



NHS Lanarkshire

Monklands Replacement Project Sites Summary Cost Report

25 February 2020

Revision control

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1. Introduction

A shortlist of potential viable sites for the provision of a new University Hospital Monklands has been determined. The shortlist sites are:

- Gartcosh
- Glenmavis
- Wester Moffat

This report sets out the overall estimated development cost capturing the site specific costs for each of the three identified site.

The development cost includes estimates for the following cost headings:-

- Baseline construction cost developed for the current generic hospital design; assumes level site (e.g development platform has been provided), and standard foundation design; this cost estimate has been developed based on elemental rates for similar scale healthcare projects
- Site specific ground condition costs
 - Earthworks to create development platform
 - Potential retaining structures to create development platform
 - Treatment of mineworkings / mineshafts
 - Treatment of potential contaminated land
 - Costs to address underground structures
- Off site roadworks; including alterations / improvements to existing road network and creation of road new links to the boundary of the proposed site; information on requirements is set out in the separately published specific Site Summary Reports. These costs have been developed in liaison with the relevant road authority, Transport Scotland and/or North Lanarkshire Council.
- Utility (power, water, gas, telecoms, drainage) infrastructure costs from point of supply / connection to the boundary of the proposed site. Estimated cost based on costs from similar works.
- Constraints on developing the site e.g impacts such as inflation of developing the site due to the advance enabling works necessary to provide access the site (e.g new road infrastructure) to allow hospital construction to commence.
- Contractor preliminaries costs; cost estimates for site management costs, site accommodation, logistics etc. based on analysis from similar sized projects
- Design fees; estimate based on analysis of likely levels from similar sized projects.
- Contractor overhead and profit: estimate based on analysis of likely levels from similar sized projects.
- Equipment; estimate based on analysis of likely levels from similar sized projects.
- Land acquisition costs; estimates based on discussions with District Valuer
- Risk and optimism bias; assessment based on best practice calculation for development stage of the project.
- Inflation; allowance based on 2.5% per annum to mid-point of construction
- VAT; applied at current standard rate

The site specific costs have been developed from the information contained in the published Site Summary Reports available on the MRP website and will be subject to review as additional information becomes available.

For example, estimated costs are based on information contained in the Phase 1 Geotechnical reports, and will be updated once the intrusive site investigation reports are published and additional information is available on the ground risks associated with developing each site.

Cost estimates have been increased in line with construction inflation reflecting site selection delay from spring 2019 until spring 2020, due to the impact on construction start date.

The impact of additional flows on the building footprint has been estimated within the financial model. These impacts will require further review and finalisation when a preferred site is selected as part of the OBC development. The working assumption is that Gartcosh may require 1nr additional generic ward to address additional flows. These flows are a combination of residents of North Lanarkshire who currently use NHS GG&C hospitals and cross boundary flow.

2. Gartcosh

The overall cost of developing Gartcosh has been assessed to be £678.5 million.

This cost includes the assessed impact on patient flows of locating the site at Gartcosh. The working assumption is that Gartcosh may require 1nr additional generic ward (compared to Glenmavis/Wester Moffat) to address additional flows. These flows are a combination of residents of North Lanarkshire who currently use NHS GG&C hospitals and cross boundary flow.

Order of Cost Estimate		Gross Floor Area (m2)	85,356
Building Works Estimate		£	313,000,000
Site specific development costs		£	14,500,000
Main Contractor's Preliminaries estimate		£	35,000,000
Sub-total		£	362,500,000
Main Contractors overheads and Profit estimate	6.0%	of £	362,500,000
		£	21,750,000
Works cost Estimate		£	384,250,000
Project Design Team Fees estimate	8.5%	of £	384,250,000
		£	32,661,250
Sub-total		£	416,911,250
Equipment		£	53,000,000
Land Acquisition costs - indicative land value		£	2,400,000
Decant Costs		£	750,000
Base cost estimate		£	473,061,250
Risk & Optimism Bias	9.00%	of £	473,061,250
		£	42,575,513
Cost limit (excluding inflation)		£	515,636,763
Inflation	9.65%	of £	515,636,763
		£	49,758,948
Cost limit (including inflation)		£	565,395,710
VAT	20.00%	of £	565,395,710.08
		£	113,079,142
		Total	£ 678,474,852
		Total - rounded	£ 678,500,000

