

# Financial and Economic Land Appraisal Project

## Output Report

July 2022



## Contents

<b>Section 1: Executive Summary</b>	
<b>Section 2: Introduction and Background</b>	
<b>Section 3: Financial Appraisal</b>	
<b>Section 4: Economic Appraisal</b>	
<b>Section 5: Conclusions</b>	
<b>Appendices</b>	
<b>Appendix 1: Cost Advisor Report</b>	
<b>Appendix 2: Revenue Costs Excess Staff Mileage</b>	
<b>Appendix 3: Explanation of technical terms</b>	

# Section 1: Executive Summary

The Land Selection process for the new Urgent and Planned Care Hospital, includes a financial and economic evaluation. This is being undertaken to establish for the 5 sites under consideration:

- The relative cost differential of building the new hospital on the different sites
- Any differential running costs
- Whether there are any differential economic impacts between the sites within the zone
- To flag the risks associated with accurately compiling costs at this point given the level of uncertainty.

This report highlights the processes and methodologies used, the external experts consulted and the results of the analysis. This can be summarised as follows.

## Capital Costs

- Capital costs have been assessed by our Cost Advisor, Gleeds
- Only differential costs associated with building on the different sites have been considered. We have not calculated the total cost of building a new hospital on each site for this assessment.
- A consistent methodology has been used for each site taking into consideration costs associated with - Land Purchase; Site Conditions; Site Topography; Site Drainage; In-coming Services and Off-site Highway Works
- From the costing undertaken there is little to distinguish between two of the sites (site 12 and 17) with a range of £19.9m to £28.2m between the least and most expensive.
- This could be considered significant when considered in isolation, however as a percentage of the overall estimated build costs the range is £495.0m - £503.2m
- There is a high degree of uncertainty at this stage due to a range of factors highlighted as potential risks that we are unable to quantify. A sensitivity analysis has therefore been performed to show how much costs would need to change for each option to change the rank order.



## Section 1: Executive Summary - continued

### Revenue Costs

- The revenue costs associated with the on-going running costs of the hospital have been assessed to be the same regardless of site as at present there is no evidence to suggest that the clinical model delivered from the sites would be different.
- Potential non-recurring staff travel costs have been identified that could be different dependent on site chosen. These are highly likely to change as there is no detail currently available over numbers/grades/specialty to be located at the new hospital and is estimated on where our current staff live.

### Economic Appraisal

- Contact was made with experts to ascertain whether it was possible to calculate a differential economic benefit. Whilst it was acknowledged that siting a hospital in the zone would have an economic benefit in the area, it was not possible to determine if this would be different dependent on site given their proximity.

### Risks

- Several risks have been identified through the technical appraisal process that could have a potential financial impact.
- At this time these could not be quantified with any degree of accuracy.
- The overarching financial risk is that of estimation based on incomplete data.
- This has been tried to be mitigated through the sensitivity analysis.
- We have requested an independent review of the methodologies utilised within the appraisal by PWC. Their overall conclusion is that the report and appendices were found to be clear and the underlying methodologies and approaches were found to be robust and well explained. They recognised that there is a potential for cost estimates to change and risks and costs to emerge which were made clear in the report.



# Section 2: Introduction and Background

Hywel Dda University Health Board (HDdUHB) has submitted a Programme Business Case (PBC) as part of its *A Healthier Mid and West Wales* Strategy to Welsh Government for capital investment, which will include the development of a new urgent and planned care hospital within the zone between and including Narberth in Pembrokeshire and St Clears in Carmarthenshire.

A Land Team has been established as a workstream sitting under the Programme Group chaired by the CEO and are responsible for the process of identifying a shortlist of site locations and are seeking to identify a rank order of sites (following a detailed options appraisal process with a range of stakeholders) to be presented at Board in August 2022.

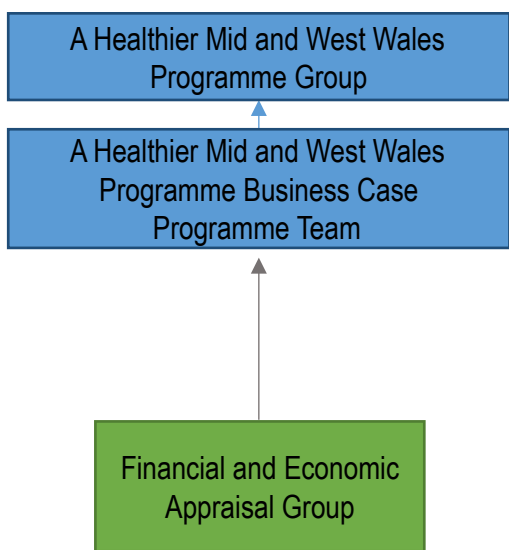
A series of parallel appraisals of the impact of the shortlisted site locations will also be presented at Board in August 2022. These appraisal areas are:

