



**Graythwaite Rehabilitation Centre
Ryde Hospital
Fourth Avenue, Denistone**

**Environmental Assessment for Project Application
Part 3A Environmental Planning & Assessment Act 1979**

OCTOBER 2011

EXECUTIVE SUMMARY

INTRODUCTION

This Environmental Assessment (“EA”) has been prepared under **Section 75N** of the Environmental Planning and Assessment Act (“the Act”) to accompany an application to the Planning Assessment Commission (as the delegate of the Minister for Planning) for the Project Application described below.

THE PROJECT SITE & CONTEXT

The Ryde Hospital site (“the site”) is located in the Inner North Sydney region, within the suburb of Denistone, approximately 15 kilometres north-west of the Sydney CBD and within the Ryde LGA. The site is bounded by Fourth Avenue to the north, Ryedale Road to the west, Florence Avenue to the south, Denistone Road to the east and has an area of approximately 3995m². The site is characterised by a mix of buildings of varying condition and which are primarily located in the north and north-eastern part of the site. The south-western part of the site is characterised by dense bushland. The proposed rehabilitation centre will be constructed within the northern part of the site with primary frontage to Fourth Avenue. A detailed analysis of the site and its context is contained in **Section 2** of this EA.

PROJECT DESCRIPTION

The application is for Project Approval under Part 3A of the Environmental Planning and Assessment Act 1979 for the new “Graythwaite” rehabilitation centre and associated parking at the Ryde Hospital site in Denistone (ref: MP_10_0179).

A detailed description of the proposal is contained in **Section 3** of this EA. Reduced copies of the plans for the proposal are appended to this EA at **Appendix 3**.

The Capital Investment Value of the project is estimated at \$38,279,910 as confirmed by the Quantity Surveyor Cost Statement prepared by WT Partnership and attached at **Appendix 22**.

ASSESSMENT CRITERIA

The Director-General of Planning previously confirmed that the project (ref: MP_10_0179) was one to which Part 3A of the Act applies. Following recent changes to Part 3A of the Act and State Environmental Planning Policy (Major Development) 2005, we note that the savings provision apply to the proposal and therefore, the project is one to which Part 3A of the Act still applies.

The Director-General of Planning has authorised the submission of the Project Application and has issued his requirements for the EA. The Director General's

Requirements (DGR's) are detailed in Section 4 of this EA. A summary of the key issues required to be assessed follows.

The Project Application seeks to assess the appropriateness of the scheme in relation to the assessed capability of the site.

STATUTORY CONTEXT

The relevant statutory regime and assessment criteria applicable to the development comprise the following:

- Part 3A of the Environmental Planning & Assessment Act 1979;
- Threatened Species Conservation Act 1995;
- Metropolitan Plan for Sydney to 2036;
- Draft Inner North Sub-regional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development;
- State Environmental Planning Policy No. 55 - Remediation of Land;
- State Environmental Planning Policy (Infrastructure) 2007;
- Ryde Local Environmental Plan 2010; and
- City of Ryde Development Control Plan 2010.

An assessment of the proposal against these and other relevant planning controls is contained in **Section 5** of this EA.

KEY ISSUES

A detailed assessment of the key issues identified in the Director General's Requirements and our own identified issues is contained in **Section 6** of this EA. A summary of those issues follows below:

Built form and urban design

This EA addresses the height, bulk and scale of the proposed development within the context of the locality with an architectural design statement prepared by Nettleton Tribe Architects. The proposal is considered to be of a high quality, contemporary design.

Environmental and residential amenity

Whilst the proposal is not for permanent residential accommodation, there is a certain level of internal amenity that is expected for the in-patients at the proposed rehabilitation centre. In addition, it is important to consider the potential impact of the proposal on surrounding residential development. Accordingly, this EA addresses issues related to environmental and residential amenity, with specific reference made to solar access, acoustic privacy, visual privacy, view loss and wind impacts. The proposal will result in a

negligible impact on surrounding residential development and will provide a high level of amenity for in-patients at the proposed rehabilitation centre.

Transport and accessibility

The Traffic and Accessibility Report, prepared by Halcrow, provides a detailed analysis of the existing road network, traffic flows, operation of intersections, parking situation (on-site and on-street) and public transport and pedestrian accessibility, in conjunction with an analysis of the potential traffic and parking impacts of the proposed development (refer to **Appendix 8**). The analysis confirms that the proposal will not result in any adverse impact on the existing traffic and transport situation at the Graythwaite Site and within the locality and adequate parking is proposed.

Ecologically sustainable development

The principles of ecologically sustainable development have been considered in the design of the development. The project has been designed to facilitate cross-ventilation, good natural daylight and solar access to the new building, and the use of energy efficient appliances and water efficient devices. Refer to **Appendix 11** for a copy of the ESD Report

Contributions

The City of Ryde Council's Section 94 Development Contributions Plan (2007) sets out the contribution rates for development. The Contributions Plan does not specifically identify hospitals or medical uses as development that would attract Section 94 Contributions. In addition, hospitals (and related uses) are routinely exempted from payment of contributions as a result of their significant contribution to social and essential infrastructure within the locality and region and associated public benefit.

Notwithstanding this, we understand that in discussions with Council, a potential increase in demand on public roads and stormwater infrastructure as a result of the proposed works was identified as a potential trigger for payable contributions. However, advice has been received from Taylor Thomson Whitting (stormwater) and Halcrow (traffic) which confirm that there will be no increase in demand on such infrastructure as a result of the proposed works (refer to **Appendix 8** and **23**).

Contamination

Preliminary investigations into the physical suitability of the site for the proposed development have been undertaken by Jeffrey and Katauskas (geotechnical) and Environmental Investigation Services (EIS) (contamination) have identified no material encumbrances to that development.

Geotechnical analysis of the site concludes that the existing ground conditions are suitable for the type of development proposed, subject to geotechnical issues being properly evaluated and addressed during the construction phase of the proposed

development, with the recommendations of the Geotechnical Investigation report prepared by Jeffrey and Katauskas adopted. Refer to **Appendix 7**.

Contamination analysis of the site, undertaken by EIS, concludes that the site is suitable for the proposed development providing the recommendations of the Stage 1 Environmental Site Assessment report prepared by EIS are adopted. Refer to **Appendix 6**.

Aboriginal Heritage

Part of the existing Ryde Hospital site is nominated as a heritage item under the Ryde Local Environmental Plan 2009. A Heritage Assessment of the proposal has therefore been undertaken by Graham Brooks and Associates. This assessment demonstrates that there will be no adverse impacts on the heritage significance of the site. In addition, a separate Aboriginal Heritage Assessment has been undertaken by City Plan Heritage that also demonstrates that, with the implementation of appropriate mitigation measures, there will be no adverse impacts on the Aboriginal Heritage significance of the site. Refer to **Appendix 10** and **Appendix 11** for a copy of these reports.

Drainage and stormwater management

Appropriate drainage and stormwater management principles are to be incorporated within the proposed development.

The stormwater concept plans and Civil Design Statement (refer **Appendices 5** and **13** respectively) accompanying the application demonstrate the ability of the proposal to adequately deal with water quantity and quality issues.

Flooding

A very small area of the northern part of the site is identified as being located within a floodpath. Accordingly, an assessment of the proposal with regards to flood-related issues has been undertaken in the Civil Design Statement prepared by Taylor Thomson Whitting (refer to **Appendix 13**). This report confirms that the proposed development has been designed to include adequate flood protection measures and will have no adverse impact on flood levels.

Utilities

An assessment of utility provision and capacity (refer to **Appendix 16**) has been undertaken by SPP Group and Steensen Varming and confirms that there is capacity to meet the demands of the proposed development.

Staging

The construction of the proposed Graythwaite Rehabilitation Centre will be undertaken in one (1) stage.

Flora and Fauna

The proposal involves the removal of one (1) street tree in the Fourth Avenue road reserve. This tree is being removed to allow the location of essential services including a fire brigade booster and valve. In addition, the tree is being removed to allow the reconfiguration of the existing driveway, currently used by the Ryde Medical Centre, and to facilitate separate car park entries into the site to include the proposed new building. Tree removal across the wider Graythwaite Site was undertaken under a separate approval and under Part 5 of the EP&A Act and prior to this Project Application. As part of that approval, a set of conditions was imposed, in accordance with advice from Travers Bushfire and Ecology, including tree planting to offset the tree removal. The proposed landscape scheme reflects the requirements of those conditions. The flora and fauna advice that accompanies this application at **Appendix 14** also confirms that the site does not accommodate any threatened species (or habitats for threatened species) of flora or fauna, EECs etc. The proposal will not result in any adverse impact with regards to flora or fauna.

Noise and vibration

An Acoustic Assessment Report has been prepared by Acoustic Logic in support of this application to assess the potential noise and vibration impacts of the proposal during the site preparation, construction and occupation phases of the proposed rehabilitation centre. The following potential noise and vibration impacts have been identified;

- Excavation and piling works, particularly those undertaken within close proximity to the northern site boundary;
- Construction works, including the use of cranes and hand tools (angle grinders etc) and concrete pumps.
- Generally, additional noise as a result of increased traffic movements to and from the site during construction of the proposed development. However, as “infill” development (as opposed to greenfield development), and as a result of the anticipated number of visitors, coupled with staff ingress / egress movements, noise levels from vehicles movements associated with the occupation of the proposed rehabilitation centre will remain relatively unchanged from the existing situation; and
- Potential noise emissions from mechanical plant during occupation of the proposed rehabilitation centre.

The Acoustic Assessment assesses the above potential noise and vibration impacts with reference to the requirements of the relevant statutory / regulatory requirements and provides a series of recommendations to mitigate these potential impacts. The Acoustic Assessment accompanies this EA at **Appendix 21**.

Waste

Waste management measures for both the construction and occupation phases of the proposal accompany this application in the form of a Construction Waste Management Plan prepared by Aurora Projects (refer to **Appendix 19b**) and an Operation Waste Management Plan prepared by NSW Health NSLHN (refer to **Appendix 19a**). The waste management measures prescribed in these documents are considered to be adequate to manage waste generated during the construction and operation phases of the proposed rehabilitation centre.

Hazards

An assessment has been prepared by Premier Engineering which confirms that the proposal falls outside the parameters set out in State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and accordingly, is not defined as being potentially hazardous or offensive. Refer to **Section 5.9** of this EA and **Appendix 24** for further detail.

Detail regarding the proposed storage, use and management of any hazardous materials is provided in the Guidelines for the Safe Use of Hazardous Substances and Dangerous Goods in NSW Health, dated 2006 and prepared by NSW Health. These Guidelines are appended to this EA at **Appendix 15**.

Consultation

Consultation has been undertaken with various Stakeholders (including Ryde City Council, the local community, Ryde Hospital staff and various utilities and services providers) and in accordance with the Department's Major Project Community Consultation Guidelines (October 2007). The issues raised during the various consultation processes are addressed in this EA. Refer to **Section 5.18** of this EA for further detail.

CONCLUSION

The EA concludes that the site is highly suitable for the proposed rehabilitation centre and will provide a significant public benefit to the community and the services offered from the Ryde Hospital Campus.

Subject to compliance with the Statement of Commitments outlined in **Section 7**, this EA concludes in **Section 8** that the Project Application warrants approval.

CERTIFICATION

I hereby certify that the information contained in this Environmental Assessment is neither false nor misleading:

PREPARED BY:



Melanie Freeland

Urban Planner

City Plan Strategy and Development Pty Limited

B. Lib (USYD), M. Plan (UNSW)

Date: 21 October 2011

and



Chris Outtersides

Manager - Development

City Plan Strategy and Development Pty Limited

BA (Hons), MTP, MRTPI

Date: 21 October 2011

REVIEWED BY:



David Ryan

Executive Director

City Plan Strategy and Development Pty Limited

BTP (Hons), Dip Law (SAB), Grad Dip Leg Prac, MPIA, CPP

Date: 21 October 2011


Job No/ Document No	Description of Issue	Prepared By/ Date	Reviewed by Project Manager/Director	Approved by Project Manager/Director
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Note: This document is preliminary unless it is approved by Director of City Plan Strategy and Development Pty Ltd				

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LIST OF APPENDICES

No.	Item	Prepared by
1	Environmental Assessment Requirements	Director-General of Planning
2	Survey Plans	Craig & Rhodes
3	Architectural Drawings & Design Statement	Nettleton Tribe Architects
4	Concept Landscape Plan	Site Design Landscape
5	Stormwater Concept Plan	Taylor Thomson Whitting
6	Contamination Report	EIS
7	Geotechnical Report	Jeffery and Katauskas
8	Traffic and Accessibility Report	Halcrow
9	Heritage Impact Statement	Graham Brooks & Associates
10	Aboriginal Heritage Statement	City Plan Heritage
11	Ecologically Sustainable Development Report	Steensen Varming
12	Access Report	Morris Goding Accessibility
13	Civil Design Report	Taylor Thomson Whitting
14	Flora and Fauna Advice	Travers Bushfire & Ecology
15	Guidelines for the Safe Use of Hazardous Substances and Dangerous Goods in NSW Health	NSW Health
16	Utilities Details	SPP Group & Steensen Varming
17	Water Management Report	SPP Group
18	Erosion and Sediment Control Plan	Taylor Thomson Whitting
19a	Operation Waste Management Plan	NSW Health NSLHN
19b	Construction Waste Management Plan	Aurora Projects
20	Consultation	Aurora Projects
21	Acoustic Assessment	Acoustic Logic
22	QS Statement	WT Partnership
23	Advice from TTW re: S94 Contributions	Taylor Thomson Whitting
24	SEPP 33 Assessment	Premier Engineering

1 INTRODUCTION

1.1 Overview

This Environmental Assessment (“EA”) has been prepared for Health Infrastructure by City Plan Strategy and Development Pty Ltd in respect of a Project Application to construct a new rehabilitation centre and associated parking on land at the Ryde Hospital Site (“the site”) in Denistone.

The site is legally described as Lot 1 in Deposited Plan 1137800 and Lot 2 in Deposited Plan 1137800, and is located at Fourth Avenue in Denistone.

In brief, the proposal comprises a new four (4) storey rehabilitation centre with the provision of car parking for 85 car spaces. A more detailed description of the proposal is provided under **Section 3**.

Advice has been received from the Director General of the NSW Department of Planning and Infrastructure that:

- he has formed the opinion that the proposal is development of a kind described in Schedule 1, Clause 18 of SEPP Major Development and is therefore a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* (“the Act”) applies;
- he has authorised the submission of a Project Application for the proposal under **Section 75E** of the Act; and
- Director General’s Environmental Assessment Requirements for the project have been issued (refer **Appendix 1**).

In accordance with this advice, this report contains the Environmental Assessment addressing the Director General’s Requirements, as set out in **Appendix 1**.

1.1.1 Phasing of the Project

For information and by way of background, the proposed rehabilitation centre and works associated with this application constitute **Phase 4** of the overall Graythwaite Rehabilitation Centre Project (GRC) at Ryde Hospital.

The first three (3) phases constitute works that have been the subject of separate approvals and are as follows;

- **Phase 1** – demolition of buildings, parking area and tree removal on and around the proposed GRC site.
- **Phase 2** – Refurbishment works to the existing “main” building and Nurses Accommodation building to enable ‘decanting’ of services from the demolished buildings.

- **Phase 3** – construction of a new car park with 38 car parking spaces on the existing tennis courts towards the rear of the Hospital site.

The above works did not require development consent under Part 4 of the EP&A Act and constituted “development without consent” under the provisions of Clause 58 of the *State Environmental Planning Policy (Infrastructure) 2007* (“ISEPP”). As such, approval for the works was granted following environmental assessment under Part 5 of the Act.

Undertaking these Stage 1 works under a separate approval prior to the Stage 4 works related to a Supreme Court ruling on 20 November 2008 regarding the “Graythwaite Trust”, the Health Infrastructure “Graythwaite cy pres scheme” and the requirement to commence works on the Graythwaite Site at Ryde Hospital by 19 May 2011. As the GRC project (the subject application) was not able to facilitate the commencement of works on the site by this date, the preliminary demolition and site clearing were expedited under a separate approval and have now been undertaken in satisfaction of the Court ruling.

It is noted that a detailed explanation of the historical context of the “Graythwaite Trust” and Supreme Court ruling was provided in the Preliminary Environmental Assessment Report prepared on 5 October 2010.

As a consequence of the above, we note that the proposal does not involve demolition works with only one (1) tree proposed for removal under the subject Project Application. The reason that this tree was not included in the scope of works under **Phase 1** is due to the fact that it is a street tree located on Council’s land and could not be undertaken as “development without consent”. Further discussion regarding the matters associated with the removal of this tree are addressed in **Section 6.14** (flora and fauna) and **Section 6.18** (consultation).

1.2 Project Application

The Project Application is made under the provisions of **Section 75E** of the Act.

The level of assessment will be sufficient for the Planning Assessment Commission (‘PAC’) to be confident that approval may reasonably be granted to the overall development.

1.3 Project Team

The proposal has been designed following detailed design input from the following consultants;

Discipline	Consultant
Project Manager	Aurora Projects
Architecture & Staging	Nettleton Tribe Architects
Landscape Design	Site Design Landscape Architects
Town Planning	City Plan Strategy and Development
Traffic	Halcrow Traffic Consulting
Structural & Civil Engineering	Taylor Thomson Whitting
Ecologically Sustainable Development	Steensen Varming
Mechanical Engineering	Sinclair Knight Merz
Fire Engineering	SPP Group
Hydraulic Engineering / Water Management	SPP Group
Electrical Engineering	Steensen Varming
BCA	Blackett Maguire and Goldsmith
Access	Morris Goding Accessibility Consulting
Acoustic Engineering	Acoustic Logic
Contamination	Environmental Investigation Services
Geotechnical Engineering	Jeffery and Katauskas
Heritage	Graham Brooks & Associates
Aboriginal Heritage	City Plan Heritage
Drainage and Stormwater Management	Taylor Thomson Whitting
Flooding	Taylor Thomson Whitting
Utilities	SPP Group and Steensen Varming
Flora and Fauna	Travers Bushfire and Ecology
Noise and Vibration	Acoustic Logic
Waste Management	NSW Health & Nettleton Tribe
Hazards	Health Infrastructure & Premier Engineering
Consultation	Aurora Projects
Cost Analysis	WT Partnership

1.4 Consultation

The Project Application and this EA have been informed by consultation with the local community, Council and other key stakeholders. Details of these consultation processes are outlined in **Section 6.18** of this EA.

2 SITE ANALYSIS

2.1 The regional context and locality

The Ryde Hospital Campus is located in the Inner North Sydney region and within the suburb of Denistone, approximately 15 kilometres north-west of the Sydney CBD and within the Ryde Local Government Area. The surrounding area predominantly consists of low density residential dwellings with a few medium density “villa” style residential developments evident. Refer to **Figure 1** below for an aerial image of the Ryde Hospital locality.



Figure 1: Locality Plan, Ryde Hospital site outlined in red (Source: Nearmaps)

The suburb of Denistone is predominantly characterised by residential development and pockets of dense bushland. Eastwood Shopping Centre (to the north of the subject site), “Top Ryde” Shopping Centre (to the south-east of the subject site) and the West Ryde Shopping precinct (to the south of the subject site) are within close proximity of the site and offer a range of commercial and retail services.

Photos of existing residential development surrounding the Ryde Hospital Campus are provided below.