Table 1: Breakdown of Gartcosh overall development cost

The breakdown of the site specific development costs are noted below:

Item	Assessed Cost Impact
Site Preparation / Demolition	
Excavate and remove redundant basement structures	£0.75m
Contamination Remediation	
Allowance for contaminated soil and ground water treatment	£1.50m
Allowance for off site disposal of potential biological contaminants	£0.11m
Mineworkings	
No recorded mineworkings impacting the development	£nil

Road Improvements to site boundary	
A752 Lochend Road / Mowbray Ave - 4 arm roundabout.	£0.40m
A752 / B806 Gartloch Road - 3 arm roundabout.	£0.30m
A752 Gartcosh Road / Towhead Road / Lochend Road – R-L Staggered priority junctions.	£0.45m
Gartcosh Road / A89 Coatbridge Road / A752 Langmuir Road - 4 arm roundabout.	£0.45m
B803 Sunnyside Road / Dunbeth Road / Russell Colt Street / Coltswood Road / B803 Burnbank Street - Dumbbell roundabout.	£0.05m
B804 Gartliston Road / Coltswood Road / Merrystown Drive - 3 arm roundabout.	£0.08m
B804 Coatbridge Road / Glenboig New Road / Main Street - signalised junction.	£0.08m
B804 Main Street / Garnqueen Crescent - 3 arm roundabout.	£0.08m
B804 Glenboig Road / Two unnamed roads (Glenburn Gardens) - 4 arm roundabout.	£0.10m
New unnamed 3 arm roundabout between Junctions 14 and 16.	£0.45m
Craignethan Drive / Auldyards Road - 4 arm roundabout.	£0.55m
Junction 2A – M73 Southbound off ramp / Auldyards Road / Southbound on ramp - 4 arm roundabout.	£0.40m
Junction 2A - Northbound carriageway at overbridge main line flow.	£0.10m
Junction 2A – M73 Northbound off ramp / Northbound on ramp / Other arm access via 17 - 4 arm roundabout.	£0.35m
Junction 2A overbridge	£4.50m
Drainage Works	
Off-site foul drainage upgrade to local network	£0.10m
Off-site surface drainage upgrade to local network	£0.10m
Electrical Supply	
Connections to substations	£3.60m
Total	£14.50m

Table 2: Breakdown of Gartcosh site specific abnormal costs

The land acquisition cost included has been included by NHS Lanarkshire following advice from the District Valuer.

3. Glenmavis

The overall cost of developing Glenmavis has been assessed to be £684.9 million.

This cost includes the assessed impact on patient flows of locating the site at Glenmavis. The working assumption is that Glenmavis may require 1nr less generic ward than at Gartcosh to address additional flows. These flows are a combination of residents of North Lanarkshire who currently use NHS GG&C hospitals and cross boundary flow. This explains the lower gross floor area and building works estimate than included in the Gartcosh summary (Table 1).

Order of Cost Estimate		Gross Floor Area (m2)	83,723
Building Works Estimate		£	308,500,000
Site specific development costs		£	21,950,000
Main Contractor's Preliminaries estimate		£	35,500,000
Sub-total		£	365,950,000
Main Contractors overheads and Profit estimate	6.0% of	£	365,950,000
		£	21,957,000
Works cost Estimate		£	387,907,000
Project Design Team Fees estimate	8.5% of	£	387,907,000
		£	32,972,095
Sub-total		£	420,879,095
Equipment		£	52,000,000
Land Acquisition costs		£	1
Decant Costs		£	750,000
Base cost estimate		£	473,629,096
Risk & Optimism Bias	9.00% of	£	473,629,096
		£	42,626,619
Cost limit (excluding inflation)		£	516,255,715
Inflation	10.55% of	£	516,255,715
		£	54,464,978
Cost limit (including inflation)		£	570,720,693
VAT	20.00% of	£	570,720,692.53
		£	114,144,139
		Total	£ 684,864,831
		Total - rounded	£ 684,900,000

