

Project Application Environmental Assessment Report

1A Northcote Road, Hornsby
SAH Day Surgery Hornsby Redevelopment

Submitted to
Department of Planning
On Behalf of Sydney Adventist Hospital

August 2010 ■ 09150

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This report has been prepared by: Alexis Cella

Signature



Date 27/08/10

This report has been reviewed by: Stephanie Ballango

Signature



Date 27/08/10

Statement of Validity

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act 1979* (as amended) by:

Environmental Assessment

Name	Alexis Cella
Qualifications	Urban Planner, BRTP (Hons)
Company	JBA Urban Planning Consultants Pty Ltd
Address	Level 7, 77 Berry Street North Sydney NSW 2060
In respect of	

Project Application

Applicant	Sydney Adventist Hospital
Address	185 Fox Valley Road, Wahroonga
Land to be developed	1A Northcote Road, Hornsby
Proposed development	SAH Day Surgery Hornsby Redevelopment

Environmental Assessment	An Environmental Assessment (EA) is attached
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Certificate	I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge:
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- It is in accordance with the Environmental Planning and Assessment Act and Regulation.
- It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.

Signature



Name

Alexis Cella

Date

27 August 2010

Contents

Executive Summary	v
1.0 Introduction	1
1.1 Background	1
1.2 Environmental Assessment and Approvals Process	2
1.3 Overview of Project	3
1.4 Project Team	3
1.5 Capital Investment Value	3
2.0 Site Analysis	4
2.1 Site Location and Context	4
2.2 Land Ownership and Legal Description	5
2.3 Existing Development	5
2.4 Topography	8
2.5 Geology and Groundwater	8
2.6 Drainage and Flooding	8
2.7 Access and Transport	9
2.8 Heritage	9
2.9 Utilities and Services	10
2.10 Surrounding Development	10
2.11 Summary of Site Opportunities and Constraints	14
3.0 Consultation	15
3.1 Council and Agency Consultation	15
3.2 Community and Adjoining Occupier Consultation	16
4.0 Proposed Project	17
4.1 Design Principles	17
4.2 Numeric Overview	18
4.3 Building Description and Staging	18
4.4 Building Envelope	21
4.5 Access, Loading and Parking	23
4.6 Landscaping	24
4.7 Operational Details	24
4.8 Ecological Sustainable Development	24
4.9 Stormwater Drainage	25
4.10 Utilities and Services	25
4.11 Construction and Site Management	26
4.12 Developer Contributions	26
5.0 Director General's Requirements	28

6.0	Environmental Assessment	31
6.1	State Legalisation	31
6.2	Strategic Implications	32
6.3	Relevant State Environmental Planning Policies	35
6.4	Hornsby Shire Council Planning Controls	36
6.5	Built Form	39
6.6	Transport and Accessibility	46
6.7	Crime and Public Safety	48
6.8	Ecologically Sustainable Development	49
6.9	Stormwater and Drainage	51
6.10	Contamination and Acid Sulphate Soils	52
6.11	Noise	53
6.12	BCA	55
6.13	Accessibility	56
6.14	Waste	56
6.15	Heritage	58
6.16	Flora and Fauna	59
6.17	Hazards	59
6.18	Utilities	60
6.19	Economic and Social Benefits	61
6.20	Site Suitability and Project Justification	62
7.0	Draft Statement of Commitments	63
7.1	Traffic Management	63
7.2	Ecologically Sustainable Development	63
7.3	Contamination	63
7.4	BCA and Accessibility	64
7.5	Construction Management	64
7.6	Wind Amelioration	64
7.7	Waste Management	65
7.8	Tree Protection	65
7.9	Utilities	65
7.10	Operational Noise	65
7.11	Hazards	65
7.12	Consultation	65
8.0	Conclusion	66

Figures

1	Locality Plan	4
2	Site Plan	5
3	Aerial photograph of the site	6
4	The existing SAN Day Surgery Hornsby viewed from Northcote Road, looking south	6
5	View of Air Liquide Healthcare building from Balmoral Street, with SAN Day Surgery Hornsby adjoining to the north	7
6	View of AMX Health building from Palmerston Road looking west	7
7	On Balance Physiotherapy building viewed from Palmerston Road	7

8	View of professional rooms from Northcote Road, with On Balance Physiotherapy in the fore ground and the SAN Day Surgery Hornsby in the background	8
9	Context Map	10
10	View of adjacent single storey and two storey residential dwellings fronting Northcote Road	11
11	View of adjacent multi-unit dwellings and three storey apartment block	11
12	View looking east from Palmerston Road into the grounds of the Hornsby and Ku-ring-gai Hospital	12
13	The new Emergency building fronting Palmerston Road	12
14	Northside Medical Imaging	13
15	Hornsby Sleep Disorder Centre	13
16	Residential dwellings to the west of the site	14
17	Northern elevation	21
18	Eastern elevation	22
19	Southern elevation	22
20	Western elevation	22
21	Hornsby Major Centre	34
22	Photographs of surrounding medium density development	42
23	Location of the Most Sensitive Receivers	53

Tables

1	Numeric overview of the proposed development	18
2	Stage 1 key scheme details	19
3	Stage 2 key scheme details	20
4	Summary of key scheme details	21
5	Proposed Building Setbacks	21
6	Building materials and façade treatment	23
7	Director General's Environmental Assessment Requirements	28
8	Director General's Environmental Assessment Requirements	36
9	Potential noise control measures	55

Appendices

A	Architectural Drawings <i>Morris Bray Architects</i>
B	Landscape Plans <i>Site Image Landscape Architects Pty Ltd</i>
C	Director General's Environmental Assessment Requirements and Authorisation <i>Department of Planning</i>
D	QS Report <i>WT Partnership</i>
E	Survey Plan <i>Whelans Insites Pty Ltd</i>
F	Traffic and Accessibility Impact Assessment <i>Arup Pty Ltd</i>

- G** Arborist Report
Treescan
- H** Ecologically Sustainable Development Statement
Sustainable Built Environments Pty Ltd
- I** Phase 1 Contamination Assessment
Douglas Partners Pty Ltd
- J** Qualitative Wind Impact Assessment
Heggies Pty Ltd
- K** Environmental Assessment – Acoustic
Heggies Pty Ltd
- L** BCA Preliminary Report
McKenzie Group Consulting
- M** Hydraulic and Fire Services Report
Warren Smith & Partners Pty Ltd
- N** Access Review
Morris Goding Accessibility Consulting
- O** Waste Management Plan
Morris Bray Architects Pty Ltd
- P** Stormwater Drainage, Erosion and Sedimentation Control Concept Plan
Enstruct Group Pty Ltd
- Q** Threatened Species Assessment
Conacher Environmental Group
- R** Electrical Servicing Letter
Connect Infrastructure Design Pty Ltd
- S** Biological and Trade Waste Review
Aecom Pty Ltd

Executive Summary

Purpose of this Report

To seek the approval of the Minister for Planning under Part 3A of the EP&A Act of a Project Application for the construction of a new hospital at Hornsby in the Hornsby LGA.

This report also responds to the Director General's Environmental Assessment Requirements which were issued on 22 April 2010.

The Proponent

The proponent is the Sydney Adventist Hospital (SAN).

Project Outline

The proposed development involves the staged construction of a maximum four level hospital of approximately 6,237m² gross floor area, to accommodate the SAN Day Surgery Hornsby (SDHS).

Approval is sought for:

- demolition of existing structures and clearing of existing vegetation on the site;
- construction of a new hospital building, including:
 - two levels of parking accommodating 139 cars, 2 service vehicles, 1 ambulance bay and bicycle car parking;
 - reception and admission areas;
 - offices for medical practitioners;
 - 79 hospital beds accommodated in wards;
 - 4 operating theatres; and
 - cafe.
- Landscaping of the perimeter of the site; and
- Upgrading of all utilities to meet demands associated with the development.

The new facility is proposed to consolidate the existing arrangements for accommodation of SAN staff and the SDSH. The new facility will also accommodate medical practitioners who will consult with and treat patients. The proposal provides in-patient services and is accordingly categorised as a hospital under the State Environmental Planning Policy (Major Development) 2005.

The Site and Locality

The site is located opposite the existing Hornsby and Ku-Ring-Gai Hospital with frontages to Northcote Road, Balmoral Street and Palmerston Road in Hornsby. It is a rectangular parcel of land with an area of approximately 3,187m².

The site comprises part of the current legal parcel of Lots 391 & 392 in DP 816195 and Lot 38 in DP 7033.