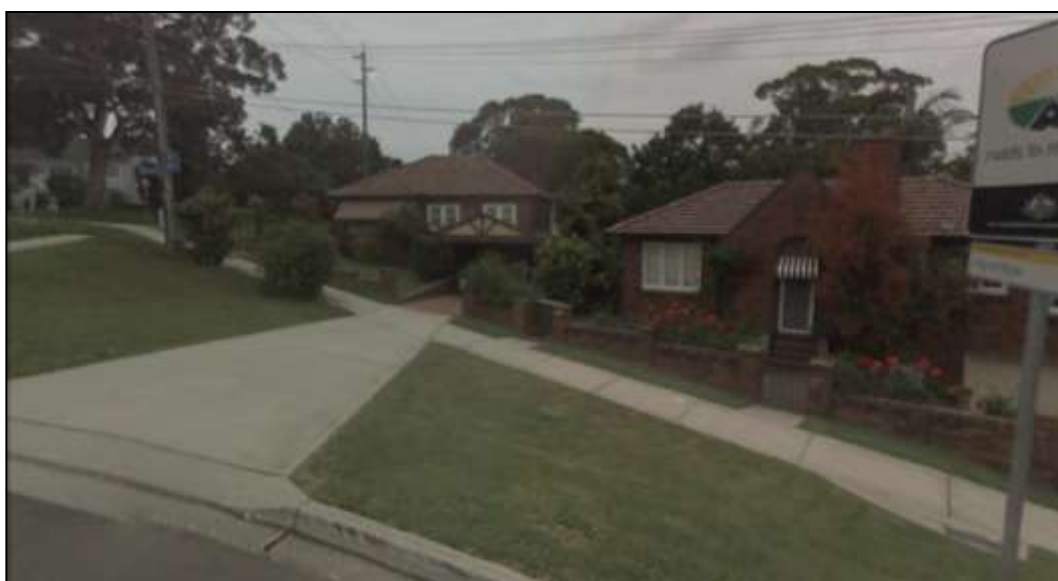
Photos 1 – 3: Residential Development to the North of the Site fronting Fourth Avenue



Photos 4 – 5: Residential Development to the West of the Site fronting Rydedale Road



Photos 6 – 7: Residential Development to the South of the Site fronting Florence Avenue



Photos 8 – 10: Residential Development to the East of the Site fronting Denistone Road



2.2 Existing road and transport conditions

Existing traffic and transport conditions have been assessed by Halcrow in the Transport and Accessibility Report which has been prepared in support of this application (refer to **Appendix 8**)

The Traffic and Accessibility Report assesses the existing road network with a summary provided below;

***“Blaxland Road** is an arterial road which provides a connection between Epping Road and Lane Cove Road. It has posted speed limit of 60km/hr and generally has two travelling lanes in each direction in the vicinity of the site during the commuter peak periods. Blaxland Road forms a signalised intersection with Florence Avenue.*

***Ryedale Road** is a collector road providing a link between Eastwood and West Ryde. It has one travel lane in each direction with posted speed limit of 50km/hr. It has “No Parking” and time restricted parking zones along the frontage of the site but apart from there, unrestricted parking is generally allowed on both side of the road. Ryedale Road forms a roundabout intersection with Fourth Avenue. It has a steep down slope from south of Fifth Avenue.*

***Fourth Avenue** is a local road with one travel lane in each direction. Parking is generally allowed on both sides of the road with some of the spaces along the southern side of the road restricted to 3 hour parking. About four accessible parking spaces are also provided along the front of the site. At east of the site, Fourth Avenue forms a sign controlled intersection with Denistone Road with priority given to traffic on Denistone Road.*

***Denistone Road** is also a two-lane, two-way local road with parking generally permitted on both sides of the road. About seven parking spaces along the western side of the road are designated for “Visiting Medical Officers”. Along the frontage of the site, it has approximately 1.5m wide painted median along the centre of the road. Denistone Road forms a sign controlled intersection with Florence Avenue with priority given to traffic on Denistone Road.”*

The Traffic and Accessibility Report also provides analysis of existing traffic flows and the operation of intersections using the SIDRA intersection analysis program. It is confirmed that the existing intersections operate at satisfactory levels of service with “acceptable delays” during morning and evening peak periods.

An analysis of the existing parking situation on-site and on-street was undertaken by means of a “parking utilisation survey”. The parking survey indicated that there was some spare parking capacity on both the site and within the surrounding street network.

Public transport and pedestrian accessibility was analysed with comments provided as follows;

- **Rail:** *“the subject site is located approximately 650m (walking distance) from Denistone Railway Station. During the peak commuting periods, the service frequency of a train to/from the city is at least one every 15 minutes in each direction.”*
- **Bus:** *“Sydney Buses provide services along Ryedale Road-Fourth Avenue-Denistone Road- Blaxland Road. Bus route 515/X15 provides services between Eastwood and City. Service frequency is about one every 30 minutes during the day in each direction.”*
- **Pedestrian Facilities:**
 - **“Fourth Avenue:** *A pedestrian footpath is located on either sides of Fourth Avenue between Denistone Road and Ryedale Road.”*
 - **“Ryedale Road:** *A footpath is located on either sides of Ryedale Road along the frontage of the site. However between Fifth Avenue and Florence Avenue, a footpath is installed only along the western side of the road.”*
 - **“Denistone Road:** *A footpath is located on either sides of Denistone Road along the frontage and in vicinity of the site. Between Fourth Avenue and Florence Avenue, it has approximately 1.5m wide painted median along the centre of the road.”*
- **Cycle Facilities:** *“unmarked cycle path exists on Fourth Avenue and Denistone Road along the frontage of the site. There is also marked cycle path on Florence Avenue between Ryedale Road and Denistone Road.”*

2.3 The Site

The Ryde Hospital Campus is legally described as Lot 1 in Deposited Plan 1137800 and Lot 2 in Deposited Plan 1137800, and is located at No. 37 Fourth Avenue, Denistone.

The Ryde Hospital Campus is bounded by Fourth Avenue to the north, Ryedale Road to the west, Florence Avenue to the south, Denistone Road to the east and has an area of approximately 3995m² (refer to **Figure 2** and **Figure 3** below).

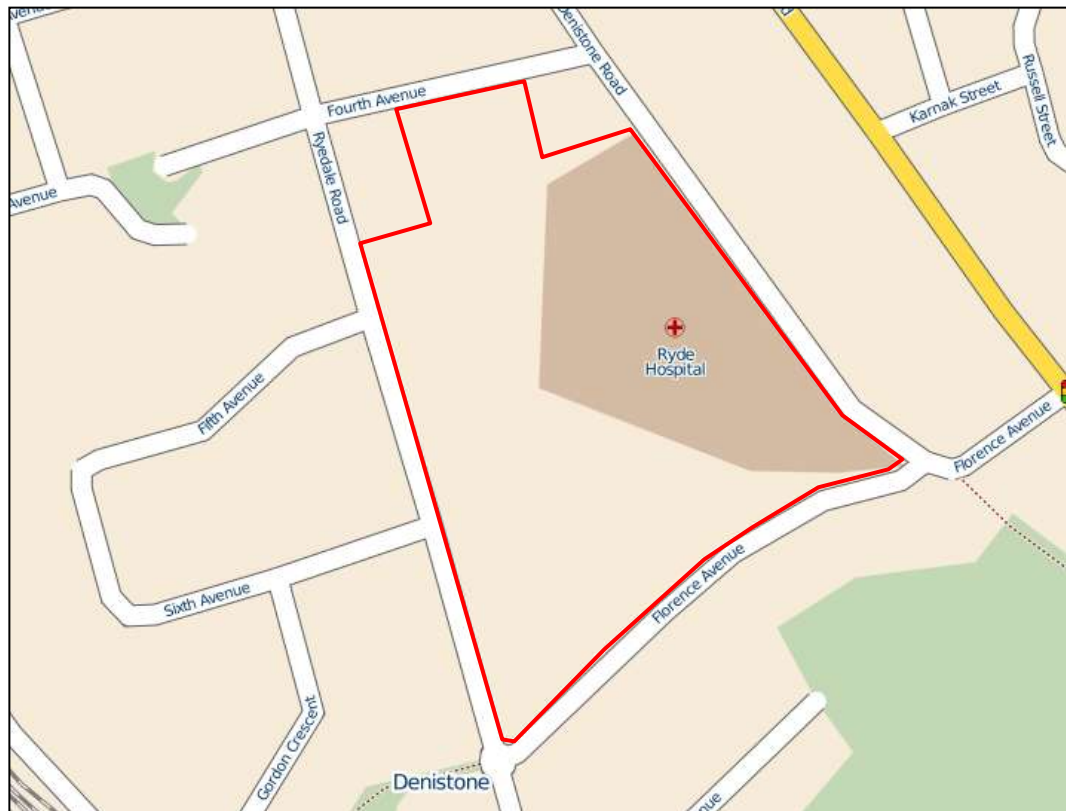


Figure 2: The Ryde Hospital Campus, outlined in red (Source: Nearmaps)



Figure 3: Aerial View of the Site, outlined in red (Source: Nearmaps)

The Ryde Hospital Campus is irregular in shape and generally slopes down from Fourth Avenue.

The Ryde Hospital Campus is characterised by a mix of buildings of varying condition with no consistent architectural style evident, including the following;

- Community health building;
- Vera Lindsay building;
- An aged care and rehabilitation centre;
- A maternity services building;
- An ambulance station;
- An accident, emergency and administration building with various wards;
- An engineering and waste building;
- A building with the nurses quarters;
- A theatre suite;
- A substation;
- “Denistone House” (refer to **Photo 11**);
- “Stables Building” (refer to **Photo 12**);
- A childcare centre; and
- Other ancillary structures on the site including open parking areas, tennis courts and a swimming pool.

As demonstrated in the figures above, the built form elements and associated structures are located to the north and north-eastern parts of the site. Services provided at Ryde Hospital include rehabilitation, aged care, day therapy and ambulatory services including physiotherapy, health promotion, adolescent and family health, mental health, drug and alcohol rehabilitation, occupational therapy, dietetics, speech pathology, dementia assessment and management. Acute services such as emergency, elective surgery, day surgery, maternity, orthopaedics, cardiac and intensive care are also provided, as well as non-acute inpatient services (such as aged care, drug and alcohol and mental health).

Part of the Ryde Hospital Campus site is identified as bushfire prone. Consultation with Ryde Council has indicated that the site supports an Endangered Ecological Community in its southern part; is a Heritage Item with various buildings of low, medium and high heritage significance; and is affected by minor flood risk area as part of the northern part of the Denistone Catchment. It is noted that “Denistone House” and the former Stables Building (refer to **Photos 11 & 12**) are the more significant buildings on the site with regards to Heritage.

The proposed rehabilitation centre will be constructed within the northern part of the Ryde Hospital Campus site and will have primary frontage to Fourth Avenue. This area is identified in **Figure 4** below and is hereto referred to as the “Graythwaite Site”.



Figure 4: Aerial view of the Graythwaite Site (Source: Nearmaps)

We note that the aerial view of the Graythwaite Site above is not an accurate representative of the existing condition of the site. In particular, the existing buildings, majority of the trees and the car park identified in the figure above have been demolished / removed under **Phase 1** of the GRC project and the “nearmaps” aerial view of the site has not been updated accordingly (refer to **Section 1.1** of this EA). Accordingly, the Graythwaite Site is now largely vacant.

Photos of the Site



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15



Photo 16

Photo Schedule

- Photo 11:** “Denistone House” (viewed from the south) (Source: Graham Brooks & Associates)
- Photo 12:** “Stables Building” (viewed from the east) (Source: Graham Brooks & Associates)
- Photo 13:** Ryde Hospital Community Mental Health building (viewed from the north) (Source: CPS&D)
- Photo 14:** Nurses Accommodation building (viewed from the east) (Source: CPS&D)
- Photo 15:** The main hospital building with frontage to Denistone Road (viewed from the east) (Source: CPS&D)
- Photo 16:** The Ryde Hospital emergency and casualty building with frontage to Denistone Road (viewed from the east) (Source: CPS&D)

2.4 Historical context

Historical analysis of the Ryde Hospital Campus (and the Graythwaite Site) has been undertaken by Graham Brooks & Associates and is provided in the Statement of Heritage Impact appended to this EA at **Appendix 9**.

An extract of this historical analysis is provided below.

“Early History, 1795 - 1913

The land on which the Hospital now stands was part of a 1795 grant to three soldiers of the NSW Corps, William Ternan, Humphrey Evans and John Parnice. They made no use of the land and it soon passed into the hands of Reverend Richard Johnson. In 1800 it was sold to Michael Connor, only to be sold a number of times over in the next thirty years. At the time it was known as ‘Porteous Mount.’

By 1830 it was owned by Doctor Thomas Foster, surgeon to the 46th Regiment and son-in-law of Gregory Blaxland. Foster owned the property for some 26 years, and built an eight roomed house which he called Deniston, in memory of his English birthplace.

During the 1840s the house and property were leased to Major Edward Darvall. In December 1872, the property, which by then comprised 48 hectares and enjoyed fine views over the Parramatta River, and west to the Blue Mountains, was purchased by Richard Rouse Terry, grandson of Samuel Terry, the former convict who prospered in the early Colony. Terry built a new Deniston House in 1874. It was an impressive two-storey stone residence, with a two-storey rear wing and is now incorporated into the Ryde Hospital. The property included at least a fine stone stables block, set to the north of the main house.

By the 1890s, Terry’s property had expanded to more than 100 hectares; however, after his death in 1898, the estate was let to a number of tenants and gradually subdivided as the surrounding neighbourhood experienced a property boom associated with development encouraged by the opening of the Northern Railway in 1886, and the arrival of a tramway in 1910.

Convalescent Hospital, 1913 - 1928

In 1913, 6.8 hectares, including the building now called Denistone House, was purchased by the New South Wales Government for use as a convalescent hospital for men, complementing the Carrara convalescent hospital for women at Vacluse.

Patients began moving into the hospital in August 1914. At that stage the hospital was practically self supporting, with its own dairy herd and large vegetable garden.

In its role as a convalescent hospital, Denistone House accommodated up to 25 patients, who were looked after by a matron, one female nurse, and four male attendants.

Despite the success of the property as a convalescent hospital, the local community lobbied the NSW Government steadily between 1918 and 1928 to have the buildings and grounds become a Soldiers' Memorial Hospital, as a mark of remembrance for those who gave their lives in the Great War.

Finally, on 15 March 1928, the Government confirmed that it would be prepared to hand over the full 7.3 hectare property to the Ryde Soldiers' Memorial Hospital Committee.

New buildings were soon planned.

Post 1930

In 1934 a new building, providing accommodation for 34 beds was completed and the old Denistone House was converted to a nurses home. The old Stables building was used for domestic staff. Within only a short time there were accommodation pressures on the hospital and a decision was taken to restructure the entire complex.

A site plan dated 1938 shows a new nurses' home to the west of the old Denistone House. The old building was converted into a private and intermediate block, while a new "Y" shaped building, with an adjacent administration block, was erected on the Denistone Road frontage. A kitchen block was also erected to the south of the old house. Thus, by 1938, the physical curtilage of Denistone House, particularly in relation to the southern frontage of the building had been severely compromised by the erection of a series of hospital buildings.

In 1937 Denistone House was converted to a Maternity Block. Various internal conversions and additions were made to the building over succeeding decades.

In 1943, the three storey Trigg House was opened, and the total accommodation on site had risen to 227 beds. This was a far cry from the 27 beds that were first established in the old Denistone House in 1914.

In 1945 the building was extended to include a new nursery area on the ground floor, new labour wards on the first floor and new consulting and examination rooms in the basement. This extension was in brick construction with a rendered external finish giving the appearance of sandstone.

In the early 1960s a series of new buildings were erected in the hospital grounds. One of these, the Patients Services Block, opened in 1969, was located immediately in front of Denistone House, on the site of the old 1830s house. The new building cut off the visual connection between Denistone House and the street frontage.

In the late 1970s additional works to the Hospital included extensions to Denistone House with a major two storey wing to the east of the old building, and installation of the external escape stairs to the main elevation.

In 1975 the name of the Hospital was changed from 'The Ryde District Soldiers' Memorial Hospital' to 'The Ryde Hospital'

Late Twentieth Century Development

In June 1985, a series of redevelopments took place including the upgrading of the accident and emergency department.

In June 1987, a further series of facilities were opened, including a Geriatric and Rehabilitation Unit, the Ward 3 complex, a new Paediatric Unit, and Stage I of the redeveloped Accident and Emergency Department.

In the mid 1990s, the now Northern Area Health Service examined a series of development and redevelopment options for the hospital. The work proposed to Denistone House, that was covered in the 1997 Conservation Management Plan was a part of this strategy.

It is apparent, from this brief summary that the nature of a medical and health facility such as Ryde Hospital is to experience an ongoing need for change and upgrading in response to medical advances and continuing improvements in patient care. The majority of historic hospitals in NSW and elsewhere have experienced a similar degree of change as the whole nature of patient care and the delivery of services experiences rapid improvements. As a result, the presentation of most hospital campuses reflects the continual development of new buildings and the upgrading of old facilities."

2.5 Analysis of site, locality and planning context

A detailed site analysis has been prepared by Nettleton Tribe Architects and forms part of the plan set for this application (Refer **Figure 5** below and **Appendix 3**).

As discussed previously, the Graythwaite Site is considered to be part of a wider low to medium density residential area. In particular, the historical context of the Graythwaite Site has meant that there is an existing relationship between Ryde Hospital and the surrounding residential locality. The wider Ryde Hospital Campus site (inclusive of the Graythwaite Site) is considerable in size and buildings and structures are dispersed across it, resulting in a density that is complementary to surrounding low to medium density residential development.

Table 1: Constraints and Opportunities

Constraints/Challenges	Opportunities
<ul style="list-style-type: none"> Minor part of the site is identified as being low risk flood prone. Current road capacity. Low to medium density residential context of the surrounding area representing “sensitive” neighbouring land uses. Some items of heritage significance 	<ul style="list-style-type: none"> Very large site. Single ownership. Services and utilities currently available; Limited and manageable environmental sensitivities. Scope to utilise a part of the site that was supported by buildings of a

<p>within the vicinity of the Graythwaite Site, and located within the Ryde Hospital Campus.</p>	<p>degraded quality and to introduce a contemporary building for specialised rehabilitation services.</p> <ul style="list-style-type: none"> • The Graythwaite Site is located within close proximity to nearby commercial centre (including Top Ryde and Eastwood). • The Graythwaite Site is located to the south of adjoining residential dwellings, thereby reducing any potential impacts caused by the proposal in terms of solar access and overshadowing. • The site is located within an existing health / medial precinct and the proposed rehabilitation centre will encourage and share a strong nexus with the existing Ryde Hospital Campus. • The Graythwaite Site previously accommodated health-related uses. Accordingly, the proposal simply adds to the range of uses on the site and will not introduce a new or “foreign” use to the site. • The site’s shape, size and location within an existing health / medical precinct presents a valuable landholding, thereby providing an ideal re-development opportunity. • The Graythwaite Site is within walking distance of public transport. Refer to Section 2.2 of this EA for further detail.
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The Graythwaite Site presents significant opportunities for the proposed development. There are some potential constraints requiring consideration, however, these are not (subject to the further assessment contained in this EA) considered insoluble.

3 DESCRIPTION OF THE DEVELOPMENT

3.1 Overview of the Project Application

Approval is sought for the construction of a new four (4) storey rehabilitation centre with car parking for 85 car spaces. The proposal also involves the boundary adjustment of the subject allotment (being Lot 1 in Deposited Plan 1137800). Further detail is provided below.

A floor by floor analysis of the proposed rehabilitation centre is provided in **Table 2** below.

Table 2: Floor-by-floor analysis of the proposed services and facilities proposed

Floor	Comment
Ground Floor	<ul style="list-style-type: none"> Four (4) external car parking spaces at the site frontage, including two (2) accessible spaces. A new driveway entrance from Fourth Avenue with a 1:25 graded ramp to car parking at the rear of the ground floor level for 79 spaces (including two (2) accessible spaces), storage rooms, the rainwater storage tank, a lift lobby, two (2) lifts and plant. The new driveway entrance will be accessed at one point with the separate exist further along Fourth Avenue. The driveway entrance and exits will be connected by a semi-circular internal driveway. The central part of this internal driveway will provide the access to the car parking within the rehabilitation centre. The main entry lobby will front Fourth Avenue at the ground floor level and will consist of a waiting and reception area, lift lobby and two (2) lifts.
Level 1	<ul style="list-style-type: none"> Indoor therapy / rehabilitation pool and associated changing and amenities; Store room areas; Consultation and therapy rooms; Staff rooms; Meeting room; Library, kitchen, laundry and computer room; Music / television room; Hairdresser / beautician; Dining room; Ten (10) x two (2) bed rooms; Ten (10) x one (1) bed rooms; 2 x transitional living bedrooms ("TLB" rooms); Lift lobby and lift areas; and Two (2) x outdoor courtyard / terrace areas and an

	outdoor therapy area on the “north terrace”.
Level 2	<ul style="list-style-type: none"> • Store room areas; • Consultation and therapy rooms; • Staff rooms; • Meeting room; • Library; • Music / television room; • Hairdresser / beautician; • Dining room; • Kitchen, laundry and computer room; • Ten (10) x two (2) bed rooms; • Ten (10) x one (1) bed rooms; • 2 x transitional living bedrooms (“TLB” rooms); • Lift lobby and lift areas; and • One (1) x outdoor courtyard / terrace and outdoor therapy area above the pool below;
Level 3	<ul style="list-style-type: none"> • Plant areas (pool A/c, chillers / condenser water, hot water heaters, air handling); • A “clean-up” room and waste holding roof; and • A walkway / link from the south-eastern corner of the building at this level to the main building.
Roof	<ul style="list-style-type: none"> • Plant, Ward, Therapy and Lobby roof.