Technical – Whether a site is capable of supporting the development of a new hospital

Financial and Economic – To establish the relative costs and whether it is possible to establish differential economic benefits between sites

Workforce – The impact on current and future workforce by each potential site

Clinical – Whether a site can provide a Safe, Sustainable, Accessible and Kind service



A Project Group has been set up to support the financial and economic land appraisal reporting to the Programme Team – Part B (Land Site Appraisal).

The output of this project group will be to provide a financial and economic comparison for site selection to the Board.

## Section 2: Introduction and Background - continued

The Financial and Economic Appraisal Group was chaired by the Director of Finance. Members were drawn from the Health Board's Finance, Planning, Estates, Workforce and Transport teams. External Project Manager and Cost Advisor were also members.

The key responsibilities of the group were to:-

- Compare the Capital costs of development of each site including any known site abnormal costs
- Identify any significant additional revenue costs that differentiate between sites
- Quantify, if possible, the wider environmental and ecology costs of each site
- Calculate the decarbonisation impact for each site if information is available to do so
- Where appropriate capture the differential economic benefits/disbenefits of each site option

## Section 3: Financial Appraisal

A financial appraisal would typically involve the use of financial evaluation techniques to determine which of a range of possible alternatives is preferred.

In terms of site selection for the new Urgent and Planned Care Hospital this workstream will consider the attributable differential capital and revenue costs to determine a rank of the potential sites with the lowest cost being ranked first.

### Capital Costs

It has been assumed that the “build” cost would be the same for each site, therefore the group has considered the differential costs only between each of the shortlisted sites with the assumption that all other costs are consistent across each of the shortlisted sites.

The Health Board have commissioned Gleeds in their capacity as Cost Advisor to compile capital costs for each of the sites in conjunction with WSP, BDP architectural team, Mace and Savills. The following cost headings have been assessed to show the greatest variation in the capital cost of each of the sites:-

1. **Land Purchase;** Land Valuation for site development and any purchase of land which would be beneficial to site development.
2. **Site Conditions;** Site specific ground conditions, environmental constraints such as site ecology and impact of noise, existing services and cost of diversions and demolition requirements of existing buildings.
3. **Site Topography;** Site terracing requirements including bulk earth movement and retaining walls, impact on site development such as external works and impact of overall site area where an oversized site would require additional landscaping works.
4. **Site Drainage;** On-site and off-site foul drainage such as the length of drainage run and treatment of phosphates, and surface water drainage.
5. **Incoming Services;** Including water and fibre and telecoms supply
6. **Off-site Highway Works;** site access to include main entrance road and secondary access route, active travel route from train station and works required to existing highways such as improvements and safety measures to adjoining roads and town centre traffic calming

The following costing methodology / assumptions have been made in assessing the capital costs of each of the sites:

- Technical appraisals have been interrogated to assess the site condition costs for each site.
- Direct quotations with companies have been sought where possible.
- Where quotations are not available a combination of midrange estimates and general allowances have been utilised.

These have been applied consistently across all options and therefore any additional margin for error in utilising estimates / allowances would apply consistently to each site.

### Section 3: Financial Appraisal - continued

The following table summarises the results of the cost analysis.

Table 1

	Site 7 £m	Site 12 £m	Site 17 £m	Site C £m	Site J £m
Land Purchase	2.862	3.930	3.630	3.516	2.280
Site Conditions	8.028	1.870	0.830	8.260	1.255
Site Topography	3.850	3.550	5.500	7.250	4.600
Site Drainage	3.975	2.913	2.686	3.088	3.708
Incoming Services	6.165	2.650	4.654	3.131	7.011
Off Site Highway Works	1.985	5.030	3.390	2.995	5.620
<b>Total</b>	<b>26.865</b>	<b>19.943</b>	<b>20.690</b>	<b>28.240</b>	<b>24.474</b>

Further detail associated with these costs are included in Appendix 1.