A site analysis is provided at Section of this report and the Architectural Plans at **Appendix A**.

Statutory Planning Considerations

On 5 November 2009, the Director-General of the Department of Planning, as delegate of the Minister for Planning formed the opinion that the redevelopment of the SDSH was of the type listed in Schedule 1, Group 7, Clause 18 of the State Environmental Planning Policy (Major Projects), was declared as a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies for the purposes of Section 75B of that Act.

Hornsby LEP 1994 is the principal planning instrument applying to the site and locality. The site is zoned Residential AM (Low Density – Medical Support) by the LEP with hospitals being a permitted use.

The development is consistent with the objectives of the zone, and is generally consistent with the planning controls applying to the land under Council's LEP and DCP, with the exception of the height and density controls.

These departures are considered reasonable in this case given that the outdated planning controls applicable to the site, the proposed building's hospital use, and the SAN's opportunity to deliver a better planning outcome in terms of a more efficient and superior building that optimises the site's strategic location within a medical hub.

Environmental Assessment

Our environmental assessment concludes:

- The site is suitable for the proposed development in being located in close proximity to other complimentary medical facilities, having good accessibility nearby public transport and arterial highway, having utility infrastructure available, and being of a size and configuration able to accommodate the facility, with no environmental constraints that are so sensitive as to preclude the development.
- The scale, bulk, height and setbacks of the proposed building can be supported having regard to the proposed uses and the minimal impact on other similar and adjoining health related uses.
- The form and architecture of the proposed new building has been designed to optimise its strategic location within a medical precinct, whilst also responding to surrounding medical and residential uses.
- Landscaping is provided around the perimeter of the site in the building setbacks, with new and additional street trees maintaining the character of the area.
- The proposed development will have no significant additional impact on adjacent properties in terms of views, sunlight access or visual and acoustic privacy.
- The local road network has the capacity to accommodate traffic generated by the proposed hospital.
- A total of 139 car parking spaces are proposed on-site and out of public view to meet the demands of the development and the requirements of Council's planning controls, thereby minimising any need for site users to park on surrounding streets. Delivery vehicles will be wholly accommodated on-site in the loading dock to minimise disruption to local traffic movements.
- The new facility is being designed to achieve a GreenStar rating of at least 4 stars under the Green Building Council of Australia's rating system to achieve a building with an efficient use of energy, water and materials, as well as a high level of internal amenity for occupants.
- A draft waste management plan is included in compliance with relevant health regulations and guidelines.

- A construction management plan will be prepared in conjunction with the builder prior to works commencing to manage the potential impacts of construction activities in accordance with relevant standards including site security and safety, noise and vibration, construction traffic, soil and water management, dust and construction waste, and community consultation.
- The development will comply with the Building Code of Australia's deemed to satisfy provisions, and in some instances, performance based measures.
- The proposal includes a Statement of Commitments on future actions by the proponent.

Given the planning merits above, the proposed development is justified and warrants the approval of the Minister for Planning.

1.0 Introduction

This Project Application and Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is to fulfil the Environmental Assessment Requirements issued by the Director General for the preparation of an Environmental Assessment of a Project Application for the SAH Day Surgery Hornsby Redevelopment.

The report has been prepared by JBA Urban Planning Consultants Pty Ltd, for the proponent, Sydney Adventist Hospital ("the SAN") and is based on information provided by the SAN, design information provided by Morris Bray Architects (**Appendix A**) and supporting technical documents provided by the expert consultant team.

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Environmental Assessment Requirements under Part 3A of the EP&A Act. It should be read in conjunction with the information contained within and appended to this report.

The report is structured as follows:

Section 1: Introduction, overview of the environmental assessment and approvals process, overview of the project, project team, and capital investment value.

Section 2: Site location and context, landownership, existing development, surrounding development, summary of opportunities and constraints.

Section 3: Summary of key issues from consultation.

Section 4: Description of the proposed development.

Section 5: Summary of Director General's Requirements

Section 6: Environmental Assessment of the Project Application.

Section 7: Draft Statement of Commitments.

Section 8: Conclusion

The appendices include a range of technical studies undertaken to inform the Project Application and its environmental assessment. These studies address the Director General's requirements for the environmental assessment. They provide a technical assessment of the environmental impact of the proposed development, and recommend proposed mitigation measures to manage potential environmental impacts associated with the proposal.

1.1 Background

The SAN currently operates a medical day surgery (the SAN Day Surgery Hornsby) on part of the subject site. Opened in 1986, the SAN Day Surgery Hornsby (SDSH) was the first private, freestanding and licensed day surgery in New South Wales.

The SDSH is a multi-specialty day surgery, with the main surgical specialities being:

- Cosmetic / Plastic Surgery
- General Surgery
- Ophthalmology
- Oral / Dental Surgery
- Orthopaedic Surgery

Redevelopment and expansion of the site is intended to complement the SAN's substantial medical facilities at Wahroonga and capitalise on the location's synergy with the NSW Health-operated Hornsby and Ku-ring-gai Hospital.

1.2 Environmental Assessment and Approvals Process

The Major Development SEPP 2005 identifies development to which Part 3A of the EP&A Act applies, and for which the Minister is the consent authority.

Clause 6 of the SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 1 (Classes of Development, Schedule 2 (Specified Sites) or Schedule 3 (State significant development) of the SEPP, is declared to be a project to which Part 3A applies.

Clause 18 of Schedule 1 of the Major Development SEPP states that the Minister may declare as a Part 3A development:

“(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), including ancillary facilities for:

- (a) day surgery, day procedures or health consulting rooms, or*
- (b) accommodation for nurses or other health care workers, or*
- (c) accommodation for persons receiving health care or for their visitors, or*
- (d) shops or refreshment rooms, or*
- (e) transport of patients, including helipads and ambulance facilities, or*
- (f) educational purposes, or*
- (g) research purposes, whether or not they are used only by hospital staff or health care workers and whether or not any such use is a commercial use, or*
- (h) any other health-related use.”*

On 27 October 2009 and in accordance with Section 75B of the EP&A Act, and Clause 6 of the Major Development SEPP, JBA Urban Planning Consultants on behalf of the SAN requested that the Minister:

- declare the project to be a Major Project subject to Part 3A of the EP&A Act; and
- issue environmental assessment requirements for the Project Application.

On 5 November 2009, the Minister declared the project was one to which Part 3A of the EP&A Act applied.

On 11 December 2009 in accordance with Section 75F of the EP&A Act, the Director-General of the Department of Planning issued the requirements for the preparation of an Environmental Assessment to accompany the Project Application project.

Further, on 22 April 2010, the Department of Planning issued updated Director General's Requirements (DGR's) pursuant to section 75F(3) of the EP&A Act, which augmented the required consideration of Ecologically Sustainable Development matters. The environmental assessment of the proposal at Section 6, therefore addresses all issues as included with the DGRs dated 21 April 2010.

A copy of the Director General's Environmental Assessment requirements for the Project Application is included in **Appendix C**.

This report constitutes the Environmental Assessment Report (EAR) for a Project Application for the site.

1.3 Overview of Project

The Project Application seeks approval for:

- demolition of existing buildings on the site;
- excavation for, and construction of, car parking for 139 spaces over two levels (basement and lower ground);
- staged construction of a new 6,237m² hospital building, including ancillary support services; and
- provision of landscaping and construction of associated physical infrastructure.

1.4 Project Team

An expert project team has been formed to deliver the project and includes:

Proponent	Sydney Adventist Hospital
Architecture	Morris Bray Architects
Urban Planning	JBA Urban Planning Consultants Pty Ltd
Land Surveyors	Whelans Insites Pty Ltd
Landscape Architects	Site Image (NSW) Pty Ltd
Arborist	Treescan
Traffic and Transport	Arup Pty Ltd
ESD	Sustainable Built Environments Pty Ltd
Hazards	Aecom Australia Pty Ltd
Contamination	Douglas Partners Pty Ltd
Infrastructure	Warren Smith & Partners Pty Ltd and Connect Infrastructure Pty Ltd
Stormwater	Enstruct Group Pty Ltd
Wind	Heggies Pty Ltd
Quantity Surveyors	WT Partnership
Building Code of Australia	McKenzie Group Consulting (NSW) Pty Ltd
Flora and Fauna	Conacher Environmental Group
Noise	Heggies Pty Ltd

1.5 Capital Investment Value

The estimated capital investment value is \$43 million as detailed in the Quantity Surveyor's Certificate, attached at **Appendix D**.

