

# **Monklands Replacement Project**

## **Site selection criterion 3 - Analysis of catchment and patient flow information**

**December 2019**

## **List of contents**

1. Introduction
2. Background
3. Methodology
4. Analysis & Outcomes
5. Conclusion

## List of appendices

- A. List of sites

## 1. Introduction

This paper sets out the process for assessing how each potential site for the new University Hospital Monklands is assessed against Criterion 3: “Must have no detrimental impact on adjoining unscheduled catchment areas of hospitals in Lanarkshire, Glasgow or Forth Valley”

The paper also identifies the assumptions adopted and the analysis applied.

## 2. Background

Each of the three general hospitals within Lanarkshire has a defined catchment area for unscheduled care - this sets out the notional boundaries in planning terms that define each hospital catchment area. These are shown in appendix A and are set out below along with the existing emergency department (ED) activity:

	Catchment	ED attendances 18/19
University Hospital Monklands	243,955	70,659
University Hospital Hairmyres	196,774	66,642
University Hospital Wishaw	218,471	74,312
NHSL residents in other NHS Boards	<u>N/A</u>	<u>44,259</u>
	659,200	255,872

Additionally it is recognised that the neighbouring NHS Boards also have defined catchment areas for their hospitals. In terms of relocating University Hospital Monklands (UHM) the two key hospitals that could be affected are Glasgow Royal Infirmary and Forth Valley Royal Hospital.

## 3. Methodology

The base line data used in this analysis is for the financial year 2018/19 - the latest validated dataset available.

The information analysed is:

- Additional ED attendances at UHM,
- Inpatient admissions flowing from these additional ED attendances
- Additional number of beds which require to be provided to enable these inpatient admissions to be accommodated.

The start point for this analysis is current admissions to inpatient beds following attendance at ED– this data is considered in relation to the impact of changes to this pattern of activity

should the location of University Hospital Monklands change. This involves the identification of the hospital that the population within each postcode sector would attend in the event of an accident or an emergency. This assessment is undertaken on an individual post code sector basis.

There are three specific categories of patient considered at this point:

Category 1 Unheralded self-referral

Category 2 Brought by ambulance

Category 3 Referred by GP or other healthcare professional

The analysis is restricted to categories 1 & 2 only as these are unpredictable – patients in category 3 are considered manageable as they will be directed by the referring clinician to their nominal catchment hospital. For each of the categories there is a further assessment of the anticipated likelihood, undertaken again by postcode sector, of change to hospital attended on a risk basis – high, medium or low. This is undertaken on a travel time basis. This assessment allows a detailed analysis to be developed based upon the use of known and validated activity data (Scottish Government Information Services Department Data) allied to a proven methodology which was successfully used to model the impact on activity at University Hospital Hairmyres of the closure of the emergency department at Victoria Infirmary in Glasgow in 2015 and the opening of the Forth Valley Royal Hospital in 2011.

Within this methodology there is an assessment of travel time undertaken to facilitate the determination of the hospital attended by each post code sector. This assessment utilises AA AutoRoute data and projects travel time on a weekday at 0900 hours. This is utilised for all assessments and simulates the typical weekday peak travel period.

The full detail of this analysis is available for review.

## **4. Analysis & Outcomes**

### **4.1 Planning Scenarios**

The effect of locating the hospital in a position which does impact on catchment is detailed more fully below in order to clarify specific implications.

*Scenario 1* - Locating the hospital further south and closer to University Hospital Wishaw has three clear outcomes:

1. A significant proportion of University Hospital Wishaw activity will be redirected to University Hospital Monklands. This unnecessarily increases the size of UHM and results in unused capacity at UHW.

2. Monklands University Hospital Monklands will require a significantly larger ED footprint and inpatient bed complement. This results in significant unnecessary cost in terms of both capital and recurring revenue.
3. A significant proportion of patient activity from Cumbernauld, Kilsyth and Northern Corridor will shift to Glasgow Royal Infirmary and Forth Valley Royal Hospital This will destabilise these facilities.

