National Rehabilitation Hospital

NRH

Construction Management Plan for EIS

229914-00

Issue 1 | 15 October 2014

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 229914

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Document Verification

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		Name	Pauric Feely	Michael O'Brien	Joe Burns
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		Name	Pauric Feely	Michael O'Brien	Joe Burns
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Document Verification

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		Name	Michael O'Brien	Michael O'Brien	Joe Burns
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		Description			
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Appendices

Appendix A

1 Introduction

The Construction Management Plan includes a description of the proposed works and how these works will be managed for the duration of the works on site. This plan will be managed and updated in advance of and throughout the construction phase as required by the appointed Main Contractor. It is intended that revisions to this document will be circulated and agreed with Dun Laoghaire Rathdown County Council as additional details are incorporated.

This document is prepared solely for the purpose of the Contractor maintaining an approved environmental and management plan for the construction works. Nothing stated in this document shall supersede or be taken to replace the terms of the Contract, or the detailed design description issued with the Contract tender. Similarly the issues covered within this document may be amended or added to by the Main Contractor.

1.1 Project Description

The Phase 1 development at the National Rehabilitation Hospital comprises the construction of a new 120 bed rehabilitation hospital. The building will be located on a site adjacent to the existing main hospital building. The brief is to design a purpose built health care building which is rehabilitation specific and patient centred in its design and function. The building will provide ward accommodation with integrated therapy spaces. Wards are designed as clusters of single rooms with ensuite facilities. Programme specific integrated therapy spaces, living and social spaces, and ward clinical and ancillary facilities are provided on each ward.

The building will function as a standalone building but provide direct, accessible and appropriate services linkages with the existing building.

The proposed new Phase 1 is designed as a four storey ward block with an element of roof top plant space. Due to the slope across the site and the existing ground levels with the NRH the lowest floor (Level 0) is below the ground level at Rochestown Avenue.

It is proposed that the floor heights will be 4.8m between Level 0 and Level 1 and 4.2m floor to floor on the upper floors.

The form and massing of the proposed Phase 1 is generated by the design concept for the wards, which are formed around a series of courtyards bringing landscaping, views, natural light and ventilation into all of the patient spaces in the building. The ward block is placed along the new 4 storey linear hospital street off which the Sports Hall and Entrance blocks sit. The Sports and Hydrotherapy space is situated at Level 00, below the entrance. The Sports Hall is accessible at grade from Level 00 to the South of the site. Direct access to the existing building is achieved through the hospital street at Level 00 and Level 01.

The design also incorporates ground level landscaped gardens and courtyards. Access to a proposed new service yard is from a dedicated service entrance on Pottery Road.

1.2 Project Participants

Main Contractor	**TBC**		
Client	National Rehabilitation Hospital	Siobhan Bonham	(01) 235 5291
Architect	O'Connell Mahon Architects	Sean Mahon	(01) 676 7408
Civil and Structural Engineers	Arup	Michael O'Brien	(01) 233 4455
Mechanical and Electrical Engineers	Ethos	Colm Devlin	(01) 293 2220
Quantity Surveyor	Healy Kelly Turner	Michael Devlin	(01) 283 1116
PSDP	O'Connell Mahon Architects	Victor Lowe	(01) 676 7408
Fire Consultant	Michael Slattery & Associates	Mark Gavin	(01) 676 5713
Landscape Architect	Mitchell & Associates	Celia Harris	(01) 454 5066
Environmental Impact Assessment	Stephen Little & Associated with input from specialist environmental consultants	Stephen Little	

2 Construction Programme and Phasing

The proposed construction phasing for this development is included in Appendix A. In summary the proposed development is anticipated to be constructed over a 24 month period, with phased hoarding lines to maintain existing pedestrian and traffic routes within the campus. Subject to a successful grant of planning, it is intended for the works to commence in March 2015.

The development is proposed to be phased on the following basis;

- Modifications to existing carparks and the construction of new visitor and staff carparks to facilitate the construction of site hoardings. Construction of service diversions.
- Construction of the Hydrotherapy, Sports and Main Hospital Entrance as well as links to the existing Hospital.
- Construction of the New Ward Block Building.

3 Service Diversions

A number of public and private utility services traverse the proposed site and will need to be diverted as part of the proposed development. These include;

- A 200mm Ø public watermain currently crosses the site from Rochestown Avenue to the north to Pottery Road to the south of the site. The watermain has a 10m wayleave associated with it. As part of the proposed development, this watermain will lie within the footprint of the New Ward Block and will need to be diverted. It is proposed to divert the watermain and wayleave to a 10m zone running adjacent to the eastern boundary of the site. This work would be envisaged to take place within the first 6months of the contract from April 2015
- The existing 150mm Ø site watermain will be maintained and extended as part of the new development. A new 150mm diameter hydrant ring main shall be provided around the perimeter of the new facility. Note that the existing supplies to these buildings shall be kept live at all times. This will be serviced from the 200mm Ø public watermain at two locations at Rochestown Avenue and with a new connection from Pottery Road.
- New foul and surface water drainage systems are to be provided to service the New Ward Block. New connections are to be provided to the public sewerage systems at Pottery Road.
- HV (See Ethos Services Drawing)
- The existing site lighting and floodlighting cables shall be relocated as required to facilitate the new road network.
- GAS. (See Ethos Services Drawing)
- COMMS. (See Ethos Services Drawing)

All existing piped and cabled underground services will be verified on site and those services under the foot print of the building will be made safe and removed within the boundary of the building. All disconnections and removals shall be co-ordinated with the NRH and their agents and with the ESB to minimise the impact of diversions and modifications within an operational Campus. All items identified for strip -out, demolition, relocation and/or diversion shall be subject to individual method statement and risk assessment or FMEA prior to commencement of these works. All surplus material removed from site will be transferred by authorised contractors to authorised facilities in accordance with the requirements of waste management legislation. The Contractor will be required to produce a method statement and risk assessment for the safe and legal transfer of all surplus materials.