Hours of Operation

The Graythwaite Rehabilitation Centre will operate 24 hours a day, seven (7) days a week. Rehabilitation services will be available during regular business hours and after-hours on-call. Acute medical cover will be available on-call 24 hours per day, seven (7) days a week from the Ryde Hospital.

Site Works

Site works involve excavation, site preparation, stormwater management, erosion and sediment control, the removal of one (1) street tree, tree protection measures and other associated preliminary works.

Access

Vehicular access and egress to the site will be obtained via Fourth Avenue. The vehicle access will be provided via a new porte-cochere and from Fourth Avenue. Access to the basement car park will also be provided via the porte-cochere.

The proposed equitable pedestrian access arrangements have been detailed in the Access Report prepared by Morris Goding Accessibility Consultants, which accompanies this EA at **Appendix 12**, with a summary provided below;

- There is an accessible path of travel for pedestrians to the building main entrance via a connecting pathway from the Fourth Avenue pedestrian footpath (northern site boundary);
- The main accessible egress points from the building are from the ground level main entry doors and the Level 2 egress doors to / from the eastern lift lobby;
- From the main entrance, there are accessible paths of travel throughout all building levels;
- There is an internal communication staircase, located opposite the main entry lift lobby at the ground level, that provides access up to Levels 1 and 2;
- There are two (2) lift banks within the building (in the north and east corners of the building);
- The northern lift bank has two (2) passenger lifts that provide a continuous accessible path of travel between the ground level entry lobby and upper Levels 1 and 2;
- The eastern lift bank has two (2) lifts that provide a continuous accessible path of travel between the ground level car park lobby and upper Levels 1, 2 and 3;
- There is a patient link from the proposed building to the adjacent Maternity building from the eastern lift lobby at Level 3 which is intended for use by staff, patients and services; and
- There is a connecting walkway from the building to the “Chattery” (adjacent existing external area) from the western fire stair on Level 2. This walkway is intended for use by staff and patients.

Landscaping

A Landscape Concept Plan has been prepared by Site Design Landscape Architects (refer **Appendix 4**).

The landscape concept includes soft and hard landscaping at the site frontage to facilitate ease of pedestrian and vehicular access and soft landscaping and planting to provide screening to the northern facade of the proposed rehabilitation centre. Additional landscaping is proposed at the terrace areas to the rear of the site at ground level to provide additional screening and also landscape relief on the site. Further information on the proposed landscaping is provided at **Section 5** of this EA.

Staging

The proposed rehabilitation centre will be constructed in one (1) stage.

Boundary Adjustment

Originally, when the Service Procurement Plan / Project Definition Plan (SPP / PDP) was completed for the project in May 2009, the Graythwaite Rehabilitation Centre proposal involved the provision of 30 beds, based on a capital budget of \$16 million. As the project has evolved since this time, and following the sale of the Graythwaite Trust

property in October 2009, the project now involves the provision of 64 beds and an amended built form. The boundary line of the Graythwaite site (being Lot 1 in Deposited Plan 1137800) is proposed to be modified under this application to reflect the amended scheme. The proposed site boundary is identified on the Site Plan (3717-DA-001) prepared by Nettleton Tribe and accompanying this EA at **Appendix 3**.

3.2 Development Statistics

The proposal comprises the following development parameters;

Table 3: Development Statistics

Development Parameter	Development Statistics
Site Area	3,928.20m ²
Gross Floor Area	4,309.45m ²
Building Height	16.2metres
Landscaped Area	<p>Front Garden (Fourth Ave) =144 m² Western Garden Bed = 55 m² Northern Courtyard = 47 m² Southern Courtyard = 178 m²</p> <p>Total Soft Landscaping for the Site = 424sqm</p>
Car Parking	85 spaces including four (4) accessible parking spaces.

With regards to the table above, we note that the calculations for gross floor area, building height and landscaped area have been undertaken in accordance with the Ryde Local Environmental Plan 2010 definitions for those development standards.

3.3 Development plans

The proposal, as described above, will be in accordance with architectural and landscape plans submitted with this application, reduced copies of which are attached to this EA as at **Appendix 3**.

Table 4: Development Plans

Architectural plans by Nettleton Tribe Architects		
Drawing AR_3717-DA-000	Cover Sheet	10 June 2011
Drawing AR_3717-DA-001	Site Plan	28 July 2011

Drawing AR_3717-DA-002	Site Analysis	10 June 2011
Drawing AR_3717-DA-011	Ground Floor Plan	13 September 2011
Drawing AR_3717-DA-012	Level 1 Floor Plan	10 June 2011
Drawing AR_3717-DA-013	Level 2 Floor Plan	10 June 2011
Drawing AR_3717-DA-014	Level 3 Floor Plan	10 June 2011
Drawing AR_3717-DA-015	Roof Plan	10 June 2011
Drawing AR_3717-DA-021	Elevations – Sheet 1	10 June 2011
Drawing AR_3717-DA-022	Elevations – Sheet 2	10 June 2011
Drawing AR_3717-DA-031	Sections – Sheet 1	10 June 2011
Drawing AR_3717-DA-041	Shadow Diagrams – Sheet 1	10 June 2011
Drawing AR_3717-DA-042	Shadow Diagrams – Sheet 2	10 June 2011
Drawing AR_3717-DA-043	Shadow Diagrams - Equinox	10 June 2011
Drawing AR_3717-DA-081	Materials Board	10 June 2011

3.4 Capital Investment Value

The Capital Investment Value of the project is estimated at \$38,279,910. This figure is confirmed by the Quantity Surveyor Cost Statement prepared by WT Partnership and attached at **Appendix 22**.

4 DIRECTOR-GENERAL'S REQUIREMENTS

The Director-General's Assessment Requirements (DGRs) for the proposal were issued on 1 December 2010. A copy of the DGRs is appended at **Appendix 1**. The key issues to be addressed in the EA are set out the following table along with an indication of where they have been addressed in this EA.

Table 5: Director General's Requirements

Key Issues	Where Addressed in EA
<p>1. Relevant EPI's policies and guidelines to be addressed</p> <p>Planning provisions applying to the site, including permissibility and the provision of all plans and policies including:</p> <ul style="list-style-type: none"> • Objects of the EP&A Act; • Threatened Species Conservation Act 1995; • State Environmental Planning Policy (Major Development) 2005; • State Environmental Planning Policy No. 55 – Remediation of Land; • State Environmental Planning Policy No. 33 – Hazardous and Offensive Development; • State Environmental Planning Policy (Infrastructure) 2007; • NSW State Plan; • Metropolitan Plan for Sydney to 2036; • Inner North Subregion Draft Subregional Strategy; • Ryde Local Environmental Plan 2010; • City of Ryde Development Control Plan 2010; and • Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance. 	<p>Section 5</p>
<p>2. Built Form and Urban Design</p> <ul style="list-style-type: none"> • Height, bulk and scale of the proposed development within the context of the locality, adjoining hospital buildings, surrounding residential development and the elevated position within the landscape; • Details of proposed open space and landscape areas; and • Design quality with specific consideration of the facade, massing, setbacks, building articulation, appropriate colours/materials/finishes etc. 	<p>Section 6.2 Appendices 3 and 4</p>

<p>3. Environmental and Residential Amenity</p> <ul style="list-style-type: none"> • Impacts of the proposal on solar access, acoustic privacy, visual privacy, view loss and wind impacts on surrounding development, with particular consideration of visual impact on Denistone House; and • Details of the measures to be implemented to achieve a high level of environmental and residential amenity. 	<p>Section 6.3 Appendix 3</p>
<p>4. Transport and Accessibility Impacts (Construction & Operational)</p> <ul style="list-style-type: none"> • Provide a Transport & Accessibility Study prepared with reference to the Metropolitan Transport Plan – Connecting the City of Cities, the NSW State Plan, the NSW Planning Guidelines for Walking and Cycling, the Integrated Land Use and Transport policy package, the NSW Bike Plan, Premier's Council for Active Living (PCAL) - Development & Active Living, and the RTA's Guide to Traffic Generating Development (where relevant), considering the following: <ul style="list-style-type: none"> - Demonstrate how users of the development will be able to make travel choices that support the achievement of relevant State Plan targets; - Detail the existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access; - Identify potential traffic impacts during the construction stage of the project, and measures to mitigate these impacts; - Describe the measures to be implemented to promote sustainable means of transport including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a Workplace Travel Plan; - Daily and peak traffic movements likely to be generated by the proposed development, including the impact on nearby intersections including Florence Avenue/Blaxland Road and any proposed access to the development, and the need / associated funding for upgrading or road improvement works (if required). The traffic impact assessment should consider base 	<p>Section 6.4 Appendix 8</p>

<p>models with future traffic generated by the Graythwaite Rehabilitation Centre;</p> <ul style="list-style-type: none"> - Details of the proposed access, parking provisions, loading facilities and service vehicle movements associated with the proposed development including compliance with Australian Standards; and - Provision of appropriate levels of onsite car parking for the proposed development having regard to the high public transport accessibility of the site, opportunities for car sharing, local planning controls and RTA guidelines (note: The Department supports reduced parking provisions, if adequate public transport is available to access the site). 	
<p>5. Ecologically Sustainable Development</p> <ul style="list-style-type: none"> • Detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development; • Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design; and • Demonstrate that the development can achieve a minimum 4 Green Star rating, or any other suitably accredited rating scheme. 	<p>Section 6.5 Appendices 11 and 17</p>
<p>6. Contributions</p> <p>Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement.</p>	<p>Section 6.6 Appendix 23</p>
<p>7. Contamination</p> <p>Demonstrate compliance that the site is suitable for the proposed use in accordance with SEPP 55.</p>	<p>Section 6.7 Appendix 6</p>
<p>8. Heritage</p> <p>A statement of significance and an assessment of the impact on the heritage significance of Denistone House and any other heritage items should be undertaken in accordance with the guidelines in the NSW Heritage Manual.</p>	<p>Section 6.8 Appendix 9</p>

9. Aboriginal Heritage The EA shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.	Section 6.9 Appendix 10
10. Drainage and Stormwater <ul style="list-style-type: none"> • Drainage issues associated with the proposal including stormwater and drainage infrastructure; and • Detailed plans of the proposed erosion and sediment control measures during demolition, construction and operation. 	Section 6.10 Appendices 5 and 13
11. Flooding An assessment of any flood risk on site in consideration of any relevant provisions of the NSW Floodplain Development Manual (2005) including the potential effects of climate change, sea level rise and an increase in rainfall intensity.	Section 6.11 Appendix 13
12. Utilities In consultation with relevant agencies, the EA shall address the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure works.	Section 6.12 Appendix 16
13. Staging Details regarding the staging of the proposed development (if proposed).	Section 6.13
14. Flora and Fauna Address impacts on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats and steps taken to mitigate any identified impacts to protect the environment.	Section 6.14 Appendix 14
15. Noise and Vibration Provide a quantitative assessment of the potential demolition, construction, operation and traffic noise impacts of the project on Ryde Hospital and surrounding medical and residential premises.	Section 6.15 Appendix 21
16. Waste <ul style="list-style-type: none"> • Identify, quantify and classify the likely waste streams to be generated during construction and operation; 	Section 6.16 Appendices 19a & 19b

<ul style="list-style-type: none"> Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste; Describe the measures to be implemented to manage the disposal of nuclear waste, if required; and Describe the measures to be implemented to manage the disposal of contaminated and potentially contaminated biological and sewage waste, if required. 	
17. Hazards <ul style="list-style-type: none"> An assessment against State Environmental Planning Policy No 33 – Hazardous and offensive Development; and A description of the proposed storage, use and management of any hazardous material and measures to be implemented to manage hazards and risks associated with the storage. 	Section 6.17 Appendices 15 and 24
18. Consultation Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007, in particular surrounding residences and Ryde City Council.	Section 6.18 Appendix 20
Statement of Commitments The EA must include a draft Statement of Commitments detailing measures for environmental management, mitigation measures and monitoring of the project.	Section 7

In addition, Appendix B of the DGR's sets out the plans and documents that must accompany the Application as set out the following table along with an indication of where they have been provided in this EA.

Table 6: Plans and documents accompanying the EA

Plans and Documents to accompany the Application		
General	<ol style="list-style-type: none"> An executive summary A thorough site analysis including site plans, aerial photographs and a description of the existing and surrounding environment; A thorough description of the proposed development; 	<ol style="list-style-type: none"> Refer to Page 1 - 7 Refer to Section 2 and Appendix 3 Refer to Section 3

	<ol style="list-style-type: none"> 4. An assessment of the key issues specified above and a table outlining how these key issues have been addressed; 5. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimize any potential impacts of the project; 6. The plans and documents outlined below; 7. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; 8. A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Project SEPP); and 9. A conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest. 	<ol style="list-style-type: none"> 4. Refer to Section 2 5. Refer to Section 6 and Section 7 6. Refer to Appendix 3 7. See pages 6 & 7 8. Refer to Appendix 22 9. Refer to Sections 6 & 8
Plans and Documents	<ol style="list-style-type: none"> 1. An existing site survey plan 2. A site analysis plan 3. A locality / context plan 4. Architectural drawings 5. Detailed floor plans 6. Elevation plans 7. Fenestrations, balconies & other features 8. Accessibility requirements 9. The height (AHD) of the proposed development 10. The level of the lowest floor and level of any unbuilt area and ground 	<ol style="list-style-type: none"> 1. Refer to Appendix 2 2. Refer to Appendix 3 3. Refer to Appendix 3 4. Refer to Appendix 3 5. Refer to Appendix 3 6. Refer to Appendix 3 7. Refer to Appendix 3 8. Refer to Appendix 12 9. Refer to Appendix 3 10. Refer to Appendix 3

	11. Changes that will be made to the level of land by excavation, filling or otherwise	11. Refer to Appendix 3
	12. Stormwater concept plan	12. Refer to Appendix 5
	13. Erosion and sediment control plan	13. Refer to Appendix 18
	14. Geotechnical report	14. Refer to Appendix 7
	15. View analysis	15. Refer to Appendix 3
	16. Landscape plan	16. Refer to Appendix 4
	17. Shadow diagrams	17. Refer to Appendix 3

5 STATUTORY PLANNING CONTEXT

5.1 Overview

The Director General's requires the assessment of the Project Application in relation to the following strategy documents and statutory instruments:

- Part 3A of the Environmental Planning & Assessment Act;
- Threatened Species Conservation Act 1995;
- NSW State Plan 2010;
- Metropolitan Plan for Sydney to 2036 & Draft Inner North Sub-regional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy No. 55 - Remediation of Land;
- State Environmental Planning Policy No. 33 – Hazardous and offensive Development; and
- State Environmental Planning Policy (Infrastructure) 2007.

Other local planning controls which are not strictly applicable to this assessment but which have nonetheless been considered are:

- Ryde Local Environmental Plan 2010;
- City of Ryde Local Environmental Plan 2010; and
- The Sydney Metropolitan Plan to 2036 (as this post-dates the issue of the DGR's).

These controls and guidelines are addressed in the following sections.

5.2 Part 3A of the Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (the Act). The Act is the principal planning and development legislation in New South Wales.

In accordance with **Section 5**, the objectives of the Act are:

“(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(iii) the protection, provision and co-ordination of communication and utility services...

(v) the provision and co-ordination of community services and facilities, and

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats...”

The project is consistent with the objects of the Act and will promote and achieve the following:-

- The economic use of part of the Graythwaite Site identified as having development potential.
- The utilisation of existing utility services.
- The orderly and economic use and development of land as the site is of an appropriate size, location and land use zoning to enable the development.
- No significant adverse impacts on the environment and surrounding locality.
- Increased employment opportunities on the site.
- Promotion and co-ordination of development for additional health services in a location which is within close proximity to a number of public transportation options.

Part 3A (Major infrastructure and other projects) of the Act was repealed on 27 June 2011. Despite this, the repealed provisions continue to apply to this application pursuant to Schedule 6A, Clause 2(1) of the Environmental Planning and Assessment Amendment (Part 3A Repeal) Bill 2011 and that the project is deemed to be a “transitional Part 3A project” as follows:-

Schedule 6A Transitional arrangements—repeal of Part 3A

2 Transitional Part 3A projects

(1) For the purposes of this Schedule, the following are transitional Part 3A projects:

(a) an approved project (whether approved before or after the repeal of Part 3A),

(b) a project for which environmental assessment requirements were notified or adopted before the repeal of Part 3A,

(c) a project that is the subject of a Part 3A project application and that the regulations declare to be a transitional Part 3A project.

Emphasis Added

Source: Environmental Planning and Assessment Amendment (Part 3A Repeal) Act 2011

The former Part 3A continues to apply to and in respect of a transitional Part 3A project. However, a transitional Part 3A project does not include a project that ceases to be a project to which Part 3A applies by the operation of State Environmental Planning Policy (Major Development) Amendment 2011. As the proposal is still deemed to be a class of development to which Part 3A applies (refer to **Section 5.7** of this EA), and is a project to which Schedule 6(A) Clause 2(1)(b) applies, the repealed provisions of Part 3A continue to apply to the application.

We also note that prior to the repeal of Part 3A of the Act, the Department of Planning's letter, dated 4 November 2010, confirmed that the proposal was a project to which Part 3A applies (see **Appendix 1**).

In accordance with **Division 3 Section 75E** of the Act, this report, assessment and attendant plans:

- a) *describe the project, and*
- b) *contain any other matter required by the Director-General.*

Section 75F requires consideration of any published guidelines in the Gazette and Director General requirements.

The Director-General issued environmental assessment requirements pursuant to **Division 3 Section 75F** of the Act on 1 December 2010. The form of this document has been taken from the Director-General's requirements. The key issues are addressed in the order in which they appear in the environmental assessment requirements to ensure that each issue is systematically addressed. These issues are cross-referenced with the relevant sections of this report and relevant Appendices.

5.3 Threatened Species Conservation Act 1995

The NSW *Threatened Species Conservation Act 1995* (TSC Act) identifies and protects threatened and endangered native plants and animals.

The purpose of the Act is to:

- conserve biological diversity and promote ecologically sustainable development
- prevent the extinction and promote the recovery of threatened species, populations and ecological communities
- protect the critical habitat of those species, populations and ecological communities that are endangered
- eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities
- ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed, and
- encourage the conservation of threatened species, populations and ecological communities through co-operative management.

The specific requirements of the *TSC Act* must be addressed in the assessment of flora and fauna matters. This requires the consideration of potential impacts on threatened species, populations and ecological communities. The factors to be taken into account in deciding whether there is a significant effect are set out in Section 5A of the *Environmental Planning and Assessment Act 1979* and are based on a 7 part test of significance. Where a proposed activity is located in an area identified as critical habitat, or such that it is likely to significantly affect threatened species, populations, ecological

communities, or their habitats, a Species Impact Statement (SIS) is required to be prepared.

Flora and fauna advice has been prepared by Travers Bushfire and Ecology in support of this application and is appended to this EA at **Appendix 14**.

It is noted that the letter of advice was prepared as a part of **Phase 1** of the GRC project as this phase involved the removal of trees on the Graythwaite Site. The advice addressed the impact of the removal of trees on the site and confirmed that there would be no adverse impact. The advice also refers to a separate “Tree Assessment Report” that also accompanied the **Phase 1** submission, which provided tree planting recommendations to offset the tree removal. These recommendations were included as conditions of the **Phase 1** approval. Site Design Landscape Architects have confirmed that the requirements of the **Phase 1** approval conditions have been addressed and are reflected in the proposed landscaping scheme for the Graythwaite Site under the subject application.