2.0 Site Analysis

2.1 Site Location and Context

The SDHS site is located at 1A Northcote Road, Hornsby approximately 1km east of Hornsby Station; 700m east of Westfield Hornsby; and 600m west of the Newcastle Freeway (**Figure 1**).

Located on the southern side of Northcote Road, between Balmoral Street and Palmerston Road, the SDHS site also has frontage to 55, 57 and 57A Palmerston Road, and 106 Balmoral Street (**Figure 2**).

The 3,187m² site has an approximate frontage of 17m to Palmerston Road, 31m to Balmoral Street, and 49m to Northcote Road.

The site is located within the Hornsby Local Government Area.

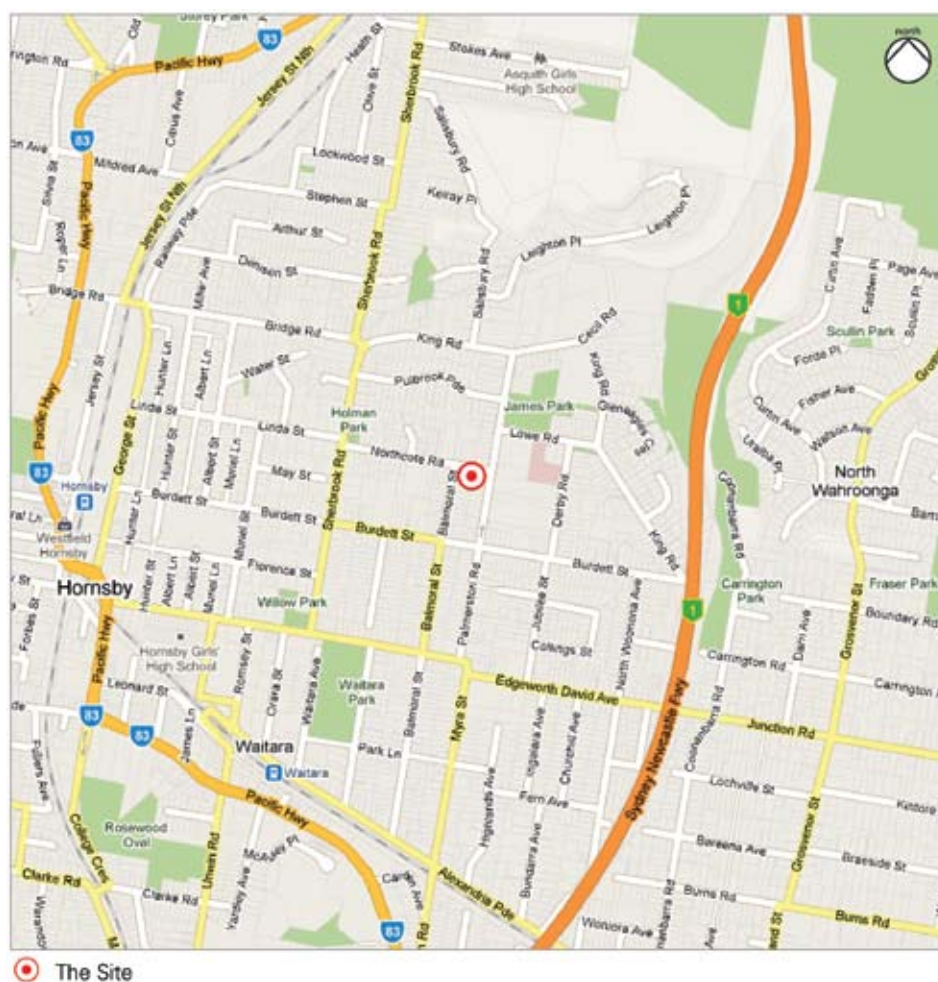


Figure 1 – Locality Plan

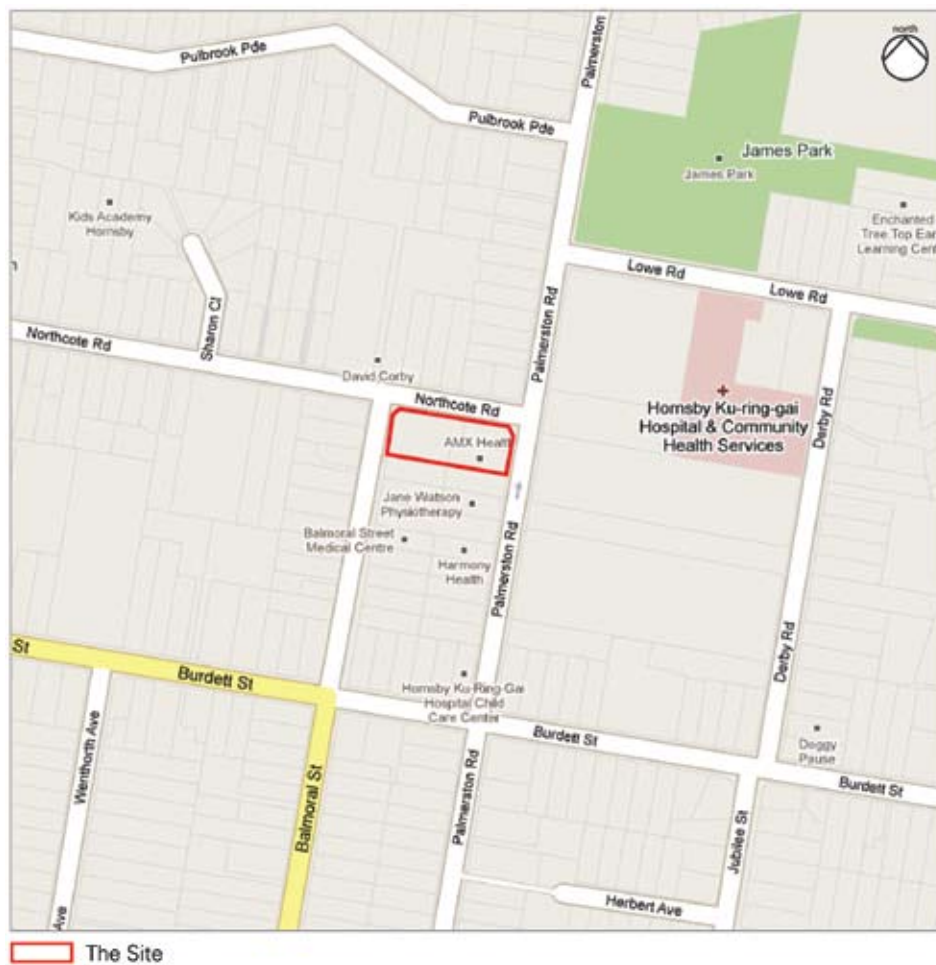


Figure 2 – Site Plan

2.2 Land Ownership and Legal Description

The site is legally described as Lots 391 and 392 in DP 816195, and Lot 38 in DP 7033 and is currently owned by the SAN.

A site survey prepared by Whelans Insites Pty Ltd is included at **Appendix E**.

2.3 Existing Development

The Site Analysis Plan attached at **Appendix A** illustrates the existing distribution of buildings and uses on the site. Five predominantly single storey buildings used for medical related purposes currently occupy the site. At grade parking is provided for visitors and patients of the existing medical uses on the site. Trees are scattered across the site and along its street frontages (predominately semi-mature to mature specimens of commonly planted landscape species), reflecting the leafy character of the area. An aerial photograph of the site, at **Figure 3**, also illustrates the site's existing layout.



Figure 3 – Aerial photograph of the site

Existing uses on the site include:

- The SAN Day Surgery, located at No 1A Northcote Road and shown in **Figure 4**;
- Air Liquide Healthcare (No 106 Balmore Street), shown at **Figure 5**;
- AMX Health (No. 55 Palmerston Road), shown at **Figure 6**;
- On Balance Physiotherapy (No. 57 Palmerston Road), shown at **Figure 7**; and
- Professional rooms (No.57A Palmerston Road), shown at **Figure 8**.



Figure 4 – The existing SAN Day Surgery Hornsby viewed from Northcote Road, looking south



Figure 5 – View of Air Liquide Healthcare building from Balmoral Street, with SAN Day Surgery Hornsby adjoining to the north.



Figure 6 – View of AMX Health building from Palmerston Road looking west



Figure 7 – On Balance Physiotherapy building viewed from Palmerston Road



Figure 8 – View of professional rooms from Northcote Road, with On Balance Physiotherapy in the fore ground and the SAN Day Surgery Hornsby in the background.