All diversions are to be agreed with the relevant Local Authority and/or Utility Provider in advance of the diversion taking place.

4 Site Establishment

The site is currently accessed from the South West of the site. For the duration of construction all construction traffic will enter and leave the site using either of the following routes;

- Existing NRH entrance on Pottery Road
- New proposed entrance on Pottery Road

From time to time it may be necessary for alternate access to be provided from existing entrances on Rochestown Avenue for defined elements of work that are remote from the site compound area. Such a request from the Main Contractor will be considered on a case by case basis, to be agreed with both the NRH and DLRCC.

4.1 Perimeter Hoarding

Perimeter hoarding will be provided around the site to provide a barrier against unauthorised access from the public areas. Controlled access points to the site, in the form of gates or doors, will be kept locked for any time that these areas are not monitored (e.g. outside working hours).

The hoarding will be well-maintained, and will be painted or covered with graphics portraying project information. A proposed hoarding line is indicated in Appendix A.

4.2 Temporary Hoarding

Hoarding or fencing will be provided within the site as a safety barrier around any areas where the public may have access. The location of this will change during the course of the project.

4.3 Tree Protection

Trees designated for protection in the Tree Survey Report are to be protected in advance of commencement of works on site.. All works associated with the removal and protection of trees on site is to be carried out in accordance with the recommendations within the Tree Survey Report.

4.4 Enabling Works

To facilitate the construction of the New Ward Block, some enabling works are to be undertaken to services and car parking arrangements within the Campus to facilitate ease of diversion through the duration of the contract.

Services requiring diversion include;

- 200mm dia. watermain
- Existing gas supply from Pottery Road
- Existing ESB supply from Pottery Road

As part of Phase 1, it is intended to construct the new staff parking to the west of the site adjacent to the existing Outpatients Building and re-align and designate parking for disabled vehicles on a temporary basis, within a reduced footprint on the existing surface carpark to the front on the existing hospital along Rochestown Avenue. Immediately thereafter as part of Stage 2, the visitor parking will be provided at its permanent location on the North east corner of the site. Access and egress to /from both carparks will remain through the existing main NRH entrance on Rochestown Avenue.

5 Hours of Working

Construction operations on site will generally be between the hours of 7am and 7pm, Monday to Friday, and 7am to 2pm on Saturdays, subject to planning authority limitations and specific client clinical requirements. However, it may be necessary for some construction operations to be undertaken outside these times, for example; service diversions and connections, concrete finishing and fit-out works, etc. Such works will be agreed in advance with DLRCC.

Similarly, deliveries of materials to site will generally be between the hours of 7am and 7pm, Monday to Friday, and 7am to 2pm on Saturdays, subject to planning authority limitations and specific Client requirements. There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times.

The construction shift times will ensure construction traffic will have limited impact on the traditional peak periods of 08:00-09:00 in the morning and 17:00-18:00 in the evening as it is envisaged most construction will be at work between 8 am in the morning and will leave after 6 pm in the evening.

6 Construction Traffic

6.1 Site Access

As outlined previously, the construction site will be accessed via Pottery Road through either one of the following two entrances;

- Existing NRH Pottery Road Entrance
- Proposed New NRH Entrance off Pottery Road.

Construction traffic will be restricted from entering the construction site from Rochestown Avenue to ensure the environment within the existing hospital is not impacted by the construction works. During the course of the construction works the existing traffic management controls (entrance gate) at the Pottery Road entrance will be lifted temporarily to ensure construction traffic are provided within unrestricted access to the site.

The temporary parking of delivery vehicles will not be permitted on the internal road network leading to the construction entrance.