As the tree removal has already been undertaken on the Graythwaite Site, a comprehensive flora and fauna assessment is not considered necessary. Notwithstanding this, we include the flora and fauna advice in support of this application to confirm that the proposed rehabilitation centre is not being constructed on a site that is affected by any of the following;

- habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974);
- critical habitats or habitats of threatened fauna or flora species, populations or ecological communities (within the meaning of the TSC Act); or
- habitat of species listed under international agreements including the Japan – Australia Migratory Birds Agreement (Jamba) and China – Australia Migratory Birds Agreement (Camba).

To address these matters, the flora and fauna advice states as follows;

- *“The proposal will not have any negative/significant impact on the habitat of protected fauna.”*
- *“No critical habitats have been identified within the subject site.”*
- *“No threatened flora species were considered to have potential habitat given the level of Disturbance.”*
- *“The subject site may provide some suitable habitat in terms of foraging for Jamba and/or Camba migratory birds however it would not support any breeding or roosting habitat. Given the level of urbanisation surrounding the subject site, the potential usage as a foraging site even briefly would be considered minimal.”*

The proposal involves the removal of one (1) street tree which is located within the Fourth Avenue Road reserve, which was not specifically addressed in the flora and fauna advice prepared by Travers Bushfire and Ecology.

This tree is being removed to allow the location of essential services including a fire brigade booster and valve. In addition, the tree is being removed to allow the reconfiguration of the existing driveway, currently used by the Ryde Medical Centre, and to facilitate separate car park entries into the site to include the proposed new building. The removal of this street tree, in isolation, is unlikely to result in any adverse environmental impacts for the site.

In accordance with the requirements of the TSC Act and Section 5A of the EP&A Act, it can be concluded that the proposed development will not have a significant impact on any threatened species, populations or EECs.

Therefore, a Species Impact Statement is not considered to be required for the proposed development.

5.4 NSW State Plan 2010

The NSW State Plan was issued in March 2010. The State Plan represented the former State Government's vision for the future of NSW, and at the time of preparing this EA, remains in place. It envisions that:

1. *"Our transport network is world class—safe, reliable and integrated. Our cities and towns are great places to live, and we experience a high quality of life"*
2. *Our economy grows stronger—supporting jobs and attracting business investment*
3. *Our children are better educated, our people more skilled and we are known for our research and innovation*
4. *Our health system provides the highest quality care accessible to all.*
5. *Our energy is clean, our natural environment is protected and we are leaders in tackling climate change*
6. *Our community is strong and the most disadvantaged communities and our most vulnerable citizens are supported*
7. *Our police and justice system keep the community safe."*

The State Plan includes eight (8) key priorities as identified below:-

1. Better transport and liveable cities;
2. Supporting business and jobs;
3. Clever state;
4. Healthy communities;
5. Green state;
6. Stronger communities;
7. Keeping people safe; and
8. Better government.

The “healthy communities” priority is considered to be most applicable to the proposed rehabilitation centre.

The proposal will aid in achieving the “healthy communities” goals and targets as follows;

- Improve and maintain access to quality healthcare in the face of increasing demand through the provision of an expanded portfolio of health services from the Ryde Hospital Site;
- Facilitate more equitable access to sub-acute rehabilitation services, acute and clinical support services, outpatient services and provide better continuity of services across the Ryde Hospital site; and
- Improve health outcomes for the community and particularly, for the aged community, by providing an emphasis on;
 - Comprehensive, multidisciplinary patient centred care, coordinated discharge processes, and access to outpatient clinics and community services.
 - Integration with Ryde Hospital Aged Care and Rehabilitation Services currently offered on the site, and other acute and clinical support services, to provide better continuity of care.
 - Encourage patients to remain mobile and undertake daily activities and therapies away from the inpatient area.

The proposal will also satisfy the key priorities of the State Plan as follows;

- An increased provision of jobs from the site. We have been advised by Project Manager, Aurora Projects, that during the peak of construction, there would be approximately 90 – 100 workers on site with additional trades working off-site, undertaking fabrication of items such as joinery, structural steel and equipment. In addition, during the operational phase of the proposed rehabilitation centre, additional jobs will be created from the site;
- The provision of additional modern health services infrastructure to support an increased demand for quality healthcare from an increasing population base (and particularly, an ageing population);
- By locating an employment generating use within a residential area, the proposal will serve the State Plan objective of providing jobs closer to home; and
- The proposal has been designed to take into consideration the principles of sustainable design throughout the proposed rehabilitation centre to contribute to achieving positive outcomes for the “environment”.

The proposal is considered to be consistent with the key priorities and directives of the State Plan, particularly those related to “healthy communities”.

5.5 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 (Metro Plan) supersedes the Sydney Metropolitan Strategy of 2005. The Metro Plan provides a broad framework for managing growth and development in Sydney over a period of 25 years and aims to support continued economic growth while balancing social and environmental matters.

In overview, Sydney Towards 2036 focuses on achieving 760,000 new jobs and 770,000 more homes. Targets related to “health” are addressed broadly, as opposed to being included as key directions or aims under the following strategies;

- Economy and employment;
- Centres and corridors;
- Housing;
- Transport;
- Environment and resources;
- Parks and public places; and
- Implementation and governance.

Examples of such targets are as follows;

- Facilitate an extensive and solid base of infrastructure, including a world class health system;
- Address the health services-related demands from the ageing population in Sydney;
- Focus the provision of health related services and jobs associated with the health services sector in centres of all sizes; and
- Built upon existing health infrastructure to improve the quality and level of health services for communities.

Of relevance to this application, despite the fact that the Graythwaite Site is not located in an identified “centre”, the proposal will respond to the increasing demand for health-related services as a result of the ageing population in Sydney. The proposal will also built upon existing health-related infrastructure offered within the Ryde Hospital Campus and will generate employment opportunities for the health services sector.

5.6 Draft Inner North Subregional Strategy

To implement the Metro Plan, ten ‘subregions’ have been established. The Graythwaite Site is located in the Ryde LGA, which is part of the Inner North Subregion (refer to **Figure 6** below).

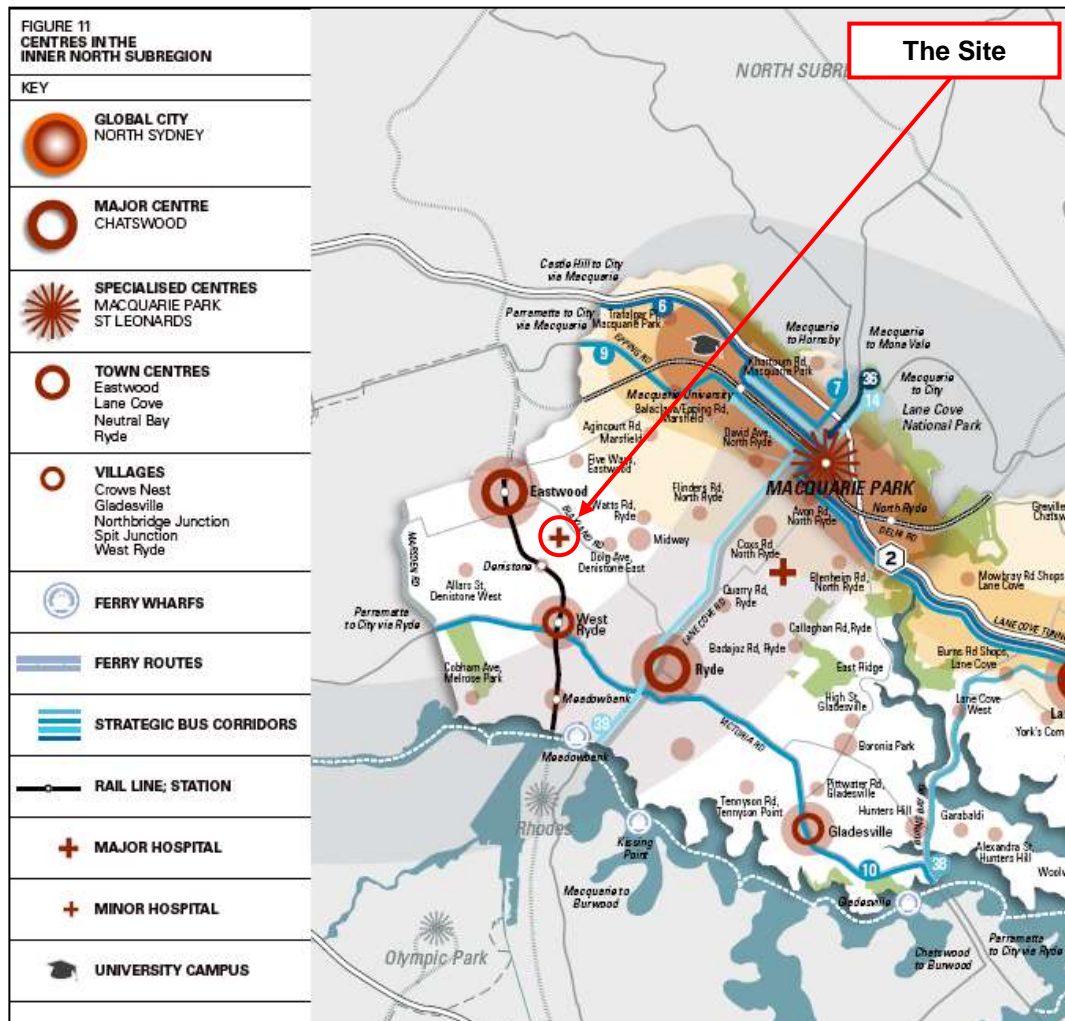


Figure 6: Extract from the Centres in the Inner North Subregion Map (page 3)

The Draft Inner North Subregional Strategy (the draft Subregional Strategy), was prepared by the Department of Planning (DoPI) to implement the actions and objectives of the Metro Plan at a Subregional level, whilst also providing for the geographic allocation of the additional jobs and housing targets.

The 'key directions' are that, the Inner North Subregion will:-

- "Strengthen the global economic corridor: North Sydney to Macquarie Park
- Reinforce the subregional's knowledge assets
- Protect strategic employment lands
- Improve housing choice and create liveable and sustainable communities
- Encourage use of public transport
- Protect and promote the harbour setting."

Aside from discussion regarding the need to build upon existing health infrastructure in identified “centre” (noting the site is not located in a “centre”), the draft Subregional Strategy only makes reference to the health implications of its actions in a broad sense.

Notwithstanding the above, in a broad sense, it is considered that the proposal will contribute towards achieving the targets for the Inner North Subregion as follows;

- The proposal will contribute towards achieving the Inner North Subregions employment targets of 60,000 new jobs and the target for the Ryde LGA of 21,000 additional jobs by 2031 through the provision of additional employment opportunities on the site. With the suburb of Denistone primarily consisting of residential uses, the Ryde Hospital Campus plays an important role in providing local employment opportunities. An increase in the number of jobs available from the Graythwaite Site as a result of the proposed rehabilitation centre will provide a significant public benefit to the community by boosting the supply of employment opportunities in the locality and supporting the local workforce;
- The expansion in medical and health-related services at the Ryde Hospital Campus will assist in meeting increased demands for health services that will result from an increasing population.

Accordingly, the proposal is considered to represent a valuable asset to assist in meeting Metropolitan and sub regional job targets and other planning objectives.

5.7 SEPP (Major Development) 2005

State Environmental Planning Policy (Major Development) 2005 was amended on 13 May 2011 to:-

- remove certain categories of development which the SEPP declares as a major project and are therefore subject to assessment under Part 3A of the EPA Act; and
- specify transitional arrangements for the assessment of existing declared projects in those categories.

The categories of development that were removed from the SEPP relate to residential, commercial or retail projects (with a CIV of more than \$100 million) and development within the coastal zone for certain kinds of subdivision.

The provisions of the SEPP still apply to the proposal, pursuant to Clause 6(1) and Schedule 1 as follows;

“Development that, in the opinion of the Minister, is development of a kind:

(a) that is described in Schedule 1 or 2...is declared to be a project to which Part 3A of the Act applies.”

Schedule 1 of the SEPP sets out “*Part 3A projects – Projects – Classes of*

Development". Clause 18 refers to Group 7 Health and Public Services Facilities, and includes:

- (1) *Development that has a capital investment value of more than \$15 million for the purpose of providing professional health care services to people admitted as in-patients (whether or not out-patients are also cared for or treated there)."*

The proposed development and associated works will have a capital investment value of more than \$15 million and therefore meets the above criteria.

As discussed previously, with the repeal of Part 3A of the Act, transitional arrangements have been made to development formerly subject to Part 3A assessment in accordance with the SEPP and the subject proposal is deemed to be a "transitional Part 3A project".

This application is therefore made in accordance with the repealed provisions of Part 3A of the Act.

5.8 State Environmental Planning Policy No. 55 - Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Contaminated Lands (SEPP 55) establishes State-wide provisions to promote the remediation of contaminated land.

Clause 7(1) of the SEPP 55 requires that a consent authority must not grant consent to a development unless it has considered whether a site is contaminated, and if it is, that it is satisfied that the land is suitable (or will be after undergoing remediation) for the proposed use.

Environmental Investigation Services (EIS) has undertaken a Stage 1 Environmental Site Assessment at the site to assess the likely contamination of subsurface soils and groundwater for the proposed development.

The Stage 1 Environmental Site Assessment report, which is appended to this EA at **Appendix 6**, concludes as follows;

"Based on the scope of work undertaken for this assessment EIS consider that the site can be made suitable for the proposed development provided that the site is inspected by experienced environmental personnel during demolition and excavation works to assess any unexpected conditions or subsurface facilities that may be discovered between investigation locations and to better assess the potential for asbestos contamination beneath the existing buildings at the site. This should facilitate appropriate adjustment of the works programme and schedule in relation to the changed site conditions."

The Stage 1 Environmental Site Assessment report also states as follows;

“Based on the results, EIS are of the opinion that the potential for significant widespread soil contamination at the site is relatively low.”

“EIS consider the potential for groundwater contamination at the site to be very low.”

Refer to **Appendix 6** for a copy of the report.

Based on the conclusions of the Stage 1 Environmental Site Assessment report, the site is considered to be suitable for the proposed development providing the recommendations of the report are adopted. These recommendations primarily relate to validation sampling and contingency plans in the event that contaminated material is encountered during site works. Accordingly, a condition has been included in the Statement of Commitments at **Section 7** of this EA to ensure that these recommendations are complied with.

5.9 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

SEPP 33 is a relevant consideration in relation to the proposed development.

An assessment of the Project Application against SEPP 33 has been undertaken by Premier Engineering (refer to **Appendix 24**). The findings from the assessment reveal the following;

“The proposed facility falls outside the parameters set out in SEPP33 which could designate the site as potentially hazardous (either with regard to the hazardous material stored or their transportation), or potentially offensive.

The proposed arrangements regarding hazardous materials have been designed with current best medical practice considered. While allowance has been made in the design for alternative materials to be used, if they are deemed to be more efficient (such as newer hypochlorite substitutes), these will be of the same or lesser dangerous goods classification and degree of risk (packing group).

None of the materials have any impact on future use of the site or surrounding land use.”

With regards to the above, we can confirm that the provisions of SEPP 33 are not applicable to the proposed development.

5.10 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across the State and identifies matters to

be considered in the assessment of development adjacent to particular types of infrastructure development.

Division 10 (Health services facilities) of the Infrastructure SEPP relates to development for the purposes of a health care facility (including a hospital).

Under Clause 57, development for the purpose of health services facilities may be carried out by any person with consent on land in a prescribed zone. The subject site falls within a prescribed zone (being SP2 Infrastructure). The proposal is therefore a permissible use subject to consent under the Infrastructure SEPP, in addition to being a permitted use under the Ryde Local Environmental Plan 2010 (RLEP) – refer to **Section 5.11**.

The proposal does not qualify as Traffic Generating Development under Clause 104 of the Infrastructure SEPP as the site does not have access to classified roads or access to a road that connects to a classified road. Further, the proposal does not involve more than 200 beds or more than 200 vehicles, and accordingly referral of the Project Application to the Roads and Traffic Authority (RTA) is therefore not required under the Infrastructure SEPP.

5.11 Ryde Local Environmental Plan 2010

The DGR's require the provisions of the Ryde Local Environmental Plan 2010 (RLEP) to be taken into consideration as a requirement of the environmental assessment undertaken in this report. However, compliance with the relevant development standards is not required. The RLEP prescribes the main land use zoning and development standards for the site.

Within the RLEP, the Ryde Hospital Campus (inclusive of the Graythwaite Site) is zoned SP2 – Infrastructure (Hospital) as identified in **Figure 7** below. The proposal is permissible, pursuant to the provisions of the RLEP.



Figure 7: RLEP 2010 Zoning Map Extract, Site Outlined in Red

Planning objectives for the SP2 – Infrastructure zone are outlined in the Land Use Table in Part 2 of RLEP, with relevant objectives generally being:

1 Objectives of Zone

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*
- *To ensure the orderly development of the land.*
- *To ensure that development does not have an adverse effect on adjoining land.*

The proposal is considered to be consistent with the above objectives as follows;

- The proposed rehabilitation centre will provide additional health infrastructure and associated services to the community that will complement the existing services offered at the Ryde Hospital Campus; and
- The design, bulk, scale and use proposed will be consistent with existing buildings at the Ryde Hospital Campus and will not result in any adverse impact on adjoining residential uses or the Denistone locality.

The proposal presents a design that responds to the size and shape of the Graythwaite Site and will transform the site from its current vacant usage to one that provides health services that will cater for the demand generated by a generally ageing population in Sydney and will be compatible with existing health services provided elsewhere within the Ryde Hospital Campus.

The RLEP contains very few development standards that would ordinarily apply to the development of the site. In particular, there are no bulk and scale development standards applicable to the Graythwaite Site and the only provisions relevant relate to heritage conservation. All relevant heritage considerations are addressed in the Heritage Impact Statement (refer to **Appendix 9**) and Aboriginal Heritage Statement (refer to **Appendix 10**) accompanying this EA and discussed in **Sections 6.8** and **6.9** of Report.

The proposal is therefore considered to be consistent with the few RLEP provisions that are relevant.

5.12 City of Ryde Development Control Plan 2010

The City of Ryde Development Control Plan 2010 (RDCP) provides more detailed provisions, supplementing the provisions of the RLEP.

As with the RLEP, the DGR's require the provisions of the RDCP to be taken into consideration in the environmental assessment undertaken in this report, although compliance with the provisions is not required.

Notwithstanding this, again we note that there are few development standards within the

RDCP that are specifically applicable to the proposed rehabilitation centre. General principles and standards related to the following aspects of the proposed development are as follows;

- Energy efficiency and water management;
- Waste minimisation and management;
- Construction activities;
- Stormwater management;
- Signage;
- Access for People with Disabilities;
- Fencing; and
- Tree Preservation.

The proposal has been designed to have due regard for the above provisions and this is demonstrated in the scheme proposed for the Graythwaite Rehabilitation Centre and the accompanying Specialist Reports appended to this EA.

6 ENVIRONMENTAL IMPACT ASSESSMENT

6.1 Overview

In addition to the statutory controls addressed in **Section 5** of this EA, the Director-General's Requirements state that the environmental impacts of the proposal must be assessed, and specify key issues be considered. These relate to built form and urban design, environmental and residential amenity, transport and accessibility, contributions, contamination, heritage, Aboriginal heritage, ecologically sustainable development, drainage and stormwater, flooding, utilities, staging, flora and fauna, noise and vibration, waste, hazards and consultation. This section contains the assessment of those and other relevant considerations.

6.2 Built Form and Urban Design (DGR 2)

The proposed development has been generally designed in deference to the existing use and building mass across the Ryde Hospital Campus and the scale of adjoining residential development within the locality. This is particularly important as the site is not subject to any quantitative development standards in the way of building height or floor space ratio.

The proposal has been designed to provide an appropriate level of amenity for occupants of the proposed rehabilitation centre and to retain levels of amenity enjoyed by adjoining sites. The proposal has also been designed to take into consideration potential impacts at the site and on adjoining sites. Discussion regarding amenity and potential impacts is provided in **Section 6.3** of this EA.

In terms of design, an Architectural Design Statement has been prepared by Nettleton Tribe Architects in support of the application (Refer **Appendix 3**). The Architectural Design Statement provides justification for the proposed scheme, and is as follows:

"The new Graythwaite Rehabilitation Centre is located within the existing Ryde Hospital site. It has a main street access from Fourth Ave with a service connection via a link into the existing hospital infrastructure.