Table 3: Breakdown of Glenmavis overall development cost

The breakdown of the site specific development costs are noted below:

Item	Assessed Cost Impact
Site Preparation / Demolition	
Excavate and remove existing structures	£0
Cut and fill to create development platform, retaining structures; the site topography requires earthworks to create a development platform	£3.00m
Mineworkings	

Drilling and Grouting of Shallow Mineworkings; Phase 1 Geotechnical Report has identified mineworking across the site that may require treatment or other ground stabilisation techniques.	£2.25m
Treatment and Capping of Shafts; Phase 1 Geotechnical Report has identified 24 mine shafts and 16 mine adits recorded within the site boundary which may require treatment.	£0.35m
Contamination Remediation	
Allowance for potential contaminated soil and ground water treatment of made ground / infill; Phase 1 Geotechnical Report has identified made ground which may contain contaminated materials	£0.75m
Treatment of sewage sludge; there is a potential range of costs depending on the full extent of material and treatment options, refer to Glenmavis Site Summary Addendum Report for further information. The mid range cost has been used for this cost assessment.	£3.0m
Road Improvements to / outwith site boundary	
An assessment of impacts on local road network has been undertaken and identified a range of works necessary.	
A73 Stirling Road / B803 Greengairs Road - 3 arm roundabout.	£0.40m
A73 Stirling Road / B803 Raebog Road / Factory Site Access - 4 arm roundabout.	£0.05m
A73 Stirling Road / Dykehead Road - Cross road junction.	£0.05m
A73 Stirling Road / A8010 Black Street / Airdrie Hill Street Motherwell Street - 4 arm roundabout.	£0.45m
A89 Alexander Street / A8010 Aitchison Street - Signalised junction.	£0.08m
B802 North Bridge Street / South Bridge Street / A8010 High Street / E High Street - Signalised junction.	£0.08m
A8010 Chapel Street / Chapel Lane – Signalised junction.	£0.08m
B804 Dunbeth Road / B803 Sunnyside Road / Russell Colt Street /Coltswood Road Burnbank Street - Dumbbell roundabout.	£0.05m
B803 Coatbridge Road / B802 Glenmavis Road - 4 arm roundabout.	£0.05m
B803 Coatbridge Road / B803 Raebog Road / B802 Condorrat Road - 3 arm roundabout.	£0.01m
New Link Road from MRRP site to A73	£4.65m
45m Roundabout on A73 or Greengairs Road	£0.50m
45m ICD Roundabout at the MRRP Site Access #1	£0.50m
T-Junction with ghost island MRRP Site Access #2	£0.50m
Drainage Works	
Off-site foul drainage connection; connection is not local to the site boundary	£0.50m
Off-site surface water drainage connection; assumed connection is local to the site	£0.10m
Electrical Supply	
Connections to substation; connections to dual sub-stations are remote from the site	£4.20m
Water Supply	

Connection to network local to site; connection is not local to the site boundary	£0.10m
Gas Supply	
Connection to network local to site connection is not local to the site boundary	£0.25m
Total	£21.95m

Table 4: Breakdown of Glenmavis site specific abnormal costs

The land acquisition cost included has been advised by NHS Lanarkshire and follows the offer from the landowner in 2018 to sell the site for £1.

The inflation allowance is higher than included in Gartcosh estimate as it reflects the likely delay to main hospital construction works commencing due to the requirement to provide a new road to access the site. Based on information provided by North Lanarkshire Council the timing of the construction of the proposed East Airdrie Link road does not align to hospital construction programme. Further information on this is included within the site summary report.

4. Wester Moffat

The overall cost of developing Wester Moffat has been assessed to be £687.2 million.