2.4 Topography

The topography of the site generally falls from the east to the west, with a gentle drop of approximately 5m. Site levels are shown on the Survey Plan at **Appendix E**.

2.5 Geology and Groundwater

The site is underlain by sandstone from the Wianamatta Group. With reference to the 1:100,000 Soils Landscape Map of Sydney, the site is situated within the Erosional Glenorie Landscape, typified with the following soil characteristics:

- Shallow to moderately deep Red Podzolic Soils on crests;
- Deep Red and Brown Podzolic soils on upper slopes;
- Deep Yellow Podzolic Soils on lower slopes; and
- Humic Gleys, Yellow Podzolic Soils and Gleved Podzolic Soils along drainage lines.

The site is located in an area of no known occurrence of acid sulphate soils on the Department of Land and Water Acid Sulphate Soil Risk Map Series 1:25 000, Edition II.

2.6 Drainage and Flooding

The nearest waterways to the site are Hornsby and Cockle Creeks. Hornsby Creek is located broadly 600m north of the site, with Cockle Creek broadly 600m to the east. The site is situated close to a natural ridge and therefore the probability of the site experiencing flooding is considered to be low.

2.7 Access and Transport

Vehicular Access and Road Conditions

The site is currently served by five vehicle access points, one from Palmerston Road, two from Northcote Road, and two from Balmoral Street.

As shown in **Figures 1** and **2** the site is located at the intersection of Northcote Road, Palmerston Road and Balmoral Street. Key surrounding roads include:

- Northcote Road – is a two way single carriageway road with on street car parking. It is restricted to a 50km/hour speed limit.
- Palmerston Road – is a partially one way street (from Burdett Street to Northcote Road) allowing only north to south traffic movements. Blisters and build out along Burdett Street ensure a low speed environment.

Other streets within the vicinity providing access to the broader road network include Burdett Street, Edgeworth David Avenue and the Pacific Highway.

Car Parking Conditions

Limited on-site at-grade parking (approximately 25 spaces) is currently available for SDHS staff, patients and visitors. On street parking is available surrounding the site. No dedicated service vehicle spaces are currently located on the site.

The Project Application provides an opportunity to reconcile the existing car parking arrangements on and around the site, and provide new on site car parking to service the hospital.

Pedestrian

The site is well connected through local pedestrian footpath networks. A zebra crossing exists along the one-way Palmerston Road adjacent to the site. This provides safe passage for pedestrians crossing to and from the nearby bus stop along Palmerston Road.

Bus

Route 575 is the nearest service the site, with stops in either direction less than 50m to the north along Palmerston Road. The service runs from Hornsby Station, past Hornsby and Ku-ring-gai Hospital, past Turramurra Station, through to Macquarie University and Macquarie Station.

Rail

The site is located approximately 1.1km from Hornsby Rail Station (as the crow flies). Hornsby Station is a major junction between the North Shore Line and the Northern Railway Line and links Hornsby to the greater Sydney area.

2.8 Heritage

The Hornsby Local Environmental Plan 1994 (Hornsby LEP) specifies heritage items and heritage conservation areas within Hornsby LGA. The subject site does not include a heritage item and is not located within a conservation area under the Hornsby LEP.

A search of the NSW Heritage Branch Database reveals that the site also does not contain any items listed by the Heritage Council under the NSW *Heritage Act 1977*.

2.9 Utilities and Services

The site is currently served by a full range of utilities and services. A brief description of the service connections are set out below.

Sewer

The site is currently serviced by two sewer mains, one (225mm diameter) located within the centre and the other (225mm diameter) located in Balmoral Street.

Water

The site is currently serviced by a network of Sydney Water mains located along Palmerston Road, Northcote Road, and Balmoral Street.

Electricity

The site is connected to existing electrical services provided by Energy Australia.

Gas

The site is under the authority of Jemena and is served by gas mains from Northcote Road (32mm), Palmerston Road (110mm), and Balmoral Street (32mm).

2.10 Surrounding Development

The surrounding locality comprises a mix of residential and medical uses. Residential uses are located to the north and west, with the northern side of Northcote Road comprising a mix of dwellings of different scale and type, including some 3 storey flat buildings. The Hornsby Ku-ring-gai Public Hospital is to the immediate east of the site on Palmerston Road, while a range of medical centres, hospitals and health consulting rooms are located directly south of the site. The site's broader context is illustrated within **Figure 9** below.

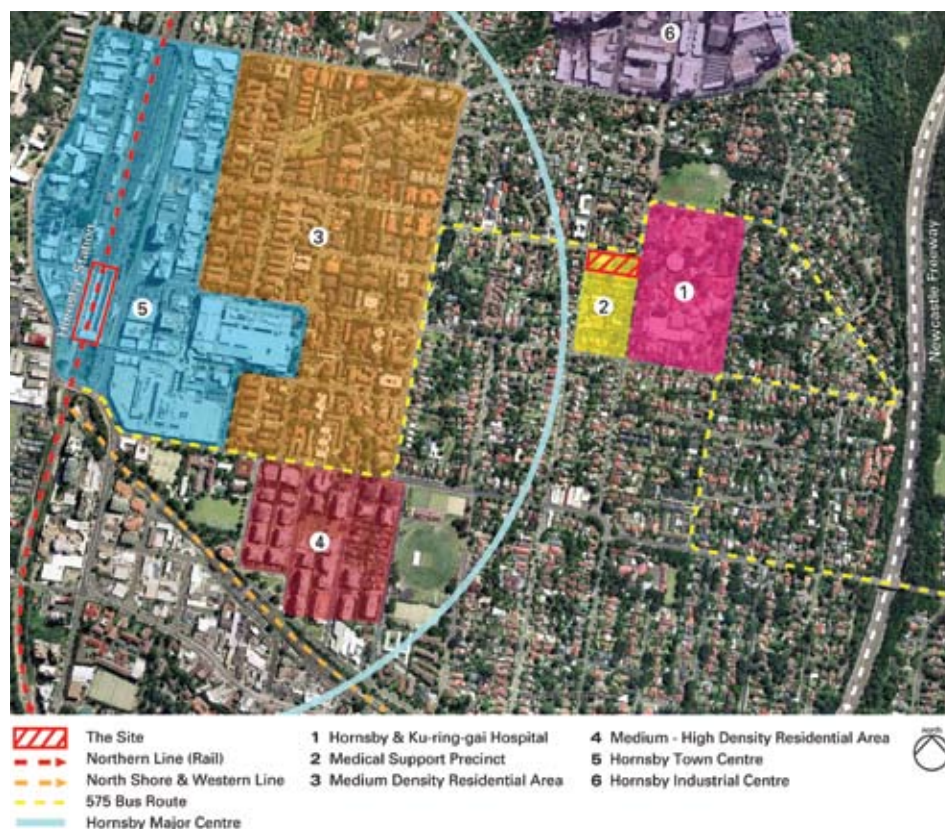


Figure 9 – Context Map

More details on the site's immediate surrounds are provided below.

2.10.1 To the North

To the north of the site across Northcote Road are residential dwellings, comprising single/two storey residential dwellings, two storey multi unit dwellings, and three storey apartment blocks (**Figures 10 and 11**). The higher density residential dwellings reflect more recent development. It is noted that Hornsby Council is currently assessing a Development Application at 8A Northcote Road for a multi-unit development comprising over 38 units.



Figure 10 – View of adjacent single storey and two storey residential dwellings fronting Northcote Road



Figure 11 – View of adjacent multi-unit dwellings and three storey apartment block

2.10.2 To the East

Hornsby and Ku-ring-gai Hospital is located adjacent the site across Palmerston Road (**Figures 12 and 13**). The Hospital encompasses a large tract of land, bound by Lowe Road to the north, Derby Road to the east, Burdett Street to the south, and Palmerston Road to the west.

The Hospital includes a number of buildings of varying height, age and character. A more recent addition/redevelopment of the Hospital involved the new Emergency, Paediatric and Maternity building, fronting Palmerston Road (to the south of the site).

The Hospital has a strong influence over the form and function of surrounding development, including for example the medical support precinct to the west, which includes the subject site.



Figure 12 – View looking east from Palmerston Road into the grounds of the Hornsby and Ku-ring-gai Hospital



Figure 13 – The new Emergency building fronting Palmerston Road

2.10.3 To the South

To the south of the site, between Palmerston Road and Balmoral Street, are a range of medical centres, hospitals and health consulting rooms (amongst others supporting and associated with the Hornsby and Ku-ring-gai Hospital). Basement parking is a feature of a number of buildings in this medical support precinct.