The new facility is contained within a subdivided lot, with Fourth Ave to the north and the Ryde Hospital site to the east, west and south.

The main entry lobby is fronting Fourth Ave. Here the identity and main public entry is formed.

The mass and scale of this entry element responds to the bulk and scale of the remainder of the street. The street frontage of the site is narrow at some 38m. The building has been set back further from the front boundary than the adjacent buildings. The awning projects out further to form a canopy. The entry canopy

provides protection for pedestrians and vehicle drop off. This includes requirements for NSW Ambulance service drop off.

The building also remains within the same bulk and scale of the other buildings within the hospital site.

The site rises back from the street some 7-8m or 1 and 3/4 stories. The lowest of the floors, Ground Floor, is at street level. It contains the main entry reception, plant and parking. The accommodation is spread over 2 levels. The lowest of these levels, Level 1, remains recessed partially below the ground at the rear of the site.

CONTEXT AND ORIENTATION

The design has responded to a number of site conditions, physical restraints and orientation.

The building is divided in plan into 2 basic areas, a treatment/consultation area staffed predominately by therapy staff and a ward area staffed predominately by nursing staff.

The treatment and consultation area is located toward the street frontage and main entry of the building. The ward area is located behind this. The Bedrooms have been orientated to face north and south in the preferred orientation to maximise the solar aspect.

Day living and dining areas are located between the treatment and ward areas. The dining and terrace has a northerly aspect and on level 1 gains access to the terrace areas. This is an important social aspect of the inpatients treatment and care. It has been given pride of place in the fulcrum of the 'L' shape and is a pivotal point between ward and treatment areas.

The sleeping areas have been located well setback off the street front for the quiet aspect. The day living areas are also well set back from the street, sitting discreetly behind the treatment/therapy areas as well as the existing Mental Health Building. This also helps to separate the inpatient functions and areas from the existing dwelling houses on Fourth Ave.

MATERIALS

The building materials have responded to the context of the site both physically and historically. The building design and materials also has some reference to the original Graythwaite site and building context.

The hospital site and surrounds contains numerous low rise brick structures ranging widely in age. Also within the context of the site there are 2 historical structures, namely Denistone House and The Stables. The south eastern portion of the Graythwaite Rehabilitation Centre sits adjacent The Stables.

The materials proposed for the Graythwaite Rehabilitation Centre have referenced both the brick and sandstone structures.

The facades and external treatments have been designed to respond to the 2 main functional areas of the building; consultation therapy areas and inpatient ward areas.

The entry, treatment and consultation areas consist of glazing and metal panels. The windows are predominately continuous here. This responds to the nature of the work space behind and the need of more natural light. There is also a combination of projections and shading to offer a better environmental performance to the building.

The ward areas have a combination of brickwork panels and smaller windows to the bedrooms. Across the 2 areas there are numerous colour panels use to add interest and texture to the building. The colours used respond to the warm colours of the brick and sandstone as well as the leafy green context of the site.

CONCLUSION

The design responds to the contextual issues of the site and surrounds and goes on to provide a best practice inpatient rehabilitation centre linked into the Ryde Hospital services."

6.3 Environmental and Residential Amenity (DGR 3)

DGR No. 3 requires an assessment of the following;

- Impacts of the proposal on solar access, acoustic privacy, visual privacy, view loss and wind impacts on surrounding development, with particular consideration of visual impact on Denistone House; and
- Details of the measures to be implemented to achieve a high level of environmental and residential amenity.

Each of these matters is considered below.

Solar Access

In accordance with the requirements of the DGR's, a series of shadow diagrams has been prepared by Nettleton Tribe Architects for the following times;

- Summer solstice shadows at 9:00am, 12:00pm and 3:00pm (21 December);
- Winter solstice shadows at 9:00am, 12:00pm and 3:00pm (21 June); and
- Equinox shadows at 9:00am, 12:00pm and 3:00pm (march 21 and September 21).

These shadow diagrams are appended to this EA at **Appendix 3**.

With regards to the overshadowing impact of the proposed development, we note the following;

- Due to the location of the site and the orientation and siting of the proposed building, the proposal will not result in any overshadowing on any residential allotments.
- Overshadowing during the summer solstice is minor between 12:00pm - 3:00pm. Between 9:00am and 12:00pm, there is minor overshadowing of the car park of the adjoining medical centre facilities to the west of the Graythwaite site. This is not considered to be of any consequence with regards to the amenity of these adjoining sites. It is noted that northern and southern terraces to the proposed rehabilitation centre will still receive solar access during all hours between 9:00am and 3:00pm.
- Overshadowing during the winter solstice will be increased as a result of the proposal. In general the shadow between the hours of 9:00am and 3:00pm is fast moving and is not considered to result in any adverse impact on adjoining areas of the Ryde Hospital Campus site (to the east and south) or the medical centre facilities to the west of the Graythwaite site. The northern outdoor terraces to the proposed rehabilitation centre receive solar access for all hours between 9:00am – 3:00pm.
- Overshadowing during the equinox period is again a fast moving shadow with the most extensive overshadowing occurring at 9:00am to the west of the Graythwaite site. In terms of the proposed terraces, the northern outdoor terraces will receive solar access for all hours between 9:00am – 3:00pm. The southern outdoor terrace to the proposed rehabilitation centre will receive solar access between 9:00am and approximately 2:00pm with complete overshadowing occurring at 3:00pm. Complete overshadowing of this terrace at 3:00pm is therefore not considered to be of any material consequence as solar access is obtained for up to five (5) hours prior.
- With regards to solar access internally for the proposed rehabilitation centre, we note that the sleeping areas (“beds”) and outdoor terrace areas have been orientated generally in the preferred orientation to maximise the solar aspect.

Having regard to the above, we note that overall, the proposal will not result in any adverse overshadowing impacts and adequate solar access will be maintained to adjoining sites and the wider Graythwaite site during the summer solstice, winter solstice and equinox period.

Acoustic Privacy

Acoustic privacy issues for the proposed development are primarily related to the sleeping areas (“beds”) and living / indoor recreation areas. In this respect, we note that these areas have been substantially setback from the street frontage to aid in mitigating any potential noise impact from Fourth Avenue.

Visual Privacy

Various design measures have been adopted to ensure visual privacy is afforded to occupants of the proposed rehabilitation centre and also, maintained to adjoining sites. Such measures include;

- The sleeping areas (“beds”) and living / indoor recreation areas within the proposed rehabilitation centre have been substantially setback from the street frontage. The “L” shaped configuration of the building allows these areas to be located to the rear of the site with the Community Health Building acting as a visual buffer between that part of the proposed building and Fourth Avenue. Site planning in this respect means that the potential for overlooking to residential development opposite on Fourth Avenue to the north is mitigated.
- Each of the proposed outdoor terrace areas has incorporated screen planting where appropriate to mitigate the potential of overlooking from these areas to adjoining sites / areas and to maintain an adequate level of visual privacy to these areas. This is particularly important as the northern outdoor terrace areas (at Level 1 and Level 2 (roof terrace)) are proposed to be used as “therapy” areas. The proposed vegetation screening to these areas will afford patients undergoing outdoor therapy with an adequate level of privacy.
- The use of a variety of ground and shrub plants around the perimeter of the Graythwaite site provides a high level of visual privacy to the site and adjoining sites. Particularly, we note that concentrated planting scheme to the south and east provides a high degree of landscape relief and a strong visual buffer between the proposed rehabilitation centre and the heritage significant “Stables” building (to the east) and the nurses accommodation building (to the south).
- Supplementary native tree canopy planting along site boundaries also acts as a buffer between the proposed rehabilitation centre and adjoining sites and the Fourth Avenue Streetscape. The proposed planting scheme plays an important role in screening the proposed built form.
- The proposal presents as a contemporary building using high quality materials and finishes that are aesthetically pleasing, complementary to existing development within the locality and respectful of the heritage significant buildings at the Ryde Hospital Campus site.

A set of photomontages has been prepared by Nettleton Tribe Architects in support of the application and is appended to this EA at **Appendix 3**.

Views

There are no significant view corridors from Fourth Avenue over the site and views around the existing buildings on the site are not of any heritage or architectural significance.

We note that the Heritage Impact Statement prepared by Graham Brooks and Associates (refer to **Appendix 9**) provides an analysis of views to, and from, the heritage items at the site with the relevant commentary provided below;

“How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?”

Views from the former Stables building include the adjacent hospital buildings and the built development of the surrounding residential locality. They are not considered to be an inherent part of the heritage significance of this item.

The former Stables is sited in close proximity to the internal road way allowing views to the building when approaching in both directions. The proposed above ground link between the new Graythwaite Rehabilitation Centre and the existing Trigg (Maternity) Building will be seen from some locations when approaching from the south west.

The visual impact of this element has been limited by the design of the highly transparent structure of this link. Views to the building allow appreciation of its aesthetic significance.

Its physical separation from the proposed development will allow continued appreciation of these views.”

The proposal will not, therefore, result in any adverse loss of views from adjoining sites or the public domain and will not impact upon any views to or from any heritage items within the vicinity of the site.

Visual Impacts on Denistone House

The Heritage Impact Statement prepared by Graham Brooks & Associates and appended to this EA at **Appendix 9** confirms that the proposal has been designed with no adverse visual impact on Denistone House. Refer to the comments from the HIS below;

- *“The existing curtilage around the heritage items (B4, B5, B6 & B7) has been so reduced and eroded that a full appreciation of their heritage significance is no longer possible. This is the result of development throughout the middle and latter decades of the 20th century.”*
- *“The proposed development does not negatively affect the remnant curtilage around these buildings or their visual integrity.”*
- *“The proposed development maintains adequate physical and visual separation from the adjacent significant heritage items.”*
- *“Through ensuring that the new structures have been kept to four storeys in height (a lower ground level is primarily located under the building), in height, the new Centre will not impact, to any unacceptable degree, or visually dominate, the adjacent heritage items.”*

Wind Impacts

The proposed Graythwaite Rehabilitation Centre is located within the existing Ryde Hospital site.

The site rises back from the street some 7-8m or one (1) and three / four storeys. The lowest of the floors, Ground Floor, is at street level. It contains the main entry reception, plant and parking. The accommodation is spread over two (2) levels. The lowest of these levels, Level 1, remains recessed partially below the ground at the rear of the site.

The proposed building is of a similar bulk and scale to the neighbouring buildings; the main roof is approximately half of a storey above the neighbouring buildings. The plant sits atop the main roof and is set back from the street.

As a result of the generally low scale design, the proposal is unlikely to have any adverse impacts on pedestrian comfort associated with wind patterns across the site.

Residential Amenity

Whilst the proposal is not for permanent residential accommodation, there is a level of internal amenity that is expected for the in-patient beds at the proposed rehabilitation centre. The following provides a summary of how residential amenity has been taken into consideration in the design of the proposal;

- The proposal has been designed in deference to the relevant guidelines / standards which dictate a certain standard of amenity that must be achieved for future occupants of the proposed rehabilitation centre;
 - Australasian Health Facilities Guidelines (AHFG);
 - Building Code of Australia BCA 2011; and
 - AS 1428.1:2009 – General Requirements for Access.

In particular, we note that the AHFG promotes positive design outcomes to achieve good practice and safe health care delivery, heightened levels of privacy, dignity and comfort for patients and workers, maximisation of accessibility, safety, security, OHS and infection control and incorporation of ESD principles and policy in design and operation of health facilities.

- In terms of acoustic amenity, the in-patient / sleeping areas have been located in the part of the building that is adequately set back from the street (Fourth Avenue) and sited discreetly behind the treatment / therapy areas and the existing Mental Health Building.
- The proposal provides a high degree of internal amenity on the site through the incorporation of high quality open space “terrace” areas with varied plantings that provide visual interest, screening for privacy and acoustic amenity and an appealing outlook from the proposed sleeping areas (“beds”).

In addition to the above, consideration of the impact of the proposal to the existing low density residential development to the north is necessary. With regards to maintaining residential amenity to the north, we make the following comments;

- The separation between the site (particularly the sleeping areas and the outdoor terrace areas), combined with vegetation screening across the site and the use of tinted / glazed windows ensure that the proposed rehabilitation centre will not result in any “overlooking” / privacy impacts to dwellings within the vicinity of the site;
- The bulk and scale of the proposed building is of a similar scale to existing buildings adjoining the Graythwaite site to the east, south and west. We note that the maximum height of the proposed building is RL 105.5. Between RL 101.5 and RL 105.5, this area accommodates the “plant” areas of the proposed building. The actual ceiling height of most of the proposed building is RL 101.5. The Medical Centre building to the west has a building height at RL 104.55, the Ryde Medical Centre, also to the west, has a RL of 101.3. The Community Mental Health and the “Stables” building to the east have maximum building heights of RL 99.0 and RL 104.0 respectively. Accordingly, the proposed building height is consistent with adjoining buildings and will not dominate when viewed from adjoining residential development to the north; and
- The “L” shaped configuration of the building, with the rear portion wrapping around the rear of the existing Community Mental Health building, provides a substantial setback to part of the building from the streets and aids in screening the proposed building.

6.4 Transport and Accessibility Impacts (DGR 4)

DGR No. 4 relates to transport and accessibility impacts and requires that a Transport & Accessibility Study be prepared with reference to the Metropolitan Transport Plan – Connecting the City of Cities, the NSW State Plan, the NSW Planning Guidelines for Walking and Cycling, the Integrated Land Use and Transport policy package, the NSW Bike Plan, Premier’s Council for Active Living (PCAL) - Development & Active Living, and the RTA’s Guide to Traffic Generating Development. The assessment is to take into consideration the issues outlined in the table below.

A Traffic and Accessibility Report has been prepared by Halcrow in support of the application and is appended to this EA at **Appendix 8**. The report addresses each of the matters to be considered in DGR No. 4. Each of these is taken in turn below.

Table 7: Director General’s Requirement No. 4

DGR No. 4 Requirements	Comment from Traffic and Accessibility Report prepared by Halcrow (Appendix 8)
Demonstrate how users of the	Section 5 of the Report addresses how

development will be able to make travel choices that support the achievement of relevant State Plan targets;	users of the proposed rehabilitation centre will be able to make travel choices that support State Plan targets (i.e. sustainable modes of transport). This is to be achieved through the implementation of a Workplace Travel Plan. The requirement for the preparation and implementation of a Workplace Travel Plan has been include in the Statement of Commitments in Section 7 of this EA.
Detail the existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access.	Existing pedestrian and cycle conditions are addressed in Sections 2.7 and 2.8 of the Report. In summary, we note that there is a pedestrian pathway located directly at the frontage of the subject site, on Fourth Avenue and also on the opposite side of the street. Pedestrian pathways are also evident along Denistone Road and Ryedale Road. With regards to cycle access, we note that there is an unmarked cycle path on Fourth Avenue and Denistone Road, along the frontage of the site. A marked cycle path is located on Florence Avenue between Ryedale Road and Denistone Road.
Identify potential traffic impacts during the construction stage of the project, and measures to mitigate these impacts.	<p>The Report addresses this item in Section 4.3 and states as follows;</p> <p><i>“It is considered that the number and frequency of trucks is estimated as relatively low and would not adversely impact the surrounding road network. Hence, the intersection performance of Blaxland Road-Florence Avenue would remain similar to its existing operating conditions.</i></p> <p><i>As the site is located in close proximity to the arterial road, there would be minimal impact on local or collector roads.</i></p> <p><i>In addition, the majority of the proposed construction routes would be via major arterial roads, which are designed to accommodate use of heavy</i></p>

	<p><i>vehicles.”</i></p> <p>In summary, and with reference to the above, we note that the anticipated traffic impacts during the construction stage of the project are considered to be minimal.</p>
Describe the measures to be implemented to promote sustainable means of transport including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a Workplace Travel Plan.	<p>The site is located within close proximity of regular bus services.</p> <p>Section 5 of the Report addresses the potential for implementing a Workplace Travel Plan and the potential benefits of introducing a car sharing scheme and promoting the available cycle path network in the vicinity of the site. The requirement for the preparation and implementation of a Workplace Travel Plan has been include in the Statement of Commitments in Section 7 of this EA.</p> <p>However, we note that as the proposal involves a rehabilitation centre with many of the patients not physically “able” to utilise public transportation and bicycle transport options. Accordingly, these forms of public transport will be encouraged amongst staff of the proposed rehabilitation centre as a part of the Workplace Travel Plan that is required to be implemented (refer to the Statement of Commitments at Section 7 of this EA for further detail).</p>
Daily and peak traffic movements likely to be generated by the proposed development, including the impact on nearby intersections including Florence Avenue/Blaxland Road and any proposed access to the development, and the need / associated funding for upgrading or road improvement works (if required). The traffic impact assessment should consider base models with future traffic generated by the Graythwaite Rehabilitation Centre.	<p>Potential impacts of the proposed development on intersection functioning and traffic movements are addressed in Section 4 of the Report. The Report concludes that the Blaxland Road – Florence Avenue intersection will retain its current operating conditions follow construction of the proposed development and that the proposal will not result in any adverse impact for traffic movements.</p>
Details of the proposed access, parking provisions, loading facilities and service vehicle movements associated with the proposed development including	<p>Section 4.4 of the Report provides detail regarding the proposed parking provision. Section 4.6 of the Report addresses matters such as access, internal circulation</p>

<p>compliance with Australian Standards.</p>	<p>etc. with regards to the relevant Australian Standards. The Report confirms that no loading areas / refuse collection areas will be provided as part of the Graythwaite scheme. All service and deliveries will continue to be taken to the existing main hospital building and transported through to the proposed rehabilitation centre by means of the Level 3 patient link. The Report also confirms that the proposed parking bays, aisles etc. generally comply with the requirements of the Australian Standards for car parking AS 2890.1:2004, aside from two (2) small car bays which are 2.4 metres wide. However, the Report considers this to be acceptable and “satisfactory”.</p>
<p>Provision of appropriate levels of onsite car parking for the proposed development having regard to the high public transport accessibility of the site, opportunities for car sharing, local planning controls and RTA guidelines (note: The Department supports reduced parking provisions, if adequate public transport is available to access the site).</p>	<p>Section 4.4 of the Report assessed the proposed car parking provision and confirms that the proposal results a car parking provision that “accords exactly” with the parking requirement. Accordingly, the Report confirms that the proposal is not considered to cause any adverse impact on future parking conditions.</p> <p>We note that the proposed car parking provision identified in the report includes the following:-</p> <ul style="list-style-type: none"> • The 79 spaces proposed in the basement; • The 4 “external” spaces proposed at the porte-cochere of the proposed development; • The 8 additional parking spaces in the new car park next to the existing Mental Health Building, allocated to the Graythwaite Rehabilitation Centre; • The 2 additional parking spaces adjacent to the Ryde Medical Centre that will be allocated to the Graythwaite Rehabilitation Centre; and • The 38 parking spaces in the car park on the former tennis courts that formed part of the scope of works under Phase 3 of the Graythwaite Project (and <u>not</u> part of this subject application).

	<p>Opportunities for car sharing are explored in Section 5 of the Report and should form part of the Workplace Travel Plan which has been included as a requirement in the Statement of Commitments at Section 7 of this EA.</p>
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Having regard to the above, the Traffic and Accessibility Report adequately addresses the matters to be considered pursuant to DGR No. 4. For further discussion regarding the above matters, refer to the Traffic and Accessibility Report at **Appendix 8** of the EA.

Access

Whilst the DGR's do not specifically require an assessment of equitable pedestrian access, an Access Review has been undertaken by Morris Goding Accessibility Consulting in support of the application and is appended to this EA at **Appendix 12**.

The Access Report confirms that the proposed rehabilitation centre generally complies with the relevant legislation and regulatory requirements to accessibility. However, the report provides a series of recommendations to achieve full compliance.

The recommendations of the Access Report relate to the following have been included in the Statement of Commitments in **Section 7** of this EA;

- Main entrance;
- Emergency egress;
- Circulation areas;
- Doorways;
- Stairways;
- Passenger lifts;
- Access linkages;
- Amenities;
- In-patient lounge and common facilities;
- Terrace areas;
- The proposed therapy pool;
- Carparking; and
- Signage.

The Access Report states that these recommendations are associated with detailed design and the proposal is capable of complying with these recommendations.