These outcomes are not supportable as they result in unnecessary and undesirable disruption which will cause instability within the healthcare system of neighbouring Health Boards. In addition, if implemented, there will be a significant and unnecessary cost as the size of a new University Hospital Monklands will require to be greater than necessary. This increase in cost is unlikely to be funded as this would not meet best value for the public purse given the underused capacity at University Hospital Wishaw

**Scenario 2** - Locating the hospital further north and significantly closer to Cumbernauld and Kilsyth also has three clear outcomes:

1. A significant proportion of University Hospital Monklands activity will shift to University Hospital Wishaw. This will increase ED activity at UHW.
2. University Hospital Wishaw will require a significantly larger ED footprint and inpatient bed complement.
3. A proportion of patient activity from Glasgow and Forth Valley will shift to University Hospital Monklands

Again all of these outcomes are not supportable as they result in disruption and instability within the healthcare system. In particular the impact on University Hospital Wishaw cannot be mitigated due to space limitations and will cause severe disruption to patient flow.

**Scenario 3** – Locating the hospital further west and closer to Glasgow

This scenario is more complex than expected due to the impact of the Northern Corridor and the proximity of Stepps, Moodiesburn, Chryston and Muirhead to Glasgow. As the location of a new University Hospital Monklands moves west the impact on catchment and patient flow is relatively minor but once past Gartcosh/Bargeddie this impact changes markedly and becomes unsupportable. This is largely due to the very close proximity of the above townships to Glasgow which will drive a disproportionate number of Glasgow residents to redirect to a new University Hospital Monklands if located within this area. Conversely the impact for the Gartcosh is relatively minor.

**Scenario 4** – Locating the hospital further east

This scenario is relatively straightforward as there are no sites which fall into this category which have a significant impact on catchment and patient flow. The East sites have a minimal impact on catchment.

## 4.2 Site Modelling

For the purposes of this analysis a number of key sites have been assessed individually with a number of other sites considered on a group basis to enable the presentation of a detailed overview of impact on the basis of geography. The existing two site options, Gartcosh and Glenmavis, are shown individually plus Stepps, Orchard Brae/Europark, Eurocentral, Cumbernauld and Bargeddie. The analysis has considered that the assessments for Cumbernauld, Eurocentral, Glenmavis and Stepps are representative of geographical groupings covering North, South, East and West boundaries and accordingly these locations are legitimately representative for the purposes of assessment.

For the purposes of this assessment the groupings include the following sites:

Grouping	Sites included
North	All Cumbernauld sites, Drumgrew, Croy, Millcroft Road
South	Eurocentral, Maxim Park, Birkenshaw, Bellshill, Hattonrigg, Chapelhall, Newhouse
East	Glenmavis, Wester Moffat Farm, Burnhead farm/Quarry
West	Stepps, Stoneyetts

The start point for this assessment is that as the overall patient population is fixed, if there are changes in patient flow these will result in increases or decreases across affected hospitals – both elements are shown along with the hospitals they would impact upon.

A summary of the impact on unscheduled care catchment areas and on patient flows is shown in the table below.

### Impact on bed requirements

	GRI	FVRH	UHW	UHM
Bargeddie	-17.7	-1.9	3.5	16.1
Gartcosh	-22.6	-2.9	3.6	21.9
Glenmavis & East sites	-9.5	-2.9	6.7	5.7
Stepps & West sites	-42.7	-2.0	6.7	38.0
Cumbernauld & North sites	-12.0	-3.0	44.0	-29.0
Eurocentral & South sites	11.0	14.0	-60.0	35.0
Europark/Orchard Brae	14.5	18.9	-54	20.6

In terms of impact the key determining threshold for what would be a significant, detrimental impact has been set at a level of **one 24 bed ward**: options which have an impact at more than this level will not meet criterion 3.