More specifically, adjoining the site to the south-east is the Northside Medical Imaging building, a large two storey building (including basement parking) which occupies the majority of the site.

Immediately adjoining the site to the south-west is the Hornsby Sleep Disorder Centre, a part single and part two storey former residential dwelling.

Figures 14 and 15 provide an indication of the built form that characterises the site's southern surrounds.



Figure 14 – Northside Medical Imaging



Figure 15 – Hornsby Sleep Disorder Centre

2.10.4 To the West

To the west of the site across Balmoral Street are predominately single storey residential dwellings, characterised with dense vegetation along their street frontage (**Figure 16**).



Figure 16 – Residential dwellings to the west of the site

2.11 Summary of Site Opportunities and Constraints

The site presents the following opportunities:

- The site is relatively large and regularly shaped landholding in an urban context that does not immediately adjoin any residential dwellings.
- The site is located within an existing medical support precinct that shares a strong nexus with the adjoining Hornsby and Ku-ring-gai Hospital;
- The majority of the site is already used as a Day Surgery by the SAN;
- The site's shape and size and location within a medical hub/precinct presents a valuable landholding, providing an ideal re-development opportunity;
- The site has a good level of access to public transport, with a bus stop adjoining the site along Northcote Road and the Hornsby Railway Station located 1km to the west;
- The site is located nearby to a major centre (Hornsby);
- The site is located to the south and west of nearby residential dwellings, thereby reducing any potential impacts caused by the proposal in terms of solar access and overshadowing;

The main constraints to development are as follows:

- the site is located on two street corners and has an interface with residential dwellings; and
- the surrounding area has a green and leafy character.

3.0 Consultation

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.

In preparing the DGRs for the Environmental Assessment, the Department of Planning consulted with the relevant authorities. Both Hornsby Shire Council and the Roads and Traffic Authority (RTA) responded to the Preliminary Environmental Assessment prepared on the SAN's behalf, raising their key issues for considerations to be included in the Environmental Assessment.

To our knowledge, no other agencies provided comments in response to the Department of Planning's request for DGRs. Notwithstanding this, the Department of Planning will advertise and exhibit the Environmental Assessment and appended reports and documentation, thereby providing relevant State Government agencies with an opportunity to review the proposal and prepare a submission(s).

Furthermore in preparing the Project Application for the redevelopment of SDSH, the SAN consulted with Sydney Water, Jemena, the RTA, Energy Australia, and NSW Health. It is not considered necessary to consult further with all of these bodies in regard to the proposed development.

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.

3.1 Council and Agency Consultation

The DGRs issued for the Project require the SAN to consult with following groups:

- Hornsby Shire Council;
- Ministry of Transport (MoT);
- NSW Health;
- Roads and Traffic Authority (RTA); and
- Relevant service providers.

Preliminary consultations have commenced with the service providers and the SAN has also arranged meetings with Hornsby Shire Council and NSW Health in the coming weeks. The SAN will provide the Department of Planning with regular updates of the consultation outcomes.

Arup, as the specialist responsible for the preparation of the traffic impact assessment, that comprises **Appendix F** of this EAR, has advised that the Project does not trigger formal requirement to the RTA or MoT under the applicable legislation and policies. It is noted however that these agencies will be referred copies of the application during exhibition (as outlined above).

3.2 Community and Adjoining Occupier Consultation

The SAN has undertaken preliminary consultation with its immediate neighbours as well as SDHS staff and users.

The objective of the consultation programme was to inform people of the SAN's proposal and to provide those likely to be most affected by the proposal with an opportunity to provide feedback to the project team.

The SDHS's current users stressed the importance of the SDSH being able to continue to operate and provide its patients with a continuous and seamless level of service throughout the redevelopment project.

The SAN recognises the importance of positive relationships with all stakeholders and seeks to proactively engage with them over the duration of the project. A Stakeholder Consultation Strategy will be prepared to outline how the SAN will engage in ongoing stakeholder engagement.

4.0 Proposed Project

The Project Application seeks approval for the following development:

- demolition of existing buildings on the site;
- excavation for, and construction of, car parking for 139 spaces over two levels (basement and lower ground);
- staged construction of a new 6,237m² hospital building, including ancillary support services; and
- provision of landscaping and construction of associated physical infrastructure.

Put simply, this proposal involves the relocation of existing services and operations undertaken within the existing SAN Day Surgery to a new, modern and enlarged building on an expanded site.

The range of services and functions currently provided by SDSH (refer to Section 1.1) will continue to be provided within the redeveloped building.

This section of the report provides a detailed description of the proposed development, including staging details. This section of the EAR should be read in conjunction with the Architectural Plans prepared by Morris Bray Architects for the proposed development at **Appendix A**, the Landscape Plans prepared by Site Image included at **Appendix B**, and the photomontages/images of the proposed development at **Appendix A**.

4.1 Design Principles

The design principles underpinning the design of the proposed development are:

- Delivery of flexible floor plate to accommodate the SDHS's services and consulting needs in a modern, inviting and stimulating environment;
- Supporting the medical relationship of the site with the adjoining Hornsby and Ku-ring-gai Hospital;
- Delivery of the main pedestrian entry statement with associated landscaping at Palmerston Road;
- Clear building circulation patterns that minimise extensive corridor systems and closed interiors, yet create a sense of discrete and semi-private zones in which patients and staff can be accommodated;
- Positioning patient wards and recovery rooms around the perimeter of the building, thereby optimising day light penetration and reducing energy demand;
- Retaining, where possible, landscaping and planting along the site's street frontages, and supplementing existing landscaping with additional planting to contribute to the site's leafy and green urban context;
- The building is over 3-4 levels with two levels of car parking and rooftop plant. The justification for the building's departure from Hornsby Shire Council's height control is addressed in Section 6.5.
- The design orientates the bulk of the building towards the centre and southern half of the site, away from nearby residential dwellings and has been stepped down towards the western boundary (consistent with the slope of the land);
- The building has been articulated and modulated to break down its bulk and scale into smaller components to create a building of varied expression and heights, and provide a modern and visually interesting addition to the medical built form character of the area;
- The built form is generally grounded, with landscaped terraces provided to mask the exposed car parking areas and faces of the basement areas;

- The rooftop plant room is held within the building height plane; and
- The roof form comprises low pitched metal deck roofing to minimise vertical projections.

4.2 Numeric Overview

A numeric overview of the proposed development is provided in **Table 1** below.

Table 1 – Numeric overview of the proposed development

Component	Proposal
Site area	- 3,187m ²
Gross Floor Area	- 6,237m ²
Density (maximum)	- Floor Space Ratio: 1.95:1
Building Height (maximum from ground level)	<ul style="list-style-type: none"> - Building maximum (plant level): 21.6m - Palmerston Road: 15.2m - Northcote Road: 17m - Balmoral Street: 14.9m
Landscaped Area	- 15% of the site
Car Parking	<ul style="list-style-type: none"> - 139 car parking spaces for visitors, patients, and staff (including 6 disabled spaces and 31 small car spaces). - Two service vehicles spaces - One ambulance bay

4.3 Building Description and Staging

Once fully constructed, the development will be a 3-4 level building including two levels of car parking, one of which is above ground whilst the other will be provided as basement parking. The floor plates of the basement, lower ground, ground floor, and level 1 are generally the same, with reduced floor plates for level 2 and level 3.

The proposed redevelopment of the SDSH involves a two staged approach, in response to the outcomes of the consultation undertaken to date with SDHS users (refer to Section 3). A staged construction program is therefore proposed to enable the SDSH to continue to operate and provide its patients with a continuous and seamless level of service throughout the redevelopment project. Retaining the existing SDSH during the construction of Stage 1 also facilitates the provision of medical services to continue to be provided to patients, with services to be decanted from the existing SDSH building into the eastern section of the new building once completed.

Once all services and functions of the SDSH have been decanted into the new building on the eastern half of the site, the existing SDSH building will become redundant and can then be demolished to make way for the completion (stage 2) of the redevelopment project.

Further details of the two stages are provided below.

4.3.1 Stage 1

Stage 1 will comprise:

- Demolition of four buildings on the site;
- Retention and operation of the existing main SDSH building;
- Excavation for and construction of basement parking (excluding the area of site occupied by retained SDSH building);
- Partial construction of the new SDSH building on eastern half of the site; and
- Construction of landscaping and associated physical infrastructure associated with Stage 1.

