the new model of care due to continuation of the existing services. However, new build extensions at PPH can commence ahead of the UPCH being completed to provide headroom in readiness for refurbishment programme.

(ix) Options 7 and 8 – under these option works at GGH assumes a combination of part new build and part refurbishment, whereas works at WGH assumes refurbishment only of retained estate.

(x) The sequencing of Community Hubs is to be confirmed by the University Health Board. All Community Hub facilities to all be in place by the time the UPCH goes operational to facilitate the shift to the new model of care.

(xi) Community Mental Health Centres are included.

(xii) Other options could be to stagger projects at the four existing acute sites. This would result in a much longer overall programme (and generate multiple options if this logic is applied).

(xiii) It is assumed that OBC and FBC for all sites are progressed concurrently.

New Build at WGH and GGH opening concurrent with new UPCH. Remodelling works at both BGH and PPH together with the development of a network of Community Hub	**Implementation Option 1**	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Concurrent with the new urgent and planned care hospital deliver new build community hospitals in Carmarthen and Haverfordwest also by Winter 2029 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 • BGH reconfigured concurrent with new urgent and planned care hospital by Spring 2031 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
	Implementation Option 2	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Concurrent with the new urgent and planned care hospital deliver new build community hospitals in Carmarthen and Haverfordwest also by Winter 2029 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 and BGH by Autumn 2034 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
New Build at WGH and GGH opening ahead of new UPCH completion. Remodelling works at both BGH and PPH together with the development of a network of Community Hub facilities	**Implementation Option 3**	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Deliver new build community hospitals in Carmarthen and Haverfordwest as early as possible by Summer 2028 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 • BGH reconfigured concurrent with new urgent and planned care hospital by Spring 2031 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029 **This option would require the new UPCH model of care services to be delivered on the existing GGH and WGH hospitals until the new UPCH is completed.**
	Implementation Option 4	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Deliver new build community hospitals in Carmarthen and Haverfordwest as early as possible by Summer 2028 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 and BGH reconfigured by Autumn 2034 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029 **This option would require the new UPCH model of care services to be delivered on the existing GGH and WGH hospitals until the new UPCH is completed.**

New Build at WGH and GGH opening following completion of the new UPCH. Remodelling works at both BGH and PPH together with the development of a network of Community Hub facilities	**Implementation Option 5**	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Deliver new build community hospitals in Carmarthen and Haverfordwest following completion of the new urgent and planned care hospital by Winter 2031 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 • BGH reconfigured concurrent with new urgent and planned care hospital by Spring 2031 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
	Implementation Option 6	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Deliver new build community hospitals in Carmarthen and Haverfordwest following completion of the new urgent and planned care hospital by Winter 2031 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 and BGH reconfigured by Autumn 2034 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
Repurposed WGH and GGH sites completed after new UPCH. Remodelling works at both BGH and PPH together with the development of a network of Community Hub facilities	**Implementation Option 7**	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Concurrent with the new urgent and planned care hospital commence enabling works at GGH and WGH then repurpose these sites as community hospitals seeing GGH fully repurposed by [Spring 2033] and WGH fully repurposed by Autumn 2034 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 • BGH reconfigured concurrent with new urgent and planned care hospital by Spring 2031 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
	Implementation Option 8	• New build urgent and planned care hospital in single phase construction available by Winter 2029 • Concurrent with the new urgent and planned care hospital commence enabling works at GGH and WGH then repurpose these sites as community hospitals seeing GGH fully repurposed by Spring 2033 and WGH fully repurposed by Autumn 2034 • Once the urgent and planned care hospital and two new community hospitals are operational reconfigure PPH by Winter 2032 and BGH reconfigured by Autumn 2034 • Phased rollout of construction/ repurposing of the network of community hubs, to be completed by end of 2029
Big Bang	**Implementation Option 9**	Parallel development of urgent and planned care hospital, reconfiguration of PPH and BGH, creation (new build) of community hospitals at Carmarthen and Haverfordwest and the network of community hub facilities over a 7-year period. All facilities ready by 2029

5.4.13 **Funding Options:** We have identified three high-level options for funding Proposal B+:

- the All Wales Capital Programme;
- a combination of All Wales Capital Funding plus other Direct Funding Sources; and
- the Mutual Investment Model / other alternative funding mechanisms.

5.4.14 Different options could be applied across different elements of the Programme. Therefore, for the purposes of this PBC-level assessment we have assessed the applicability of each Funding Option to the University Health Board's:

- Acute hospitals;
- Community hospitals; and
- Community Hubs.

5.4.15 At this PBC stage however we have considered it important not to discount any funding option, and this open approach is also adopted in the Commercial Case. It is only at OBC stage, once the options for delivering Proposal B+ have been better defined and it has been possible to identify preferred options for each element of the Programme, and in discussion and agreement with Welsh Government, that we will consider the funding options in more detail.

5.4.16 We also recognise that the future availability of funding sources may impact timescales for delivering individual elements of the Programme and the Programme overall.

5.4.17 We have not considered this factor within the high-level assessment undertaken at this PBC stage, however it will be taken into account in the options analysis to be undertaken at OBC stage.

5.4.18 All funding options are therefore considered to be green – "possible" - at this stage.

Funding Option 1	Funding Option 2	Funding Option 3
All Wales Capital Programme	**All Wales Capital Funding and other Direct Funding sources**	**Mutual Investment Model / alternative finance**
All works to the University Health Board's acute hospitals, community hospitals and community hubs are funded via the All Wales Capital Programme.	Works to the University Health Board's acute hospitals, community hospitals and community hubs are funded through a combination of the All Wales Capital Programme and other Direct Funding sources (as described in Annex 11 to the NHS Wales Infrastructure Investment Guidance (2018)).	Works to the University Health Board's acute hospitals, community hospitals and community hubs are funded via the Mutual Investment Model (as described in Annex 12 to the NHS Wales Infrastructure Investment Guidance (2018)) and possibly other sources of funding such as land disposals.

5.4.19 **Summary results of the Options Framework assessment:** The table below summarises the University Health Board's assessment of the options described above.

	Options								
Service	1 Do Nothing	2 Do Minimum	3A Minimum Efficiency Design Assumptions applied	3B Likely Efficiency Design Assumptions applied	3C Maximum Efficiency Design Assumptions applied				
Solution	1 Do Nothing	2 Do Minimum	3 Minor repurposements to site	4 Repurposing of existing estate	5 Estate changes to support implementation of Proposal B+	6a Partial implementation of Proposal B+ (Acute only)	6b Partial implementation of Proposal B+ (Community only)		
Service	1 In-house	2 Current mixed model	3 Extended mixed model / Strategic Partnerships						
Implementation	1 New Build at WGH and GGH opening concurrent with UPCH; BGH reconfiguration completes 2031	2 New Build at WGH and GGH opening concurrent with UPCH; BGH reconfiguration completes 2034	3 New Build at WGH and GGH opening ahead of new UPCH completion; BGH reconfiguration competes 2031	4 New Build at WGH and GGH opening ahead of new UPCH completion; BGH reconfiguration completes 2034	5 New Build at WGH and GGH opening following completion of the new UPCH; BGH reconfiguration completes 2031	6 New Build at WGH and GGH opening following completion of the new UPCH; BGH reconfiguration completes 2034	7 Repurposed WGH and GGH sites completed after new UPCH; BGH reconfiguration completes 2031	8 Repurposed WGH and GGH sites completed after new UPCH; BGH reconfiguration completes 2034	9 "Big bang" (7 years programme)
Funding	All Wales Capital Programme	All Wales Capital funding and other Direct Funding sources	Mutual Investment Model / alternative finance						

5.4.20: **Shortlisted scenarios:** The Options Framework analysis described above has helped us to think through how Proposal B+ might be delivered from the different perspectives captured by the Key Dimensions; and to use our Spending Objectives and CSFs effectively to assess each option.

5.4.21 We will revisit this thinking at OBC stage, as we refine costings and modelling and develop procurement strategies.

5.4.22 We have undertaken economic appraisal on three scenarios – Minimum, Likely and Maximum Efficiency – which are driven by different applications of the Design Assumptions

with a resultant impact on bed numbers; plus Do nothing and Do minimum scenarios. These are described in the table below:

Do nothing	Do minimum	Minimum Efficiency	Likely Efficiency	Maximum Efficiency
Current service offering is sustained with no major reconfiguration / transformation to align with the AHMWW strategy. From a revenue perspective there is no change in bed numbers, though with projected demand increases and without transformation, performance and service quality would likely deteriorate.	Current service offering is sustained with minor transformation of services to align with the AHMWW strategy where possible within existing affordability limits, supported with investment to bring the acute hospital estate up to Condition B and targeted investment within the community estate. From a revenue perspective the University Health Board would try to flex the size of the estate to cope with changes to workforce and demand, with experience over the last 10 years as a guide.	Minimum Efficiency Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a more cautious approach to realisation of the design assumptions applied. The scenario reduces the requirement for beds on the urgent and planned care site and increases the requirement on community hospital sites (WGH/GGH) (making the configuration less efficient and less sustainable, e.g. due to duplication of services). Day-case theatres and endoscopy remain at WGH and GGH.	Likely Efficiency Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a "most likely" set of design assumptions to determine bed requirements on the urgent and planned care site and the supporting hospital (acute and community) and community infrastructure applied.	Maximum Efficiency Design Assumptions are applied. Services are transformed to align with the AHMWW strategy with a more ambitious approach to realisation of the design assumptions applied. The scenario increases the requirement for beds on the urgent and planned care site and reduces the requirement on community hospital sites (WGH/GGH), although bed numbers are the same as in the Likely Efficiency scenario.

5.5 Economic appraisal of the scenarios

5.5.1 This section sets out the economic appraisal we have undertaken on the scenarios described above (do nothing, do minimum, Minimum, Likely and Maximum Efficiency).

5.5.2 At this PBC stage we have not produced a Comprehensive Investment Appraisal (CIA) model. We have however produced estimates of the capital and revenue costs of each scenario, to give an initial range of the likely costs, to be further developed and refined at OBC stage.

5.5.3 This economic appraisal includes the following sections:

- Approach and assumptions.

- Summary of capital and revenue costs under each scenario.
- Risks and benefits.

Approach and assumptions

5.5.4 **Activity modelling:** During 2017/18 the University Health Board worked with Capita on an Excel based activity model to inform the consultation exercise undertaken in the summer of 2018.

5.5.5 Work was subsequently undertaken to convert this model into SQL and Power BI. In preparation for the PBC it was agreed that this model, known as 'Horizon' would be used as the basis for the PBC activity modelling process to ensure consistency with the clinically-led Consultation assumptions.

5.5.6 The activity model has been used to determine:

- projected inpatient and day case bed requirements;
- projected outpatient activity; and
- projected A&E and MIU activity;

for each site under each scenario and based on the Design Assumptions attached at Appendix 8A.

5.5.7 The process of running the model has included the following steps:

- Utilising our 2019/20 activity – with March 2020 data substituted for March 2019 due to COVID – 19.
- The tool applies the design assumptions agreed as part of the original work on the strategy, *A Healthier Mid and West Wales*, to produce a 'likely' efficiency scenario with demographics modelled over ten years to 2029/30.
- 'Do nothing', 'Minimum efficiency' and 'Maximum efficiency' scenarios have also been generated to produce a range of activity scenarios based upon different efficiency assumptions.

5.5.8 The outputs from this modelling were considered initially by the Planning Team, Director of Operations and Director of Acute Services, the Medical Director and CEO and then presented to the Strategic Advisory Group (SAG).

5.5.9 There was broad consensus through these discussions, which led to some adjustments being proposed to the outputs of the model:

(i) That the number of beds generated by the model for Glangwili and Withybush, given the proposed model of care, was too high. In discussion it was felt that these should be limited in the likely and maximum efficiency scenarios to two wards in Withybush Hospital and three in Glangwili Hospital, with the balance of beds being held in the new Urgent and Planned Care Centre.

(ii) The outpatient numbers by site generated by the model significantly increased outpatient attendances at our current community sites and moved the activity from the sites that will become community sites in the future. Activity on the smaller sites for the

PBC has been capped at 2,000 per annum, with the balance of activity assumed to take place at our existing hospital sites.

(iii) The impact of virtual activity has not been reflected in these numbers currently. Whilst knowing through our experience of COVID-19 that a significant proportion of new outpatient activity has been conducted virtually, it is not yet clear how this will settle post- COVID or whether it will translate into a reduced requirement for outpatient consultation facilities.

5.5.10 Bed numbers per site were presented to the Executive Team on 18 August 2021 for discussion and agreement. The presentation to Executive Team and decision taken was shared with Strategic Advisory Group (see Management Case for description) on the 31 August 2021. There was good representation at this meeting from both clinical and management teams across the Health Board which again had consensus with the approach agreed at Executive Team.

5.5.11 Other assumptions in the activity model include:

(i) All elective inpatient and all day case surgery in the south of Hywel Dda with the exception of ophthalmology is assumed to take place at the new Urgent and Planned Care Hospital.

(ii) The view from the Strategic Advisory Group was that endoscopy should take place at the new Urgent and Planned Care Hospital, Bronglais Hospital and possibly Prince Philip Hospital, but not on Glangwili or Withybush Hospitals.

(iii) Current assumptions are that plain film and ultrasounds are available on all five sites and fixed CT on three. MRI is assumed at the new Urgent and Planned Care Hospital, Bronglais Hospital and Prince Philip Hospital.

5.5.12 An indicative assessment has been made in relation to critical care and inpatient assessment beds to ensure consideration to critical clinical adjacencies and space requirements at this high level PBC stage (it is anticipated that modelling at OBC stage will be at a sub-speciality level).

5.5.13 The activity model has determined the projected attendances for A&E and Urgent Care. Proposed functional content for A&E has been aligned to WHBN 15-01.

5.5.14 The activity model has determined the projected attendances for Outpatients and proposed functional content has been based on high level utilisation assumptions. Indicative space allowances have been included for identified sub-specialties (renal and chemotherapy; cardiac, pulmonary and neurophysiology diagnostics; ante-natal; outpatient rehabilitation; breast unit). It is anticipated that speciality and sub-speciality level modelling will be undertaken at OBC stage to determine required outpatient capacity.

5.5.15 Theatre and endoscopy functional content has been based on clinical assessment of future requirements to support the proposed model. It is anticipated that procedure level modelling will be undertaken at OBC stage to support validation of functional requirements.

5.5.16 Mental health bed numbers have been based on current numbers.

5.5.17 Diagnostic equipment requirements have been based on clinical assessment of future requirements to support the proposed model. This will be revisited as part of OBC modelling.