The analysis therefore concludes that the impact on catchment at the locations East of Airdrie is less than one 24 bed ward and that these sites meet the criteria. The impact at these

locations is considered to be within the limits set by NHS Lanarkshire and does not significantly affect patient flow within the locality.

## **5. Conclusion**

The key point arising from the analysis is that the new location for University Hospital Monklands can significantly impact upon catchment areas and patient flows and that significant consideration must be given to this criterion to ensure that a new location is selected which has the minimum impact on the wider balance of healthcare within Lanarkshire and the surrounding region.

Applying this analysis across all of the 53 sites identified or nominated, six sites are assessed as meeting criterion 3:

- Bargeddie
- Gartcosh
- Glenmavis
- Burnhead farm/Quarry
- Wester Moffat Farm
- Manor Drive

G Johnston

Head of Planning & Development

27<sup>th</sup> December 2019

## Long list of potential locations (2016/17)

## Appendix A

- Site 1: Drumshangie (Glenmavis)
- Site 2: Land south of Orchard Farm, Holytown
- Site 3: Hattonrigg C, Bellshill
- Site 4: Eurocentral Plot S, Holytown
- Site 5: Eurocentral Site X, Holytown
- Site 6: Site of former LNG storage Facility, Annathill
- Site 7: Kilgarth Special Site, Gartgill Road, Coatbridge
- Site 8: Former Kilgarth Tip, Gartgill Road, Coatbridge
- Site 9: Clydesdale Works, Mossend
- Site 10: Site of Former Clydesdale Iron & Steel Works, New Stevenson
- Site 11: Glenboig CGA, Glenboig
- Site 12: Gartcosh
- Site 13: Gartcosh/Glenboig CGA, Gartcosh
- Site 14: Stoneyetts, Moodiesburn
- Site 15: Paxtane Farm, Harthill
- Site 16: Former Calderhead Colliery & Bing, Shotts
- Site 17: The Voe, Shotts
- Site 18: Ravenscraig East – North Site
- Site 19: Ravenscraig East – South Site
- Site 20: Ravenscraig West
- Site 21: Former Lanarkshire Steel Works, Motherwell
- Site 22: Ravenscraig Business Quarter
- Site 23: East of Main Street, Newmains
- Site 24: Royal George Washery Site, Newmains
- Site 25: Wishaw CGA
- Site 26: Pather Farm, Wishaw
- Site 27: Cumbernauld CGA 1, Cumbernauld
- Site 28: Cumbernauld CGA 2, Cumbernauld
- Site 29: Newhouse/Calderbank
- Site 30: Langlands, East Kilbride
- Site 31: Craighead Retreat, Blantyre
- Site 32: Barbana Road, East Kilbride
- Site 33: Shield Road, East Kilbride
- Site 34: Thorniehill, Hamilton
- Site 35: Larkhall Community Growth Areas, Larkhall
- Site 36: Europark, Eurocentral
- Site 37: Larkhall Academy, Larkhall



**Potential sites identified by North Lanarkshire Council – 2019**

- Site 38: Orchardton Woods, Cumbernauld
- Site 39: Westway/Wardpark North, Cumbernauld
- Site 40: Buchanan Business Park, Stepps
- Site 41: Drumgrew, Cumbernauld
- Site 42: Dunalister East Site, Chapelhall
- Site 43: Croy Quarry, Croy
- Site 44: Farm land, Bargeddie
- Site 45: Former Shanks & McEwan site, Coatbridge

**Potential sites nominated by members of the public – 2019**

- Site 46: Clarkston/Plains – Burnhead Farm/Quarry
- Site 47: Millcroft Road, Cumbernauld
- Site 48: North of Birkenshaw Trading Estate, Uddingston
- Site 49: Manor Drive, Airdrie
- Site 50: Craigneuk Park, Airdrie
- Site 51: Former Law Hospital Site, Law
- Site 52: Former Alexander Hospital Site, Coatbridge
- Site 53: Farm land, Wester Moffat, Airdrie