A level by level breakdown of Stage 1 level is summarised in **Table 2** below:

Table 2 – Stage 1 key scheme details

Element	Details	GFA
Basement:	- Provision of 74 car spaces at basement level accessed from Balmoral Street	N.A
Lower Ground Floor	- Ambulance drop off area, two service vehicle spaces, and parking for 16 cars including four disabled spaces accessed from Northcote Road - Hospital support functions (including prep kitchen, comms room, rubbish collection, switch room etc)	450m ²
Ground floor	- Main pedestrian entry level (accessed from Palmerston Road) - Public and staff cafe and associated kitchen - Outdoor terrace fronting Northcote Road - Admin/admission centre - 13 hospital beds with central support	990m ²
Level 1	- Ward bed level - Provision for 22 hospital beds with central support	1,025m ²
Level 2	- Operating theatre level - Provision of two general operating theatres - Recovery areas - Reception and waiting area - Support facilities	1,053m ²
Level 3	- Plant room - Doctors lounge and open terrace	109m ²

4.3.2 Stage 2 – Fully Developed

Stage 2 comprises:

- Demolition of the main SDSH building;
- Excavation for and construction of remaining basement in location of existing SDSH;
- Completion of construction of the redeveloped SDSH on western half of the site; and
- Completion of landscaping and associated physical infrastructure associated with stage 2.

A summary of key scheme details for Stage 2 (fully developed) are included within **Table 3** below.

Table 3 – Stage 2 key scheme details

Element	Details	GFA
Basement:	- Provision for 87 car spaces (increase of 13 from stage 1) accessed from Balmoral Street	N.A
Lower Ground Floor	- Ambulance drop off area, loading dock, two service vehicle spaces, and parking for 52 cars (increase of 36 from stage 1) including 6 disabled spaces (increase of two from stage 1) accessed from Northcote Road - Hospital support functions (including prep kitchen, comms room, rubbish collection, switch room etc)	N.A
Ground floor	- Main pedestrian entry level (accessed from Palmerston Road) - Public and staff cafe and associated kitchen - Outdoor terrace fronting Northcote Road - Admin/admission centre - 35 hospital beds (increase of 22 from stage 1) with central support	1,013m ²
Level 1	- Ward bed level - Provision for 44 hospital beds (increase of 22 from stage 1) with central support	1,013m ²
Level 2	- Operating theatre level - Provision of four general operating theatres (increase of two from stage 1) - Expanded recovery areas - Reception and waiting area - Expanded support facilities	584m ²
Level 3	- Expanded plant room - Doctors lounge and open terrace	N.A

4.3.3 Summary

A summary of the key scheme details of the proposed development are included within **Table 4** below.

Table 4 – Summary of key scheme details

Element	Stage 1	Stage 2	Total
Car spaces	87 (including 4 disabled spaces)	52 (including 2 disabled spaces)	139 (including 6 disabled spaces)
Service Vehicles Spaces	3	-	3
Beds	35	44	79
Theatres	2	2	4
GFA	3,627m ²	2,610m ²	6,237m ²

4.4 Building Envelope

The building is a predominately three storey building, with a stepped fourth storey.

The maximum height of the building within the centre of the site is approximately 15m above ground level. As illustrated in **Figures 17 – 20**, the building steps down to a maximum height of 15.2m above ground level along the eastern boundary (Palmerston Road), 17m along the northern boundary (Northcote Road), and 14.9m along the western boundary (Balmoral Street).

The proposed setbacks are outlined in **Table 5** below.

Table 5 – Proposed Building Setbacks

Boundary	Ground Level setback (minimum)
Northern - Northcote Road (primary street)	6.3m
Eastern - Palmerston Road	4.5m
Western - Balmoral Street	3.4m
Southern – 104 Balmoral Street and 53 Palmerston Road	3.02m



Figure 17 – Northern elevation

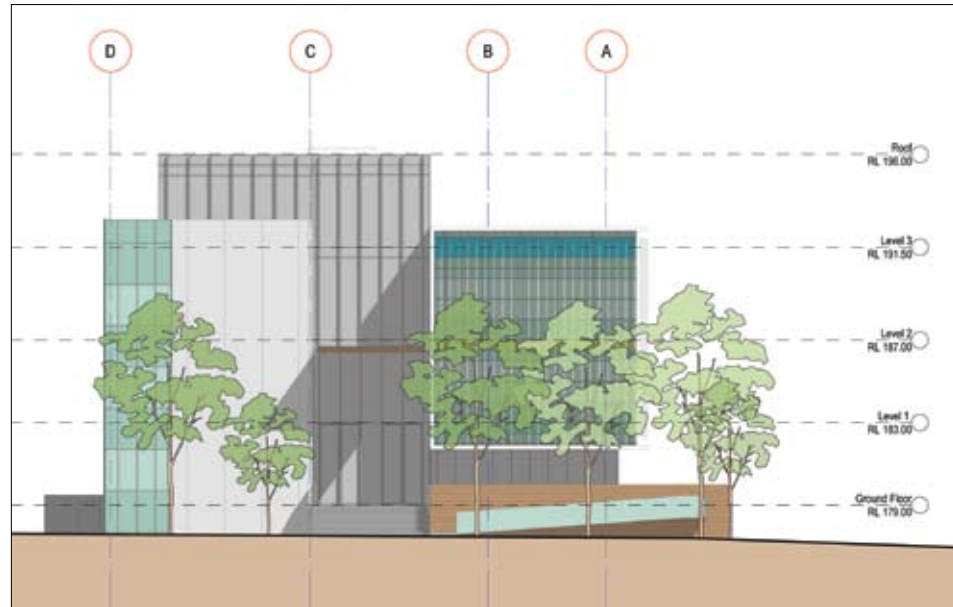


Figure 18 – Eastern elevation

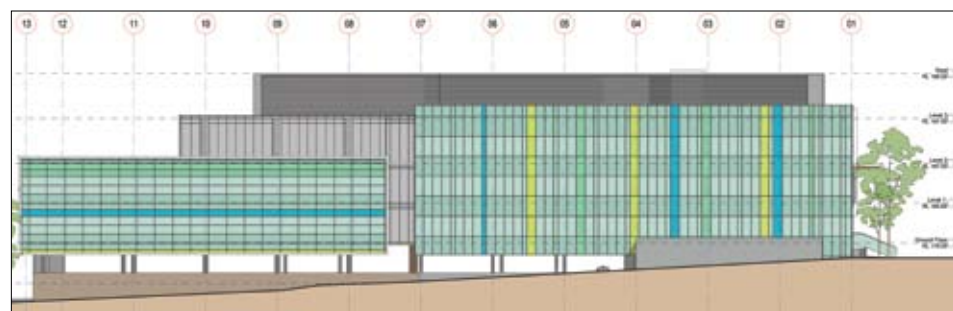


Figure 19 – Southern elevation



Figure 20 – Western elevation

Table 6 outlines the proposed building materials and façade treatment for the development.

Table 6 – Building materials and façade treatment

Component	Detail
Façade treatment	Curtain wall system; off form concrete; slatted timber; timber louvres; sandstone tiles; glass balustrades; horizontal louvres
Landscaping/vegetation	Concrete; turf, landscaping

4.5 Access, Loading and Parking

4.5.1 Vehicular Access

Three vehicle access points are proposed as part of the redevelopment of the SDSH, one from Northcote Road, and two from Balmoral Street. The proposed access points generally reflect the locations of existing access points to the site. Access from Northcote Road will service the lower ground floor, with separate entry and exit points along Balmoral Street serving the basement level.

4.5.2 Pedestrian Access

The main pedestrian entry to the redeveloped SDSH building will be from Palmerston Road. The location supports the medical nexus between the site and the adjoining Hornsby and KuOring-gai Hospital.

Due to the topography of the site, the ground floor (which is the main pedestrian entry level) is raised above the natural ground level along Palmerston Road, resulting in an elevated entrance served by stairs and a ramp. The design and positioning of the stairs and ramp ensures that both 'able' and 'disabled' persons can share the same entrance to the building.

Existing pedestrian pathways along Palmerston Road, Northcote Road, and Balmoral Street will not be affected by the proposed development, and suitable measures are to be implemented during construction in order to minimise potential impacts.

4.5.3 Delivery and Servicing

Delivery and servicing vehicles are to enter the site through the Northcote Road access point, located centrally along the site's northern boundary.

This access point serves the lower ground floor level which comprises mainly car spaces and BOH operations. Provision for three service vehicle spaces is provided, comprising courier space, ambulance bay, and loading dock.

All delivery and servicing vehicles will enter and exit the site in forward gear.