5.5.18 Summaries of bed numbers, outpatient attendances and A&E/MIU attendances are shown below (please note that Mental Health Activity is not included in these activity modelling projections but is currently assumed to replicate current activity):

10-year projection: Beds

Reconfigured Site	Projected Beds			
	Current Efficiency	Minimum Efficincy	Likely Efficiency	Maximum Efficiency
BGH	151	149	141	127
PPH	324	205	169	129
GGH	393	155	72	72
WGH	208	100	48	48
Proposed Hospital	-	401	506	454
Swansea Bay	93	61	48	43
Amman Valley	28	28	28	28
Delta Lakes	-	-	-	-
Llandovery	16	16	16	16
Tenby	-	-	-	-
South Pembs	35	35	35	35
Cylch Caron	3	3	3	3
Aberystwyth	-	-	-	-
Aberaeron ICC	-	-	-	0
Cardigan ICC	-	-	-	-
Ty Bryngwyn Mawr	7	7	7	7
Tregaron	-	-	-	-
Park House Court	10	10	10	10
Other *	-	-	-	-
Total	**1,267**	**1,170**	**1,083**	**971**
Comparison with Baseline	**1,073**	**1,073**	**1,073**	**1,073**
Net Change (+/-)	**194**	**97**	**10**	**-102**

10-year projection: outpatients

10-year projection: A&E/MIU:

Reconfigured Site	Projected A&E Attendances				Projected MIU Attendances			
	Current Efficiency	Minimum Efficincy	Likely Efficiency	Maximum Efficiency	Current Efficiency	Minimum Efficincy	Likely Efficiency	Maximum Efficiency
BGH	33,100	24,491	22,173	20,853	745	787	713	670
PPH	-	-	-	-	30,591	32,334	29,275	27,532
GGH	-	-	-	-	3,754	20,427	18,494	17,393
WGH	-	-	-	-	148	8,322	7,534	7,086
Proposed Hospital	67,093	49,642	44,945	42,269	-	-	-	-
Swansea Bay	23,883	17,671	15,999	15,046	-	-	-	-
Amman Valley	-	-	-	-	-	-	-	-
Delta Lakes	-	-	-	-	-	-	-	-
Llandovery	-	-	-	-	-	-	-	-
Tenby	-	-	-	-	3,366	8,154	7,381	6,942
South Pembs	-	-	-	-	-	-	-	-
Cylch Caron	-	-	-	-	-	-	-	-
Aberystwyth	-	-	-	-	-	-	-	-
Aberaeron ICC	-	-	-	-	-	-	-	-
Cardigan ICC	952	704	637	600	3,409	14,048	12,719	11,962
Ty Bryngwyn Mawr	-	-	-	-	-	-	-	-
Tregaron	-	-	-	-	-	-	-	-
Park House Court	-	-	-	-	-	-	-	-
Other *	-	-	-	-	-	-	-	-
Total	**125,028**	**92,508**	**83,754**	**78,768**	**42,012**	**84,073**	**76,116**	**71,585**
Comparison with Baseline	**119,045**	**119,045**	**119,045**	**119,045**	**41,602**	**41,602**	**41,602**	**41,602**
Net Change (+/-)	5,983	-26,537	-35,291	-40,277	410	42,471	34,514	29,983

5.5.19 Functional content reflects operational requirements, however the University Health Board

Reconfigured Site	Projected Outpatients			
	Current Efficiency	Minimum Efficincy	Likely Efficiency	Maximum Efficiency
BGH	43,798	35,735	32,506	29,280
PPH	133,108	86,574	80,079	73,585
GGH	2,380	62,049	57,443	52,837
WGH	3,851	79,567	73,372	67,180
Proposed Hospital	139,068	23,083	21,220	19,360
Swansea Bay	-	-	-	-
Amman Valley	1,917	2,000	2,000	2,000
Delta Lakes	2,451	2,000	2,000	2,000
Llandovery	-	2,000	2,000	2,000
Tenby	1,230	2,000	2,000	2,000
South Pembs	1,691	2,000	2,000	2,000
Cylch Caron	1,269	2,000	2,000	2,000
Aberystwyth	-	2,000	2,000	2,000
Aberaeron ICC	7,435	2,000	2,000	2,000
Cardigan ICC	-	2,000	2,000	2,000
Ty Bryngwyn Mawr	-	-	-	-
Tregaron	-	-	-	-
Park House Court	-	-	-	-
Other *	-	-	-	-
Total	**338,197**	**305,007**	**282,620**	**260,242**
Comparison with Baseline	**311,139**	**311,139**	**311,139**	**311,139**
Net Change (+/-)	27,058	-6,132	-28,519	-50,897

will need to undertake all bed modelling at specialty level at OBC stage. This means that at this PBC stage the functional content reflects a totality of requirements with some indicative groupings where we know there may be a greater space consideration (such as critical care beds) or where a particular clinical adjacency needs to be factored in (such as assessment beds).

5.5.20 High Level Functional Content and Schedules of Accommodation for the scenarios are attached at Appendices 8C and 8D.

5.5.21 All assumptions have been reviewed and endorsed by the HB clinical teams but that it is understood this is a high level assessment of requirements and that detailed analysis of requirements will be undertaken as we enter the next phase of work.

Capital cost assumptions

5.5.22 Based on the Functional Content and Schedules of Accommodation, the University Health Board produced capital cost estimates for the following eight scenarios:

- Do nothing
- Do minimum
- Option B+ Minimum Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals
- Option B+ Likely Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals
- Option B+ Maximum Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals

5.5.23 The following broad assumptions have been made in calculating the capital costs for the Likely Efficiency, Minimum Efficiency and Maximum Efficiency for the New Urgent and Planned Care Hospital and the four existing acute sites. Further details on these assumptions is provided in the Estates Annex at Appendix 9:

Assumption	Description
Works Costs	The cost methodology adopted is slightly different for each of the different types of developments, however they are based on and elemental cost per m^2 with % adjustments made for the impact of cost drivers such as decarbonisation aspirations, location and biophilic design where applicable.
Fees	Fees have been assumed at 18.5% of the Total Works Cost.
Equipment	A notional equipment % of the total works cost based on a similar capital scheme. Adjustments have been made to reflect larger pieces of equipment such as radiology.
Non-Works Costs	Estimated Land Purchase Costs where applicable and scheme specific assessment of requirements.
Contingency	Planning contingency has been set at 10% of Works Cost, Fees, Non-works and Equipment.
VAT recovery	VAT recovery has been included on Design Fees and land purchase costs only. A more detailed assessment will be undertaken at future iterations of business cases.
Inflation	Construction costs have been included at PUBSEC 269.
Impairment of capital cost of new / refurbished facilities	No assumptions have been included in relation to the level of any impairment of the new facilities. This will be included through an indicative valuation of the new facilities based on the depreciated replacement cost.
Depreciation	The useful economic life will be used as the basis for the depreciation of the building element of the new Urgent and Planned Care Hospital and the approach to existing assets including any accelerated depreciation will be considered as part of the detailed modelling in future iterations. The total equipment cost included within the new facilities costs will be depreciated based on the University Health Board's accounting policy and in line with the nature of the equipment assets.
Land and Property Disposals	No assumptions have been made about land and property disposals at this stage. The likely value and timing will be considered as the University Health Board develops future iterations of Business Cases.
Land Purchase Costs	High level estimates of land values for the Urgent and Planned Care Hospital have been provided by NWSSP and Savills for the purpose of PBC cost estimates.
Life Cycle Costs	No assessments have been made of life cycle costs at this stage. These will be re-visited at the next business case iterations.
Net Zero Carbon Estimates	An allowance of 3% has been included for sustainability and decarbonisation. This has been applied to the new build Urgent and Planned Care Hospital and new build options for Glangwili and Withybush Community Hospitals together with new build extensions at Bronglais and Prince Phillip. Refurbishment options and Community schemes have no specific allowance made.

Assumption	Description
Modern Methods of Construction	No specific allowance has been made for modern methods of construction although this will undoubtedly feature in the construction of the new hospital(s). This is becoming the industry norm but will depend on the contractor chosen and the nature and capability of their supply chain.
Configuration of beds / wards	• The Urgent & Planned Care Hospital is assumed to be 100% single bedrooms compliant with current WHBN guidance. • Withybush and Glangwili new build schemes are assumed to be 100% single bedrooms compliant with current WHBN guidance. • Withybush and Glangwili refurbishment options have the potential to achieve 100% single bedrooms, however this will require further exploration at the OBC stage. • At Prince Philip Hospital the assumption is that there will be circa 50% single bedrooms which have the potential to be compliant with current WHBN guidance. • At Bronglais Hospital the assumption is that there will be between 50% and 70% single bedrooms dependent on the efficiency scenario. Due to the restrictions of the existing building it will not be possible to achieve full WHBN compliance for these bedroom spaces. • The future configuration of beds at the other community sites will require further exploration at the OBC stage for each project.
New build or refurbishment	Capital Cost estimates have been completed based on new build and / or refurbishment as detailed in the Capital Cost Assumptions set out in the Estates Annex at Appendix 9 and summarised below.
Location Factor	Rate has been set at 0.97 as per current guidance from NHS Wales Shared Services Partnership.
Optimism Bias	Insufficient level of detail is available to calculate the optimism bias, therefore an allowance of 25% has been added to all capital costs.
Cashflows	Provisional cashflow estimates have been made based on the current programme, however these will change as the individual business cases progress.

5.5.24 Descriptions and capital costings for each scenario are shown in the Estates Annex at Appendix 9.

Site	Current/do nothing			Do minimum			Minimum Efficiency						Likely Efficiency						Maximum Efficiency					
	Area (m^2)	Beds	Cost 269	Area (m^2)	Beds	Cost 269 (£m)	Area (m^2)		Beds	Cost 269 (£m)			Area (m^2)		Beds	Cost 269 (£m)			Area (m^2)		Beds	Cost 269 (£m)		
							Ref	NB		Ref	NB		Ref	NB		Ref	NB		Ref	NB		Ref	NB	
Bronglais Hospital	27,531	155	7.98	27,531	155	91.61	Refurbishment 30,381		149 11 (MH)	Refurbishment 125.81			Refurbishment 30,381		149 11 (MH)	Refurbishment 125.81			Refurbishment 30,381		127 11 (MH)	Refurbishment 125.81		
Glangwili Hospital	51,294	381	22.91	51,294	381	209.70	22,000	22,304	155	122.95	154.61		15,750	15,888	72	97.21	109.63		15,750	15,888	72	97.21	109.63	
Prince Philip Hospital	29,297	216	7.38	29,297	216	101.47	Refurbishment 33,750		205	Refurbishment 115.74			Refurbishment 32,600		169	Refurbishment 108.51			Refurbishment 31,450		129	Refurbishment 101.58		
Withybush Hospital	39,477	213	10.77	39,477	213	169.91	18,450	18,914	100	125.68	129.89		17,450	14,133	48	121.24	99.93		17,450	14,133	48	121.24	99.93	
Urgent & Planned Care Hospital	0	0	0	0	0	0	New build 85,924		401	New build 681.21			New build 94,335		506	New build 736.87			New build 91,705		454	New build 719.77		
Mental Health	11,818	107	-	11,818	107	-	-	-	98	-	-		-	-	98	-	-		-	-	98	-	-	
Aggregated community sites	30,196	98	9	30,196	98	82	44,380	44,380	89	185	185		44,380	44,380	89	185	185		44,380	44,380	89	185	185	
Totals	**189,613**	**1,170**	**58.04**	**189,613**	**1,170**	**654.69**	**234,885**	**235,653**	**1,208**	**1,356.39**	**1,392.26**		**234,896**	**231,717**	**1,134**	**1,374.64**	**1,365.75**		**231,116**	**227,937**	**1028**	**1,350.61**	**1,341.72**	
Optimism bias @ 25%			**14.51**			**163.67**				**339.10**	**348.07**					**343.66**	**341.44**					**337.65**	**335.43**	
Total including optimism bias			**72.55**			**818.36**				**1,695.49**	**1,740.33**					**1,718.30**	**1,707.19**					**1,688.26**	**1,677.15**	

5.5.25 The range of capital cost estimates at this PBC stage is therefore:

- between £1,342m for the Maximum Efficiency New Build scenario and £1,392 for the Minimum Efficiency New Build scenario without optimism bias.
- between £1,677m for the Maximum Efficiency New Build scenario and £1,740m for the Minimum Efficiency New Build scenario if optimism bias is included.

5.5.26 It is important to note however that the do nothing and do minimum scenarios are undeliverable as described above: if no Design Assumptions were applied, delivery would require an additional 194 beds compared with our current bed base, which would not be possible within the existing footprint. Neither of these options would resolve the estates issues noted in the Strategic Case (Estates Case for Change) and therefore would only defer the investment requirement. This means that over a longer time horizon – e.g. 20/30 years – the costs would be likely to be much higher than stated and likely higher than the other options.

5.5.27 Please note that areas shown above may differ from those shown in 2.2.22-23 and 4.7.29-30, which reflect the baseline in the Functional Content provided to the Design Team. The areas shown in the table above reflect designed outputs.

Revenue cost assumptions

5.5.28 Our approach to generating revenue cost assumptions for the Minimum, Likely and Maximum Efficiency scenarios has been as follows:

- We have produced incremental revenue cost assumptions only: we have **not** produced absolute revenue cost assumptions for each scenario, rather we have calculated incremental revenue costs against current revenue costs.
- We have used existing cost information for FY19/20 as the most recent representative year and scaled this against functional units in order to calculate incremental cost.
- We have applied Patient Level Information & Costing System (PLICS) costs, based on FY 2019/20, to the Functional Content output attached at Appendix 8C. Costs have been applied to functional units and the end state has been costed.
- Where PLICS costs have not been available or are not easily reproduced to match functional units, proxies have been used.
- At this stage the focus has been on 'in hospital' activity as the modelling activity only covers this element. This will be enhanced further as we develop the service model. As a consequence, some high level assumptions have been made for other aspects of care.
- Glangwili and Withybush Hospitals are community settings in the Minimum, Likely and Maximum Efficiency scenarios, therefore the bed costs reflect this lower level of acuity.
- The beds transferred into the new Urgent and Planned Care Hospital which, purely on the basis of the mathematical model would be in Glangwili or Withybush Hospitals, have been costed at the same rate as if they had been provided in the community.
- We have not sought to quantify the impacts of potential innovations which may occur between FY19/20 and the opening of the Urgent and Planned Care Hospital and rebuilt/refurbished sites.
- No assumptions have been made with respect to productivity or efficiency gains.
- No assumptions have been made with respect to changes in fixed and variable overheads.

- No assumptions have been made with respect to transitional costs, e.g. move-out and move-in, double-running of services.
- Mental Health costs are assumed to stay the same as present costs for the purpose of this costing exercise.
- Primary care, Continuing Health Care and externally commissioned service costs are assumed to stay the same as there is insufficient information to determine otherwise at this stage.
- No new service developments since 2019/20 have been included for example Single Day Emergency Care.
- The Do Nothing scenario assumes no additional costs compared with current state and takes no account of projected additional activity required that would result in unacceptable performance.

5.5.29 Supporting information on our revenue cost assumptions is provided at Appendix 10.

5.5.30 It is also important to note that work we are currently undertaking on our Workforce Plan is not reflected in the approach decided above: integration of our workforce assumptions into our revenue cost modelling will be done at OBC stage.

5.5.31 The table below summarises the incremental revenue costs per annum under the Do Minimum, Minimum, Likely and Maximum Efficiency scenarios (we have assumed that the do nothing scenario will be neutral from a revenue cost perspective, therefore it does not appear in the table below):

Functional Unit	Do Minimum £m	Minimum Efficiency £m	Likely Efficiency £m	Maximum Efficiency £m
Emergency Department	0.4	-10.1	-10.1	-10.1
MIU	0.0	5.1	5.1	5.1
Acute Admission Beds	0.0	1.8	1.8	1.8
Acute IP Beds	0.0	-28.8	-48.9	-71.4
Swansea Bay	46.0	14.5	11.4	10.2
Step Up/Down Beds	0.0	30.1	34.5	36.5
Neonatal	0.0	0.0	0.0	0.4
Theatres	0.0	1.2	0.0	0.0
Radiology	0.0	1.1	1.1	1.1
Outpatients	3.9	1.9		-1.9
Rates - new site	0.0	3.0	3.0	3.0
Additional inter-site transfers - WAST	0.0	5.0	5.0	5.0
Single room/Acuity	0.0	4.0	4.0	4.0

Functional Unit	Do Minimum £m	Minimum Efficiency £m	Likely Efficiency £m	Maximum Efficiency £m
Revenue Consequences of Capital Schemes - Maintenance	0.0	7.6	7.6	7.6
Revenue Consequences of Capital Schemes - Increased footprint	0.0	2.7	2.7	2.7
Community Investment	0.0	10.5	10.5	10.5
Decarbonisation Efficiencies		-4.0	-4.0	-4.0
Leasehold release Efficiencies		-1.0	-1.0	-1.0
Total	**50.3**	**44.6**	**22.7**	**-0.5**

5.5.32 Given the uncertainties in the revenue modelling undertaken a range of + or – 25% can be applied to the incremental costs per annum. The impact of this is shown in the table below:

Range %	Do Minimum £m	Minimum Efficiency £m	Likely Efficiency £m	Maximum Efficiency £m
-25	37.7	33.4	17.0	-0.4
+25	62.9	55.8	28.4	-0.6

Observations at the stage

5.5.33 Based on the modelling we have undertaken to date our conclusions are as follows:

(i) As noted above, for the "Do minimum" scenario we have estimated that, if no design assumptions were applied, an additional 194 beds compared with the current base would be required.