The ranking of each option with 1<sup>st</sup> being the least and 5<sup>th</sup> being the most expensive are shown below:-

Table 2

Rank	Site	Difference to (Site 12) £m	Difference to (Site 12) %
1	12	0	0
2	17	0.747	4
3	J	4.531	23
4	7	6.922	35
5	C	8.297	42

### Section 3: Financial Appraisal - continued

Costs between sub-headings vary significantly across each of the sites with the highest difference in site conditions. A difference of over £7 million exists between Site 17 and Sites 7 and C. The main reason for this is that both Sites 7 and C are likely to require the diversion of an existing high pressure gas main.

District Valuer valuations have been sought for the land purchase costs of each of the sites. Adjustments have been made to some of these values based on recommendations by Savills.

The cost analysis shows that Site 12 has the lowest expected additional costs at £19.9m with a £8.3m increase in costs (42%) for the most expensive Site C.

Whilst assessed by itself a 42% increase would be deemed to be significant, what needs to be considered is that the cost analysis shows the differential costs only. To illustrate the potential impact of this, the works costs of the new urgent and planned care hospital in the AHMWW PBC was approximately £475m. Some of the costs included within the cost analysis in table 1 would be included in that cost, however as it is not possible to distinguish which of these costs are included, £475m will be utilised for illustrative purposes. Adding the cost analysis to the works costs of the New Urgent and Planned Care Hospital changes the percentage increase as follows:-

Table 3

	Site 7 £m	Site 12 £m	Site 17 £m	Site C £m	Site J £m
Costs Table 1	26.87	19.94	20.69	28.24	24.47
Works Costs (AHMWW PBC)	475.00	475.00	475.00	475.00	475.00
Total	501.87	494.94	495.69	503.24	499.47
% Increase (lowest cost)	1.40	0.00	0.15	1.68	0.92

This demonstrates that when considered within the overall works costs the % difference between the sites is less than 2%.

## Section 3: Financial Appraisal - continued

Whilst the impact of inflation could be significant, we have assumed that each site would be available for construction at the same time and the cost of inflation would be consistent for all sites. No increase for inflation has therefore been made to these costs.

It should be noted that there remains the potential for significant variation in the estimated costs as the Health Board progresses to OBC stage.

### **Environmental and Ecological Costs**

The capital costs have considered the wider environmental and ecological costs of each site where possible.

The only expected differential between sites for site ecology is the potential presence of bats.

### **Decarbonisation**

It has not been possible to calculate the different decarbonisation impacts for each site.

## Section 3: Financial Appraisal - continued

### Revenue Costs

The group assessed whether there would be any significant variation in revenue costs between each of the shortlisted sites. As the clinical model is going to be predominantly the same irrelevant of site, at this stage it was difficult to determine any significant variation. Some alternative models have been considered by the Clinical Workstream for a limited number of services but it is too early to quantify whether this would impact significantly on costs. The following headings were considered in detail:

**Table 4**

Revenue Cost Heading	Cost Variation (Y/N)	Rationale
Staff Pay Costs	N	Current assumption is that the same clinical services would be located at each of the shortlisted sites
Other Staff Costs e.g. travel	Y	There could be temporary staff relocation expenses which would vary against each of the shortlisted sites.
Premises Costs	N	Current assumption there would be no great variation in building size

It was assumed that all other revenue costs such as digital, maintenance contracts and consumables would be the same across the shortlisted sites.

### Analysis of other staff costs (temporary staff relocation mileage expenses)

It has been assumed that staff would be eligible to reclaim mileage at 25p per mile for four years under existing terms and conditions of service. It should be noted that there is a risk that these could change in the future which would have an impact on the potential cost.

The following analysis shows the potential financial impact if staff who have Glangwili and Withybush stated as their work base would be required to work in the new Hospital. Not all of these staff would be expected to change work base as they could be working remotely or may move to other community based settings, therefore a notional percentage of forty, fifty and sixty has been applied to the total potential mileage.

This leads to the following potential costs over a four year period:

### Section 3: Financial Appraisal - continued

Table 5

% Staff reclaiming mileage	Site 7 £m	Site 12 £m	Site 17 £m	Site C £m	Site J £m
40	8.80	7.61	6.78	7.63	7.44
50	11.00	9.51	8.48	9.54	9.30
60	13.20	11.41	10.17	11.45	11.15

This demonstrates that based on the assumptions made there could be a marginal cost difference in Site 17 compared with Sites C, 12 and J with Site 7 potentially being the most costly in terms of reimbursement of mileage costs to staff.

On this basis it can be concluded that at this stage there are no material revenue cost differences between each of the sites.

The above analysis would be ranked in the following order with Rank 1 being the lowest cost:-

Table 6

Rank	Site
1	17
2	J
3	12
4	C
5	7

Further details associated with the assumptions and calculations associated with this are in Appendix 2.