4.5.4 Car Parking

A total of 139 undercover car parking spaces will be provided in the basement and lower ground floor levels of the building. This quantum of parking includes 6 disabled car spaces and 31 small car spaces spread across both levels of parking.

4.5.5 Bicycle Facilities

The proposed redevelopment will have weather-protected, secure parking for a number of bicycles for staff/visitors located at basement level adjacent to the lifts. Bicycle facilities (including staff change rooms with toilets, shower facilities and lockers) will also be provided at basement level. Bicycle locking points will be installed adjacent to the entry of the building on Palmerston Road for visitors.

4.6 Landscaping

A Tree Report has been prepared by Treescan (refer to **Appendix G**), documenting existing trees on the site and commenting on the effects of the proposal. A number of trees across the site will require removal as a result of the proposal, in the main within the centre of the site.

A plan of the proposed landscaping for the development is included within the Landscape Plans and specifications, prepared by Site Image Landscape Architects, included within **Appendix B**. The proposed design provides:

- Replacement of feature street tree (Jacaranda) along the site's western boundary;
- Relocation (on site) of palm trees along the site's western boundary;
- Retention (part) of planting along the site's northern boundary;
- Planting along part of the building's Northcote Road facade;
- Retention (part) of planting along the site's eastern boundary; and
- Planting along the site's eastern boundary.

Landscaping is proposed to be undertaken as relevant to each stage.

4.7 Operational Details

Whilst involving the provision of new and larger premises, the future services and operations undertaken on site are expected to generally reflect that of the existing SDSH. It is anticipated that the redeveloped SDSH will employ in the order of 100 staff.

The proposed hours of operation of the redeveloped SDSH will reflect the existing hours of operation of the SDSH on the site, which currently operates 24 hours a day. As is currently the case, peak use of the redeveloped SDSH will take place during the day.

The SDSH holds an Extended Recovery Care licence from NSW Department of Health, allowing patients who have undergone more advanced surgery to stay overnight for post-operative care. Accordingly, whilst activity will occur within the redeveloped SDSH during the night, it will be low intensive as it will not generally involve the intake of patients or receiving visitors.

The cafe on the elevated ground floor will principally serve patients and visitors to the site. The general public is however also welcome to use the cafe. The hours of use for the cafe will be principally between 9.00am to 5.00pm.

4.8 Ecological Sustainable Development

As set out in SBE's ESD Statement (**Appendix H**) the proposed development incorporates a number of ESD initiatives into the design and operation of the proposed development. These are discussed in further detail in Section 6.8.

4.9 Stormwater Drainage

Enstruct Civil and Structural Engineers have prepared a Stormwater Drainage Concept Plan for the proposed development. The key parts of the stormwater management system are explained below.

Roof drainage

All roof drainage to be designed to:

- suit 20 year ARI or 1 in 100 year ARI;
- have protection against leaves or debris blockage; and
- connect to the combined rainwater detention storage tanks.

Surface water drainage

Surface water runoff from the ground or near ground level impervious areas (being a small percentage of the total site area) is proposed to be discharged directly to the nearest Council pipes or kerb and gutter. It is not practical to discharge surface water to the detention tanks due to level constraints of the site and due to the potential of the water to pollute the 'clean' rainwater.

Rainwater collection

Two dual purpose detention/rainwater tanks are proposed at basement and lower ground levels, with the lower half of the tank comprising the rainwater storage. It is proposed for the rainwater to be used for external landscape watering and within the building as a non-potable water reuse (e.g. toilet flushing). Rainwater reuse will require the use of mechanical pumps, which will be designed as part of the detailed design stage.

4.10 Utilities and Services

Water

The development is to be connected to one of the existing Sydney Water mains serving the site.

Fire Protection

A fire control panel and sprinkler valve room is to be located within the Hospital support function area at the eastern end of lower ground level. The fire sprinkler system, fire hydrant and hose reel system, fire detection and alarm system, and sound system and intercom system to be installed and located throughout the building will be designed and constructed in accordance with relevant Australian standards and BCA requirements.

Sewer Drainage

The development is to be connected to one of the existing Sydney Water sewer mains on the site.

Electricity

Connect Infrastructure as an authorised service provider accredited to design and build Energy Australia's assets is in the process of negotiating with Energy Australia to confirm the potential augmentation and extension of Energy Australia's network to meet the additional load of the proposed development at this site.

Gas

The proposed development will connect to one of the existing gas mains that serve the site.

4.11 Construction and Site Management

Construction Management

As outlined in Section 4.3, construction will occur in two stages. A detailed Construction Management Plan will be prepared by the appointed contractor prior to commencement of works and will address:

- traffic and pedestrian construction routes;
- storage and handling of construction materials;
- waste handling procedures; and
- proposed hours of construction.

Hoardings, erosion and sediment control measures, site fencing and tree and root protection zones will be installed as part of the demolition and construction process to ensure the site remains safe at all times.

Construction of the basement will require part of the site to be excavated. This will necessitate the installation of temporary shoring, batters and permanent retaining walls across the site. Excavated materials may be able to be reused on site (subject to confirmation), whilst some material will require disposal at appropriate landfills.

Operation

Handling and storage of waste during the operation of the redeveloped SDHS will be managed internally, however existing waste removal practices will be continued and overseen by the SAN's existing waste contract.

Clinical and medical wastes will be stored in secured areas before being disposed of by specialist contractors and transported for treatment or incineration.

General waste will be stored on the Lower Ground Level. Provision will be made throughout the building for the sorting of waste recyclables, organics, commingles and general waste.

4.12 Developer Contributions

Hornsby Shire Council's Section 94 Development Contributions Plan (2007-2011) 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.

Whilst it is noted that "commercial/retail" development attracts contributions of \$2,154.25 per employee (equating to \$215,425 of Section 94 Contributions for the overall hospital), it is our view that "hospital" as a defined land use in the Hornsby LEP (upon which the Section 94 Contributions Plan is presumably based) and therefore cannot be categorised as a commercial and/or retail development. Similarly, the hospital cannot be identified as a "business premise" which is defined under the LEP as *"a building or place in which there is carried on an occupation, profession, light industry or trade or banking activities which provides a service directly and regularly to the public, but does not include a building or place elsewhere defined in this clause"* (emphasis added).

Notwithstanding the above, we note that the Contributions Plan states *"the contribution rates for development that does not fall within the above development types will be based on an assessment of the expected demand for public facilities that the development generates"*. In this regard, Section 94 levies cannot be imposed on a development unless there is an increased demand on local infrastructure being generated by the development.

The expected demands on local infrastructure are being addressed by the proposal through the provision of on-site car parking, job creation and economic investment in the Hornsby LGA and the other significant social and economic impacts identified in Section 6.20.

An exemption from the payment of Section 94 Contributions can also be supported on the following grounds:

- the proposal's principal purpose is to replace, upgrade and improve an existing obsolete facility;
- there is not expected to be a significant increase in patients (who as sick people are unlikely to use the community facilities for which contributions are collected); and
- the proposal will mitigate environmental impacts and seek to provide its own car parking and public domain enhancements, drainage and site entrance works as part of the project.

It is therefore considered reasonable that the SAN be exempt from paying Section 94 Contributions.

5.0 Director General's Requirements

Table 7 provides a detailed summary of the individual matters listed in the Director General's Environmental Assessment Requirements (DGRs) and / or identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 7 – Director General's Environmental Assessment Requirements

Director General's requirements	Location in Report/ Application
Key Issues	
Relevant Environmental Planning Instruments, Policies and Guidelines to be addressed	Section 6.1 Section 6.2
Planning provisions applying to the site, including the permissibility and the provisions of all plans and policies including:	Section 6.3
- Objects of the EP&A Act;	Section 6.5
- SEPP (Major Development) 2005;	Section 6.5
- SEPP (Infrastructure) 2007;	
- SEPP 55 – Remediation of Land	
- NSW State Plan	
- Sydney Metropolitan Strategy and draft North Subregional Strategy	
Consider the applicable Hornsby Shire Council Instruments and policies.	
Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines (including the Hornsby Shire Council Medical Support Development Control Plan and any other relevant Hornsby Shire Council DCP/s) and justification for any non-compliance.	
Built Form	Section 4.1
The EA shall address the height, bulk and scale of the proposed development within the context of the locality. Detailed envelope/ height, FSR and contextual studies should be undertaken to ensure the proposal integrates with the local environment, and that the form, layout and siting of the building achieve optimal design and amenity outcomes.	Section 4.3 Section 6.5 Appendix A Appendix B
Urban Design	Section 4.1
The EA shall address the design quality of buildings with specific consideration of the façade, massing, setbacks, articulation, materials/ finishes & colours palette.	Section 4.3 Section 4.6
The EA shall address landscaping, safety by design and public domain, including an assessment against the Crime Prevention Through Environmental Design (CPTED).	Section 6.5 Section 6.7 Appendix A Appendix B
Amenity Impacts on Neighbouring Properties	Section 4.1
The EAR must address the visual impact, privacy and overshadowing of the development on adjoining properties, with particular regard to any sensitive uses.	Section 6.5 Appendix A Appendix B
The EA shall provide the following documents:	Appendix J
- View analysis to and from the site from key vantage points;	
- Options for the siting and layout of building envelopes having regard to views from adjoining buildings, adequacy of separation between buildings on the site, impacts on the development potential of adjoining properties, solar access to surrounding properties and wind.	