6.5 Ecologically Sustainable Development (DGR 5)

DGR No. 5 relates to ecologically sustainable development (ESD) and requires the following matters to be addressed;

- Detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development;
- Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design; and
- Demonstrate that the development can achieve a minimum 4 Green Star rating, or any other suitably accredited rating scheme.

To address the above matters, a ESD Report has been prepared by Steensen Varming and is appended to this EA at **Appendix 11**. The ESD Report provides the following detail;

- How the proposal addresses the relevant regulatory requirements including Section J of the BCA, NSW Health Technical Guidelines (TS-11 – Version 2: Engineering services & sustainable development guidelines), Environmental Performance Guide for Government Buildings and the NSW Government Sustainability Policy;
- ESD design during the design, construction and operation phases of the project; and
- How the proposal addresses the Green Star Rating and relevant sustainability targets.

Generally, the proposal focuses on achieving the following to promote principles of ESD;

- Reduced carbon emissions and environmental impact;
- Improved indoor environmental quality;
- Reduced operating costs;
- Reduced consumption of potable water;
- Cost effectiveness over life cycles; and
- Efficient material usage.

ESD in Design

As per the findings of the ESD Report, identified strategies that have been implemented in the design phase of the proposal are as follows;

- Engage an ESD consultant to provide advice on sustainable design initiatives.
- Design for the provision of optimum air quality to occupants, and to counteract build-up of indoor pollutants.
- Provide monitoring systems to control CO₂ concentrations and Volatile Organic Compounds (VOC) in the air.
- Design for good daylighting, and provide access to external views.
- Provide external shading devices to control solar access and minimise issues of glare.
- Design artificial lighting to appropriate levels, and avoid over-lighting of spaces.
- Design for high level of thermal comfort.
- Designing with materials and internal finishes that minimise the levels of VOC and formaldehyde emissions within the spaces.

- Design building services systems that are not easily susceptible to mould growth that can harm occupant health.
- Design to minimise issues of noise, to reduce patient discomfort.
- Reduce contaminants in the air by providing dedicated exhausts for certain spaces (such as for photocopying areas).
- Design to reduce outdoor air pollutants to occupant spaces.
- Design places of respite for occupants to connect to the external environment.
- Design for a reduction in operational energy by;
 - Energy Sub-metering
 - Light Zoning
 - Naturally ventilating Carparks
 - Efficient external lighting
- Design for and encourage transport with low environmental impact.
- Implement water conservation strategies by installing water meters, reducing potable water consumption for landscaping, equipment cooling, and recycling of fire system test water.
- Reduce the Environmental Impact of new building materials by considering where possible; the re-use of building materials, specifying recycled concrete and steel, source timber from FSC or other certified suppliers, and minimise PVC use.
- Design to reduce the environmental impact associated with stormwater run-off and sewerage discharge.
- Design to minimise the risk of legionella from mechanical services systems.
- Design building systems to minimise refrigerant leaks, and select refrigerants that have low environmental impact.

Water Management

A Water Management Report has been prepared by SSP Group in support of the application and is appended to this EA at **Appendix 17**. The Water Management Report outlines environmentally sustainable water management design initiatives for the proposal. Specifically, the Water Management Report identifies and evaluates measures for the reduction of potable water consumption within the hydraulic and wet fire services installed throughout the development.

The Water Management Report provides the following;

“Potable Authority Mains Water

Potable mains water is traditionally used to supply all of the water requirements within a building. It is of a quality suitable for drinking, and therefore exceeds the quality requirements of many water consuming processes within a building.

Regardless of various water saving initiatives that may be employed within a development, a potable mains water connection will always be required to supply the potable water requirements of the building and to provide a back-up water supply to any non-potable water supplies sources.

Non-Potable Authority Mains Water

Non-potable mains water is available in some locations and can be used to supply all of the non-potable water requirements within a building. It is of a quality unsuitable for drinking, and therefore requires careful planning regarding its application and integration into developments in order to avoid cross connections and potential contamination of any potable water supplies.

Non-potable mains water cannot be considered for the proposed Graythwaite Rehabilitation Centre development, as the local water supply authority do not currently provide a non-potable water supply.

Stormwater Harvesting

Stormwater harvesting refers to the collection of stormwater from the developments internal stormwater drainage system. Stormwater from the stormwater drainage system can be classified as either rainwater where the flow is from roof areas only, or stormwater where the flow is from all areas of the development.

For the purposes of this development, we refer to a rainwater harvesting system, where the following benefits can be achieved over a stormwater harvesting system;

- *Rainwater collected from roof areas is generally less polluted than general stormwater drainage.*

In general terms the rainwater harvesting system will be an in-line tank for the collection and storage of rainwater. At times when the rainwater storage tank is full rainwater can pass through the tank and continue to be discharged via gravity into the stormwater drainage system. Rainwater from the storage tank will be pumped for distribution throughout the development in a dedicated non-potable water reticulation system."

Recommendations

Construction

The ESD Report states that during the construction phase of the proposal, the contractor will be expected to ensure that *"construction is executed in accordance with the design and specifications that have been documented by the design team"* and that it would be beneficial to implement the following measures;

- Reduce construction waste by implementing a Waste Management Plan (WMP).
- Encourage reuse or recycling of construction waste. (This requirement will be specified within the Tender preliminaries).
- Implement a site – specific Environmental Management Plan. Appoint a Contractor who holds a valid ISO 14001 accreditation prior to and throughout the construction.

- Maintain and conserve the ecological integrity of site by implementing good construction practices.

These recommendations have been included in **Section 7** of this EA as a part of the Statement of Commitments.

Operation

The ESD Report states that during the operation phase of the proposed rehabilitation centre, there are benchmarks and targets that must be set for future monitoring and benchmarking. These are as follows;

- Implement ongoing monitoring to allow for optimisation of building energy consumption.
- Purchase green power from an energy supplier.
- Provide area dedicated for the separation, storage and collection of recyclables (paper, plastics, mercury containing products & devices).
- Provide periodic staff training and provide information to occupants regarding the buildings environmental attributes and performance.
- Utilise a Building Management System (BMS) to maximise the effectiveness of building services.
- Encourage the use of non-potable water (ex: rainwater harvesting) whenever possible.
- To implement ESD measures during the operation phase of the project, the ESD Report recommends that a Sustainability Control Group or Green Team is established within the hospital management organisation.

These recommended benchmarks / targets have been included in **Section 7** of this EA as a part of the Statement of Commitments.

Green Star Rating

The DGR's refer to attaining a minimum of 4 Star Green Star Rating.

The Green Star credit summary at Appendix A of the ESD Report confirms the Green Star "credits" that the design team has incorporated into the scheme. The ESD Report confirms that based on these initiatives, the proposal is likely, and able, to achieve a Green Star rating equivalent to a 4 Star rating. A Green Star score of 45 points has been confirmed based on initiatives agreed to date (with a minimum score of 45 required to achieve a 4 Star rating). As identified in the ESD Report, *"currently, the project is targeting 8 additional points that need to be confirmed. Together with these 8 points, the score comes to a total of 53 points (this includes 8 buffer points, in addition to the 45 points required for 4 Star)"*.

The Statement of Commitments in **Section 7** of this EA has included a condition to ensure that the proposal achieves a minimum 4 Star Green Star rating.

6.6 Contributions (DGR 6)

The City of Ryde Council's Section 94 Development Contributions Plan (2007) sets out the contribution rates for development.

The Contributions Plan does not specifically identify hospitals or medical uses as development that would attract Section 94 Contributions. In addition, it is noted that hospitals (and ancillary uses) are routinely exempted from payment of contributions as a result of their significant contribution to social and essential infrastructure within the locality and region and associated public benefit.

We also note that preliminary discussions / comments from Council recognise that whilst there is a public benefit associated with the proposed rehabilitation centre, there are other considerations, including stormwater and drainage, roads and traffic contained in Council's S94 Contributions Plan that need to be addressed before any determination of the application.

Council's S94 Contributions Plan provides a series of base rates for contributions for stormwater and drainage, and, roads and traffic. There are also contributions payable for transport and accessibility facilities which are levied on a per car parking space basis where insufficient on-site parking is provided to meet demand generated.

We would comment as follows;

- As the Traffic and Accessibility Report prepared by Halcrow (refer to **Appendix 8**) confirms that the proposed car parking provision on the site is adequate to cater for the demand generated by the proposal, contributions are not considered to be required in this instance;
- With regards to stormwater and drainage, advice has been received from Taylor Thomson Whitting (refer to **Appendix 23**) which confirms that the proposed development should not result in any increase in demand on Council's stormwater infrastructure; and
- With regards to roads and traffic, the Traffic and Accessibility Report prepared by Halcrow (refer to **Appendix 8**) confirms that "*the proposed development [will] not necessitate any intersection upgrade or road improvement works*" (p. 14). Accordingly, the proposed development is not considered to result in any increase on public road infrastructure.

Having regard to the above, Section 94 Contributions are not considered to be necessary for the proposed development as the proposal has been designed to ensure that there is no increase in demand on public / Council-owned infrastructure.

6.7 Contamination (DGR 7)

DGR No. 7 relates to contamination and requires the Project Application to demonstrate compliance that the site is suitable for the proposed use in accordance with SEPP 55.

Contamination

This matter has been addressed in **Section 5.8** of this EA in the assessment of the proposal against the provisions of SEPP 5.

In summary, we note that the Stage 1 Environmental Site Assessment report prepared by EIS and appended to this EA at **Appendix 6**, confirms that the site is unlikely to be affected by groundwater or soil contamination.

Recommendations

In order to ensure that the site is suitable for the proposed rehabilitation centre, the Stage 1 Environmental Site Assessment report recommends that the site is inspected by experienced environmental personnel during excavation works to assess any unexpected soil or groundwater contamination. Accordingly, this recommendation has been included as a condition in the Statement of Commitments at **Section 7** of this EA.

Geotechnical

Whilst not part of DGR No. 7, a Geotechnical Report is a requirement of the DGR's to assess the risk of geotechnical issues on the site and identification of any design solutions where necessary, to ensure the stability of the land and structures and safety of persons.

Accordingly, a Geotechnical Assessment has been undertaken by Jeffery and Katauskas Pty Ltd in support of this application and is appended to this EA at **Appendix 7**.

The Geotechnical Assessment concludes as follows;

"The recommendations presented in this report include specific issues to be addressed during the construction phase of the project. As an example, special treatment of soft spots may be required as a result of their discovery during proof-rolling, etc.

In the event that any of the construction phase recommendations presented in this report are not implemented, the general recommendations may become inapplicable and Jeffery and Katauskas Pty Ltd accept no responsibility whatsoever for the performance of the structure where recommendations are not implemented in full and properly tested, inspected and documented.

Occasionally, the subsurface conditions between the completed boreholes may be found to be different (or may be interpreted to be different) from those expected. Variation can also occur with groundwater conditions, especially after

climatic changes. If such differences appear to exist, we recommend that you immediately contact this office.

This report provides advice on geotechnical aspects for the proposed civil and structural design. As part of the documentation stage of this project, Contract Documents and Specifications may be prepared based on our report. However, there may be design features we are not aware of or have not commented on for a variety of reasons. The designers should satisfy themselves that all the necessary advice has been obtained. If required, we could be commissioned to review the geotechnical aspects of contract documents to confirm the intent of our recommendations has been correctly implemented.”

As identified in the extract above, the Geotechnical Assessment provides a series of recommendations to be adopted during the construction phase of the proposed rehabilitation centre. In particular, we note that the Geotechnical Assessment includes comments and recommendation in relation to a number of different excavation and construction methods. These recommendations are too detailed and extensive to incorporate into this EA in-full. However, a condition has been included in the Statement of Commitments at **Section 7** of this EA to ensure compliance with all relevant recommendations contained within the Geotechnical Assessment. Providing compliance with these recommendations is achieved, it is considered that any potential geotechnical impacts associated with the proposal will be able to be mitigated appropriately.

6.8 Heritage (DGR 8)

DGR No. 8 requires that a statement of significance and an assessment of the impact of Denistone House and any other heritage items are to be undertaken in accordance with the guidelines in the NSW Heritage Manual.

The Graythwaite Site is located in the vicinity of two (2) heritage items of “local heritage significance” located on the Ryde Hospital Campus. These items are as follows;

- Denistone House; and
- The former Stables building.

To address the requirements of DGR No. 8, a Heritage Impact Statement (HIS) has been prepared by Graham Brooks & Associates and is appended to this EA at **Appendix 9**.

Section 5.4 of the HIS provides an evaluation of the proposal with regards to the guidelines in the NSW Heritage Manual. The table below provides an extract of the comments provided, with regards to these guidelines;

Table 8: Extract from HIS (pp. 20 – 21)

Questions to be Answered from NSW Heritage Manual	Comment
<i>How is the impact of the new</i>	The proposal has no physical impact on the

<i>development on the heritage significance of the item or area to be minimised?</i>	<p>adjacent former Stables building.</p> <p>The development site is to be fenced from the surrounding hospital facilities during construction, consistent with normal site safety procedures. This will also serve to minimise any impacts on the adjacent heritage item.</p>
<i>Why is the new development required to be adjacent to a heritage item?</i>	<p>The built environment of most hospital campuses is subject to ongoing upgrades to address changes in the nature of patient care and the delivery of medical services.</p> <p>As the Ryde Hospital site contains two heritage items some development on this campus will be adjacent to a heritage item.</p>
<i>How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?</i>	<p>The original curtilage of the former Stables building included its rural setting and visual connection with Denistone House. The curtilage that remains today is the space around it that allows appreciation of its aesthetic attributes.</p>
<i>How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?</i>	<p>Views from the former Stables building include the adjacent hospital buildings and the built development of the surrounding residential locality. They are not considered to be an inherent part of the heritage significance of this item.</p> <p>The former Stables is sited in close proximity to the internal road way allowing views to the building when approaching in both directions. The proposed above ground link between the new Graythwaite Rehabilitation Centre and the existing Trigg (Maternity) Building will be seen from some locations when approaching from the south west.</p> <p>The visual impact of this element has been limited by the design of the highly transparent structure of this link.</p> <p>Views to the building allow appreciation of its aesthetic significance. As shown in Figures 5.3 to 5.8 its physical separation from the proposed development will allow continued appreciation of these views.</p>
<i>Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?</i>	<p>The scale of the proposed development is considered sympathetic to the heritage item as it is consistent with that of the existing hospital development in the vicinity of the former Stables.</p>

	It will be seen as a background element in views to the former Stables, from the east. Given the compact nature of the existing development within the hospital site this is considered to be acceptable from a heritage perspective.
<i>Will the additions visually dominate the heritage item? How has this been minimised?</i>	As the proposed new building is part of a complex of similarly scaled, closely sited buildings it will not visually dominate the former Stables building.
<i>Will the public, and users of the item, still be able to view and appreciate its significance?</i>	Yes, the public, and users, of the former Stables building will still be able to view and appreciate its significance.

The table above confirms that the proposal will be consistent with the relevant guidelines in the NSW Heritage Manual.

Section 6.1 of the HIS provides a series of conclusions regarding the proposed works and the heritage significance of the Graythwaite Site, as follows;

“6.1 Conclusions

The subject site itself is not listed as an item of heritage significance in any statutory instrument.

It is located in the vicinity of Denistone House and its former Stables which are both listed as items of local heritage significance in the Ryde LEP 2010 and included on the NSW Health Section 170 Heritage and Conservation Register.

The nature of a medical and health facility such as Ryde Hospital is that it experiences an on-going need for change and upgrading in response to medical advances and continuing improvements in patient care.

At Ryde Hospital this has resulted in a complex of closely sited buildings of varied ages and styles, site in close proximity to the heritage items located within the site.

Denistone House is separated physically and visually from the proposed development by the intervening buildings. As such it is considered that the proposal will not affect the established heritage significance and existing setting of Denistone House.

The proposal has no physical impact on the adjacent former Stables building.

As the former Stables is sited in close proximity to the internal road way views to the building when approaching in both directions will remain readily available.

It is concluded that the proposed new Graythwaite Rehabilitation Centre will have no adverse impact on the established heritage significance of Denistone House of the former Stables.

The proposed development is consistent with the requirements and guidelines of the Ryde LEP 2010.

Should any relics be located during site excavation, an excavation permit under Section 140 of the NSW Heritage Act 1977 will be required to be obtained from the NSW Heritage Council.

The Ryde LEP 2010 heritage map and schedule should be updated to identify the two listed buildings within the Ryde Hospital site and not the whole site."

Having regard to the above, it is concluded that the proposed works will not impact upon the heritage significance of the two (2) heritage items within the vicinity of the proposed rehabilitation centre and the proposal is consistent with the relevant heritage legislation.

Recommendations

As per the extract above, the HIS provides the following recommendation;

"Should any relics be located during site excavation, an excavation permit under Section 140 of the NSW Heritage Act 1977 will be required to be obtained from the NSW Heritage Council."

This recommendation has been included in the Statement of Commitments in **Section 7** of this EA.

6.9 Aboriginal Heritage (DGR 9)

DGR No. 9 relates to aboriginal heritage and requires a consideration of the proposal against the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.

Accordingly, a Baseline Aboriginal Heritage Assessment has been prepared by City Plan Heritage in support of this application and accompanies this EA at **Appendix 10**.

The Baseline Aboriginal Heritage Assessment concludes as follows;

"In conclusion, in addressing Aboriginal Heritage in accordance with the legislation and guidelines and in fulfillment of the Director General's Requirements, it is considered by City Plan Heritage that there is no potential for sites or places of Aboriginal Heritage Cultural Significance to be located within the nominated subject site of the Graythwaite Rehabilitation Centre.

*The required AHIMS search for any previously recorded Aboriginal sites and places located within the advised lots numbers for the site, which were Lot numbers 1 and 2 in Deposited Plan 1137800, also included a buffer zone of 200 metres. The subject site of Graythwaite is located within Lot 1 of this DP. The results of the searches– see Attachment A – were for **no previous sites or places recorded**. The assessment of the development history of the site, combined with an appraisal of the environment and landscape, and an appraisal of the types of Aboriginal cultural heritage sites likely to be in the area also resulted in the area not being considered a likely location for sites or places relating to Aboriginal cultural heritage significance.”*

Recommendations

The Baseline Aboriginal Heritage Assessment provides recommendations as follows;

“There is unlikely to be sites or places of Aboriginal cultural heritage retained across the proposed development path for Graythwaite, which is Lot 1 of DP 1137800 and its extended curtilage and formerly part of the Ryde Hospital Precinct. It is considered that there is nothing special or significant in any of its historical landscape qualities that would warrant further research.

However, although this baseline assessment has not identified the subject allotment and its extended developed curtilage as an area of potential for Aboriginal cultural heritage, once ground clearance commences if something is discovered that could be an Aboriginal object, City Plan Heritage must be contacted. In that instance, advice would be sought from the Environment Protection and Regulation Group of the Office of Environment and Heritage relating to recording the finds and the appropriate management options. [N.B., Part 6 of the National Parks and Wildlife Act gives the Director General of the Office of Environment and Heritage only express powers to consent to the damage, destruction or defacement of Aboriginal objects by development activities.]

It cannot be stated from this baseline study whether there are likely to be items of Aboriginal cultural heritage retained beyond the subject allotment and its extended developed curtilage in Lot 2 across the undeveloped, sloping, tree covered parts of the site, bounded by Florence Avenue and characterized by mature native forest.”

These recommendations have been included in the Statement of Commitments in **Section 7** of this EA.

6.10 Drainage and Stormwater (DGR 10)

DGR No. 10 relates to drainage and stormwater management and requires the following matters to be addressed;

- Consideration of drainage issues associated with the proposal including stormwater and drainage infrastructure; and
- Provision of detailed plans of the proposed erosion and sediment control measures during demolition, construction and operation.

Each of the above matters is taken in turn below;

Drainage and Stormwater Management

A stormwater concept plan and Civil Design Report have been prepared by Taylor Thomson Whitting and are appended to this EA at **Appendix 5** and **Appendix 13** respectively.

The Civil Design Report provides commentary regarding the existing stormwater drainage condition on the Graythwaite Site and the proposed stormwater system, with an extract provided below;

“Existing Stormwater Drainage Condition

The site falls from South to North and currently the majority of the site’s stormwater system consists of series of pipes & inlet pits. The proposed site is about 80% of the surface area impervious surface in its current state.