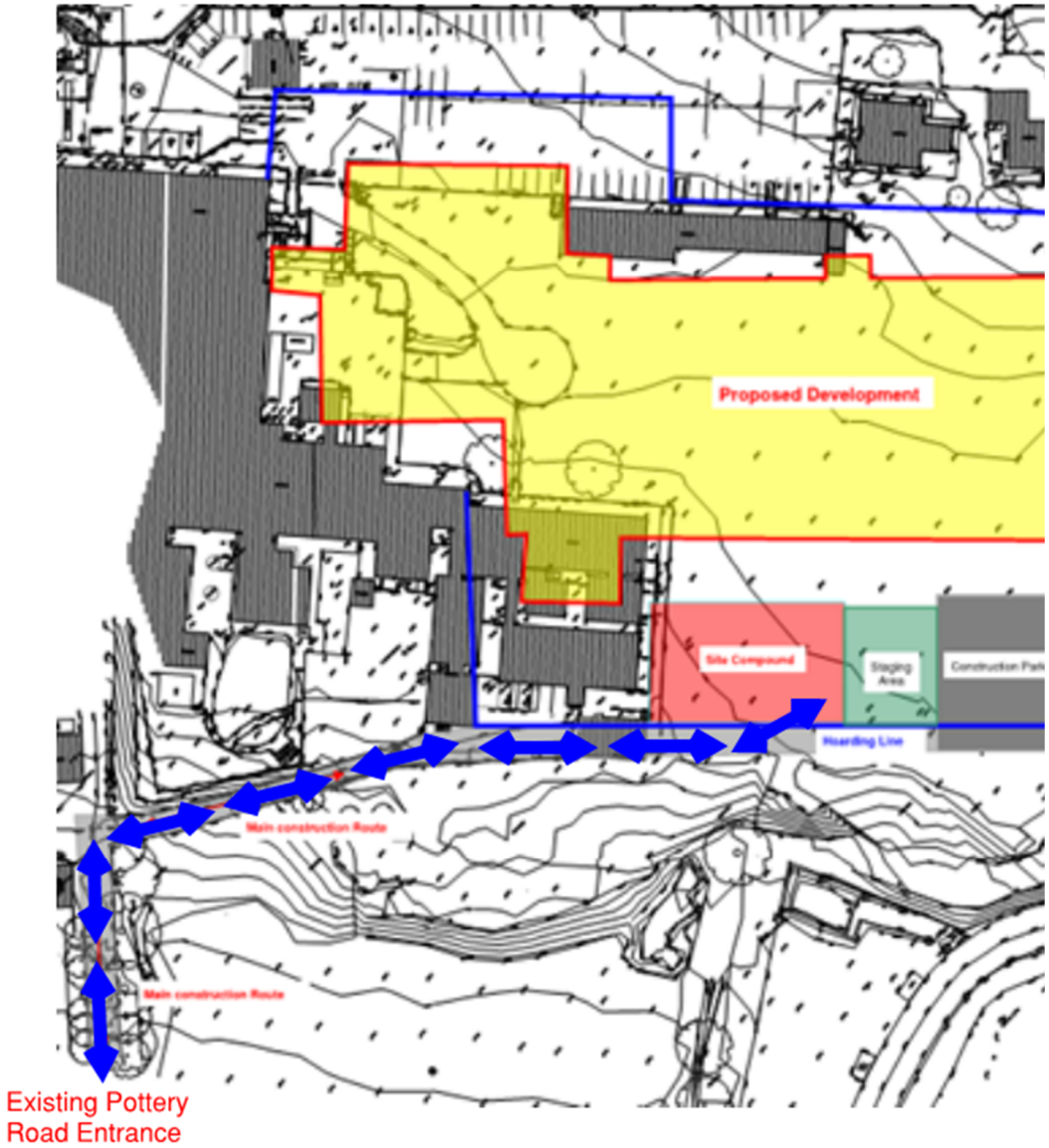


Figure 1 Figure showing the construction site and internal access route required

6.2 Construction Traffic Routing

Construction traffic will be restricted to the primary routes in the vicinity of the National Rehabilitation Hospital and will not be permitted to use residential routes. The heavy good vehicles (HGV's) routes to and from the site will depend on the location from where concrete will be sourced and the end destination for surplus demolition and excavation materials not reused on site. The locations of concrete batching plants and suitable waste recovery/waste disposal facilities have yet to be determined and will be identified when the contractor is appointed and when more detailed information on the materials to be handled is available. The HGV routes from the construction site will be agreed with Dun Laoghaire Rathdown County Council Roads and Traffic Department before commencement of works on the site.

6.3 Construction Parking

A total of 40 spaces will be provided within the construction site to cater for staff and visitors during construction of the new hospital building. These will be provided on a temporary surface within the confines of the site hoarding.

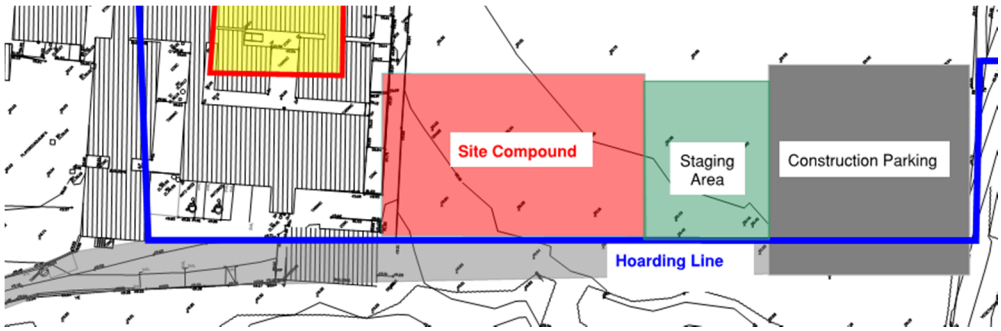


Figure 2 Figure showing the location of parking spaces

6.4 On Site Construction Vehicle Staging Area

Construction traffic will be managed and scheduled in such a way that construction vehicles do not queue on either the internal road system or on the public road. An on-site construction vehicles staging area will be provided to facilitate awaiting vehicles.

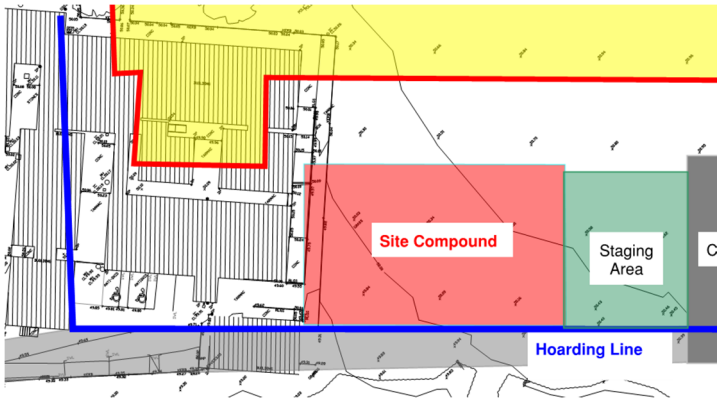


Figure 3 Figure showing the location of the staging area

6.5 Estimation of Vehicle Movements during Construction

During the excavation of the pool and reduction of the site to the required formation levels, it is proposed that the majority of the residual excavated material will be re-used on campus lands to the west of the site with a temporary haul road constructed to route the construction vehicles within the NRH Campus. Approximately 14,000m3 of residual excavated material will be removed off-site for reuse and/or recovery at an authorised facility in accordance with the waste hierarchy and relevant waste legislation. Transportation of the material will be by licenced hauliers over an approximate 3month period from May to August 2015. This equates roughly to there will be minimal impact on the local road network.

During the excavation phase of the construction works the peak daily HGV traffic will be in the region of 40 to 50 one-way movements and will extend for a period

of approximately 3 months. During this phase of the works, it is envisaged that peak HGV traffic would be in the region of 5 to 10 trips during any one hour period.

Following the completion of the excavation works the level of HGV traffic will reduce with a peak generation of 25 one-way movements a day. There will be a concentration of truck movements when large concrete pours are scheduled.