However this would not be possible in the existing footprint.

Therefore, whilst potentially more attractive in capital cost terms, significant additional capacity would need to be sourced from elsewhere and it is likely that performance would deteriorate to unacceptable levels.

Furthermore it would not be possible to achieve efficiencies from implementation of the digital, workforce, estates and decarbonisation strategies, therefore the long-run costs would potentially be higher than under the Minimum, Likely or Maximum Efficiency scenarios.

Our initial conclusion at this stage – to be reviewed, modelled in more detail and confirmed at OBC stage – is therefore that the "do nothing" and "do minimum" scenarios are to be rejected.

(ii) It can be seen that there is little difference in terms of capital costs and bed numbers between the Minimum, Likely and Maximum Efficiency scenarios: the differentials between scenarios lie within a cost range of approximately £50m without optimism bias; and within a range of approximately 180 beds.

(iii) We are considering alternatives and options to reduce revenue costs.

Risks and benefits

5.5.34 At this stage and as indicated by Welsh Government we have not quantified the risks and benefits identified in the Strategic Case.

5.5.35 As we develop the OBCs for individual schemes, in line with HMT Green Book and BBC guidance the short list of scenarios will be subjected to quantitative analysis to produce a net present social value (NPSV) or net present social cost (NPSC) and benefit cost ratio (BCR) for each scenario.

5.5.36 This means that we will identify quantifiable benefits, which include cash-releasing and monetisable non-cash releasing benefits and societal benefits. Although they do not have an effect on the BCR, unmonetisable benefits will also be recorded in the CIA Model(s) and taken into account when examining the overall VfM of each shortlisted scenario through the Economic Case.

5.5.37 We anticipate that benefits identification and quantification will take place through workshops with attendance from key internal stakeholders. The benefit assumptions, and methodologies for quantifying these benefits, will be recorded.

5.5.38 The CIA Model requires a quantified risk analysis to be undertaken, with the probability assessed of risks identified in the risk register materialising, and the associated value impact (£) analysed. These quantified risks will be applied to the cost base of each scenario, resulting in a risk adjusted NPSV/C.

5.5.39 At this stage we have made a general allowance for Optimism Bias. As the individual schemes develop at OBC stage, allowances for optimism bias will be refined and replaced by measured risk (£).

5.5.40 Workshops will also be used to discuss and quantify risks.

6. Commercial Case

6.1 Introduction

6.1.1 This Commercial Case outlines our approach to procuring and delivering the Programme.

6.1.2 Our Programme is wide-ranging, encompassing the acquisition of land; construction of a new urgent and planned care hospital; and modernisation and repurposing of our existing hospitals and community estate: as shown in the Economic Case, each PBC scenario is made up of 21 individual projects (5 hospitals, 16 community facilities) and can be delivered in a variety of ways and sequences. The Programme will also be a vehicle for implementation of our Digital, Environmental and Social Value and Impact Strategies.

6.1.3 The procurement approach outlined in this Commercial Case is high level and aims to set out the principles which will inform the procurement strategies we will detail in the OBCs for delivering the preferred options for delivering the individual projects.

6.1.4 This Commercial Case also identifies the potential sources of funding, however no decisions as to the optimal funding route have been taken at this stage. We will refine our thinking on a project-specific basis once preferred options have been identified at OBC stage.

6.1.5 Our approach to creating social value and impact will be led from a local community lens, looking for opportunities where we can tie together our workforce aspirations to that of our local community and future generations. For example, social contracts within procurement contracts to enable skills, training and employment within the local community. Developing strong links with schools and colleges to engage and inform on the opportunities for future careers. This will build on the excellent work that we already have in place within our Future Workforce Team. We will look to ensure that we capitalise on these interventions and reflect on what more we could be doing to support our communities to directly and indirectly alleviate health inequalities within our workforce strategies and planning activity.

6.2 Underlying principles

6.2.1 Our procurement strategy will be developed to reflect the following:

6.2.2 **Well-being of Future Generations (Wales) Act 2015:** We will maximise the opportunities for our Programme to further the aims of the Well-being of Future Generations (Wales) Act in the following ways:

(i) We will incentivise our contractors to further the aims of the Act through our tender evaluation criteria and the performance criteria we place in our contracts.

We recognise that the Community Benefits Toolkit is embedded within the Building for Wales framework agreements, however we will exploit opportunities to improve on these criteria where possible and deliver additional social value which strengthens our local foundational economy.

This means that we will engage early with potential suppliers and encourage them to consider how they will meet and exceed performance targets or how they might be improved and made more targeted and relevant. We have learnt from the experience of other large public sector organisations in Wales that engaging with the staff who will work in and the people who will use our new/repurposed hospitals and community facilities, and with private and third sector partners, has the potential to generate good ideas, grounded in real lived experience, which will enable us to improve upon the standard criteria.

(ii) We will structure the way in which we plan our procurement processes and draft our contracts to reflects the Five Ways of Working set out in the Future Generations framework for projects:

a. Long-Term:

We will design our Programme to meet the long-term needs of our population, so we will consider how we can procure our construction, equipment and facilities

management contracts to enable ongoing refinement as digital and environmental technologies evolve.

We will also consider how we will maximise the long-term socio-economic impacts of the Programme as a whole and the individual projects within it.

b. Prevention:

The framework encourages us to design our Programme so that it supports the breaking of negative cycles and/or inter-generational challenges such as poverty, poor health, inequalities and inequity, environmental damage and loss of biodiversity.

Breaking cycles of poverty and poor health which result in health inequalities are the rationale behind the Social Model of Health we want to implement, which envisages health and care facilities and services as integral and accessible parts of a community's social fabric.

We are committed to Welsh Government's decarbonisation strategy. Our procurements will seek to minimise waste and resource use, minimise emissions and maximise air quality.

c. Integration:

Our Programme will integrate with existing plans and strategies of other public bodies. We are doing this by working together with other partners, for example Ceredigion, Carmarthenshire and Pembrokeshire county councils on the development of Public Services Board Well-being Plans. In addition we work through the West Wales Care Partnership on the transformation of health and social care and the development of Integrated County Plans which seek to strengthen and embed preventative, proactive, intermediate, rehabilitation, unscheduled care and long-term care delivery within an integrated community model.

d. Collaboration:

We are collaborating in a wide variety of ways in the delivery and development of our Programme. More information is contained in the sections which describe our stakeholder engagement and communication strategy in the Strategic and Management Cases.

e. Involvement:

We will incorporate the lived experiences of citizens who will be affected by our Programme into how, for example, the new Urgent and Planned Care Hospital should be designed and how our existing sites repurposed.

As detailed in the Strategic Case, we have already received a significant amount of public feedback which tells us how important our sites are in our local communities, and we will incorporate this feedback into our designs.

(iii) We will also incorporate the Seven National Well-being Goals (Prosperous, Resilient, Healthier, More equal, Cohesive communities, Vibrant culture, Globally responsible) into our procurement strategies and contract designs.

(iv) We are also mindful of the findings of the report titled *"Procuring Well-being in Wales: a review into how the Well-being of Future Generations Act is informing procurement in Wales"*, published in February 2021.

6.2.3 We are in close contact with the Future Generations Commissioner for Wales and will seek her feedback as we design our procurement strategies at OBC stage.

6.2.4 **Social Value:** Social value is a broader appreciation of value from not only a finance perspective, but from an environmental and social perspective too. By bringing these three elements together, it will enable us to make decisions that reduce environmental harm, reduce inequality, improve the wellbeing of our communities and bolster our local economy and the economy of Wales. We recognise the important role the University Health Board plays in positively impacting its local communities by providing jobs, procuring local goods and services, leasing and owning buildings and working with a range of partners to draw on expertise.

6.2.5 Through this Programme, we will carefully consider how our decisions with regards to procuring and managing all elements of our Programme will help to reduce the inequalities associated with socio-economic disadvantage. In the Strategic Case we identified the disparity between the healthy life expectancies of our better off and deprived populations.

6.2.6 We are also giving consideration to the impacts the University Health Board can have on improving the performance of the foundational economy. Welsh Government has stated that a key aim of economic policy is to help grow and sustain the 'missing middle' sector of the economy and wishes to:

"…increase the number of grounded firms in Wales and establish a firm base of medium sized Welsh firms which are capable of selling outside Wales, but have decision-making rooted firmly in our communities."[24]

6.2.7 We have also noted the Foundational Economy in Health and Social Services 2021-22 Programme and its call for public service bodies to focus on:

- The direct goods and services we buy.
- The workforce we directly employ.
- How the location and co-location of our services has an impact on communities and their access to all services.[25]

6.2.8 We fully recognise that if public sector bodies like ourselves can shape our procurement and expenditure decisions around basic products and services, this will improve economic performance and resilience in our local economies and strengthen and deepen local supply chains.

6.2.9 Our Sustainable Resources Committee is committed to looking at ways in which we can move away from traditional – and somewhat narrow – definitions of value. Clearly, to ensure best use is made of the funding we have available, wider definitions of value must be

[24] https://gov.wales/foundational-economy
[25] https://gov.wales/written-statement-approach-foundational-economy-health-and-social-services

incorporated – value to patients, to society in general, and within the context of economic recovery post-pandemic.

6.2.10 Personal value to patients is an increasing feature of the work undertaken by our Value Based Health Care team – incorporating the capture of patient reported outcomes and associated measures is now becoming more mainstream within the University Health Board's care pathways. We have recognised however that we need help to identify and quantify the impacts on the wider economy, as this is a complex and highly specialised undertaking.

6.2.11 We are guided by our six Strategic Objectives – with which the Spending Objectives stated in the Strategic Case align. Under the Strategic Objective of Sustainable Use of Resources one of the outcomes is the following:

- **Social:** Our positive impact on society is maximised.

6.2.12 Procurement is one of the levers we have for achieving this outcome, because it brings us the potential to generate Social Value by creating employment opportunities through our supply chain:

- Locally rooted suppliers are more likely to provide longer term, stable local employment opportunities.

- By default, smaller firms extract less wealth. 58% more wealth is retained in the local economy for every pound spent with a smaller firm, compared to a larger one.

- Generative suppliers – SMEs, social businesses, worker-owned organisations and mutuals - tend to ensure that a higher proportion of their income goes to wages, as profits are not being extracted for distant shareholders. They tend to have smaller pay ratios among staff (the difference in pay between the top and bottom of the organisation), higher productivity, greater levels of innovation, better resilience to economic turbulence and a more engaged and contented workforce.

- They reinvest in their local communities, because profits are distributed more locally, and because they are more likely themselves to have localised supply chains.

- Where it is not possible to utilise local, generative suppliers, other suppliers can be incentivised to create new employment or apprenticeship opportunities through social value commitments.

- Making a concerted effort to ensure public money is pushed back into the local economy, supports local multipliers.

- Smaller firms retain more wealth in the local economy. These businesses can be supported by adapting our procurement processes and decision-making – leading to denser ecosystems of local businesses in the University Health Board's supply chain.

6.2.13 We have identified the following ways in which we can approach our procurement activity to generate Social Value and achieve our Strategic Objective:

- Increase the proportion of spending with local suppliers, and in particular more generative suppliers – SMEs, social businesses, worker-owned organisations and mutuals.
- Where possible ring-fence contracts for providers which support job opportunities for more vulnerable citizens.
- Seek Social Value commitments for suppliers to:
  - create new jobs for South West Wales residents;
  - create new apprenticeships for South-West Wales residents, focused most especially on our most deprived communities;
  - upskill their workers and ensure talent is retained in South-West Wales.
- Adopt a hierarchy of intent for procurement spending:
  - South-West Wales first;
  - If not possible, wider Wales;
  - If not possible, outside of Wales.

- More generative suppliers desired over less generative
- Publish medium-to-long-term spending plans and engage early and regularly with potential local suppliers.
- Encourage and support local consortia of smaller suppliers.
- For works contracts, consider whether it is possible to separate the goods and labour components (this gives greater control over environmental specifications and helps local SMEs with cash-flow).
- Simplify procurement processes, particularly for lower value spend, to give smaller businesses easier access to procurement opportunities.
- Adopt social value weightings for larger contracts, linked to local needs analysis (being as bold as we can be without impacting adversely on the financial affordability of the scheme).
- Encourage and where possible require suppliers to use local supply chains in sub-contracts.
- Design lotting arrangements to enable smaller suppliers and social businesses to access procurement opportunities.
- Where possible ringfence the procurement to local suppliers and/or SME/VCSE suppliers.

- Use pre-qualification criteria to restrict who has access to tendering exercises to further ensure the delivery of social value.

6.2.14 We have also approached Bangor University to assist in economic and econometric analysis. The aim is for the patient/healthcare-associated impacts of the University Health Board's activities to be quantified, and then to identify the wider societal impacts of the care which the University Health Board provides and also the expenditure it incurs.

6.2.15 The following project specifications are out to advertisement as at January 2022:

- **Prevention of inequalities in health through wider value creation in the local economy by the Hywel Dda University Health Board**

  West Wales has pockets of inequality in health and socioeconomic opportunities for the local population. We know from the work of the Marmot Review (Marmot, 2020) that "place" determines life expectance and quality adjust life expectancy. There is a 19.2 year difference in quality adjusted life year expectancy across Wales. Hywel Dda University Health Board would like to know the added local value created in the economy of West Wales from the £1 billion spent on health and social care annually. The creation of local jobs, transport and community initiatives linked to the activities of the Health Board can help mitigate or prevent the persistence of such inequalities in health and life opportunities.

  In this novel PhD, the PhD student will with work with the Director of Finance and public health / clinical staff at Hywel Dda University Health Board to develop a novel demonstration project of how the Health Board is contributing to the local economy above and beyond its spending on health and social care service provision. The student will specifically look at the impact of this local value creation on inequalities within the Health Board with a view to mitigating or preventing future inequalities in health.

- **Capturing the value of prevention spending across the life-course by Hywel Dda University Health Board**

  Health boards across Wales are responsible for the organisation and delivery of health care services to patients. Routine finance and accounting methods record spending by service type. In this novel PhD, the PhD student will with work with the Director of Finance and public health / clinical staff at Hywel Dda University Health Board to develop an alternative way of looking at health care spending across different stages of the life course. These stages span birth and early years, childhood and adolescents, working age, retirement age, elderly and very elderly, and the services around how and where we die. A particular focus of this PhD will be how funds are spent on prevention and the promotion of well-being and well-becoming across the life-course. For example, a healthy middle-age sets the stage for ageing well. We know that the early years of life determine health and well-being later on in life.

  Hywel Dda University Health Board would like to know the extent and type of value creation that they generate in addition to their spending of £1 billion per year on providing health services. There is particular concern to recognise local inequalities in health and the extent to which the wider value creation by the Health Board can benefit the local economy through generating jobs, volunteering opportunities, and promoting well-being and resilience, which all have a financial social value to this part of West

Wales. This is an exciting opportunity to explore, using health economics methods and thinking, the wider benefits of spending public resources on health and social care in a locality.

6.2.16 We will also incorporate the insights we gain from this work into our procurement strategies.

6.2.17 We will look for opportunities to use our procurement strategy to support local SMEs, particularly in the construction sector - for example by requiring National All Wales Framework suppliers to use local SMEs for a certain percentage of goods and services. Our Procurement team has worked with Business Wales to engage with and prepare local suppliers.

6.2.18 We also recognise that the constructions/refurbishments which our Programme will entail, together with our position as a major employer, mean that we have a significant role to play in town centre regeneration in the communities where we have a presence. We recognise the ambitions of the Regenerating Town Centres in Wales report by Audit Wales in September 2021 and will proactively seek opportunities to protect and foster local employment and economic activity through our construction programmes, procurement strategies and long-term plans (for example, the location of support services). We are working in partnership with the Local Authorities to collaboratively look at opportunities to support Town Centre First principles.

6.2.19 **Decarbonisation and alignment with Net Zero by 2030:** As described in the Strategic Case and shown in Appendix 12, the University Health Board is developing an Action Plan to report to the NHS Wales Decarbonisation Programme Board and which recognises that procurement is the largest contributor to our carbon footprint. The Action Plan will be fully reflected in the University Health Board's procurement strategies under the Programme.