The site’s existing stormwater pipe system drains towards Council’s 450mm Stormwater pipe system that crosses Fourth Avenue fronting the proposed site. An existing pit (shown pit # 2 in TTW’s SKC01) which is located inside the GRC’s site is to be retained and is proposed to be the point of connection. The proposed development is to provide an on-site detention system (OSD) system in accordance with City of Ryde Development Control Plan 2006 – Section 8.2 Stormwater Management.

Existing stormwater pipe infrastructure owned by Ryde Hospital that are located within the proposed GRC site exist. These pipes that traverses the proposed GRC site are proposed to be diverted and that appropriate stormwater easement are provided in accordance with City of Ryde Development Control Plan 2006 – Section 8.2 Stormwater Management.

The proposed diversions are shown in drawing SKC01 which are as follows:

- (i) Stormwater line between pits 2 and 16 which is located to the west of the proposed site.*
- (ii) Stormwater line between pits 2 and 7 which is located to the east of the proposed site.*
- (iii) Stormwater easement in favour of the hospital is between pits 10 and 3.*

Proposed Stormwater System

All proposed internal pipeworks which consist of pipes and access pits shall be designed in accordance with Australian Rainfall & Runoff (AR&R), Council and

AS 3500.3 1998 and will be directed to the OSD tank systems prior to discharge to Council's receiving stormwater network in Fourth Avenue.

The majority of the catchment is from the roof which is proposed to be captured and re-use for non-potable usage with appropriate water quality filter/treatment.

To reduce stormwater site's existing peak flowrates runoff, the proposed stormwater drainage system includes on-site detention (OSD) tanks.

The OSD tanks system shall be designed in accordance with Ryde City Council's requirements to provide temporary storage and restrict stormwater peak discharge flowrates from the site to a rate that specified by Council.

The proposed stormwater drainage system has been designed to provide both minor and major flow conveyance systems which is generally in accordance with the intent of Australian Rainfall and Runoff (1987) and the City of Ryde requirements. The proposed frontage carpark and vehicular site entry/exit act as overland flowpaths which accommodate surcharges from the proposed site stormwater system up to and including the 100-year ARI storm event."

The civil and stormwater engineering component of the development has been designed to comply with the relevant Standards, the BCA and local regulations (including Ryde City Council's requirements). However, as stated in the Civil Design Report, the proposed scheme will be progressively updated and is subject to change to reflect "relevant Authorities' approval and development consent conditions".

Erosion and Sediment Control

A comprehensive erosion and sediment control plan has been prepared by Taylor Thomson Whitting and is appended to this EA at **Appendix 18**. The erosion and sediment control plan details measures during demolition, construction and post-construction that are required to be implemented.

In addition, the Civil Design Statement prepared by Taylor Thomson Whitting provides commentary regarding erosion and sediment control requirements for the proposal. Such measures include;

- *"Staging: Staging of operations (eg. clearing, stripping, demolition);*
- *Restoration: Progressive restoration of disturbed areas;*
- *Drains: Temporary drains and catch drains;*
- *Dispersal: Diversion and dispersal of concentrated flows to points where the water can pass through the site without damage;*
- *Spreader Banks: Or other structures to disperse concentrated silt traps;*
- *Construction and maintenance of silt traps to prevent discharge of scoured material to downstream areas;*
- *Temporary grassing: Or other treatment to disturbed areas (eg. contour ploughing);*
- *Temporary fencing."*

Recommendations

The Civil Design Report also provides a series of recommendations related to erosion control and stormwater management. The Statement of Commitments in **Section 7** of this EA includes a condition for the proposal to comply with these recommendations.

6.11 Flooding (DGR 11)

DGR No. 11 relates to flooding and requires that an assessment is undertaken of any flood risk on site in consideration of any relevant provisions of the NSW Floodplain Development Manual (2005) including the potential effects of climate change, sea level rise and an increase in rainfall intensity.

The NSW Floodplain Development Manual applies to land that is flood liable and seeks to manage flood liable or flood prone land.

Section 4.0 of the Civil Design Statement prepared by Taylor Thomson Whitting (refer to **Appendix 13**) confirms that a very small area of the northern part of the Graythwaite site is identified as being located within a floodpath. Refer to the figure below.



Figure 8: Simulation of 100 Year ARI Flood (Source: Taylor Thomson Whitting, Appendix 13).

The Civil Design Statement adequately addresses the matters for consideration required by DGR No. 11, with regards to flooding, as follows;

“4.0 Flooding

Taylor Thomson Whitting (TTW) have reviewed the comprehensive flood study undertaken by Bewsher Consulting for Ryde City Council. A relevant extract to the proposed site that simulates the 1 in 100-year Average Recurrence Interval

(ARI) storm event is shown in **Appendix C** of this report. TTW have superimposed this flood extent information over a detailed survey plan to approximate the 100-year ARI flood level and extent immediately north of the proposed site.

The lowest proposed finished habitable floor level of 89.50mRL is approximately 1650mm higher than the 100-year ARI flood level which is approximated at 87.85m, AHD.

Our investigation shows the proposed development is outside the mainstream flood extent.

Flood evacuation plan is not necessary as the proposed site is outside the flood extent and appropriate freeboard is provided in accordance with Floodplain Development Manual – 2005.

The Department of Environment, Climate Change and Water (DECCW) guidelines on sea level rise shows that the adopted benchmarks are for a rise relative to 1990 mean sea levels of 91cm by Year 2100. Since the proposed site is away from the harbour foreshore and approximately 89 metre above sea level, it is not anticipated that the proposed development be affected by an increase in the sea level.

With respect to the increase in rainfall intensity, it is understood that at most, the rainfall for 1 day will increase by 10 percent as results show. To date, the study on shorter time frames is not completed. However, TTW's topographical analysis shows the proposed site is at the top of the catchment and an increase of rainfall intensity of 10% will have a very negligible impact on flood levels. As mentioned above, currently the proposed development has approximately 1650mm freeboard above the approximated 100-year flood level on Fourth Avenue.

Given that the proposed development:

- (i) makes provision for overland flowpath for local overland flooding,
- (ii) makes provision for OSD system to control stormwater site's existing peak flowrates runoff.
- (iii) outside the mainstream 100-year ARI flood extent,
- (iv) not adversely affected by climate change and
- (v) provision of approximately 1650mm of freeboard above the approximated 100-year ARI flood level.

TTW is of the opinion that the proposed development has adequate flood protection and has no adverse impact on flood levels."

6.12 Utilities (DGR 12)

DGR No. 12 relates to the provision of utilities and requires that, in consultation with the relevant agencies, the Project Application is to address the existing capacity and any augmentation requirements of the development for the provision of utilities.

Hydraulic Services

SSP Group has undertaken investigations into the utility infrastructure for hydraulic services and we note the following;

- Sydney Water has provided SPP Group with a Section 73 feasibility letter which outlines the methodology for the sewer and potable water connections; and
- Jemena Gas Networks have responded to SPP Group's query in the form of a mains diagram indicating the size and location of the gas main that the proposed development is to connect to.

Accordingly, we understand that there are existing hydraulic services infrastructure available for the proposed development.

A letter of advice prepared by SPP Group confirms that formal applications will be made to both Sydney Water and Jemena Gas Networks to follow the required protocol to establish connections to such utility infrastructure. Refer to **Appendix 16** for a copy of this letter.

Electrical Services

A letter of advice has been prepared by Steensen Varming which confirms that the power supply to the proposed rehabilitation centre will be via a new Energy Australia Kiosk substation, which will be located on the subject site. Refer to **Appendix 16** for a copy of this letter.

We note that Steensen Varming has also submitted an application to Energy Australia to request a service connection of 1250 A supply (application sent on 24 February 2011).

Further to this application, Energy Australia (Ausgrid) has also undertaken a preliminary assessment which confirms that an alteration of the Energy Australia network will be required to provide the electrical connection requested in the application. We note that the application has been processed by Energy Australia and the preliminary assessment details the requirements to progress the application. Refer to **Appendix 16** for a copy of the preliminary assessment prepared by Ausgrid.

Communications Services

A letter of advice has been prepared by Steensen Varming which confirms that communication services to the proposed rehabilitation centre will be provided by linking the new development to the existing Ryde Hospital main communication network. In

particular, lead in conduits will be provided from the street to the main communications room in the proposed rehabilitation centre for future connection.

It is noted that Steensen Varming has also consulted with Telstra in relation to the proposal.

Refer to **Appendix 16** for a copy of this letter.

In summary, utilities will be available to service the proposed development.

6.13 Staging (DGR 13)

DGR No. 13 requires details regarding the staging of the proposed development if applicable.

We can confirm that the proposal will be constructed in one (1) stage.

6.14 Flora and Fauna (DGR 14)

DGR No. 14 requires potential impacts on flora and fauna (including threatened species, populations and endangered ecological communities (EECs) and their habitats) to be addressed and steps to be identified to mitigate any potential impacts to protect the environment.

As discussed previously, the tree removal works that were required to be undertaken for the proposed rehabilitation centre were undertaken under **Phase 1** of the GRC project and under a separate approval (refer to **Section 1.1** of this EA for further discussion).

Flora and fauna advice has been prepared by Travers Bushfire and Ecology in support of this application and is appended to this EA at **Appendix 14**.

It is noted that this advice was prepared as a part of **Phase 1** of the GRC project as this phase involved the removal of trees on the Graythwaite Site. This advice addressed the impact of the removal of trees on the site and confirmed that there would be no adverse impact. The advice also referred to a separate "Tree Assessment Report" that also accompanied the **Phase 1** submission, which provided tree planting recommendations to offset the tree removal. These recommendations were included as conditions of the **Phase 1** approval. Site Design Landscape Architects have confirmed that the requirements of the **Phase 1** approval conditions have been addressed and are reflected in the proposed landscaping scheme for the Graythwaite Site and under the subject application.

As the tree removal has already been undertaken on the Graythwaite Site, a comprehensive flora and fauna assessment is not considered necessary. Notwithstanding this, we have included the flora and fauna advice in support of this

application to confirm that there proposed rehabilitation centre is not being constructed on a site that is affected by any of the following;

- habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974);
- critical habitats or habitats of threatened fauna or flora species, populations or ecological communities (within the meaning of the TSC Act); or
- habitat of species listed under international agreements including the Japan – Australia Migratory Birds Agreement (Jamba) and China – Australia Migratory Birds Agreement (Camba).

Despite the above, we note that the proposal involves the removal of one (1) street tree which is located within the Fourth Avenue Road reserve, which was not specifically addressed in the flora and fauna advice prepared by Travers Bushfire and Ecology.

This tree is being removed to allow the location of essential services including a fire brigade booster and valve. In addition, the tree is being removed to allow the reconfiguration of the existing driveway, currently used by the Ryde Medical Centre, and to facilitate separate car park entries into the site to include the proposed new building. The removal of this street tree, in isolation, is unlikely to result in any adverse environmental impacts for the site.

Recommendations

To offset the removal of the identified street tree, a condition has been included in the Statement of Commitments at **Section 7** of this EA to ensure appropriate replanting is undertaken in accordance with Council's specifications.

6.15 Noise and Vibration (DGR 15)

DGR No. 15 requires a quantitative assessment to be undertaken, with regards to the potential demolition, construction, operation and traffic noise impacts of the project on Ryde Hospital and surrounding medical and residential premises.

Whilst demolition does not form part of this application, to address the outstanding matters related to construction, operation and traffic noise, an Acoustic Assessment has been prepared by Acoustic Logic and accompanies this EA at **Appendix 21**. In summary, the Acoustic Assessment identifies the following potential noise and vibration impacts;

- Excavation and piling works, particularly those undertaken within close proximity to the northern site boundary;
- Construction works, including the use of cranes and hand tools (angle grinders etc) and concrete pumps. Noise and vibration impacts will be lessened once the shell of the proposed rehabilitation centre has been constructed as the new building will provide "considerable noise attenuation". The report acknowledges that from time to

time, the DECCW recommended levels for acoustic emissions may be exceeded until the shell of the building has been constructed;

- Generally, additional noise as a result of increased traffic movements to and from the site during construction and operation of the proposed development. However, it is acknowledged in the report that as the proposal represents “infill” type development (as opposed to Greenfield development), and as a result of the anticipated number of visitors, coupled with staff ingress / egress movements, noise levels from vehicles movements associated with the occupation of the proposed rehabilitation centre will remain relatively unchanged from the existing situation. Temporary additional noise impacts during the construction phase of the proposed development are anticipated; and
- Potential noise emissions from mechanical plant during occupation of the proposed rehabilitation centre.

The Acoustic Assessment assesses the above potential noise impacts with regards to the requirements of the relevant statutory / regulatory authorities including the Department of the Environment and Climate Change.

The Acoustic Assessment states that as a detailed construction program for the proposed development is not available at this stage, a detailed construction noise assessment cannot be undertaken. However, a recommendation has been included in the Acoustic Assessment to undertake a detailed assessment of noise emissions at the Construction Certificate (CC) stage. The indicative analysis and assessment in the Acoustic Assessment has provided a series of generic recommendations as identified below.

Recommendations

In light of the potential noise and vibration impacts associated with the proposed development, the Acoustic Assessment provides a series of recommendations to manage such impacts. The Statement of Commitments in **Section 7** of this EA includes a condition for the proposal to comply with these recommendations.

To summarise, we note the following recommendations of the Acoustic Assessment;

- *During preparation of the construction program (CC stage), consult with Ryde Hospital to determine what areas of the hospital are particularly noise sensitive, and at what time (ward rooms, operating theatres etc).*
- *On completion of the construction program, acoustic review of proposed construction activities and plant/methods should be undertaken to identify work items likely to exceed DECCW guidelines.*
- *For those noise intensive activities, the analysis should identify where on the construction site are the areas likely to result in high noise levels. This will then assist in determining the likely time period for which high noise levels will occur at nearby properties.*

- *Identify feasible acoustic controls or management techniques (use of screens, scheduling of noisy works, notification of adjoining land users, respite periods) when excessive levels may occur.*
- *For activities where acoustic controls and management techniques still cannot guarantee compliant noise levels, implement a notification process whereby nearby development is made aware of the time and duration of noise intensive construction processes.*
- *Consultation with Ryde Hospital prior to excavation/construction to determine if there is any particularly vibration sensitive equipment items on site, particularly near the eastern, western and south-western boundaries (MRI, microscopes etc) in order to determine appropriate vibration criteria.*
- *Where practicable, excavation in rock should be done using rock saws as opposed to pneumatic hammers.*
- *If piling is required, use of augured or vibro piling should be used rather than impact piling.*
- *For at least the initial stages of excavation and piling, vibration monitoring at the Community Mental Health and Ryde Medical Centre buildings should be conducted to ensure excessive levels of vibration are not achieved. Any monitoring system should allow for rapid feedback to the contractor (for example, SMS notification) in the event that excessive levels are reached.*
- During construction activities, where compliance with the DECCW Interim Construction Noise Guidelines cannot be achieved, noise emissions are to be managed in accordance with the principles of AS 2436-1981 "Guide to Noise Control on Construction Maintenance and Demolition Site".
- *Vibration caused by construction should be limited to:*
 - *For structural damage vibration, German Standard DIN 4150-3 Structural Vibration: Effects of Vibration on Structures; and*
 - *For human exposure to vibration (amenity), the evaluation criteria presented in the British Standard BS 6472:1992 Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80Hz) for low probability of adverse comment*
- *A detailed review of all external mechanical plant should be undertaken at CC stage (once plant selections and locations are finalised). Acoustic treatments should be determined in order to control plant noise emissions to the levels set out in section 6.1 of the Acoustic Assessment report.*

- *All plant can be satisfactorily attenuated to levels complying with noise emission criteria through appropriate location and (if necessary) standard acoustic treatments such as noise screens, enclosures, in-duct treatments (silencers/lined ducting) or similar.*

Through the adoption of the above recommendations (being those contained within the Acoustic Assessment report appended to this EA at **Appendix 21**), noise and vibration impacts can be suitably managed and mitigated.

6.16 Waste (DGR 16)

DGR No. 16 relates to waste management and requires the following detail to accompany the EA;

- Identify, quantify and classify the likely waste streams to be generated during construction and operation;
- Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste;
- Describe the measures to be implemented to manage the disposal of nuclear waste, if required; and
- Describe the measures to be implemented to manage the disposal of contaminated and potentially contaminated biological and sewage waste, if required.

Construction Waste Management

To address the waste management measures proposed during the construction phase of the proposal, Aurora Projects have prepared a waste management plan in support of the application. The construction waste management plan is appended to this EA at **Appendix 19b**.

Operation Waste Management

The NSW Health Northern Sydney Local Health Network (NSLHN) has an existing policy that covers all NSLHN Hospitals, including the Ryde Hospital facilities, which also extends to the new building proposed under this development.

As the proposal represents an expansion of services provided by the Ryde Hospital Campus, there will be an increased level of waste generated from the site, associated with the operation of the proposed rehabilitation centre. Accordingly, waste management during the operation phase of the proposed rehabilitation centre will be undertaken in accordance with this existing policy which is appended to this EA at **Appendix 19a**.

We note that the NSLHN Waste Management and Resource Recovery Plan is based on a wide range of waste guidelines and has incorporated waste legislative requirements.

6.17 Hazards (DGR 17)

DGR No. 17 relates to “hazards” and requires the following detail to accompany the EA;

- An assessment against State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33); and
- A description of the proposed storage, use and management of any hazardous material and measures to be implemented to manage hazards and risks associated with the storage.

SEPP 33 Assessment

Refer to the assessment of the proposed development with regards to the provisions of SEPP 33 at **Section 5.9** of this EA for further detail.

Storage, Use and Management of Hazardous Materials

We note that detail regarding the proposed storage, use and management of any hazardous materials is provided in the Guidelines for the Safe Use of Hazardous Substances and Dangerous Goods in NSW Health, dated 2006 and prepared by NSW Health. These Guidelines are appended to this EA at **Appendix 15**.

6.18 Consultation (DGR 18)

In accordance with Part 3A of the EP&A Act, consultation is required to occur at the following stages;

- The Director General of the Department of Planning is required to consult with relevant public authorities in preparing the environmental assessment requirements for the Project Application; and
- The Director-General is required to advertise and exhibit the Environmental Assessment and appended reports and documentation.

DGR No. 18 requires that consultation be undertaken at *“an appropriate and justified level of consultation in accordance with the Department’s Major Project Community Consultation Guidelines October 2007, in particular surrounding residences and Ryde City Council”*.

A Consultation Register is attached to this EA at **Appendix 20** which provides a summary of key consultation dates (with Ryde Council and the general community). The table below provides a summary of these key dates;

Table 9: Key Consultation Dates (Source: Appendix 20)

Date	Description
5 March 2010	Initial discussions and consultation with the Ryde Medical Centre (adjacent to the site).

6 September 2010	Meeting with Ryde Council to discuss Graythwaite Centre.
15 September 2010	Meeting with Dr Eagleton (Ryde Medical Centre) on options for the proposed development and the final adopted option.
19 October 2010	Meeting with Ryde Council.
16 November 2010	Presentation to the Ryde Medical Centre.
1 December 2010	DGR's Issued
10 March 2011	Email update to Ryde Council regarding updated design.
6 May 2011	Email update to Ryde Council regarding updated design.
9 May 2011	Presentation to the Ryde Hospital staff.
20 May 2011	Email update to Ryde Council regarding updated design.
12 May 2011	Two (2) community presentation sessions held at Ryde Hospital (afternoon and evening sessions). Invitations to these sessions were provided via letter-drop to residents and local businesses within the locality. These sessions were held at 2:00pm and 6:30pm.

Community Consultation

As stated above, consultation was undertaken with the local community, predominantly via two (2) presentation and information sessions held on the 12 May 2011 where the proposed scheme was introduced and those who attended the session were given the opportunity to ask questions with answers provided accordingly.

These two (2) sessions were held at 2:00pm and 6:30pm to provide all relevant stakeholders an opportunity to attend during the day or following normal working hours.

We note that the following Project representatives attended and chaired the sessions;

- Health Infrastructure;
- Aurora Projects (Project Manager);
- Nettleton Tribe (Project Architect);
- Ryde Hospital Project Team representatives; and
- Graythwaite Rehabilitation Centre clinical lead.

