



**NHS Lanarkshire**

**Monklands Replacement Project**

**Site Options Appraisal – OBC Financial Assessment**

**Briefing Notes**

**16 September 2020**

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## Introduction

The Site Options financial appraisal for the Monklands Replacement Project (MRP) will be undertaken in accordance with the Scottish Capital Investment Manual (SCIM) Option Appraisal Guide; A practical Guide to the Appraisal, Evaluation, Approval and Management of Policies, Programmes, and Projects.

The option appraisal focusses on the economic case taking into account the resource costs and benefits of each option and will form part of the MRP Outline Business case (OBC) being included in the New Build, new site, option as identified in the Initial Agreement (IA).

At this early stage in the development of the project the option appraisal is being carried out to identify the option which is most likely to make the best use of resources and provide best value for money i.e. a high benefits to cost ratio. The primary purpose of option appraisal is to provide an assessment of the costs and benefits (cost benefit analysis) of the short list of options.

It is noted that the capital costs for Gartcosh include the cost of an additional ward the reason for this being that at this location the increased cross-boundary flow from other NHS Boards has been assessed to require one additional ward. Additional Emergency Department (ED) activity is assessed at Gartcosh and Glenmavis, but not at Wester Moffat. The annual revenue costs of this have been assessed as £990,720 for Gartcosh and £285,480 for Glenmavis. The site options financial appraisal will therefore be carried out on capital costs for the options and also, in the case of Gartcosh and Glenmavis, the additional ED activity revenue costs. Additional inpatient costs are excluded as these will be recovered directly from other NHS Boards.

The lifecycle costs (LCC) are by far the highest investment costs for the project and these have been assessed over a 60 year lifecycle for each project option. The LCC are based on the development option areas and equal low and high range LCC cost rates per m<sup>2</sup> per annum. For appraisal purposes the high range costs will be adopted.

The outcome from the option appraisal will be used to support and justify a decision to proceed with the selection. It does this by identifying a preferred option which is expected to demonstrate that the project will deliver the benefits required and provide good value for money with an acceptable level of risk.

The two key components of the option appraisal values for money assessment are the weighted scoring derived from the public scoring exercise and the Net Present Costs (NPC) for each option.

## 1. Weighted Scoring

The outcome of the public scoring event is a weighted score for each option. It has been calculated based on the criteria and weightings defined as part of the process.

## 2. Capital and Net Present Costs (NPC)

The indicative capital and LCC costs and, in the case of Gartcosh and Glenmavis, the additional ED activity revenue costs, have been used to calculate the Net Present Cost (NPC) of each option over the expected life of the project using discounted cash flow techniques in accordance with SCIM and HM Treasury guidance.

The capital costs for the project were included in documentation published earlier this year as part of the public engagement exercise and comprised the following key headings: -

- Works
- Demolition
- Abnormals
- Main Contractor Preliminaries
- Main Contractor Overhead & Profit
- Design Fees
- Equipment
- Land acquisition
- Decant costs
- Risk & Optimism Bias
- Inflation
- VAT

An explanation of the areas covered by the above cost headings is included in Appendix A.

A summary of the capital costs is shown in the table below.

	Site 1	Site 2	Site 3
Capital Cost	£515,637,000	£516,256,000	£518,022,000
Inflation	£49,758,971	£54,465,008	£54,651,321
<b>Sub Total</b>	<b>£565,395,971</b>	<b>£570,721,008</b>	<b>£572,673,321</b>
VAT	£113,079,194	£114,144,202	£114,534,664
<b>Sub Total</b>	<b>£678,475,165</b>	<b>£684,865,210</b>	<b>£687,207,985</b>
<b>Total Rounded</b>	<b>£678,500,000</b>	<b>£684,900,000</b>	<b>£687,200,000</b>

The Net Present Cost (NPC) of each option has been calculated by applying the SCIM and HM Treasury guidance on discount rates – 3.50% for years 1-30 and 3% for year 31 onwards. As required by the guidance this excludes inflation and VAT. The NPC has been calculated on the costs from Full Business Case approval only.

The LCC for the project comprise the capital replacement costs of the building technical services and fabric. This has been calculated by applying equal project benchmark rates over the anticipated 60 years lifecycle.

The NPC for the capital and additional ED activity / LCC costs are shown in the following table.

<b>NPC</b>	<b>Site 1</b>	<b>Site 2</b>	<b>Site 3</b>
Capital	£469,800,000	£466,100,000	£464,200,000
Additional ED activity / LCC	£73,000,000	£55,000,000	£48,300,000
<b>Totals</b>	<b>£542,800,000</b>	<b>£521,100,000</b>	<b>£512,500,000</b>

### 3. Value for money

As a measure of value for money the weighted scoring and Net Present Costs are combined to arrive at a cost per benefit point.

An example of the calculation is noted below:-

Option	Weighted Benefits Score	Net Present Cost (NPC) £million	Cost (NPC) per benefit point £000
1	4000	£500	$500,000,000 / 4,000$ $= 125,000 / 1,000$ $= 125$

## 4. Net Present Cost (NPC) Per Benefit, and Sensitivity Analysis

At this stage of this project it should be recognised that although the costs are high level and indicative, they have all been calculated on a similar set of assumptions. These could be subject to some variation as future information becomes available.

Recognition of this level of uncertainty is reflected in the risk and optimism bias included in the current assessed costs. However there remains some level of variability in the project costs

A sensitivity analysis will therefore be undertaken to examine the robustness of the ranking of options and the selection of a preferred option. This will consider two areas - abnormals and additional ED activity revenue - to determine whether adjusting these could have any significant impact on outcome.