This cost includes the assessed impact on patient flows of locating the site at Wester Moffat. The working assumption is that Wester Moffat may require 1nr less generic ward than at Gartcosh to address additional flows. These flows are a combination of residents of North Lanarkshire who currently use NHS GG&C hospitals or cross boundary flow. This explains the lower gross floor area and building works estimate than included in the Gartcosh summary (Table 1).

Order of Cost Estimate		Gross Floor Area (m2)	83,723
Building Works Estimate		£	308,500,000
Site specific development costs		£	20,750,000
Main Contractor's Preliminaries estimate		£	35,500,000
Sub-total		£	364,750,000
Main Contractors overheads and Profit estimate	6.0%	of £	364,750,000 £ 21,885,000
Works cost Estimate		£	386,635,000
Project Design Team Fees estimate	8.5%	of £	386,635,000 £ 32,863,975
Sub-total		£	419,498,975
Equipment		£	52,000,000
Land Acquisition costs - indicative land value		£	3,000,000
Decant Costs		£	750,000
Base cost estimate		£	475,248,975
Risk & Optimism Bias	9.00%	of £	475,248,975 £ 42,772,408
Cost limit (excluding inflation)		£	518,021,383
Inflation	10.55%	of £	518,021,383 £ 54,651,256
Cost limit (including inflation)		£	572,672,639
VAT	20.00%	of £	572,672,638.63 £ 114,534,528
		Total	£ 687,207,166
		Total - rounded	£ 687,200,000

Table 5: Breakdown of Wester Moffat overall development cost

The breakdown of the site specific development costs are noted below:

Item	Assessed Cost Impact
Site Preparation / Demolition	
Cut and fill to create development platform; the site topography requires earthworks to create a development platform	£4.0m
Retaining walls to create suitable hospital site due to existing topography; ; the site topography requires earthworks to create a development platform	£3.0m
Contamination Remediation	
No major issues identified; subject to ongoing review as intrusive site investigations develop	£nil

Mineworkings	
Mineworkings; hospital may be planned to avoid impact; subject to ongoing review as intrusive site investigations develop	£nil
Treatment and Capping of Shafts; hospital may be planned to avoid impact; subject to ongoing review as intrusive site investigations develop	£nil
Road Improvements to site boundary	
An assessment of impacts on local road network has been undertaken and identified a range of works necessary.	
Craigends Road / Roughrigg Road	£0.35m
A73 Carlisle Road / Burniebrae Road	£0.25m
A73 Main Street / B799 Lauchope Street	£0.25m
Petersburn Road / Towers Road	£0.40m
Towers Road / A89 Forrest Street / Connor Street	£0.35m
A73 Motherwell Street / A89 Forrest Street / Clark Street / Carlisle Road - 4 arm roundabout.	£0.15m
A73 Carlisle Road / Petersburn Road / Brownsburn Road	£0.10m
Junctions south of A73 Main Street / B799 Lauchope Street	£0.15m
New Link Road from MRRP site to Tower Road; 800 metres WS carriageway with 2 metre footway and 3 metre share cycle/footway	£2.50m
New Link Road from MRRP site to Tower Road; 166 metre viaduct over North Calder Water	£6.75m
Drainage Works	
Off-site foul drainage upgrade to local network; connection is not local to the site boundary	£0.25m
Off-site surface drainage upgrade to local network; assumed connection point is local to the site	£0.10m
Electrical Supply	
Connections to substations; connections to dual sub-stations are remote from the site	£1.8m
Water Supply	
Connection to network local to site; connection is not local to the site boundary	£0.10m
Gas Supply	
Connection to network local to site; connection is not local to the site boundary	£0.25m
Total	£20.75m

Table 6: Breakdown of Wester Moffat site specific abnormal costs

The land acquisition cost included has been included by NHS Lanarkshire following advice from the District Valuer.

The inflation allowance is higher than included in Gartcosh estimate as it reflects the likely delay to main hospital construction works commencing due to the requirement to provide a new road to access the site. Based on information provided by North Lanarkshire Council the timing of the construction of the proposed East Airdrie Link road does not align to hospital construction programme. Further information on this is included within the site summary report.



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