6.2.20 As also described in the Strategic Case, our new build Urgent and Planned Care Hospital will encompass biophilic design principles and align with Welsh Government's Net Zero Carbon agenda.

6.2.21 **NHS Wales Infrastructure Investment Guidance and Annexes:** The NHS Wales Infrastructure Investment Guidance and Annexes set out a number of requirements which we will meet as we develop our procurement strategies.

6.2.22 We confirm that we will:

- Develop a Community Benefits schedule at OBC stage.
- Observe the ten Design Principles set out at section 9.1 of the Guidance and the Design Guidance on creating an Older Person Friendly Environment at Annex 15.
- Have due regard for the Welsh Government's national planning policy document *Planning Policy Wales (PPW)* and supplementary guidance *Technical Advice Note 12: Design*.
- Develop the design briefs for all elements of our Programme in accordance with the criteria set out in the *Achieving Excellence Design Evaluation Toolkit (*AEDET); carry out evaluations of all elements of the Programme prior to OBCs for inclusion within their estates annexes; and include Project Design Peer Reviews, as required in AEDET, in our Programme Plan.

- Achieve Building Research Establishment Environmental Assessment Method (BREEAM) Excellent ratings for all new build elements of the Programme; and VERY GOOD ratings (assessed against BREEAM Non-Domestic refurbishment and fit-out) for all refurbishment schemes.

6.2.23 **Learning from other relevant Programmes:** We have also sought to learn from the recent experience of other public sector bodies under other relevant programmes – this is described in more detail in the Management Case.

6.3 Procurement timelines and resourcing

6.3.1 Procurement will be core function of Programme Team, drawing on the wider resources of the University Health Board as required. We will work with Shared Services and Welsh Government to agree, procure and fund any necessary specialist capability and capacity that is not available within the University Health Board as may be required.

6.3.2 Further detail on procurement timelines and approaches to the OBC and FBC stages is provided in the Management Case.

6.4 Procurement and funding strategies

6.4.1 Our Programme comprises a number of new-build and refurbishment projects. This section identifies the alternative procurement and funding strategies which may be appropriate, however decisions as to the optimal route for each project will be taken only at OBC stage following rigorous analysis.

6.4.2 **New build:** New build elements of the Programme include:

- the new Urgent and Planned Care Hospital; and
- potentially, Withybush and Glangwili Hospitals if it is determined that new build will represent better VfM and affordability than refurbishment.
- Community facilities such as The Cross Hands Health and Wellbeing Centre.

6.4.3 The University Health Board, in dialogue with Welsh Government, has identified that new build elements may be funded through the All Wales Capital Programme and/or Mutual Investment Model and/or other funding structures.

6.4.4 ***All Wales Capital Programme:*** At a high level, the following procurement strategies are possible:

- A single tender for all works across all Hospitals as a single package; or
- Multiple tenders for individual packages of work and defined projects.

6.4.5 We will take a decision on which strategy to follow early in the OBC stage and following scoping of the individual projects.

6.4.6 We would use the following procurement routes as applicable:

- NHS Building for Wales National Frameworks for projects over £12m (or future replacement(s)); or
- NHS Building for Wales Regional Frameworks for projects over £4m (or future replacement(s)); or
- any other frameworks which might be relevant; or

- an open tender using the Find a Tender process.

6.4.7 The decisions as to which routes to use will be important strategic ones which we will make early in the OBC stage and in full engagement with Welsh Government.

6.4.8 With regards to the National Frameworks, there are concerns about the capacity of the supplier market to meet our timescales given that:

- a number of Programmes of comparable scale will come to market from other Health Boards during a similar timeframe;
- we may also be in competition with a large number of programmes in England under the New Hospitals Programme; and
- many large non-health-related construction programmes are also planned across the UK, partly as a result of pent-up demand from the Covid-19 period being released.

6.4.9 The table below provides a summary of the benefits and potential limitations we have identified under each procurement route:

	Framework procurement	Open procurement using a Find a Tender process
Cost and cost certainty	Open book costing will enable the University Health Board to evidence Value for Money.	May give the University Health Board a higher level of competitive tension than procurement under a Framework, therefore greater ability to exert pressure on costs and level of certainty.
Contract form	The University Health Board will have the ability to use an already negotiated contract form, which can be further tailored subject to agreement between the parties.	The University Health Board will have the ability to set out its desired contract form, however this will inevitably lead to inconsistencies in tenders received as each organisation will have its own limitations as to the Terms & Conditions it will accept.
Risk of potential legal challenge	Low – the Framework sets out a procurement process which all parties have understood and agreed.	Medium – the procurement process will need to be carefully managed to mitigate the risk of legal challenge.
Timescales	A significant benefit of the Framework procurement route is that no shortlisting stage will be required. The fact that all parties will be using a pre-agreed procurement route will also mitigate risk to timescales.	May be significantly longer than a procurement under a Framework Agreement, mainly because an initial Selection Questionnaire stage will need to be undertaken.
Cost of process	Whilst costs will be subject to some risk, the fact that both parties will be operating within a well-understood and pre-	The potential for an open market procurement to take longer than a procurement under the Framework may put upward pressure on costs.

	Framework procurement	Open procurement using a Find a Tender process
	agreed procurement route is likely to mitigate cost risk.	
Supplier capacity	Limited to the Framework Suppliers and their supply chain members, raising risk to Supplier capacity.	This route will allow the University Health Board to reach a wider supplier market, potentially mitigating risk to the availability of suitably qualified suppliers with sufficient capacity to meet demand.
Due diligence requirements	Due diligence has already been undertaken on Framework Suppliers, however given the scale of the new Urgent and Planned Care Hospital and other individual projects, it is likely that additional financial scrutiny and due diligence will be required.	The University Health Board will need to undertake financial and capability due diligence on bidders at Selection Questionnaire stage and this will need to be refreshed at Invitation to Tender stage and up to the appointment of preferred bidders.
Administrative requirements	Limited – the University Health Board will benefit from significant levels of support.	Significant – the University Health Board will bear the full responsibility of running the procurement with limited/no access to external support, however the University Health Board would be likely to have access to external project management services to help to manage the procurement process.
Ability to customise documentation	The University Health Board will have limited ability to alter the standard forms set out in the Frameworks.	The University Health Board will be able to tailor the documentation to its requirements, within procurement regulation parameters.

6.4.10 ***Mutual Investment Model:*** If a Mutual Investment Model was determined to be the most appropriate structure, we understand that it would be structured to align with the following basic Principles:

- The private sector would provide the University Health Board with serviced accommodation.
- Payment would only commence once the accommodation was complete and ready for use.
- The University Health Board would pay for available facilities and deductions would be made from the Annual Service Payment if the facilities were not available, or the Services were otherwise not provided in accordance with the University Health Board's requirements.
- The private sector would provide planned maintenance (including lifecycle replacement), reactive maintenance to the buildings and hard landscaping; in turn, this should produce a simplified Service Level Specification and associated performance monitoring and contract management arrangements for the University Health Board.

- The agreement(s) would promote maximum value for money through commercially reasonable risk transfer consistent with the principles outlined above.

6.4.11 However, it is possible that at OBC stage the University Health Board may conclude and recommend that it will be more affordable and represent better VfM to deliver the new Urgent and Planned Care Hospital and rebuilds of Withybush and Glangwili Hospitals via the All Wales Capital Programme, as outlined below. Nonetheless, the University Health Board will also consider other possible options for the funding of these elements.

6.4.12 **Refurbishment:** Refurbishment elements of the Programme include:

- Refurbishment of Bronglais and Prince Philip Hospitals.
- Potentially Withybush and Glangwili Hospitals if it is determined that refurbishment will represent better VfM and affordability than new build.
- The community estate.

6.4.13 In principle we will seek to fund these elements of our Programme through the Direct Funding options identified in Annex 11 of the NHS Wales Infrastructure Investment Guidance, principally the All Wales Capital Programme, as described above.

6.4.14 Procurement and funding of these elements of the Programme could potentially involve working in partnership with Local Authority colleagues and leveraging their borrowing capabilities.

6.4.15 **Community Facilities:** Procurement options will range from the NHS Building for Wales Frameworks for larger value schemes, to existing in-house and local frameworks for schemes under £4m in value. We will also explore the possibility of partnerships with Local Authorities, third party developers and voluntary services.

6.4.16 Under all options we will seek to generate Social Value by supporting the foundational economy and local SMEs.

6.4.17 The procurement of works to community facilities may be captured within an All Wales procurement of primary and community schemes – the University Health Board has already benefited from Pipeline 1 and may be able to use future pipelines.

6.4.18 **Specialist equipment (including digital):** The specialist equipment element of the Programme will be procured and funded through the All Wales Services Agreement. We will explore the potential for equipment transfers and/or alignment with replacement programmes as an alternative to the purchase of new equipment. We will also consider innovative approaches to this area of procurement – for example, entering into strategic partnerships with large digital players.

6.4.19 **Facilities Management:** We anticipate that this element of the Programme will be retained in-house with some outsourcing as required, although this could be a different model if Mutual Investment Model or third party developer models are utilised.

6.5 Land Disposal(s)

6.5.1 The Programme may produce opportunities for the University Health Board to release landed assets.

6.5.2 Where opportunities are identified we will discuss the most appropriate action with Welsh Government. This may include sale and/or use of surplus land to advance carbon offset/biodiversity drives and policies.

6.6 Land Acquisition

6.6.1 In parallel with producing this PBC the University Health Board is undertaking an appraisal of site options for the new Urgent and Planned Care Hospital. An appraisal report will be shared with Welsh Government to seek support and capital for the land purchase and legal process and the University Health Board will continue to work with Welsh Government representatives and Shared Services in the management of this process.

7. Financial Case

7.1 Introduction

7.1.1 In the Economic Case we identified capital cost requirements for eight scenarios and associated revenue cost increases for these scenarios.

7.1.2 In this Financial Case we firstly describe the current financial position of the UHB.

7.1.3 We then consider the financial impacts of the “counterfactual”, namely our “do nothing” scenario.

7.1.4 We then comment on the impacts of the “do minimum” and Likely, Minimum and Maximum Efficiency scenarios on our capital and revenue requirements. (We are not in a position to model impacts on our balance sheet and income and expenditure at this stage.)

7.1.5 We also consider how the additional expenditure required to implement the Programme will reconcile with our deficit reduction ambitions, by looking at the efficiencies which would be required in order for us to deliver a sustainable financial position.

7.2 Context

7.2.1 The University Health Board has faced a challenging financial position since its establishment. Since the NHS Finance (Wales) Act came into effect from 1 April 2014 to date the University Health Board has failed to meet its statutory duties to have an approvable Integrated Medium Term Plan or break even over a 3 year period. As a consequence, the University Health Board was placed in Targeted Intervention status from September 2016. The University Health Board has been working hard to improve its planning and performance and confidence from Welsh Government has increased, resulting in a move to a lower level of Enhanced Monitoring purely related to the financial position.

7.2.2 Following discussions between the University Health Board and Welsh Government it was acknowledged that the University Health Board was not in a position to submit an approvable IMTP for 2020/23 due to the financial position and three year forecast. Instead an Annual Plan was submitted for 2020/21 that had been prepared before the extent of the Covid-19 pandemic implications were known. The Annual Plan 2020/21 set out a forecast deficit of £25m and despite the pandemic the UHB achieved this position. (The planning process was paused in the Spring of FY20/21 to allow organisations to focus on tackling the pandemic.)

7.2.3 The actual financial performance for FY20/21 was a deficit position of £24.9m. Revenue funding of £116m to offset the costs incurred due to COVID-19 during FY20/21 was received from WG. The University Health Board has failed to meet its statutory duty to break even over the latest 3-year period. However, improvements in financial control, alongside the financial recognition of the University Health Board's demographic challenges in 2018/19 together with additional £10m recurring funding in 2020/21, have contributed to a reduction year-on-year in the deficit position.

7.2.4 Our revenue resource performance for the last three years is summarised in the table below:

	2018/19	2019/20	2020/21	Total
	£'000	£'000	£'000	£'000
Net operating costs for the year	**862,414**	**928,650**	**1,054,279**	**2,845,343**
Less general ophthalmic services expenditure and other non-cash limited expenditure	1,722	1,400	**1,889**	5,011
Total operating expenses	**864,136**	**930,050**	**1,056,168**	**2,850,354**
Revenue Resource Allocation	828,698	895,107	**1,031,258**	2,755,063
Under/(over) spend against Allocation	***(35,438)***	***(34,943)***	**(24,910)**	***(95,291)***

Source: Hywel Dda University Health Board, Annual Report and Accounts 2020/21

7.2.5 All NHS organisations were asked to submit an annual plan for FY21/22. The University Health Board submitted its draft plan in March 2021 with a revised submission in June 2021 in accordance with Welsh Government timelines. The focus of the plan is on recovery from the impacts of the pandemic both in the short term in regard of tackling long waiting times as a result of reduced capacity and longer term solutions that make our services more resilient. Whilst this has been hastened by the response to the pandemic much of what we propose to do was already in line with proposals set out in AHMWW. We will also take the opportunity to learn lessons during the pandemic and modify our response as appropriate.

7.2.6 We have identified four themes for improvement which will provide a framework for us to design and develop opportunities for 2021/22 and beyond, underpinned by key components of our 2021/22 to 2022/23 planning objectives. These themes are:

- Providing system wide integrated community, social and mental health care, managing attendance and admission rates and LOS;
- Developing and nurturing our substantive workforce and reducing reliance upon agency and locum resource;
- Developing commissioning opportunities; and
- Maintaining grip and control over our resources. Which includes a review of paused 20/21 savings programme and insights from other Health Board programmes.

7.2.7 During FY21/22 we have been developing a Roadmap that outlines how we could deliver financial sustainability. This has been developed from external and internal reviews of drivers of our excess costs compared with others. Demographics and remoteness were suggested to be unavoidable and have been recognised through an uplift to the University Health Board's baseline funding. Delivery of services across multiple sites and excess demand for A&E and unscheduled care for the size of the population are areas that need further attention. Building on the above we have identified the following as the areas of focus:

- Pathways: Transforming our pathways and services end to end.
- Recovery: Considering the immediate requirements for recovery.

- Efficiency & productivity: Identifying opportunities to increase our efficiency and productivity.

7.2.28 These include:

- Addressing excessive unscheduled care admissions
- Reassessing skill mix and addressing challenges in workforce recruitment
- Addressing high on-call and 24/7 rotas
- Unsustainable ED/MIU provision
- Addressing unsustainable 24/7 provision in support services

7.2.9 Our analysis indicates that we have an excess bed consumption of circa 200 beds compared with other Local Health Boards. Redesigning our pathways and shifting our investment into the community, through schemes such as Same Day Emergency Care, Urgent Primary Care and a significantly enhanced bridging service to support discharge, will support bed reduction and deliver on our strategic intent to deliver care closer to home. Together with delivering other efficiency opportunities we believe this will help us to stabilise and reduce our deficit. However, whilst reducing the bed base will make us more allocatively efficient, it will worsen our technical efficiency. Having two acute takes in Glangwili and Withybush has been assessed as costing a premium of circa £10m, similarly there is a premium of circa £10m for running a medical take in Prince Philip Hospital. We will not be able to make changes to the current configuration until the new Urgent and Planned Care Hospital is built. Therefore, we are seeking transitional funding from Welsh Government of £20m until the new hospital is built. This should reduce to £10m at this point, assuming demographic growth funding is sufficient to cover any residual costs not addressed by efficiencies, economies of scale and/or digital investment.

7.3 Counterfactual

7.3.1 In line with HM Treasury Green Book and HM Treasury/Welsh Government Better Business Case guidance, the performance of the scenarios is to be assessed against the counterfactual position. In the context of this PBC our counterfactual is our “do nothing” scenario.

7.3.2 At this stage we are able to comment on likely impacts on our capital and revenue requirements and the sustainability of the do nothing scenario, as follows:

7.3.3 **Capital:** As detailed in the Economic Case, the “do nothing” scenario includes the cost of addressing the existing backlog maintenance only.

7.3.4 The total cost impact of this is £58.04m. This is the backlog maintenance as at 31 March 2021 (excluding Fire backlog maintenance at Glangwili and Withybush Hospitals as funding has been provided by Welsh Government to address these).