6.6 Internal Haul Road

The majority of excavated material from the proposed development is proposed to be reused within the NRH site. A temporary haul road is proposed to be constructed from the existing NRH entrance road off Pottery Road westwards to the location of the proposed disposal area. It is anticipated that the road will be in operation for approximately six months from April 2015 to September 2015. The road construction will be stone on the existing ground and it is proposed to be removed and the existing ground re-instated with topsoil upon completion.

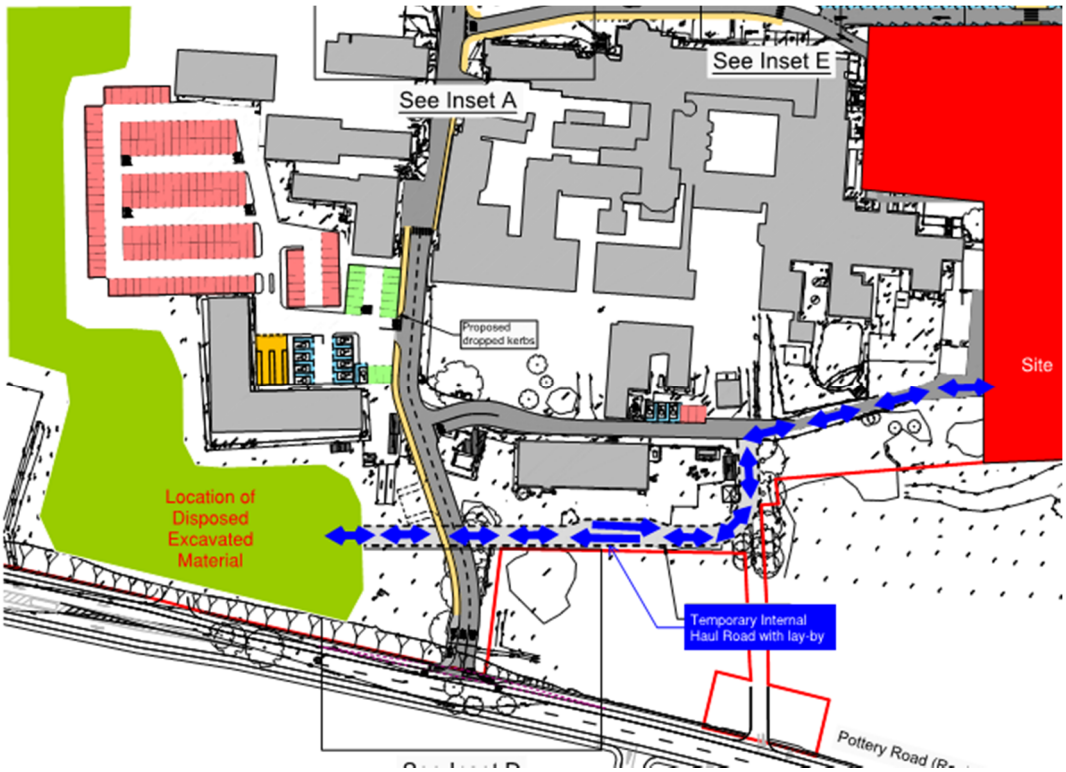


Figure 4 Internal Temporary Haul Road

6.7 Mitigation Measures

6.7.1 Local Environmental Protection

Detailed mitigation to protect the local environment is specified within the specialist chapters of the Environmental Impact Statement for the proposed development. The Contractor will be required to adopt these mitigation measures for the duration of works on site.

6.7.2 Retention of Excavated Material On-Site

During the excavation of the site to the required formation levels, a significant proportion of material excavated will be reused onsite for landscaping works. This will reduce the amount of material for removal offsite. Information on the quantities of material to be reused and removed offsite are outlined in the Waste Management section of the EIS.

6.7.3 Minimise Construction Vehicle Movements

Construction vehicle movements would be minimised through:

- Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods.
- Use of precast/prefabricated materials where possible
- 'Cut' material generated by the construction works will be re-used on site where possible, through various accommodation works
- Adequate storage space on site will be provided
- A strategy will be developed to minimise construction material quantities as much as possible
- Construction staff vehicle movements would also be minimised by offering Travel to Work Scheme benefits to encourage car sharing

6.7.4 Construction Phase - Mobility Management Measures

The contractor will be required as part of the contract to introduce a mobility management plan for its workforce to encourage access to the site by means other than by private car. The following section identifies some of the measures the contractor will provide as part of the Mobility Management Plan. The Mobility Management Plan will form part of the Construction Management Plan and will be agreed with Dun Laoghaire Rathdown County Council prior to works beginning on site.

Walking

The contractor will ensure construction staff are provided access from Rochestown Avenue to ensure construction staff are provided with access to the public transport routes that run along this route.

Cycling

Cycle parking spaces will be provided on the site for construction staff, in addition lockers will be provided to allow cyclists store their cycling clothes.

Car Sharing

Car sharing among the construction staff should be encouraged, especially from areas where construction staff may be clustered. The contractor will aim to organise shifts in accordance to staff origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion

of construction staff driving to the off-site car parking facility, and will minimise the potential traffic impact on the road network surrounding this facility.

Public Transport

The Contractor will issue an information leaflet to all staff as part of their induction on site highlighting the location of the various public transport services in the vicinity of the construction site.

Management of the Mobility Management Plan

To oversee and implement the Mobility Management Plan for the construction works, the following mechanisms will be put in place:

- The appointment of a Mobility Manager to implement the Plan
- The establishment of a group (which includes the Main Contractor and NRH) to oversee the implementation and ongoing implementation of the Plan.

6.8 On Site Accommodation

On site accommodation will consist of;

- Adequate materials drop-off and storage area
- Internal turning area for trucks
- Limited dedicated staff and visitor parking within the confines of the site hoarding
- Staff welfare facilities i.e. toilets etc.