The following stakeholder groups attended the sessions;

- Local business representatives;
- Neighbouring residents;
- Ryde Hospital staff; and
- A City of Ryde Council representative.

We have been advised that the following issues were raised at the sessions;

- 1) Impacts related to construction of the proposed rehabilitation centre (such as noise, dust and construction traffic);
- 2) Concerns regarding the new car park in the location of the existing tennis courts with regards to “light spill” on residences along Ryedale Road;
- 3) Insufficient car parking on the site and parking impact on surrounding street network; and
- 4) Concerns regarding increased traffic to and from the site as a result of additional staff and visitors and impacts on surrounding street network.

Whilst we understand that the above concerns were addressed by the Project representatives at the sessions, we wish to comment further as follows;

- 1) A Construction Management Plan (CMP) will be prepared prior to the issue of a Construction Certificate to appropriately manage any potential impacts associated with the construction of the rehabilitation centre and associated works. The proposed construction will be undertaken in accordance with the CMP (refer to the Statement of Commitments at **Section 7** for further detail).
- 2) The concern regarding light spill from the car park in the location of the existing tennis courts is not the subject of this application, but rather, the subject of a separate approval. Accordingly, this issue is not considered to be applicable to this application. Notwithstanding this, we note that these concerns were acknowledged by the Project representatives and we understand that measures will be taken in the construction of the car park to ensure that there are no adverse “light spill” impacts.
- 3) Concerns regarding the proposed car parking provision on the site have been addressed in the Traffic and Accessibility report submitted in support of this application. The report concluded that there would be no adverse parking impacts on the site or on surrounding streets as a result of the proposed car parking provision. Refer to **Section 6.4** for further detail.
- 4) Concerns regarding traffic impacts have been addressed in the Traffic and Accessibility report submitted in support of this application. The report concluded that there would be no adverse traffic impacts on the site or on surrounding streets as a result of the proposed development. Refer to **Section 6.4** for further detail.

With regards to the above, it is considered that there are no outstanding issues or concerns as a result of the community consultation process.

Notes of the Community Consultation meetings held at Ryde Hospital on 12 May 2011 are provided at **Appendix 20**.

Consultation with Ryde City Council

Prior to the issue of the DGR's, we understand that Health Infrastructure held a presentation for Ryde City Council with the Mayor in attendance, detailing the proposed works on the site (including the works that were to be undertaken under the provisions of the SEPP (Infrastructure 2007)).

Following the issue of the DGR's, Health Infrastructure communicated verbally and via email correspondence with Ryde City Council's Manager of Strategic Planning and Client Management. We understand that an invitation for Health Infrastructure to conduct a second presentation to Ryde City Council with an update on the proposed rehabilitation centre was sent but the Council did not require a further presentation as the design had not substantially altered post-issue of the DGR's.

We note that Ryde City Council was also invited to the Community Presentation sessions held on the 12 May 2011 and Council's representative.

Consultation with Utilities / Services Providers

Consultation has been undertaken with the relevant utilities / services providers and further detail is provided in **Section 6.12** of this report.

Additional Consultation

During the exhibition period, community members will also be able to make submissions on the Project Application.

Following Project Application approval, consultation will continue throughout the duration of the project with relevant service providers, NSW Health, and surrounding neighbours.

Recommendations

As identified in the Community Consultation notes at **Appendix 20** and in accordance with the Major Project Community Consultation Guidelines October 2007, future consultation throughout the duration of the Project Application will consist of the following;

- Establishment of a Project email address for the logging of queries from the community and stakeholders;
- Letterbox drops will be undertaken prior to the commencement of disruptive works;
- Community Consultation sessions will be undertaken at key project milestones; and

- Regular updates will be published through the local newspapers, Ryde Hospital staff broadcasters etc.

A condition has been included in the Statement of Commitments at **Section 7** to ensure that future consultation is undertaken in accordance with the above and the requirements of the Major Project Community Consultation Guidelines October 2007.

7 DRAFT STATEMENT OF COMMITMENTS

In accordance with Part 3A of the *Environmental Planning and Assessment Act 1979*, the proponent is required to include a Draft Statement of Commitments in respect to environmental management and mitigation measures on site.

The following are the commitment made by the Proponent to manage and minimise potential impacts arising from the proposed Graythwaite Rehabilitation Centre.

Table 10: Draft Statement of Commitments

Issues	Action
1. Traffic and accessibility	A Workplace Travel Plan is to be prepared and implemented during the occupation of the proposed rehabilitation centre. The framework for the Workplace Travel Plan is to follow the framework identified in the Traffic and Accessibility Report prepared by Halcrow and accompanying this EA at Appendix 8 .
2. Ecologically Sustainable Development	<p>The proposal is to achieve a minimum 4 Star Green Star rating (or equivalent under other suitably accredited rating scheme).</p> <p>The proposal is to comply with the recommendations of the ESD Report prepared by Steensen Varming and appended to this EA at Appendix 11. Such recommendations include, but are not limited to the following:-</p> <ul style="list-style-type: none"> • The project must consider exceeding the deemed-to-satisfy requirements of Section J of the BCA; • It is recommended that hospital management / the Clients, establish a Sustainability Control Group (SCG) or Green Team, within the organisation, to help implement policies for ESD. This group should consist of director-level representatives, or other high-level staff members who have a decision-making capacity; • The internal noise levels from building services should meet the recommended design sound levels provided in Table 1 of AS/NZS2107:2000 for 95% of the project's nominated area; • The facility lighting design is to provide a maintenance illuminance of not greater than 25% above the minimum maintained illuminance levels recommended in Table F1 of

	<p>AS 1680.2.5 for 95% of the nominated area as measured at the working place (or as required by AS 1680.2.5).</p> <ul style="list-style-type: none"> During the construction phase of the project, it would be recommended to implement the following; <ul style="list-style-type: none"> <i>“Reduce construction waste by implementing a Waste Management Plan (WMP).</i> <i>Encourage reuse or recycling of construction waste. (This requirement will be specified within the Tender preliminaries).</i> <i>Implement a site – specific Environmental Management Plan. Appoint a Contractor who holds a valid ISO 14001 accreditation prior to and throughout the construction.</i> <i>Maintain and conserve the ecological integrity of site by implementing good construction practices.“</i> During the operation phase of the project, it would be recommended to implement the following; <ul style="list-style-type: none"> <i>“Benchmarks / targets must be set for future monitoring and benchmarking.</i> <i>Implement ongoing monitoring to allow for optimization of building energy consumption.</i> <i>Purchase green power from an energy supplier.</i> <i>Provide area dedicated for the separation, storage and collection of recyclables (paper, plastics, mercury containing products & devices).</i> <i>Provide periodic staff training and provide information to occupants regarding the buildings environmental attributes and performance.</i> <i>Utilise a Building Management System (BMS) to maximise the effectiveness of building services.</i> <i>Encourage the use of non-potable water (ex: rainwater harvesting) whenever possible. “</i>
3. Contamination	<p>The proposal is to comply with the recommendations contained in the Stage 1 Environmental Site Assessment report prepared by</p>

	<p>EIS and appended to this EA at Appendix 6. Such recommendations include, but are not limited to the following:-</p> <ul style="list-style-type: none"> • The site is to be inspected by experienced environmental personnel during excavation works <i>“to assess any unexpected conditions or subsurface facilities that may be discovered between investigation locations and to better assess the potential for asbestos contamination beneath the existing buildings at the site.”</i> • <i>“The requirement to report to the DECCW (EPA) under Section 60 and Guidelines on the Duty to Report Contamination²² under the CLM Amendment Act 2008 should be assessed once the site has been inspected following... excavation works.”</i>
4. Geotechnical	<p>The proposal is to comply with the recommendations contained in the Geotechnical Investigation report prepared by Jeffery and Katauskas and appended to this EA at Appendix 7. We note that the recommendations provided in the Geotechnical Investigation report are quite extensive and have therefore not been included in this Statement of Commitments and reference should be made to the complete report at Appendix 7.</p>
5. Heritage	<p>Should any relics be located during site excavation, an excavation permit under Section 140 of the NSW Heritage Act 1977 will be required to be obtained from the NSW Heritage Council.</p>
6. Aboriginal Heritage	<p>Once ground clearance, excavation or site preparation works commence, if something is discovered that could be an Aboriginal object, a qualified Heritage Consultant must be contacted. In that instance, advice is to be sought from the Environment Protection and Regulation Group of the Office of Environment and Heritage relating to recording the finds and the appropriate management options.</p>
7. Drainage and stormwater management	<p>The recommendations of the Civil Design Report prepared by Taylor Thomson Whitting and accompanying this EA at Appendix 13 are to be complied with to ensure appropriate stormwater management and erosion and sediment control</p>

	<p>measures are undertaken. Such recommendations include, but are not limited to the following:-</p> <ul style="list-style-type: none"> • Necessary measures are to be adopted as may for erosion control, including the following where applicable: <ul style="list-style-type: none"> - Staging: Staging of operations (eg. clearing, stripping, demolition); - Restoration: Progressive restoration of disturbed areas; - Drains: Temporary drains and catch drains; - Dispersal: Diversion and dispersal of concentrated flows to points where the water can pass through the site without damage; - Spreader Banks: Or other structures to disperse concentrated silt traps; - Construction and maintenance of silt traps to prevent discharge of scoured material to downstream areas; - Temporary grassing: Or other treatment to disturbed areas (eg. contour ploughing); - Temporary fencing. • The building is required to liaise and comply with the requirements of the Landcom's Managing Urban Stormwater "Soil and Construction" (The "Blue Book") and the local Council. • The builder is required to apply dust and noise control measures to minimise disturbance to the functioning of neighbouring properties. The contractor is required to demonstrate the proposed works equipment to be within acceptable limits for noise and vibration as determined by a registered acoustic consultant. • Shoring, excavation techniques, excavation support, temporary and permanent batters are to be undertaken in accordance with TTW's specification and the recommendations of a qualified practicing Geotechnical Engineer. • Site preparation works are to include the following: <ul style="list-style-type: none"> - Stripping of topsoil from work areas to be stockpiled for landscape areas. - Tyne, water and roll the areas over which filling, paving or building slabs are to be placed. Six passes of a 10 tonne static roller are required. The final pass shall be a proof
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	<p>roll where movement of greater than 3mm under the roller will indicate Bad Ground.</p> <ul style="list-style-type: none"> - Placement of acceptable material from cut areas shall be placed in layers of not more than 200mm to the compaction requirements. - Filled areas and cut areas to be overlain by buildings and pavements are to be protected to maintain constant moisture content in the soil. The protection is to remain in place until construction is complete. <ul style="list-style-type: none"> • An independent approved NATA registered testing authority is required to perform all the compaction testing of earthworks and submit test certificates to the Principal. Certification will be required that aggregates are suitable for use in roadwork and concrete. • All proposed internal pipeworks which consist of pipes and access pits shall be designed in accordance with Australian Rainfall & Runoff (AR&R), Council and AS 3500.3 1998 and will be directed to the on-site detention (OSD) tank systems prior to discharge to Council's receiving stormwater network in Fourth Avenue. • The OSD tanks system is to be designed in accordance with Ryde City Council's requirements to provide temporary storage and restrict stormwater peak discharge flowrates from the site to a rate that specified by Council. • All pavements (including roads, parking areas, paths and service vehicle access areas) are to be designed and constructed in accordance with Section 5.0 of the Geotechnical Investigation Report at Appendix 13 of this EA.
8. Ecology	<p>Appropriate replacement planting is to be undertaken to offset the removal of one (1) street tree located in the Fourth Avenue Road Reserve, and directly north of the site. Replanting is to be undertaken in accordance with Council's specifications.</p>
9. Management of Construction noise, vibration, dust, soil and erosion	<p>A Construction Management Plan (CMP) is to be prepared prior to construction to adequately manage any potential environmental impacts associated with the construction of the proposed rehabilitation centre and associated works. As a</p>

	<p>guide, the CMP is to include measures for waste, noise, vibration, dust, air, traffic, water and soil and erosion control management. The proposed construction is to be undertaken in accordance with the CMP for the development.</p> <p>Hours of construction will be limited to 7.00am to 7.00pm Monday to Friday, and 8.00am to 4.00pm on Saturdays. There will be no work on Sundays and public holidays.</p>
<p>10. Waste</p>	<p>Waste management is to be undertaken in accordance with the Construction Waste Management Plan prepared by Aurora Projects (refer to Appendix 19b) and the Operation Waste Management Plan prepared by NSW Health NSLHN (refer to Appendix 19a).</p>
<p>11. Access</p>	<p>The proposal is to comply with the recommendations contained within the Access Report prepared by Morris Goding Accessibility Consulting accompanying this EA at Appendix 12 to ensure compliance with the relevant legislation and regulatory requirements. Such recommendations include, but are not limited to, the following:-</p> <p>Main Entry</p> <ul style="list-style-type: none"> • Ensure the connecting pathway to building main entry has a 1:20 min. gradient, compliant with AS1428.1. • Ensure the active leaf of main entry doors provides 850mm clear width (generally 920mm door leaf), compliant with AS1428.1. • Ensure a 1:8 kerb ramp, compliant with AS1428.1 is provided at patient drop off zone to enable wheelchair access from roadway to building entry. <p>Emergency Egress</p> <ul style="list-style-type: none"> • Consideration should be given to provide 850mm clear width doorways (generally 920mm door leaf) at all fire stairs, fire passages and egress doors to street level. This will allow some level of fire safety protection for a person using a wheelchair (advisory). <p>Circulation Areas</p>

	<ul style="list-style-type: none"> • Ensure handrails are provided along at least one side of every passageway or corridor that is used by patients. Where practical the handrail shall be continuous for their full length, compliant with BCA section D2.17. <p>Doors</p> <ul style="list-style-type: none"> • Ensure all consulting and staff room doors provide 850mm min. clear width (generally 920mm door leaf), compliant with AS1428.1. • Ensure all consulting and staff room doors provide 510-530mm latch side clearance, compliant with AS1428.1. • Ensure the active leaf of all dual hinged doors of equal width provide 850mm min. clear width (generally 920mm door leaf), compliant with AS1428.1. <p>Stairs</p> <ul style="list-style-type: none"> • Ensure the handrails indicated on both sides of stair are compliant with AS1428.1. <p>Passenger Lifts</p> <ul style="list-style-type: none"> • Ensure the lift cars have internal lift components (control panels, audio/visual indicators, handrails and light levels) that meet the requirements of AS1735.12 and BCA E3.6. <p>Access Linkages</p> <ul style="list-style-type: none"> • As western fire stair becomes a communication stair between level 2 building and external walkway, ensure it includes handrails on both sides and is compliant with AS1428.1 to assist ambulant people with disabilities. • Ensure active leaf of dual hinged doors (equal width) from level 2 east lobby to external area provide 850mm min. clear width, compliant with AS1428.1. • Ensure any connecting external path of travel to 'The Chattery' from the building level 2 east lobby doors is compliant with AS1428.1 <p>Office and Staff Amenities</p> <ul style="list-style-type: none"> • Ensure all office and staff room doors provide 850mm min. clear width (generally 920mm door leaf), compliant with AS1428.1.
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	<ul style="list-style-type: none"> • Ensure all office and staff room doors provide 510-530mm latch side clearance, compliant with AS1428.1. <p>In-patient Lounge and Common Facilities</p> <ul style="list-style-type: none"> • Ensure all common-use doors provide 850mm min. clear width (generally 920mm door leaf), compliant with AS1428.1. • Ensure all common-use doors provide 510-530mm latch side clearance, compliant with AS1428.1. <p>North Terrace</p> <ul style="list-style-type: none"> • Ensure the active leaf of all dual hinged doors to terrace provide 850mm min. clear width, compliant with AS1428.1. <p>South Terrace</p> <ul style="list-style-type: none"> • If terrace will be used as a common-use area, ensure an accessible path of travel compliant with AS1428.1 <p>Accessible Toilets</p> <ul style="list-style-type: none"> • To ensure compliance with AS1428.1-2009 and Ryde Council DCP, the accessible toilets should be enlarged to ensure there is 2300mm x 1900mm clear circulation space around the WC pan with the basin outside this area (max. encroachment 100mm). Overall internal dimensions of approx. 2400mm x 2400mm are required (basin on adjacent wall to pan as shown), for compliance with AS1428.1 fig 43. • Ensure fixtures within all accessible WCs are installed in compliance with AS1428.1-2009. <p>Therapy Pool Accessible Toilet and Shower</p> <ul style="list-style-type: none"> • To ensure compliance with AS1428.1-2009 and Ryde Council DCP, the accessible toilets should be enlarged to ensure there is 2300mm x 1900mm clear circulation space around the WC pan with the basin outside this area (max. encroachment 100mm). Overall internal dimensions of approx. 2400mm x 2400mm are required (basin on adjacent wall to pan as shown), for compliance with AS1428.1 fig 43. • To ensure compliance with AS1428.1-2009 and
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	<p>Ryde Council DCP, the accessible toilet should be enlarged to ensure there is 2300mm x 1900mm around the WC pan with the basin to sit outside this area (max. encroachment 100mm).</p> <ul style="list-style-type: none"> • Ensure fixtures within the accessible WC and separate shower are installed in compliance with AS1428.1-2009. <p>Therapy Pool</p> <ul style="list-style-type: none"> • To ensure compliance with DDA Premises Standard and BCA 2011, ensure the fixed pool ramp is designed in accordance with Part D5.2 and AS1428.1. This requires 1:14 max. gradient and appropriate landings at top and bottom and every 9metres. • Ensure handrails are provided on both sides of the ramp, compliant with AS1428.1 <p>Car Parking</p> <ul style="list-style-type: none"> • Ensure door from car park to entry lobby provides 850mm min. clear width (generally 920mm door leaf), compliant with AS1428.1. • Provide 1540 x 2070mm min. circulation space at end of access way outside car park door for wheelchair manoeuvrability, compliant with AS1428.1. • Ensure 2500mm min. height clearance over the accessible car spaces and 2200mm min. height clearance on path of travel from car park entry, compliant with AS2890.6. <p>Signage</p> <ul style="list-style-type: none"> • Signage is to comply with DDA Premises Standards and BCA part D3.6. • Provide way finding signage to accessible entrances, lifts and accessible toilets.
12. Noise and Vibration	<p>The proposal is to comply with the recommendations contained in the Acoustic Assessment report prepared by Acoustic Logic and appended to this EA at Appendix 21. We note that the recommendations provided in the Acoustic Assessment report are quite extensive and have therefore not been included in this Statement of Commitments and reference should be made to the</p>

	complete report at Appendix 21 .
13. Consultation	Future consultation with key stakeholders is to be undertaken during the course of the Project Application in accordance with the commitments outlined in the Community Consultation note at Appendix 20 and the NSW Department of Planning's Major Project Community Consultation Guidelines October 2007.

8 CONCLUSION

The proposal seeks approval for a new rehabilitation centre with associated parking for the identified Graythwaite Site which forms part of the Ryde Hospital Campus in Denistone. Currently, the proposed built form falls across both Lots 1 and 2 in Deposited Plan 1137800. Following the proposed boundary readjustment of Lot 1, the site will be legally described as Lot 1 in Deposited Plan 1137800.

The design for the proposed rehabilitation centre represents a significant improvement to the existing conditions on the part of the Ryde Hospital site. The internal design will provide the Ryde Hospital Campus with the flexibility it requires to cater for an extended range of rehabilitation services.

The design has emerged from a detailed analysis of the existing site, having regard for the streetscape, environmental effects, heritage and urban form.

The proposed building represents a scale and form that is consistent with the context of development across the Ryde Hospital Campus and respects the low to medium residential density nature of the surrounding locality.

The development is permissible within the underlying Special Uses (SP2) zone and complies with the zone objectives, as well as State Government strategic planning documents for the site. The proposal is of significant merit and will result in the provision of a modern rehabilitation centre which will aid in maintaining the long term viability of Ryde Hospital particularly through the enhanced flexibility offered by the design. The design demonstrates design excellence and minimal environmental impacts.

The potential environmental impacts identified at **Section 6** of this EA, are able to be ameliorated by the mitigation measures recommended within the various consultant reports and are incorporated into the draft statement of commitments accordingly.

Having regard to the above, it is considered that the project will provide social and economic benefits and accordingly we recommend that the Planning Assessment Commission (PAC) approves the application.