7.3.5 This would not address the additional capacity required of 194 beds which was identified via the activity modelling. Also, the existing acute hospitals and community sites would not be compliant with the existing Estates compliance standards, which would lead to a significant decline in patient safety, quality and experience.

7.3.6 **Revenue:** It has been assumed that the "Do nothing" scenario would align to the University Health Board Roadmap.

7.4 Do Minimum; Minimum, Likely and Maximum Efficiency Scenarios

7.4.1 The modelling we have undertaken to support this PBC operates on an incremental basis, assessing each revenue scenario over and above the counterfactual position. It is assumed that the revenue costs would be the same for the new build and refurbishment options for the Minimum, Likely and Maximum Efficiency scenarios.

7.4.2 A summary is included below as detailed in the Economic Case:

	Do Nothing £m	Do Minimum £m	Minimum Efficiency £m	Likely Efficiency £m	Maximum Efficiency £m
Revenue	Current Cost base	50.3	44.6	22.7	-0.5

7.4.3 Further work will be undertaken in future business case iterations to include but not limited to:

- The development of detailed workforce assumptions.
- Detailed cost modelling by specialty and by scheme, to take account of developments in the University Health Board's service model once this has been defined.
- The reflection in revenue cost assumptions of how implementation of the University Health Board's digital, estates and environmental strategies will impact on costs.
- The quantification of risks and benefits.
- Detailed (line by line/cost level) sensitivity analysis once key risks and cost drivers are more thoroughly understood. The annual impact on cashflows

7.4.4 As noted in the Economic Case, capital costs have been estimated based on the Functional Content and Schedules of Accommodation for the following eight scenarios:

- Do nothing
- Do minimum
- Option B+ Minimum Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals
- Option B+ Likely Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals
- Option B+ Maximum Efficiency:
  - New build at Withybush and Glangwili Hospitals
  - Refurbishment of Withybush and Glangwili Hospitals

7.4.5 These are summarised in the table below:

	Do Nothing £m	Do Minimum £m	Minimum Efficiency £m		Likely Efficiency £m		Maximum Efficiency £m	
			New Build at WGH & GGH	Refurbishment at WGH & GGH	New Build at WGH & GGH	Refurbishment at WGH & GGH	Build at WGH & GGH	Refurbishment at WGH & GGH
Total Cost (Pubsec 269)	58.1	654.7	1,392	1,356	1,365	1,375	1,342	1,351

7.4.6 Indicative Cashflows have been completed for the Minimum, Likely and Maximum Efficiency capital options and details on these are included within the Estates Annex at Appendix 9 and summarised overleaf:

	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	Total
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Minimum (NB)	17.8	23.9	33.0	71.2	183.3	382.9	469.5	119.8	51.6	27.4	12.0			**1,392.4**
Minimum (Ref)	17.8	23.7	32.1	68.8	170.0	296.1	355.5	88.6	112.1	81.4	56.1	42.0	12.2	**1,356.4**
Likely (NB)	17.4	23.4	32.3	71.4	179.9	346.6	485.8	127.1	49.8	25.7	7.1			**1,366.5**
Likely (Ref)	18.0	24.0	32.6	69.5	174.5	301.9	378.0	106.3	107.7	81.0	49.5	21.6	10.0	**1,374.6**
Maximum (NB)	17.1	22.9	31.7	69.7	177.0	341.0	493.0	111.2	53.1	25.1				**1,341.8**
Maximum	17.6	23.5	31.9	68.8	171.5	296.3	385.3	90.5	110.9	80.4	42.4	21.6	10.0	**1,350.7**

7.5 Sensitivity Analysis

7.5.1 Sensitivity analysis is critical in testing the assumptions made in estimating the Capital and Revenue impact of the preferred case and identifying any potential risk mitigation which may be required.

7.5.2 It is too early in the process to undertake this analysis and this will be tested at future business case iterations, to ensure that any key factors are identified which could impact on the affordability of the preferred option.

7.5.3 Areas which are likely to be reviewed in relation to sensitivities include:-

- Capital Costs are x% higher
- Higher than anticipated inflation
- An x% reduction in cash releasing benefits

7.6 Addressing the break-even requirement

7.6.1 Each scenario described in the economic appraisal will require significant levels of capital investment and increases in revenue cost spend.

7.6.2 Significant efficiencies will be required if capital investment and revenue cost increases are to be combined with a requirement for the University Health Board to break-even.

7.6.3 Indicative modelling as to the efficiencies required is shown below:

Functional Unit	Do minimum £m	Minimum Efficiency £m	Likely Efficiency £m	Maximum Efficiency £m
Sub-total (from economic appraisal)	50.3	44.6	22.7	-0.5
Healthboard Deficit (Alignment to roadmap)	20.0	20.0	20.0	20.0
Funding premium required for Prince Phillip Hospital (alignment to roadmap)	-10.0	-10.0	-10.0	-10.0
Additional Efficiencies required through Economies of Scale / Digital Investment plus assumed funding for Demographic Growth	**60.3**	**54.6**	**32.7**	**9.5**

7.7 Affordability Analysis

7.7.1 **Capital Costs:** It is assumed that Welsh Government Capital Funding Support will be required to deliver the projects outlined in 7.7.4.

7.7.2 Whilst capital costs have been developed for each of the projects at this stage, as noted in the Commercial Case the University Health Board could explore funding the new Urgent and Planned Care Hospital via an alternative funding model such as Mutual Investment Model.

7.7.3 **Revenue Costs:** Revenue costs are currently projected to be in excess of breakeven. However, given the stage of development and re-design of the service model yet to be agreed, together with delivering the benefits from digital technologies, we believe this can be aligned to a sustainable position (in line with the £10m premium we believe will need to remain in place associated with Prince Philip Hospital).

7.7.4 **Impairment & Depreciation**: Whilst estimates have not been developed at this Programme Business Case Stage, it is assumed that any additional funding for depreciation or impairment will be provided via Welsh Government.

7.8 Accounting Treatment

7.8.1 As the impact on the University Health Board's Financial Statements becomes clearer through future business case iterations, the accounting treatment will be in line with the current accounting standards and agreed with our External Auditors.

7.9 Stakeholder/funder support

7.9.1 We have written to the following stakeholders seeking letters of support, which will be shared with Welsh Government as part of the PBC scrutiny process:

1. Swansea University.
2. Aberystwyth University.
3. University of Wales Trinity Saint David.
4. Betsi Cadwaladr University Health Board.
5. Powys Health Board.
6. Swansea Bay University Health Board.
7. Welsh Ambulance Service NHS Trust.
8. Carmarthenshire County Council.
9. Pembrokeshire County Council.
10. Ceredigion County Council.

7.9.2 In addition, the PBC has been presented to the Hywel Dda CHC Executive Committee at their meeting on 18 January 2022.

8. Management Case

8.1 Introduction

8.1.1 In the preceding Cases we have set out the strategic rationale for our Programme; identified a preferred way forward (Proposal B+); examined cost and affordability; and considered our approach to procurement.

8.1.2 This Management Case sets out the leadership, governance and management arrangements we have put in place to deliver the Programme. It also provides details of the Programme plan and our approaches to stakeholder engagement and communication, risk management and mitigation and benefits realisation.

8.2 Programme Governance and Delivery Arrangements

8.2.1 The Programme Governance and Delivery Arrangements described in this section flow from the Programme Mandate signed by Maria Battle as Chair of the University Health Board.

8.2.2 The Programme Mandate aligns to the University Health Board's Strategic Objectives, in particular Strategic Objective number 5: safe, sustainable, accessible, kind care; and the Planning Objectives stated in section 4.4 of the Strategic Case.

8.2.3 Other relevant planning objectives to this mandate include:

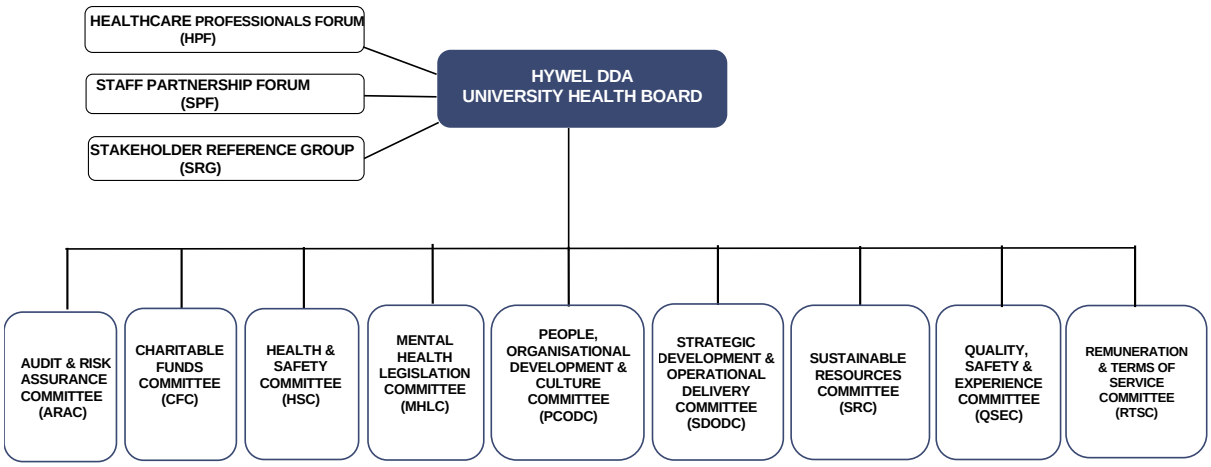
- 6G: During the first quarter 2022/23 develop and endorse a strategic roadmap to respond to the Welsh Government ambition for NHS Wales to contribute towards a public sector wide net zero target by 2030.

8.2.4 The Programme Mandate also states the following:

- It appoints the Chief Executive Officer (CEO) of Hywel Dda University Health Board, Steve Moore, as the Senior Responsible Owner (SRO), for the Healthier Mid and West Wales Programme Business Case. This appointment includes delegated authority, accountability and responsibility to deliver this Healthier Mid and West Wales PBC to the agreed terms and conditions.
- The SRO has appointed a Programme Manager (PM) - Paul Williams, Assistant Director of Strategic Planning - with defined delegated authority and accountability to deliver the PBC.
- The Board, Chair and CEO of Hywel Dda University Health Board define a successful PBC as one that achieves the aims and objectives defined within the Healthier Mid and West Wales Strategy.
- The Programme Manager is responsible and accountable to the SRO.
- The SRO and Programme Manager have appointed a Programme Group to successfully deliver the PBC.
- The Programme Group is responsible and accountable to the SRO; and
- The Programme Group does not have mandate or authority to undertake the University Health Board to contractual, financial or operational commitments however shall act in an advisory capacity to the SRO.

8.2.5 The principles of the Programme Mandate described above are operationalised through the governance and management structures shown below.

8.2.6 The first organigram below shows our board structure:



8.2.7 The Board's role and purpose is to require and receive positive assurance, not only on service preparedness and response but also on clinical leadership, engagement and ownership of developing plans; the health and well-being of staff; proactive, meaningful and effective communication with staff at all levels; and health and care system preparedness.

8.2.8 This PBC was presented to Board for approval on 27 January 2022.

8.2.9 The PBC was also presented to the following Board Level Committee Meetings for assurance:

- Executive Team
- Strategic Development and Operational Delivery Committee (SDOD)
- Sustainable Resources Committee;

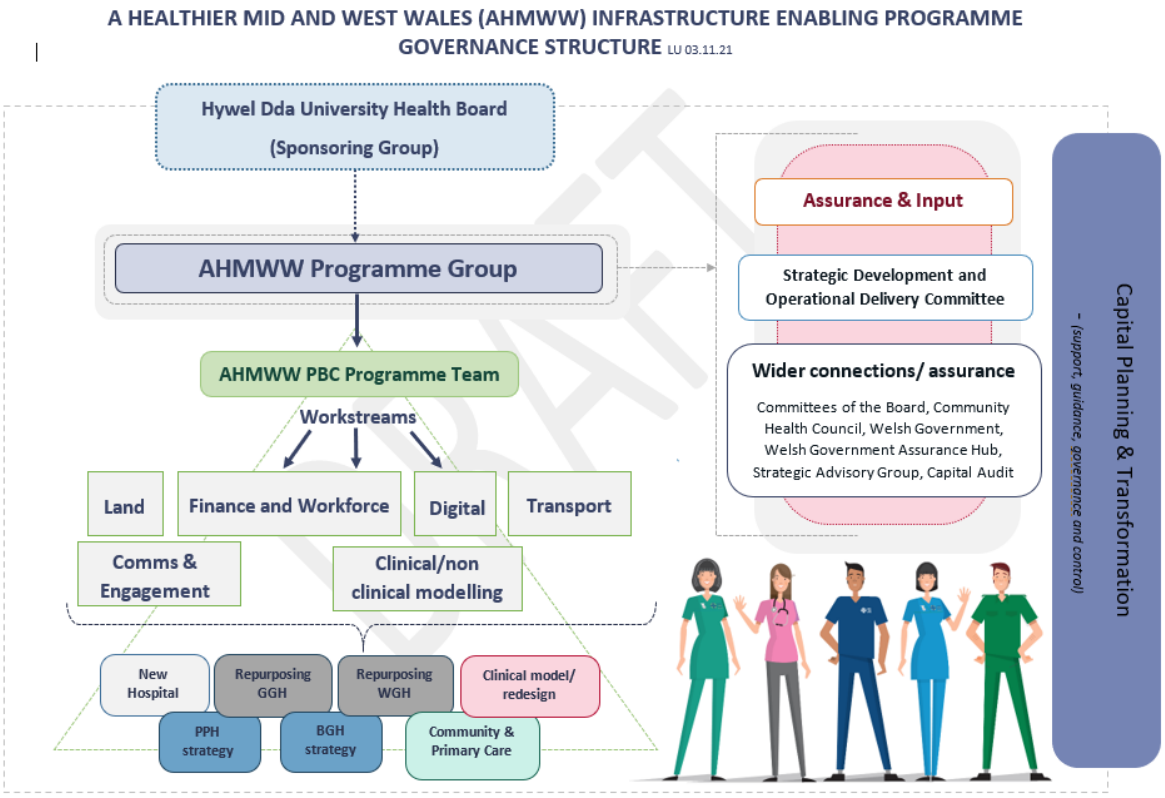
and to the following Sub-Committee Meeting:

- Capital Estates and IM&T Sub-Committee (CEIM&TSC).

8.2.10 Progress on the PBC was also presented to the following Advisory Groups:

- Staff Partnership Forum
- The Stakeholder Reference Group
- Healthcare Professionals Forum
- CHC Service Planning Committee.

8.2.11 The second organigram shows our structure for delivering the Programme:



8.2.12 The narrative which follows describes this structure in detail.

Programme Group

8.2.13 Programme Group is chaired by Steve Moore, CEO, in his capacity as SRO for the Programme.

8.2.14 Membership of Programme Group is set out in full at Appendix 14.

8.2.15 Programme Group meets approximately monthly and receives reports from the Programme Manager and the Leads of the Programme Team Workstreams (described below).

8.2.16 During the period of development of this PBC the Terms of Reference of the Programme Group – attached at Appendix 15 - have been as follows:

- Identify risks, issues and mitigations for the successful completion of an approvable PBC.
- Ensure the PBC delivers within its agreed boundaries (e.g. cost, organisational impact and adoption, expected actual benefits realisation).
- Identify problems and solutions in respect of the production of the PBC.
- Monitor production progress and timelines.
- Escalate risks and issues to the SRO/Board.
- Scrutinise the content of the PBC and production process.
- Resolve strategic and directional issues, which need input and agreement of senior stakeholders to ensure the progress of the PBC.
- Ensure due regard has been taken in relation to Public Sector Equality duties and socio-economic impact.

- Maintain focus on alignment with the AHMWW Strategy.
- Ensure compliance with relevant standards and guidance.
- Make resources available for planning and delivery purposes.