As the Business Case progresses through to the next stages greater granularity will be known in terms of the proposed clinical model across the Health board which may influence the revenue costs dependent on which site is selected.

## Section 4: Risk and Sensitivity Analysis

### Risk Analysis

A summary of the key financial risk is noted below.

*Table 7*

Risk	Mitigation
High degree of estimation leading to inaccuracies in costings	Independent review undertaken by PWC to verify the reasonableness of the assumptions made

The results of the Financial and Economic Land appraisal should therefore be viewed in this light.

The technical appraisal has identified some risks which could have a financial impact such as the existence of ransom strips and increased contribution to Dwr Cymru Welsh Water towards the treatment of phosphates. These are likely to impact each site differently, however quantification is not possible at this stage.

## Section 4: Risk and Sensitivity Analysis - Continued

### Sensitivity Analysis

A sensitivity analysis has been applied to the results in table 1 to examine the impact of potential movements in capital costs. The below demonstrates the extent that the costs of each site must reduce to become equivalent to the most cost effective option when compared with an increase in the costs of the cheapest site.

**Table 8**

Site 12	Site 7	Site 17	Site C	Site J
% difference applied to original capital costs				
+2%	-32%	-2%	-39%	-20%
+10%	-18%	No reduction required	-22%	-10%
+20%	-11%	No reduction required	-15%	-2%
+30%	-4%	No reduction required	-8%	No reduction required
+40%	No reduction required	No reduction required	-1%	No reduction required

The above demonstrates the extent that the capital costs are sensitive to potential changes and how the ranking of options could be influenced by changes in the capital costs.

As can be shown above the difference in the costs of Site 17 and Site 12 are significantly smaller than the other options, with only 2% increase in costs to Site 12 required and a corresponding reduction of 2% for Site 17 for both to be comparable.

A 10% increase in the costs of Site 12 would require a corresponding 10% reduction in the costs of Site J, 18% for Site 7 and 22% for Site C to be comparable with Site 12.

## Section 5: Economic Appraisal

An economic appraisal can be utilised as a key tool for assessing the value for money of an investment decision.

It would typically look at direct and indirect capital and revenue costs, direct and indirect public sector benefits which include quantifiable and qualitative benefits and wider benefits to UK society as a whole.

Risk costs would also be included.

An economic appraisal would seek to answer which option provides the best balance of cost, benefits and risk.

Initial discussions took place within the group and it was felt that it would be difficult to ascertain whether there is a significant economical difference between the shortlisted sites as they are located within a very small geographical zone. Also as the current assumption is that the clinical model would be the same for each of the sites the benefits and risks would be the equivalent for each option.

In order to ensure that the requirements of an economic appraisal for site selection were understood the Health Board discussed with Welsh Government colleagues their expectations with regards to the content of an economic appraisal. The Health Board has also consulted with a number of experts to assess whether any economic differential can be measured at this stage between the sites.

Welsh Government have acknowledged that it would be difficult to differentiate any economical impacts between the sites and have confirmed that there is no requirement to complete a Comprehensive Investment Appraisal Model nor to calculate a Net Present Cost for each site at this stage.

Health and Care Economics Cymru who are an all-Wales collaboration of health economics experts, concluded that there is unlikely to be a differential economic benefit to the community in terms of the alternative sites compared with the overall impact of siting a hospital within the selected zone.

The Foundational Economy Department within Welsh Government have also concluded that it is not possible to identify and significant differences in economic impact of the different sites, due to their close proximity and similar average wages across the two counties.

Following the advice received from experts the group have concluded that it is not possible to demonstrate a differential economic impact between each of the sites.

## Section 7: Conclusion

The capital appraisal demonstrated a variation in capital costs of £8.3m between the shortlisted sites.

The results of the revenue appraisal suggested that there is a difference of £2.5m if 50% of staff were to relocate over a four year period.

The ranking of each shortlisted site in terms of the capital and revenue cost analysis is shown below.

Table 9

Rank	Capital Site	Revenue Site
1	12	17
2	17	J
3	J	12
4	7	C
5	C	7

The table above shows the ranking applied based on a crude analysis of lowest to highest costs.

There is a difference between the capital costs associated with the land selection for Sites 12 / 17 and the other sites. However, when these costs are considered with the potential total cost of the New Urgent and Planned Care Hospital the differences are much less significant and are not a strong enough indicator to favour one site over the other.