7 Road Maintenance and Reinstatement of Roadway Lining and Signing

7.1 Litter and Mud on Campus and Public Roads

The following measures will be taken to ensure that the site and surroundings are kept clean and tidy:

- A regular program of site tidying will be established to ensure a safe and orderly site.
- Scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind.
- Food waste will be strictly controlled on all parts of the site.
- Mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate.

- Wheelwash facilities will be provided for vehicles exiting the site.
- In the event of any fugitive solid waste escaping the site, it will be collected immediately and removed to storage on site, and subsequently disposed-of in the normal manner.

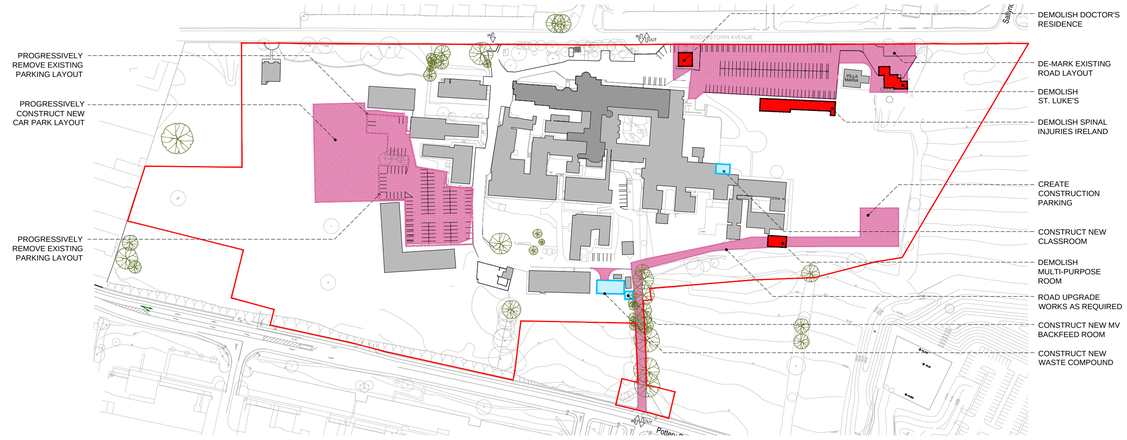
7.2 Reinstatement of Roadway Lining and Signing

On completion of the project, roadway lining and signing along the New Pottery Road access road will be assessed with respect to the quality of existing signage and road markings. Sub-standard signage and road markings will be reinstated.

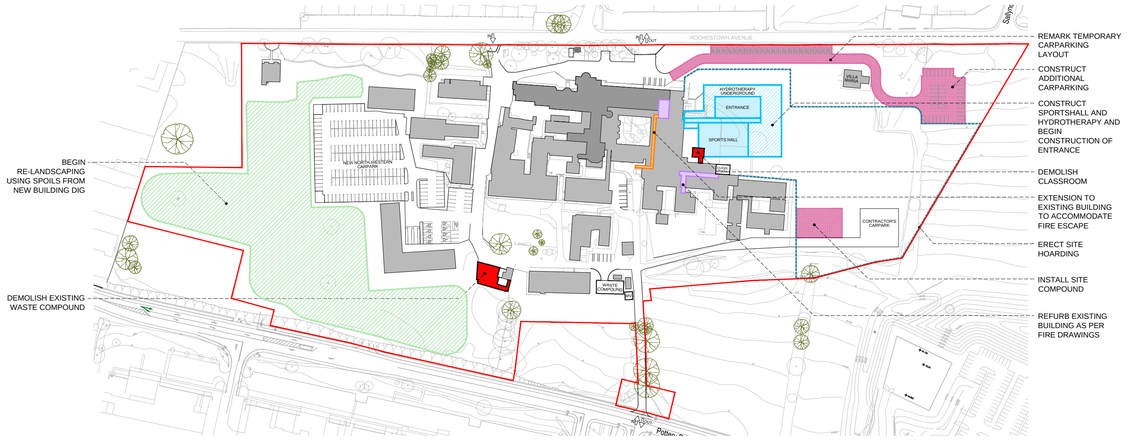
8 Construction and Demolition Waste Management Plan

The construction and demolition waste management plan is described in the waste management chapter. Refer to this chapter for further details.

Appendix A



STAGE 1



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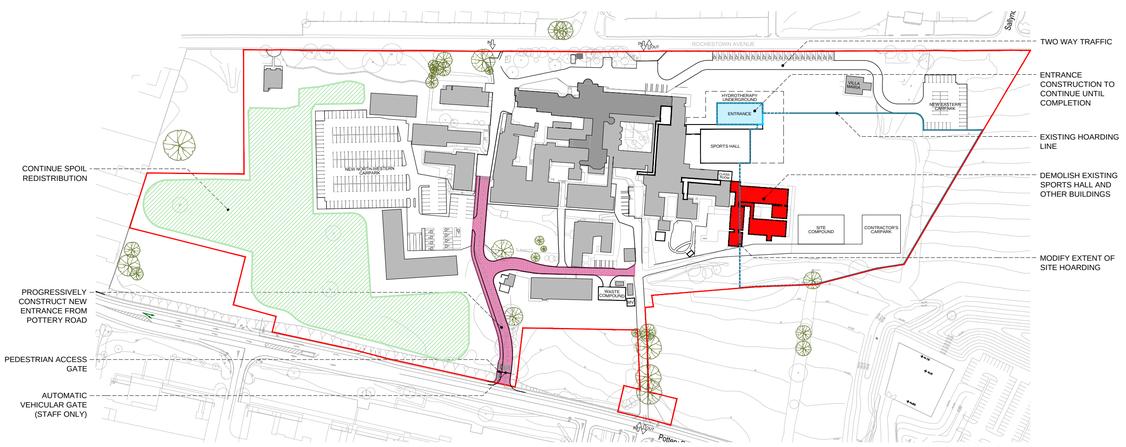