In terms of abnormals the key element is remediation of contamination – we will model an adjustment to these costs by +/-10% and +/-20% individually for each site to assess the impact this would have. Regarding the Gartcosh and Glenmavis sites, to ensure parity of the evaluation, the revenue costs of the additional ED activity at £990,720 for Gartcosh and £285,480 for Glenmavis will also be subject to a +10% and +20% sensitivity analysis.

Following the weighted scoring exercise the sensitivity analysis calculation is shown below. This demonstrates the impact of the scenarios being considered:

	Site 1		Site 2		Site 3	
Weighted Scoring		5319		4295		4808
	NPC*	Cost per benefit point £000's	NPC*	Cost per benefit point £000's	NPC*	Cost per benefit point £000's
Total Capital Costs	£469,800,000		£466,100,000		£464,200,000	
Total Additional ED Activity Revenue Costs / Lifecycle Costs (LCC)	£73,000,000		£55,000,000		£48,300,000	
<b>Totals</b>	<b>£542,800,000</b>	<b>£102</b>	<b>£521,100,000</b>	<b>£121</b>	<b>£512,500,000</b>	<b>£107</b>
Abnormals + 10% adjustment	£544,900,000	£102	£524,300,000	£122	£515,500,000	£107
Abnormals + 20% adjustment	£547,000,000	£103	£527,500,000	£123	£518,500,000	£108
Abnormals - 10% adjustment	£540,700,000	£102	£517,900,000	£121	£509,500,000	£106
Abnormals - 20% adjustment	£538,600,000	£101	£514,700,000	£120	£506,500,000	£105
Revenue Costs +10%	£545,000,000	£103	£521,800,000	£121	£0	£0
Revenue Costs +20%	£547,200,000	£103	£522,400,000	£122	£0	£0
<b>RANK</b>		<b>1</b>		<b>3</b>		<b>2</b>
Abnormals & Revenue Costs +10%	£547,100,000	£103	£525,000,000	£122	£0	£0
Abnormals & Revenue Costs +20%	£551,400,000	£104	£528,800,000	£123	£0	£0
<b>RANK</b>		<b>1</b>		<b>3</b>		<b>2</b>

\*The NPC utilised is indicative and actual amounts will be utilised in the actual financial analysis



# Appendices

## Appendix A

### Cost Report – Glossary of Terms

The table below provides a high-level overview of the content of the key cost headings that comprise the total capital development cost for the MRP project utilised within the Option Appraisal process.

Cost Heading	Content / Description
Works	<p>Baseline construction cost developed for the current generic hospital design; assumes level site (e.g. development platform has been provided), and standard foundation design.</p> <p>The baseline cost for Gartcosh is higher than for Glenmavis and Wester Moffat as the cross-boundary flow impact has been assessed to require 1 nr additional ward at Gartcosh.</p>
Revenue	<p>Running costs of additional ED activity at the Gartcosh and Glenmavis sites . The revenue costs of the ward have been assessed as £990,720 for Gartcosh and £285,480 for Glenmavis.</p>
LCC	<p>Lifecycle costs for the project comprise the capital replacement costs of the building technical services and fabric over the anticipated 60 years lifecycle.</p>
Demolition	<p>Cost of demolition of the existing University Hospital Monklands – excluded and funded separately as part of future site re-development proposals</p>
Abnormals	<p>Site specific ground condition costs: earthworks to create development platform; potential retaining structures to create development platform; treatment of mineworking's / mineshafts; treatment of potential contaminated land; costs to address underground structures etc</p> <p>Off-site roadworks; including alterations / improvements to existing road network and creation of new road links to the boundary of the proposed site</p> <p>Utility (power, water, gas, telecoms, drainage) infrastructure costs from point of supply / connection to the boundary of the proposed site.</p>
Main Contractor Preliminaries	<p>Main contractor site management costs, site accommodation, logistics, temporary facilities etc during the duration of the works.</p> <p>The costs for Glenmavis and Wester Moffat are higher than for Gartcosh as an allowance is included for extra preliminaries to deal with impact of additional site abnormals.</p>
Main Contractor Overhead & Profit	<p>% allowance for contractor overhead and profit: estimate based on analysis of likely levels from similar sized projects.</p>

	The figures for each site are slightly different as the % is applied to different levels of estimated costs (e.g. differing works costs, differing abnormals etc).
Design Fees	% allowance for design fees based on analysis of likely levels from similar sized projects.  The figures for each site are slightly different as the % is applied to different levels of estimated costs (e.g. differing works costs, differing abnormals etc).
Equipment	Estimate for equipping the hospital based on analysis of likely levels from similar sized projects.  The allowance for Gartcosh is higher to account for 1nr additional ward.
Land acquisition	Estimates for purchase of sites. Values provided from District Valuer for Gartcosh and Wester Moffat. Glenmavis based on the £1 offer from the landowner.
Decant costs	Estimated costs to move from the existing University Hospital Monklands to new facility
Risk & Optimism Bias	% allowance for brief and design development issues, and over optimism within the baseline costs. Assessed based on best practice calculation for the development stage of the project.  The figures for each site are slightly different as the % is applied to different levels of estimated costs (e.g. differing works costs, differing abnormals etc).
Inflation	Allowance for assessment of the impact of future inflation costs / movement in market conditions. All costs headings above and included in total development costs are net of inflation and are base dated Q1 2020.  Assessed impact based on 2% per annum to mid-point of construction.  The costs for Glenmavis and Wester Moffat are higher than for Gartcosh as the programme for these sites is assessed to be longer due to enabling works required to facilitate access to the site before main construction works can commence.
VAT	Standard rate of VAT applied to different project costs.
Rounding	Minimal adjustment to round cost to nearest £100,000's



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