Similarly, the revenue cost analysis suggested that the is not enough of a variation at this stage to affect site selection.

There also remains a high level of uncertainty over these cost estimates at this stage.

The small geographical area between the shortlisted sites means that there is insufficient evidence available to differentiate the relative economic benefits of each of the sites.

The financial and economic appraisal is one part of the land selection process and these results should be considered with those of the other land selection workstreams.

## Appendices

### Contents

1. Cost Report – Completed by Gleeds	
2. Revenue Costs (Excess Mileage)	
3. Explanation of technical terms	



## Appendix 1: Cost Report – Completed by Gleeds

A link to the cost advisor report is below:-



Microsoft Edge  
PDF Document

## Appendix 2 – Revenue Costs (Excess Mileage)

### Analysis of temporary staff relocation mileage expenses

Under current terms and conditions of employment the majority of staff who are required to move work base are eligible to reclaim the excess mileage between home to existing work base and home to new base at 25p per mile over a period of four years.

A new Urgent and Planned Care Hospital is likely to lead to a significant amount of existing staff requiring a change in work base.

An analysis has been undertaken to calculate the potential difference in mileage claims between each of the sites. Data provided by Transport for Wales has been utilised. The information provided included travel distances between home postcodes, current work base and each of the proposed site locations.

The following assumptions have been made:-

- Staff employed at Glangwili and Withybush only would be required to change work base,
- All staff who are currently in employment at both sites would be employed at the time of the new hospital opening,
- The same staff would relocate to each of the shortlisted sites and each member of staff would travel individually via car,
- Details of which staff could be relocated are unknown, therefore no attempt has been made to breakdown the analysis into different staff groups who would be required to move work base,
- This excludes the potential impact of staff relocation expenses.

The potential number of miles eligible to be claimed per journey if all staff based at Glangwili and Withybush were to be relocated to each of the respective sites is shown below.

	Site 7	Site 12	Site 17	Site C	Site J
Glangwili	61,124	37,813	25,032	39,616	30,376
Withybush	17,434	30,093	35,531	28,512	36,019
<b>Total</b>	<b>78,557</b>	<b>67,906</b>	<b>60,563</b>	<b>68,129</b>	<b>66,394</b>

## Appendix 2: Revenue Costs Excess staff mileage payments - Continued

Not all staff who have Glangwili and Withybush stated as their work base would be required to move as some staff would remain in those sites, could be working remotely or may move to other community based settings.

A notional percentage of 40, 50 and 60 applied to the above numbers would reduce the total potential mileage per journey to:-

% Staff	Site 7	Site 12	Site 17	Site C	Site J
40	31,423	27,162	24,225	27,251	26,558
50	39,279	33,953	30,281	34,064	33,197
60	47,134	40,744	36,338	40,877	39,837

To quantify the potential cost impact over a financial year, these would need to be multiplied by the number of journeys which would be made by staff.  
Specific data is not available for Health board staff therefore information included in the National Travel Survey 2019 for residents in England will be utilised. The survey stated that on average 140 commuting trips were undertaken.

Applying this to the data in the previous table would lead to the following potential costs over a four year period

% Staff	Site 7 £m	Site 12 £m	Site 17 £m	Site C £m	Site J £m
40	8.80	7.61	6.78	7.63	7.44
50	11.00	9.51	8.48	9.54	9.30
60	13.2	11.41	10.17	11.45	11.15

### Appendix 3: Explanation of technical terms

Term		Description
Benefit	Direct	Benefits which have a direct impact.
	Indirect	An indirect benefit is not caused immediately and obviously by a thing or person, but happens because of something else that they have done.
	Qualitative	Benefits that may not be readily measurable or monetizable.
	Quantitative	Benefits are measured in monetary units or rates of change.
Comprehensive Investment Appraisal Model (CIA)		The CIA is a model which is utilised to support economic appraisals in business cases. It analyses the costs of a project in line with it's risks and benefits over a specified time period.
Costs	Direct	These costs are directly traceable to goods and services such as materials.
	Indirect	These costs are not directly traceable to goods or services such as cleaners.
	Works	Contractor costs for development and/or construction costs of a project.
Net Present Cost		It equates the total cost of a project over a specific time period, taking into account the time value of money.
Programme Business Case		Sets out the strategic direction of an organisation and focuses on the delivery of outcomes, provides and umbrella under which enabling projects can be co-ordinated and delivered and is typically expected to take several years to deliver.
Sensitivity Analysis		Analysis of the effects on an appraisal of varying the projected values of important variables.