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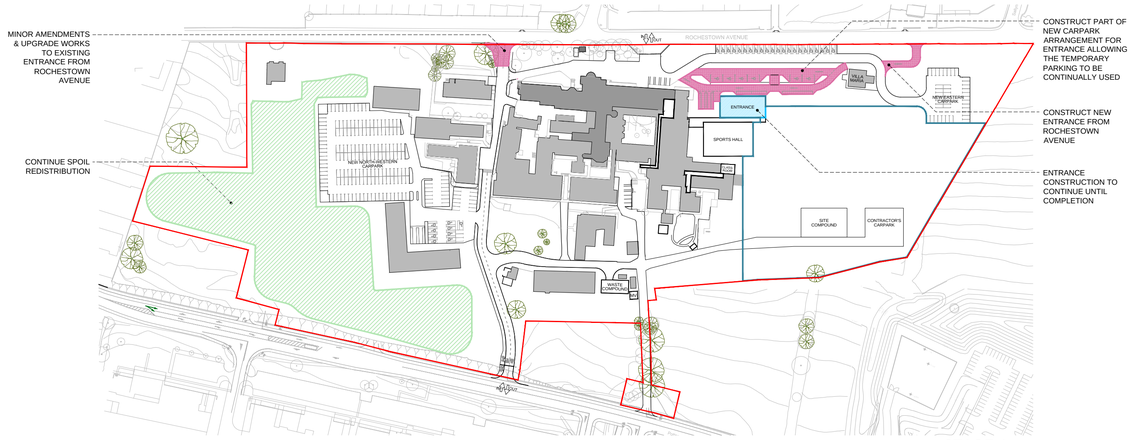

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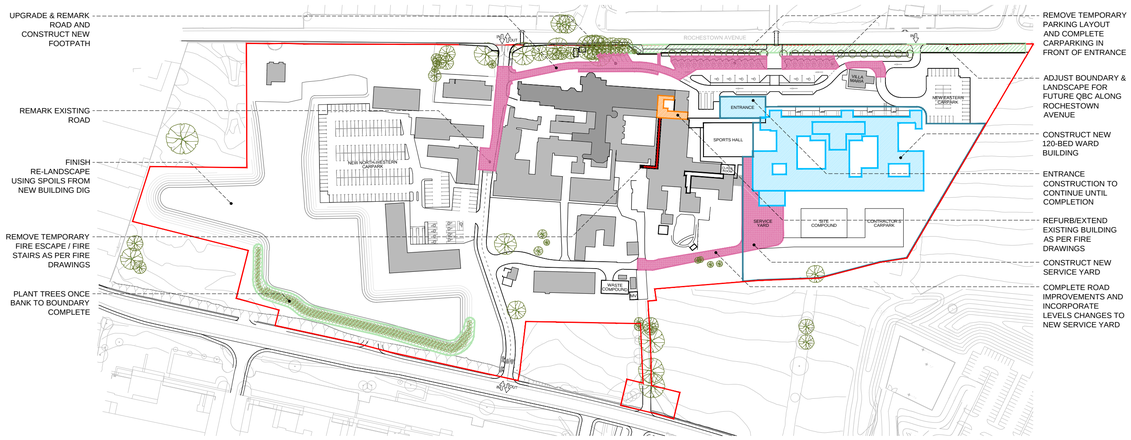

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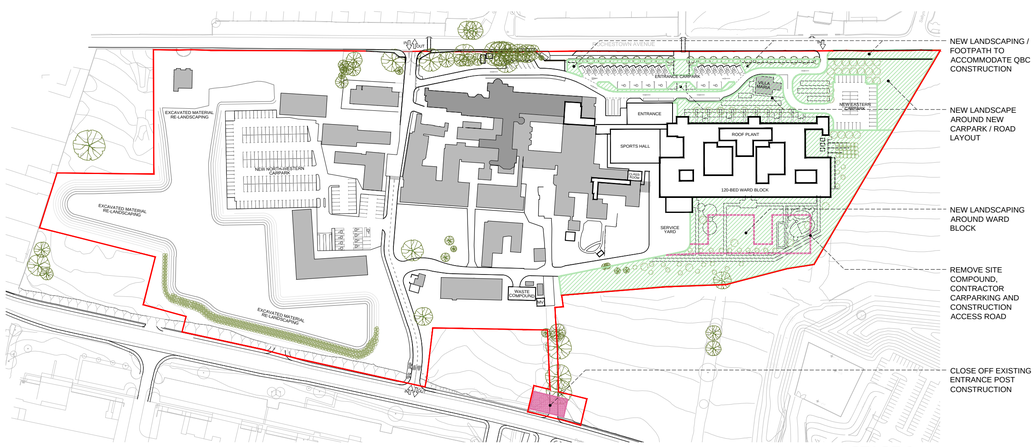

STAGE 6

NOTES / LEGEND

GENERAL NOTES:

- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND DRAWINGS.
- ALL DIMENSIONS TO BE CHECKED ON SITE.
- IN THE EVENT OF ANY DISCREPANCIES BETWEEN DRAWINGS THE CONTRACTOR IS TO INFORM THE ARCHITECT IMMEDIATELY.