8.2.17 These Terms of Reference will be refreshed for future business case stages.

8.2.18 Programme Group is also the vehicle through which the University Health Board engages with and receives assurance and feedback from a range of internal and external stakeholders including:

- Welsh Government.
- Community Health Council.
- Shared Services Partnerships, Audit and Shared Services.
- ARCH.
- West Wales Regional Partnership Board.
- Public Services Boards in each of the three Local Authority areas.
- Local Government partners.
- Swansea City.
- Committees of the Board.
- Advisory committees of the Board, including Stakeholder Reference Group, Black, Asian and Minority Ethnic Advisory Group, Staff Partnership Forum and Healthcare Professionals Forum.
- Sponsor Group.

8.2.19 As noted in the Strategic Case, our Chief Executive has requested that a Biophilic Advisory Group be set up to ensure that biophilic design principles are fully embedded in the development of our OBCs. This will be a key workstream for the Programme Group, managed through the Programme Team.

Strategic Development and Operational Delivery Committee (SDODC)

8.2.20 SDODC has responsibility for seeking assurance on delivery against all Planning Objectives aligned to it, considering and scrutinising the plans and programmes that are developed and implemented.

8.2.21 From the perspective of this Management Case, SDODC assures alignment between business cases produced to support the Programme (including this PBC) and other relevant plans and reports.

8.2.22 Key responsibilities include:

- To review business cases, prior to Board approval, including the development of this PBC.
- To seek assurances on:
    - Delivery of the University Health Board's Annual Recovery Plan.
    - The development of the University Health Board's Integrated Medium Term Plan (IMTP).
    - All outstanding plans in relation to the National Networks and Joint Committees including commitments agreed with Swansea Bay UHB/ARCH; Mid Wales Joint Committee.

- The development and implementation of a comprehensive approach to performance delivery and quality management, to incorporate all performance requirements set by the Board, WG, regulators and inspectors.

- To consider the University Health Board's approach to reducing health inequalities and the interventions aimed at addressing the causes.
- To consider proposals from the Capital, Estates and IM&T Sub Committee on the allocation of capital and agree recommendations to the Board.

Strategic Advisory Group (SAG)

8.2.23 Membership of SAG is comprised of service leads from the Mental Health & Learning Disability, Primary Care & Community, Acute Services, and Transformation lines of service, amongst others. For a full list of members, please see Appendix 16.

8.2.24 The responsibilities of SAG, according to its Terms of Reference, are to:

- Provide a forum to connect ongoing work in primary, community and acute services to support the Programme.
- Provide assurance that the delivery of any projects, service changes and pathway re-design related to the AHMWW Programme is consistent with the principles and design assumption set out within A Healthier Mid and West Wales: *Our future generations living well*.
- Provide assurance that the delivery of any projects, service changes and pathway re-design related to the AHMWW Programme is consistent with the University Health Board's learning from response to the Covid pandemic.
- Provide clinical input and assurance through continuous engagement.
- Ensure that there is continuous engagement with all relevant parties.
- Ensure the AHMWW business cases are based on best practice and innovation.
- Ensure the clinically-led service model informs the functional resource requirement of the AHMWW Programme across the University Health Board footprint. Subject to direction given by the Capital Programme Team (see below), establish work streams, task & finish groups as appropriate and determine the membership and ToR of such work streams. Escalate high-level issues upwards when necessary based on continuous assessment of impact throughout the lifecycle of work.
- Deliver the following outputs:
    - A clinically-led service model for the whole system and the new and repurposed estate, that responds to the Social Model for Health and Well-being.
    - A clinically-led functional content plan that meets the practical requirements of the PBC and subsequent business cases and the wider system as a whole.
    - Programme products as planned to the required level of quality, standards and to timescales and ensuring due regard has been taken in relation to Public Sector Equality duties and socio-economic impact of the PBC (please see the Equalities and Health Impact Assessment attached at Appendix 5 and summary in the Strategic Case).

Programme Team

8.2.25 Programme Team is a delivery vehicle, reporting to and seeking guidance from Programme Group.

8.2.26 Programme Team has had responsibility for the development and completion of this PBC and will have responsibility for delivering future business cases. It is chaired by the PM (Paul Williams, Assistant Director of Strategic Planning) and comprises a number of Workstreams. Workstream Leads and Roles are set out in the table below. The Programme Team Terms of Reference are provided at Appendix 15.

8.2.27 The Programme Team meets every two weeks and receives reports from the Workstream Leads. The table below describes the Workstreams and theirs Roles as they have applied during the development of the PBC. Workstream Terms of Reference are available on request and will be refreshed for future business case stages.

Workstream	Workstream Role
Digital	To develop plans to ensure the optimal use of technology and digital solutions are identified to support the development of the PBC and subsequent business cases in line with our vision of a Healthier Mid and West Wales.
Communications and Engagement	To act as a delivery vehicle for the development and completion of the communication and engagement activities required to support the PBC and subsequent business cases.
Land	To support delivery of the land process, which includes identifying site options, facilitating the shortlisting process, managing public and stakeholder communication and engagement and assessing technical and legal requirements to identify a shortlist of sites.
Finance and Workforce	To provide direction, coordination and oversight to financial and workforce costings and plans and to collaborate with other design groups, directorates and enablers to ensure the detailed planning, engagement and implementation have a sound financial basis. To undertake the financial and workforce planning and monitoring required to support the agreed Capital Investment Programme.
Transport	To develop plans to address access, travel and transport in support of the preferred way forward identified in the PBC.
Clinical/non-clinical Modelling	To develop an activity modelling platform that will inform the PBC and subsequent business cases as the overall Health and Care Strategy is delivered. To provide activity modelling information on the different scenarios/shortlisted options. To review the impact of pathway re-design work on the activity modelling scenarios. To review the impact of the social model for health on the activity modelling scenarios.

8.2.28 All Workstream Leads are asked to consider the Well-being of Future Generations (Wales) Act 2015 five ways of working and seven well-being goals as part of their work.

8.2.29 The Programme Team also hears reports from the University Health Board's estates, land and business case advisers.

8.2.30 A typical agenda for a Programme Team meeting includes:

- review of Actions;
- Workstream Leads' reports;
- review of the Risk Register.

Capital Planning Team

8.2.31 The Programme Manager is supported by the Capital Planning Team.

8.2.32 The Capital Planning Team has been responsible for the day-to-day direction and management of PBC development and delivery and will continue this role into OBC and FBC stages. The Team uses MSP methodology.

8.2.33 During development of the PBC the Team has also developed a "Reflections Log" which gathers together lessons learned from various external and internal sources. Two key sources of information for this have been engagement with Aneurin Bevan University Health Board and a review of their Grange University Hospital Lessons Learnt Review, along with the paper published by the Nuffield Trust titled "Lessons from the last hospital building programme, and recommendations for the next".[26] These two documents, along with information gathered from meetings with other organisations which have been through similar business case development production in recent years, have enabled us to develop a log and consider how these lessons can be applied in the development of the Programme. Appendix 17 details the lessons that we can learn from others and how we will endeavour to address these as we develop our PBC and future business cases.

8.2.34 The Capital Programme Team has engaged with Welsh Government throughout the development of this PBC.

Aligning our Programme with the Future Generations of Wales Act, our Socio-Economic Duty and Foundational Economy

8.2.35 We have demonstrated in the Strategic Case that we understand our responsibility to play our part in achieving the ambitions of the Well-being of Future Generations (Wales) Act, and to consider our Equality and Socio-Economic duties, adding Social Value and helping to build a Foundational Economy; and in the Commercial Case how we will build these responsibilities into our procurement strategies.

8.2.36 We recognised that we needed to ensure that we were using the lens of the Well-being of Future Generations Act to help to inform our Programme at each stage and decided to develop a framework which could be used to test our thinking and decision making processes. This is additional to the integrated equality and health impact assessments which have been undertaken at a Programme and Workstream level and give assurance to the Programme Group that equality and socio-economic duties have been considered.

[26] Available at https://www.nuffieldtrust.org.uk/resource/lessons-from-the-last-hospital-building-programme-and-recommendations-for-the-next

Use of Specialist Advisers

8.2.37 We have appointed/engaged with the advisers shown in the table below to support the delivery of this PBC. Advisers to support the University Health Board during the OBC and FBC stages will be appointed by competitive tender.

Adviser	Responsibility
MACE	Programme Management
Strategic Healthcare Planning	Healthcare Planning
PwC	Business Case Authorship
NHS Wales Shared Services Partnership	Estates, land and procurement advisory role
The Consultation Institute	Public engagement
Savills	Land Specialists
BDP	Masterplanners

8.3 Programme Planning

8.3.1 Key Programme milestones are shown in the table below and a detailed Programme Plan is included within the Estates Annex at Appendix 9.

8.3.2 The milestones and Programme Plan are based on Implementation Option 1 as described in the Economic Case. Timelines for the other Implementation Options are available on request. Timelines are preliminary and estimated at this stage, subject to PBC endorsement and decisions on most appropriate source(s) of funding, this decision being taken during the scrutiny process – these timelines are based on All Wales capital solutions.

8.3.3 The following should also be noted:

- For the new Urgent and Planned Care Hospital there is an estimated period of eighteen months between option to purchase and submission of Outline Planning Application, with Outline Planning Applications for other sites being submitted simultaneously. This is because the work needed to inform and prepare the planning application (including all environmental surveys and assessments and the required pre-planning consultation) will take a minimum of eighteen months and can only commence once we have a preferred site / option and the full OBC stage design commences.

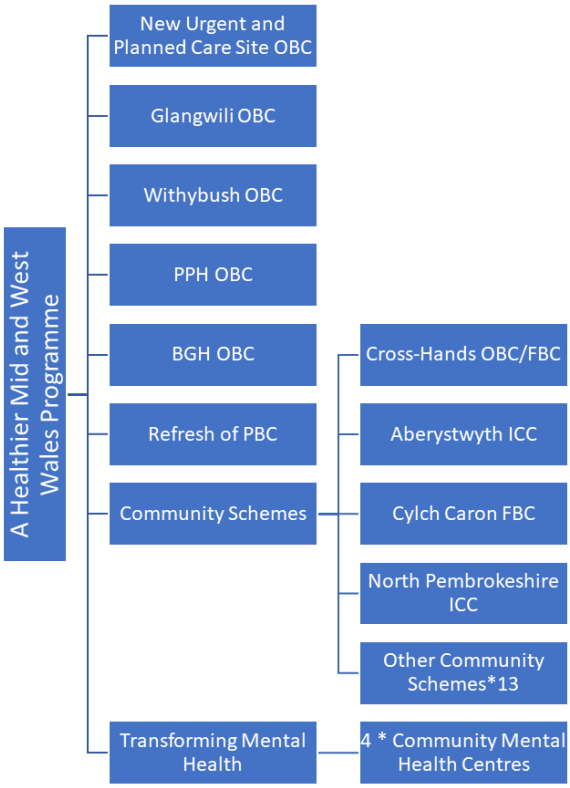
- The assumption is that business cases for the different schemes will be produced in parallel to maintain the overall integrity of the Programme, however this may lead to gaps in timelines between FBC completion and construction projects for schemes dependent on completion of the Urgent and Planned Care Hospital

Milestone	Urgent and Planned Care Hospital	Glangwili Hospital (new build)	Withybush Hospital (new build)	Prince Philip Hospital	Bronglais Hospital	Community
PBC Submission	End January 2022	End January 2022	End January 2022	End January 2022	End January 2022	End January 2022
PBC Endorsed (for purposes of progression)	March-May 2022	March-May 2022	March-May 2022	March-May 2022	March-May 2022	March-May 2022
OBC team selected (BfW framework)	May – July 2022	May – July 2022	May – July 2022	May – July 2022	May – July 2022	Timelines to be confirmed on a scheme-by-scheme basis, but all FBCs to be submitted by Mid March 2026
Preferred site confirmed (potentially subject to consultation and heads of term)	By June 2022	Not applicable	Not applicable	Not applicable	Not applicable	
Option to purchase	July/August 2022	Not applicable	Not applicable	Not applicable	Not applicable	
Outline Planning Application*	Dec 2023	Dec 2023	By Dec 2023	By Dec 2023	By Dec 2023	
OBC Submission	End January 2024	End January 2024	End January 2024	End January 2024	End January 2024	
Outline Planning Approval	End May 2024	End May 2024	End May 2024	End May 2024	End May 2024	
OBC Approval (WG)	Mid July 2024	Mid July 2024	Mid July 2024	Mid July 2024	Mid July 2024	
Reserved Matters Discharged (Planning)	September 2025	By September 2025	By September 2025	By September 2025	By September 2025	
FBC Submission	Mid March 2026	Mid March 2026	Mid March 2026	Mid March 2026	Mid March 2026	
FBC Approval (WG)	Early June 2026	Early June 2026	Early June 2026	Early June 2026	Early June 2026	
Purchase Site completion	Mid July 2026	Not applicable	Not applicable	Not applicable	Not applicable	
Period of site preparatory/demolitions/ enabling works	Not applicable	July 2026 – July 2027	July 2026 – July 2027	July 2026 – October 2028	Not applicable	
Start on site	August 2026	August 2027	August 2027	November 2028	July 2026	July 2024 onwards
Construction Completion	End May 2029	End June 2029	End June 2029	July 2032	January 2031	Various as schemes delivered
Commissioning	June – October 2029	July – October 2029	July – October 2029	Ongoing throughout refurbishments / repurposing	Ongoing throughout refurbishments / repurposing	Ongoing as schemes delivered
Opening	End October 2029	End October 2029	End October 2029	Not applicable	Not applicable	All open by October 2029

* For the new Urgent and Planned Care Hospital there is an estimated period of eighteen months between option to purchase and submission of Outline Planning Application, with Outline Planning Applications for other sites being submitted simultaneously. This is because the work needed to inform and prepare the planning application (including all environmental surveys and assessments and the required pre-planning consultation) will take a minimum of eighteen months and can only commence once we have a preferred site / option and the full OBC stage design commences.

Approach to OBC and FBC stages

8.3.4 We are currently considering our approach to OBC and FBC stages. Our current expectation is shown in the graphic below:[27]



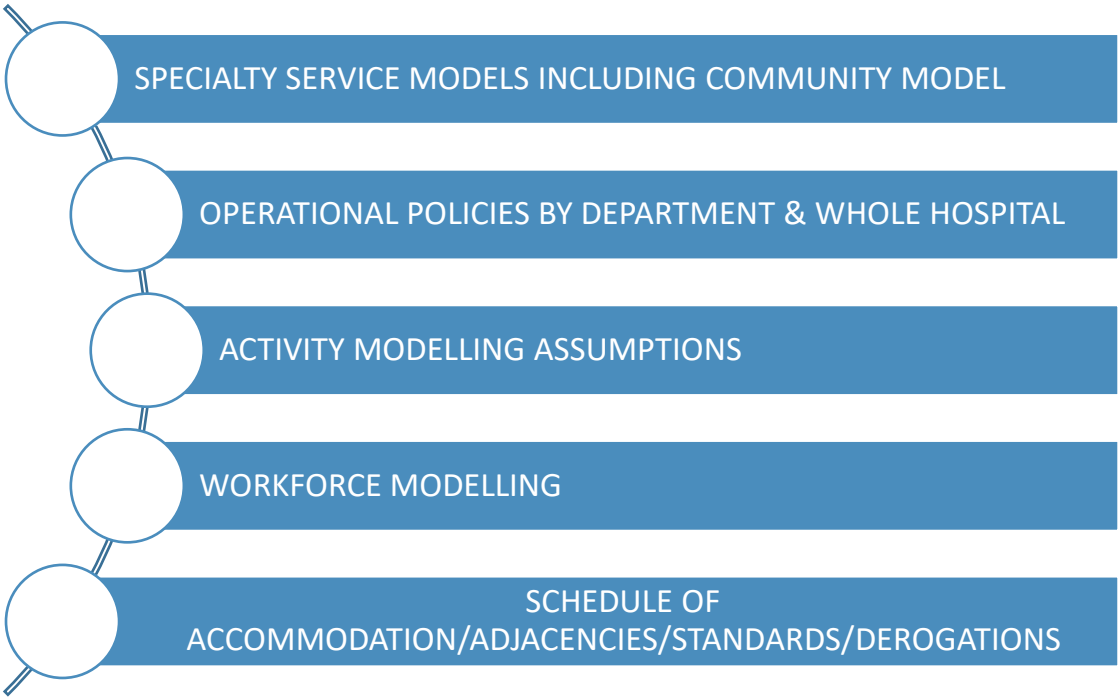
8.3.5 The University Health Board will work with Welsh Government on resource schedules for the OBC stage and will take advice from the Shared Services Audit Team on the establishment of governance for a programme of this scale, learning lessons from comparable programmes in Wales and elsewhere and using specialist advisers where necessary. We will fully engage with Welsh Government as we progress into and through OBC and FBC development and keep Welsh Government updated at a frequency to be agreed (at least quarterly) on the progress being made.