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NORTH

SCALE 1.2000

0 40m 80m 160m

- PROPOSED BUILDING DEMOLITION WORKS
- PROPOSED NEW BUILDING WORKS
- ROAD WORKS
- LANDSCAPE WORKS
- EXTENSION TO EXISTING BUILDING
- REFURBISHMENT TO EXISTING BUILDING
- PROPOSED HOARDING LINE

REVISION	DATE	DESCRIPTION	BY
-	DD.MM.YYYY	DESCRIPTION	BY

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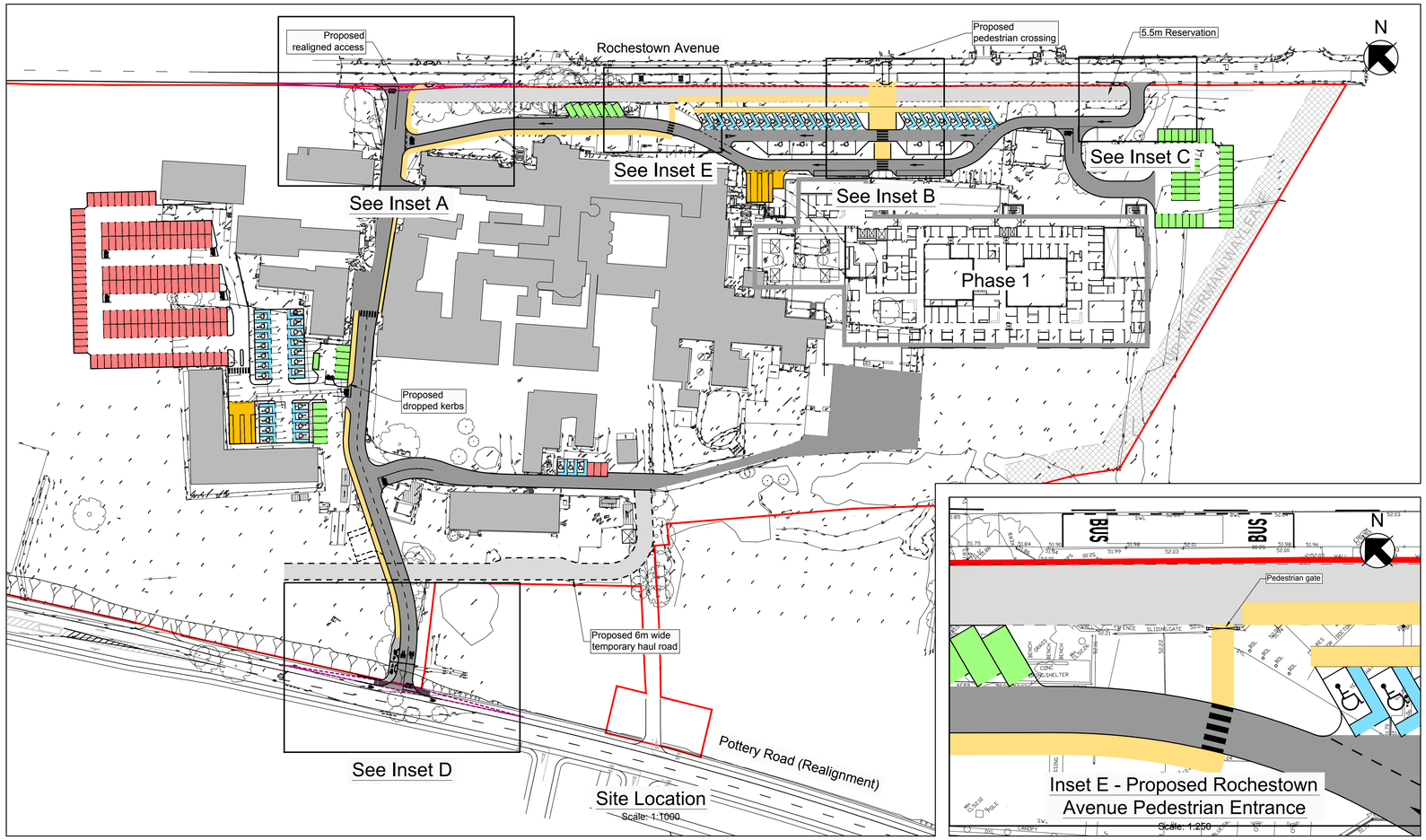
PROJECT			CLIENT			
NRH 120 BED HEALTHCARE BUILDING			NRH			
DRAWING	DATE	DRAWN BY	PROJECT NUMBER	DRAWING STATUS	DRAWING NUMBER	REVISION
SITE PHASING DRAWINGS	OCT 2014	KC	3862	PA	002	-
STATUS	SCALE	CHECKED BY				
PLANNING	1:2000 @ A1	HK				

A1



Site Location
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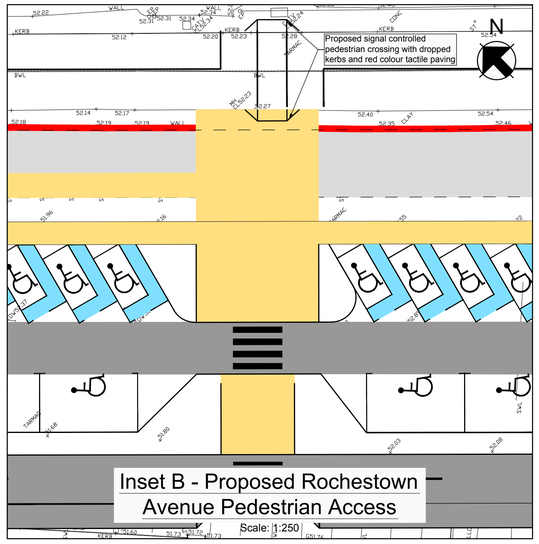
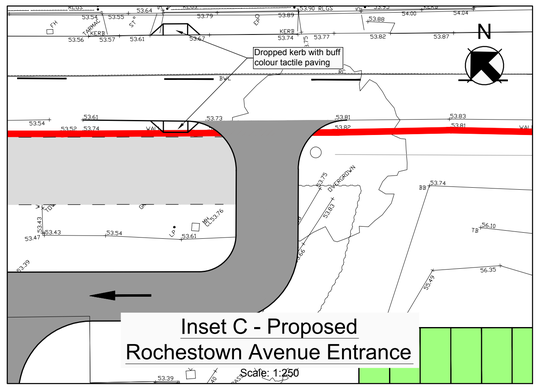