8.3.6 We will develop an Integrated Assurance and Approval Plan and will engage with the Assurance Hub on this.

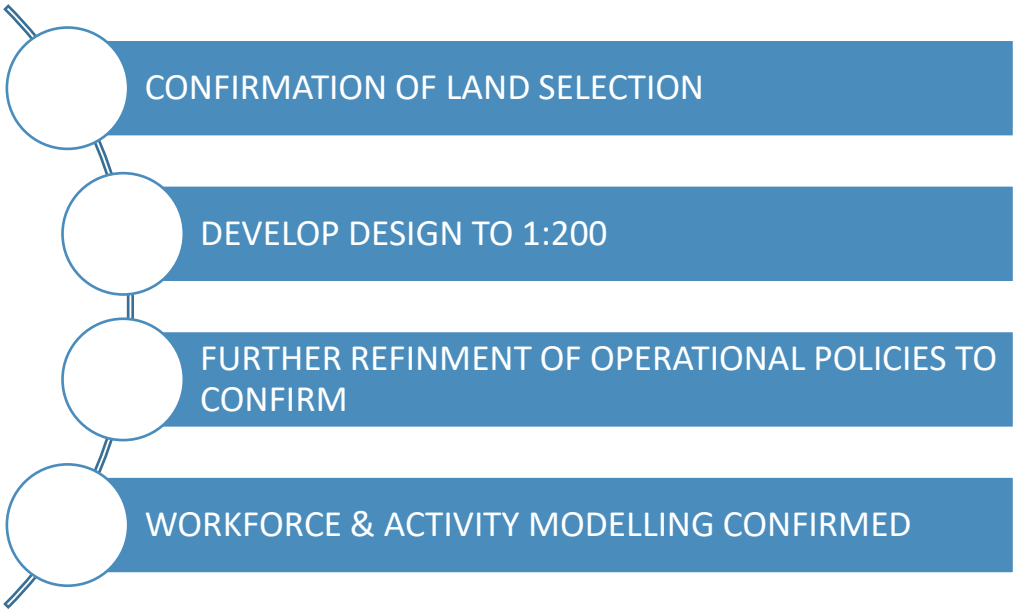
8.3.7 We are conscious of the significant amount of work to do to build on the solid foundations provided by the Health and Care Strategy, and we are developing a programme which will commence in advance of OBC to provide the service detail which will underpin the OBCs. We know that from a service perspective the OBC stage will be divided into RIBA Stages 1 and 2, and we are in the process of defining the outputs required to commence that process. Our current view of those inputs is shown in the graphics below:

[27] The thirteen Other Community Schemes include: Haverfordwest Central ICC; Neyland ICC; Milford Haven ICC; Narberth ICC, Pembroke Dock ICC, Tenby ICC, South Pembrokeshire, Lampeter ICC, Llandysul ICC, Pentre Awel, Llandovery, Carmarthen Hwb and Amman Valley.

1. Clinical Information and Activity Modelling OBC Requirement – RIBA Stage 1 – Initial Project Brief circa 4 months



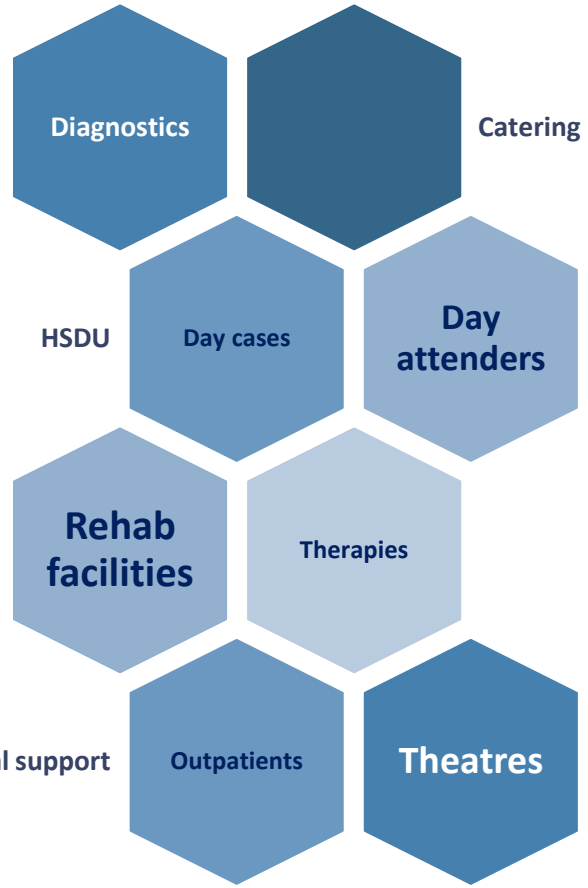
2. Clinical Information and Activity Modelling OBC Requirement – RIBA Stage 2 – circa 8 months



3. Clinical Information and Activity Modelling OBC requirement

- Clarity on our service model across all sites and community, including the development of Operational Policies
- Review the consultation design assumptions and confirm
- Progress with macro pathway work to confirm by specialty what activity we will be undertaking where IP/DC/OP

Impact of pathways on all sites in terms of



Consultation Design Assumptions

Population	Site changes	Admission avoidance	Bed discharge	Outpatient change
Impact of increase in the population over 7 years (to 2024/25)	Flow of patients to nearest site providing required service*	40% Reduction to existing levels of emergency admissions for ACS conditions	Reduction in lengths of stay to the median of the peer group	25% Reduction in follow-up outpatient appointments
A&E/MIU change	**A&E/MIU proportions**	**Acute to community step-down – beds**	**Acute to community step-down – outpatients**	**Daycase community hub shift**
4.3% Reduction in overall level of A&E & MIU attendance (net 0% change against demographic growth over 7 years)	30% Attendances currently presenting at A&E will present at MIUs instead	50% Patients in an acute bed will step down to a community bed within 72 hours of admission	90% New and follow-up appointments will take place in a community setting	50% Daycases for medical specialties will take place in a community setting

Hybrid/Agile working

8.3.8 NHS Wales organisations have received guidance from the report "NHS Wales Approach to Agile Working: Briefing and Guidance", which outlines the wider context of hybrid working, as well as building on the learning of remote working during the first wave of the Covid-19 pandemic.

8.3.9 Welsh Government have outlined in their Programme for Government 2021-2026 a target of 30% of workforce to be working remotely.

8.3.10 We have set up a Hybrid/Agile Working Group, which has also identified linkages to other commitments in the Government programme including:

- Potential to support the notion of hybrid working hubs, supporting town centre regeneration opportunities; and
- Placing technology first – enabling a successful hybrid working approach.

8.3.11 Hybrid/agile working will support the University Health Board's decarbonisation action plans through:

- A reduction in the number of workspaces, indirectly reducing the level of commuting; and
- Increased use of video-conferencing technology, reducing the need to travel.

8.3.12 The Hybrid/Agile Working Group has developed a set of Design Assumptions to inform design work on all elements of the Programme, shown in the table below:

1	The opportunity will exist for the workforce to work in a hybrid/agile manner if the role permits it. This flexible working arrangement could include working: • At home (subject to appropriate risk assessment); • At a hybrid/ agile working hub; or • At an agreed place of work (Health Board site). Working in this manner is subject to University Health Board approval.
2	For team development, staff well-being and creative working, face-to-face contact will continue to be important and therefore all members of staff will be expected to attend their stated place of work on a regular basis, with the frequency agreed with the line manager.
3	Teams that are linked/work closely together will be co-located whenever possible to allow for closer collaboration (e.g in a zonal working/open desk policy approach).
4	There will be touch down hubs/zones near or located within population centres for the workforce to utilise. Zones/hubs could be owned/managed by the University Health Board, or wider public sector partners.
5	There will be an increase in accessible multi use offices/touchdown spaces and multi-use consulting rooms. It is anticipated that single use offices will be minimised and only supported subject to University Health Board approval (to reflect individual needs).

6	If appropriate training will be virtual to maximise efficiency – it is anticipated that there will be an increase in multi-functional rather than dedicated training venues per service/ directorate.
7	There will be an overall increase in virtual meetings. Existing meeting facilities will be maintained, to support face-to-face drop-in sessions and collaboration events etc.
8	The main base for the workforce will (where possible) reflect the University Health Board's broader strategy to shift services into the community, thereby decongesting acute hospital sites.
9	Overall improvement in quality and suitability of estate.
10	Overall reduction in estate leased and/or owned by the University Health Board.

8.4 Change Management Arrangements

8.4.1 The University Health Board recognises the enormity of the challenge to transform services over the coming years to deliver the Programme.

8.4.2 We confirm that we will adopt and abide by the All Wales Organisational Change Policy, developed by the Welsh Partnership Forum and which sets out the principles intended to apply to all employees and all situations of organisational change within NHS Wales.

8.4.3 This policy ensures that procedures are in place for:

- Consultation of staff interests.
- Management of employees at risk of displacement.
- Filling posts during organisational change.
- Protection of pay and conditions of service.
- Restrictions on vacancy filling.
- Equality.
- Evaluation and monitoring.
- Temporary appointments to maintain services; and,
- Support arrangements, such as counselling available for staff and career support for displaced employees.

8.4.4 We will develop a change management policy, methodology and plan for the Programme, building on the All Wales Organisational Change Policy (March 2018) and reflective of relevant Welsh and UK government guidance, once preferred options have been identified at OBC stage.

8.4.5 Set out below are the principles on which our change management policy, methodology and plan will be based.

Developing a compelling change approach and narrative for the transformation

8.4.6 We are embarking on a far-reaching transformation that will touch every aspect of our organisation and workforce, including our service models, role redesign, ways of working and locations, and will impact our people's psychological well-being. We strongly believe that the new ways of working and behaviours needed to make the transformation a success

will only come about if change is person-centred and people-led – a top-down, management-driven approach will not work. Our change management approach is based on this principle. Our change management approach will also align to our values, and the principles of the Strategy, meaning that we will approach change management in the same way – safe, sustainable, accessible and kind. Our emergent planning and organisational enablers (described in the Strategic Case) will facilitate the approach.

Our person-centred people-led change approach and principles

8.4.7 Our approach is rooted in the ADKAR change principles of moving people from awareness and desire to change along the change curve so they have the knowledge to change and become advocates of change, and then change is reinforced so that it is sustainable. ("ADKAR" is an acronym for the five outcomes an individual needs to achieve for a change to be successful: **Awareness, Desire, Knowledge, Ability and Reinforcement**).

8.4.8 Our change methodology is grounded on the following principles:

- Creating a new Hywel Dda way will involve the development of people culture plans for the whole of the organisation to enable teams and people to get to where we want to be. These must be owned by leaders and staff.
- Win hearts and minds early by creating an exciting vision for the future and understand how to tailor it to different audience groups so they are excited and not overwhelmed.
- Ask our staff and communities to think about the potential impacts of the vision on their roles, service delivery models and ways of working, and how the model will need to work for them to feel engaged, motivated and energised - staff will want to know how will I get to work / impact on family life? Staff have said via the report titled "Understanding the staff experience in Hywel dda University Health Board during the 2020-21 COVID 19 Pandemic" what was positive, and this was empowerment. Engage with our Black, Asian and Minority Ethnic network.
- Use immersive techniques that enable and embed change (see discussion of points 3&4 below).
- Align with board outcomes and staff experience measures.

Overview of our people-centred change, communications and adoption methodology

Key principles

People first approach which places experiences at the centre of design

Win hearts and minds and equip leadership with the tools, techniques and messages they need to lead the change

User Adoption not 'training' – Focus on driving engagement and enthusiasm through immersive Learning experiences

Just in time support – Using Digital Adoption Platform to provide timely and in-context support for key and frequent processes

1 Start from where you are
Strategy and assess

Use experiences from programmes in government and health sectors to set the foundation for effective change management. Develop a core narrative for our workforce transformation, utilising the various resources available and liaising with key stakeholders.

2 What could your future people experience look like?
Design

Understand the wants, needs and impacts in building a change approach based on staff experiences, representing how stakeholders will be impacted by transformation. Document research to understand the impact of change to staff, and to gain insight to workforce challenges and opportunities and what it will be like working in a new hospital in the long term.

3 Prepare for change
Build

Develop change, communications and engagement strategy and present through interventions to key stakeholders by having the communications materials prepared.

4 Manage change
Implement

To bring the strategy to life communications will launched through immersive events, developed content and various forms of training sessions. Develop change agent networks who can host events and ensure that the change strategy is embedded within the local teams.

5 Reinforce and measure change

The strategy will evolve as effectiveness is measured through the use of KPIs and collected through surveys. This will ensure objectives are met and impact is measured.

Key outcomes

A best practice change management strategy and approach that will deliver successful change across Inchcape globally.

Knowledge transfer and upskilling to improve change capability and enhance future delivery of change within Inchcape.

A strategy that brings the business with you on the journey, building on employee experience insights to effectively engage with stakeholders throughout the programme, driving buy-in at a local level and maximising adoption.

(1) Experience on similar change, communications and engagement programmes in government and the health sector is that the foundation for effective **change management** starts with everybody who will be a part of delivering the change to work together in developing a compelling vision for the future. We will develop a core **narrative** for our workforce transformation, using inclusive terminology, draft supporting communications and liaise with key stakeholder groups from across the University Health Board to agree the key messaging/lines to take.

(2) We will then begin to build the right change approach by understanding different wants, needs and impacts through staff stories to represent the experience of different stakeholder groups impacted by the transformation - this is real and authentic and reflects more where we are as an organisation. Building on previous stakeholder engagement work we have done, we will run workshops to understand how different staff will be impacted (e.g. members of trade unions, hospital staff, other health staff professionals) and gain insights on workforce challenges and opportunities. We will also run focus groups, interviews and supplement with desktop research to understand the future culture and identify how it needs to change; and to explore what it will feel like to work in the new hospital and organisation in 10 years' time.

(3&4) Our analysis will help us develop a change, communications and engagement strategy and **tailored approach for key stakeholder groups** with interventions such as communications, engagement events and training. To drive engagement, we will deliver **immersion events** (e.g. town halls, roadshows) by developing content and running train-the-trainer events. These will help bring strategy to life. We will also define and establish a change champion network who can deliver engagement events, answer questions and help make the change stick on the ground with their local teams.

(5) Finally, our change approach is designed to be agile and evolve as its effectiveness is measured. We will develop a **set of KPIs** to understand how the change is landing and use surveys to measure how quickly ways of working and culture and behaviours are changing. This will enable us to make regular interventions that ensure our ambitious transformation achieves its objectives and to measure *impacts.*

Milestones: Core narrative, stakeholder map, communications strategy and engagement plan; train-the-trainer immersion sessions and focus groups across the business to gauge engagement; top-level messaging for other departments; engagement plans workstreams, briefings with ministers, senior leaders and stakeholders on transformation activities and decisions, change champion network and adoption KPIs.

8.4.9 We will bring in external advice to help us to structure and implement the above.

8.4.10 Our approach will also be informed by the experience we gained of staff moving into our Integrated Care Centres at Aberaeron and Cardigan, where we aimed to create a dynamic environment that provides rich, safe spaces to work. Following the move we invited an Anthropologist, Dr Luci Attala, Trinity St David, to undertake a study to look at how employees negotiated the transition from traditional workspaces to an open-plan hot-desk environment in non-clinical areas.

8.4.11 We found words Dr Attala used in a presentation to us to be very powerful:

"Being subsumed into a new culture or having to abandon one's work culture is uncomfortable for all of us. It confronts one's sense of identity which in turn prompts questions around belonging. Challenges to one's identity and sense of belonging invariably cause anxiety."

8.4.12 Some people had found the change to be more challenging than we had perhaps anticipated. We have learned that people need space and time for dialogue and their voices to be heard – otherwise the risk is that people may perceive changes to work methods as a threat to their work cultures.

8.5 Communications and Engagement

8.5.1 In the Strategic Case we set out the Communications and Engagement work undertaken to date. Our Communications and Engagement Plan going forward is attached at Appendix 18.

8.5.2 The objectives of the overarching communications and engagement plan for A Healthier Mid and West Wales, are to:

- Raise awareness amongst our people of the opportunities to participate and share views that will shape health and care.
- Facilitate ongoing engagement with patients, carers, staff, public and wider stakeholders and ensure their views are shared and considered by the organisation.
- Target those most affected by the proposed service changes through engagement methods best suited to the key groups.
- Provide a range of opportunities, taking account of accessibility, for our staff and key stakeholders to give their views.
- Communicate significant developments and key milestones towards A Healthier Mid and West Wales so people feel informed about developments in health and care.
- Build awareness of the actions taken to reach the long-term vision, including case for change, how we arrived at this point and the next steps.

8.5.3 For the purposes of this plan, the key audiences are divided into the following categories:

- Patients, service users, carers.
- Staff.
- Seldom heard groups.
- Key stakeholders.
- General public, including seldom heard groups.

8.5.4 A broad stakeholder map and analysis will be undertaken, which will follow the Transforming Clinical Services model (see Appendix 18). As an organisation we have well established, regular forms of communication with key stakeholders (from staff communication, regular meetings with key stakeholders such as local authorities and politicians, updates to members of our involvement and engagement scheme, and a range of external communication channels). These methods are used to keep people informed of the latest developments on an ongoing basis. However, it is recognised that bespoke stakeholder maps and analysis will be required for specific projects in order that we consider and target key audiences.

8.5.5 We intend to take additional steps to ensure that we listen to seldom heard voices, to ensure that we find out what matters to everyone who uses health and care services or may need to use them in future. This includes the voices of future generations, where work has been undertaken with Dyfed-Powys Police, Dyfed-Powys Office of the Police and Crime Commissioner and Mid and West Wales Fire and Rescue Service to create a Children and Young People's Charter. This was approved by the Board in 2021. The purpose of the Charter is to ensure that children and young people's voices are heard and that we uphold the UNCRC Rights of the Child. Work is now underway to scope the establishment of a Children and Young People's Advisory Board, which will enable children and young people to

influence services in a meaningful way, including the delivery of our long term Health and Care Strategy. Our engagement methods will be based on the Children and Young People's National Participation Standards.

8.5.6 Our Community Development Outreach Team works specifically to engage with communities who traditionally face barriers to accessing health services e.g. Black, Asian and Minority Ethnic communities, gypsy and travellers, refugee and asylum seekers, homeless. Much of the interaction is on an individual basis and helps to unlock difficulties faced in accessing services and most importantly builds longer term relationships and engagement with groups within our population who we can then go back to speak to at a later date about other specific matters e.g. their views on service change, health needs etc.

8.5.7 We are also considering setting up a continuous mechanism for people to tell us about anything they feel we should hear related to equality/inequalities, e.g. an online forum using Engagement HQ.

8.5.8 We will engage to consider how we not only ensure that our plans limit the damage to our environment and nature, but how our plans can also improve and have positive impacts on our environment.

8.6 Benefits Realisation Arrangements

8.6.1 In the Strategic Case we showed how our Spending Objectives for the Programme and our Strategic Objectives as a Health Board are aligned.

8.6.2 We also set out the Outcomes and Benefits we want to achieve against each Strategic/Spending Objective; and how we will measure whether we are achieving them.

8.6.3 We have developed a draft Benefits Register which we will use to measure whether benefits are being achieved post-implementation of the Programme and monitor the reasons for success/failure.

8.6.4 For each benefit the Benefits Register records:

- The **Measuring Tool** we will employ (e.g. surveys; quantitative information on, for example, our workforce / spend under construction contracts; management information on the performance of our services / our estate).
- The **Current Baseline Value** (i.e. where we are at the time of submission of this PBC).
- Our **Target Improvement** (i.e. where we expect to get to on a benefit-by-benefit basis).
- The **Timing** within which we expect the Benefit to be achieved.
- Who has **Lead Responsibility** for tracking achievement of the benefit (in principle direct responsibility for measuring and monitoring the achievement of benefits will lie with the Workstream Leads).
- How the Benefit meets NHS Wales Investment Criteria (as set out in the NHS Wales Infrastructure Investment Guidance and consistent with the table provided in section 4.6).
- Any **Actions Required** to secure the Benefit.

8.6.5 The draft Benefits Register will be a live document which we will continue to develop and refine as we move through the OBC and FBC stages.

8.6.6 Programme Group will hold responsibility for developing and refining the benefits register through future revisions to the PBC, OBCs and FBCs so that, by the time that the FBCs are approved we will be in a position to incorporate Programme benefits into our 3-year rolling plans and Integrated Medium Term Plan and Planning Objectives.

8.6.7 It should be noted however that, because the Programme Spending Objectives align with our corporate Strategic Objectives, our Programme benefits also align with our wider corporate benefits. We do not therefore anticipate any significant divergence to arise between Programme and wider corporate benefits.

8.6.8 We will also integrate consideration of the Well-being of Future Generations (Wales) Act 2015 five ways of working and seven well-being goals into how we define, measure and monitor benefits as the Programme progresses.

8.7 Risk Management Arrangements

8.7.1 We have developed a risk register for the Programme which tracks:

- A description of the Risk (**"Risk Statement"**).
- Risk **Domain**.
- **Control Measures** in place.
- **Current Likelihood** and **Current Severity** scores.
- **Current Risk Score** (this is calculated by multiplying the Current Likelihood Score by theCurrent Severity score, the maximum Current Risk Score therefore being 16.
- **Actions** agreed to mitigate and manage the Risk and who is responsible.

8.7.2 Programme risks are managed by the Senior Responsible Officer (SRO) and are reported through Programme Group. As the Programme develops there will be individual project risk registers that will inform the Programme Risk Register through the escalation of the highest scored risks. The Programme risks will also be reported as appropriate through the University Health Board Committee Structure to ensure appropriate risk ownership and actions.

8.7.3 For the development of the PBC, risk has been managed as follow:

1. The Programme Risk Register is managed by the PBC Programme Manager. Programme

2. Risks 12 and over are highlighted to the Programme Team and Programme Group.

3. All Workstream Leads are asked to identify and report on risks to Programme Team. Decisions made during Programme Team on the management of risks are recorded inthe Risk Register.

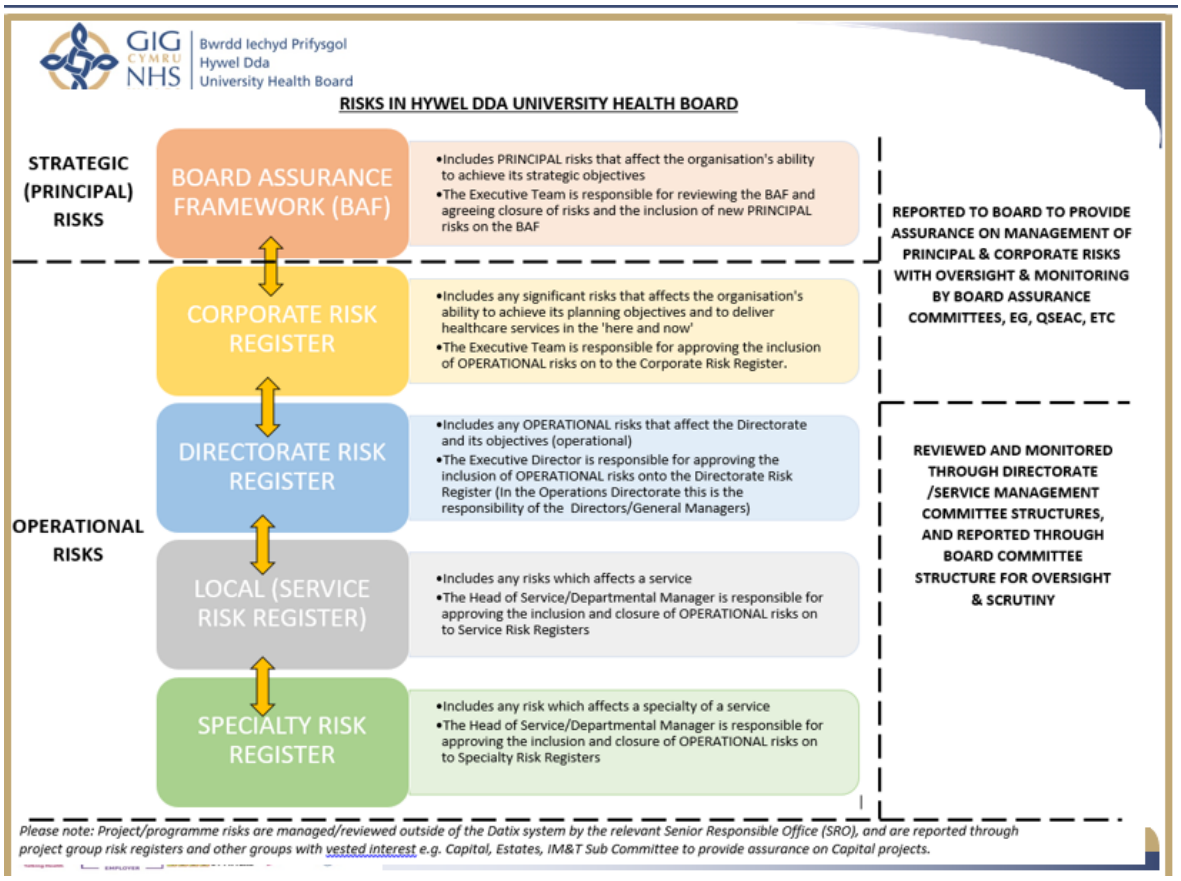
4. Risks scoring 12 or over are reported to SDODC.

8.7.4 The Programme Risk Register is a live document which will continue to evolve as we move through OBC and FBC stages. The Terms of Reference of the Programme Group state that its responsibilities are, in respect of producing an approvable PBC for the University Health Board, to:

- Identify risks, issues and mitigations for the successful completion of an approvable PBC.
- Escalate risks and issues to the SRO/Sponsoring Group (The Board).

8.7.5 The risk landscape is evolving as the Programme develops. Immediate risks are being activelymanaged, our methodology is evolving and being tested and proved.

8.7.6 Risk management arrangements for the Programme align with the University Health Board's risk management arrangements, shown in the graphic below:



8.7.7 The Board recently agreed the introduction of a new Committee structure which will be responsible for overseeing delivery of Planning Objectives.

8.7.8 There has also been development of the Board Assurance Framework (BAF) which monitors the achievement of the University Health Board Strategic Objectives. The BAF includes a specific risk related to this Programme as follows:

> "There is a risk that the University Health Board is not able to provide safe, sustainable, accessible and kind services. This is caused by insufficient investment to ensure we have appropriate facilities, medical equipment and digital infrastructure of an appropriate standard. This could lead to an impact/effect on our ability to deliver our strategic objectives, service improvement/development, statutory compliance (i.e. fire, health and safety) and delivery of day to day patient care."

8.7.9 The production of a PBC for the capital investment in facilities and digital infrastructure is part of the control to address this risk.

Contingency Arrangements

8.7.10 In the event that the PBC is not approved, the University Health Board will revert to the "do minimum" case described in the Economic Case.

8.7.11 Funding to meet backlog maintenance would be required in this case.

8.7.12 In addition, the Business Continuity (Major Infrastructure) PBC would need to be refreshed on an annual basis, therefore further funding would be needed to undertake ward and other refurbishments.

8.8 Programme Assurance

8.8.1 A Programme Assessment Review in support of our work programme was undertaken from 22-24 September 2021, organised through the Welsh Government Assurance Hub. The process involved the review of programme documentation and interviews with key individuals including the SRO and Lead Executive. Their brief covered the following three areas:

- The current arrangements for the finalisation of the PBC.
- To test the robustness of planning for the future development of the Outline Business Case (OBC); and
- To review the land selection process.

8.8.2 The review concluded in a very positive report with an amber delivery confidence rating. This rating was influenced by two principal concerns. The first was to ensure the alignment of the University Health Board and Welsh Government expectations relating to the PBC, and a follow up meeting was held with Welsh Government colleagues to ensure a 'no surprises' approach. The second related to the significant step-up in resource requirements to manage the next stages of the Programme and the need to analyse in more depth the key timeline drivers for the OBC and FBC. This work has been undertaken and is reflected in this Management Case.

8.8.3 These and the other recommendations from the Review are the subject of management actions reported through the Programme Group.

8.8.4 The Programme Assessment Review and the University Health Board's response are attached at Appendix 20A and 20B respectively.

8.9 Post-Programme Evaluation Arrangements

8.9.1 Post-programme evaluation (PPE) is a mandatory requirement for infrastructure projects that receive Welsh Government funding in accordance with guidance from the NHS Wales Infrastructure Investment Guidance for PPE section 6 Capital Investment Guidance for PPE.

8.9.2 Within the University Health Board we understand why we need to undertake PPEs, for the following reasons:

- Ensure a positive outcome for current and future projects/programmes.
- Celebrate what worked well and our achievements.

- Capture information around what did not go to plan so that we avoid making the same mistakes again.
- Take the opportunity to share learning and improve processes and systems where appropriate.
- Consider wider organisational reflections on the Programme.
- Reflect on comments made in Project/Programme Audit Reports and Gateway Reviews.
- Demonstrate whether the capital investment has delivered against the spending objectives set out in the business case.
- Capture and understand whether the benefits identified in the original business case have been delivered and if not, why not; and,
- Enable us to close the Programme and transfer any outstanding benefits realisation and risks to the appropriate operational service directorate.

8.9.3 In order to facilitate this process the University Health Board will designate a Programme Evaluation Team consisting of:

- An Evaluation Manager.
- Programme Team members.
- Representatives of the clinical users.
- Independent technical consultants (if required); and
- Stakeholder representatives.

8.9.4 The role of the Evaluation Manager will be to:

- Define in detail the evaluation processes for sign off.
- Chair the evaluation team.
- Identify members of the evaluation team ensuring that all interests are represented; and
- Manage the evaluation programme and ensure that the results are communicated within specific timescales.

8.9.5 The evaluation will be carried out in line with NHS Wales guidance, and will measure the Programme against the following factors:

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

8.9.6 Post-Programme evaluation will also look at how the Well-being of Future Generations (Wales) Act 2015 five ways of working and seven well-being goals have been considered to influence thinking, shape developments and inform decisions.

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

Stage 1: Procurement

The objective of the evaluation at this stage is to assess how well the Programme was managed to commencement of the construction phase(s). It is planned that this evaluation will be undertaken within three months of the commencement of construction/refurbishment works. The evaluation at this stage will examine:

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

Stage 2: Implementation

The objective of this stage is to assess how well the Programme was managed from the time the construction phase(s) commenced through to commencement of operational commissioning. It is considered that this should be undertaken three months following operational commissioning. The evaluation at this stage will examine:

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

Stage 3: New operational model(s) in place

The objective of this stage will be to assess how well the Programme was managed during the operational commissioning phase(s), through to operation in the new/refurbished buildings. It is proposed that this stage will be undertaken up to 12 months after completion of operational commissioning. The evaluation at this stage will examine:

- How effectively the Programme was managed.
- Effectiveness of the new operational model(s).
- Communications and involvement during commissioning and into operations.
- Overall success factors for the Programme in terms of cost and time; and
- Extent to which the new operational model(s) meets the needs of patients, carers and staff.

Stage 4: New operational model(s) well-established

It is proposed that this evaluation is undertaken two years following completion of operational commissioning. The objective of this stage will assess how well and effectively the Programme was managed during the actual operation of the new/refurbished facilities. The evaluation at this stage will examine:

- Effectiveness of the new operational model(s); and
- Extent to which the new operational model(s) meets the needs of patients, carers and staff.