Inset B - Proposed Rochestown Avenue Pedestrian Access
Scale: 1:250

Inset E - Proposed Rochestown Avenue Pedestrian Entrance
Scale: 1:250



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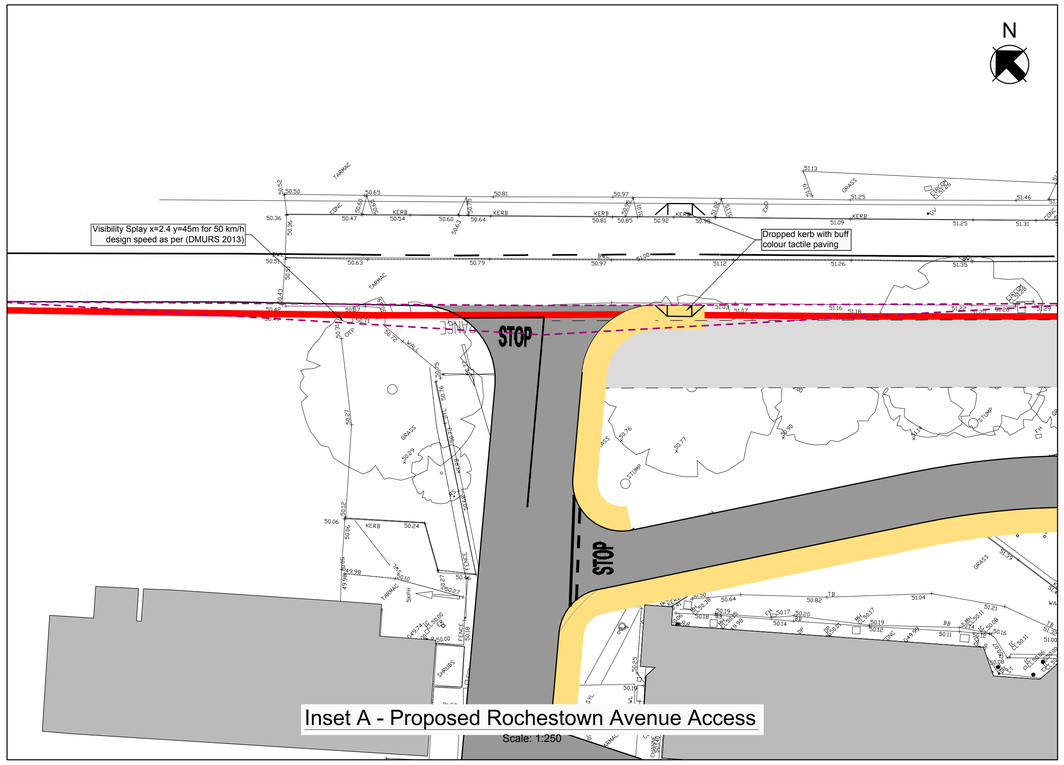
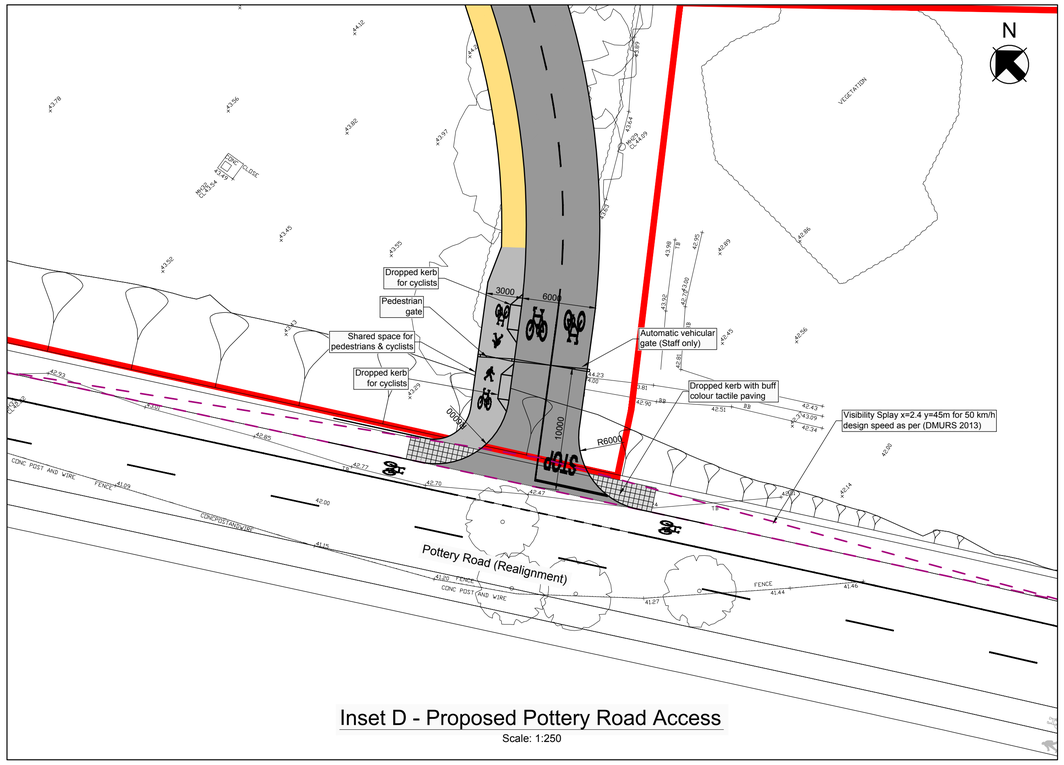


Inset A - Proposed Rochestown Avenue Access
Scale: 1:250



Inset D - Proposed Pottery Road Access
Scale: 1:250

Issue	Date	By	Chkd	Appd
	/ /			

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Client
National Rehabilitation Hospital

Job Title
120 Bed Ward Development

Proposed Development Access

Scale at A1 1:1000 & 1:250 (1:2000 & 1:500 @ A3)

Discipline Consulting

Job No **229914-00**

Drawing Status **Planning**

Drawing No **T001**

Issue **P1**

Do not scale

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