Director General's requirements	Location in Report/ Application
<p>Ecologically Sustainable Development</p> <p>The EA shall:</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; and - Demonstrate that the development can achieve a minimum 4 Green Star rating, or any other suitably qualified rating scheme. 	<p>Section 6.8</p> <p>Appendix H</p>
<p>Transport and Accessibility (Construction and Operational)</p> <p>The EA shall provide a Transport & Accessibility Impact Assessment prepared in accordance with the RTA's Guide to Traffic Generating Developments and making reference to the NSW Planning Guidelines for Walking and Cycling, considering traffic generation, car parking and access arrangements, measures to promote sustainable means of public transport, relevant State Plan targets, existing pedestrian and cycle movements, mitigation measures during construction for pedestrians and cyclists, implications for non-car travel modes.</p>	<p>Section 6.6</p> <p>Appendix F</p>
<p>Soil and Water</p> <p>The EA shall include:</p> <ul style="list-style-type: none"> - A site water balance for the project, including a description of the measures that would be implemented to minimise the use of potable water. - Detailed plans of the proposed erosion and sediment controls during construction and stormwater infrastructure during operations. - Consideration of the potential for flooding (with consideration of climate change), contamination, acid sulphate soil and salinity impacts. - An assessment of the feasibility of installing infrastructure for rainwater collection. 	<p>Section 2.5</p> <p>Section 2.6</p> <p>Section 4.9</p> <p>Section 6.9</p> <p>Section 6.10</p> <p>Appendix A</p> <p>Appendix I</p> <p>Appendix P</p>
<p>Noise</p> <p>The EA shall include a quantitative assessment of the potential construction, operational and traffic noise impacts of the project.</p>	<p>Section 6.11</p> <p>Appendix K</p>
<p>Developer Contributions</p> <p>The EA shall review the project against the relevant contributions plans, and outline what contributions would be made towards the provision of local infrastructure and services.</p>	<p>Section 4.12</p>
<p>Waste</p> <p>The EA shall identify, classify and quantify the likely waste streams of the project during construction and operation, and describe what measures would be implemented to minimise, reuse, recycle and dispose of this waste.</p>	<p>Section 6.14</p> <p>Appendix O</p>
<p>Heritage</p> <p>The EA shall consider any potential impacts on heritage.</p>	<p>Section 2.8</p> <p>Section 6.15</p>
<p>Flora and Fauna</p> <p>The EA shall consider any potential impacts on flora and fauna.</p>	<p>Section 6.16</p> <p>Appendix Q</p>
<p>Hazards</p> <p>The EA shall consider the hazard risks from the storage and use of hazardous materials.</p>	<p>Section 6.17</p> <p>Appendix S</p>

Director General's requirements	Location in Report/ Application
<p>Consultation</p> <p>During the preparation of the Environmental Assessment, you should consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with:</p> <ul style="list-style-type: none"> - Hornsby Shire Council; - NSW Health; - Roads and Traffic Authority; - Ministry of Transport; and - Relevant service providers for energy, gas and water etc. <p>The consultation process and the issues raised must be described in the Environmental Assessment.</p>	Section 3.0

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Project Application proposal. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs).

The draft Statement of Commitments complements the findings of this section.

6.1 State Legalisation

6.1.1 Environmental Planning and Assessment Act 1979 (EP&A)

The Objects of the EP&A 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,*
 - (iv) *the provision of land for public purposes,*
 - (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, and*
 - (vii) *ecologically sustainable development, and*
 - (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposed development is consistent with the objects of the EP&A Act, particularly so for the following reasons:

- The development sites the proposed redeveloped SDHS in an existing medical precinct that shares close ties with the Hornsby and Ku-ring-gai Hospital and provides for the orderly and co-ordinated use of land by replacing dated and underutilised buildings.
- It provides social and economic benefits through the investment by the SAN in providing expanded medical facilities to serve the local and wider community and through generating substantial and real employment benefits.
- The development is being provided with little or no environmental impact arising from the construction and operation of the development.
- Ecologically sustainable development initiatives are to be incorporated into the design, construction, and operation of the development.

Part 3A of the EP&A Act outlines the process for considering applications under the Major Development SEPP. In particular it outlines:

- What development constitutes a Major Development;
- The matters which the Minister must take into account when assessing a major application;
- Information which must be submitted with an major Project Application;
- The environmental assessment requirements for approval;
- Public exhibition of Major Project Applications;
- Assessment report procedures; and
- Appeals under Part 3A.

This report responds to these requirements.

6.2 Strategic Implications

State Plan

The New South Wales State Plan was released in March 2010. The Plan sets a strategic direction and goals for the NSW Government across a broad range of services and infrastructure. The challenge set by the Plan is to balance competing demands in an environment of change, high expectations and limited resources.

The redevelopment of the SDSH will assist in implementing solutions to these challenges. The proposal will provide a new and modern hospital facility on land currently used for medical related purposes, which is well connected to public transport links and in close proximity to the major centre of Hornsby. The proposal seeks to provide expanded medical facilities for a growing urban population. It will also demonstrate a high level of sustainability with the provision of those measures indicated within the ESD Statement (refer to **Appendix H**) and other various management plans (refer to Statement of Commitments and relevant appendices).

The Part 3A Project Application satisfies key priorities of the State Plan, namely:

- *Increase the number of jobs closer to home* – the proposal will increase the provision of jobs within an employment node, in a location with good connections to public transport.
- *Maintain and invest in infrastructure* – the provision of the new, modern, and enlarged SDHS will assist in equipping NSW with the infrastructure to support growth;
- *Improve and maintain access to quality healthcare in the face of increasing demand* – the provision of the new, modern and enlarged SDHS responds to increasing demand for healthcare services from an increasing population base.
- *Tackle climate change* – the design of the proposal seeks to reduce reliance on energy consumption for heating/cooling purposes. The use of gas to supply energy for the operation of the Day Surgery will also be maximised, together with investigating the use of low carbon technology (e.g. cogeneration plant), solar hot water, and PV cells.
- *Secure sustainable supplies of water and use our water more wisely* – the proposal incorporates the collection of rainwater for use in non-potable applications such as landscape irrigation and for flushing toilets and urinals.

Sydney Metropolitan Strategy (2005)

The two most pertinent strategies within the NSW Metropolitan Strategy in relation to the proposed development relate to 'Economy and Employment' and 'Centres and Corridors'.

The Metropolitan Strategy's vision for the Economy and Employment is summarised below:

- Sydney will have a competitive, innovative and adaptable economy which underpins its success in the global economy;
- Sydney will continue to offer opportunities for value-added investment, more good jobs, innovation and learning;
- Economic spaces will strengthen globally competitive industry networks and clusters. An advanced infrastructure network will support the flow of ideas, people and products.

Relevant objectives of the Metropolitan Strategy for Economy and Employment are summarised as follows:

- Provide suitable commercial sites and employment lands in strategic areas; and
- Increase Innovation and Skills Development.

The Hornsby and Ku-ring-gai Hospital is a key generator of employment within the Hornsby LGA and wider subregion. Significant opportunities exist for uses aligned with the public hospital to be developed on surrounding land, which will further support job creation in the area and Sydney more broadly. The proposed redevelopment of the SDHS, involving the provision of over 100 jobs, will therefore contribute to the Sydney economy and further support its role as a Global City.

The Hornsby and Ku-ring-gai Hospital has in the past (on an ad hoc basis) acted as a type of 'magnet infrastructure', drawing a range of medical uses which share a nexus with and support the Hospital to establish within adjoining lands. The past clustering of uses has enabled this medical 'node' to distinguish itself from other medical centres in the region. The redevelopment of the SDHS will further strengthen this industry cluster through improving the quality and quantum of medical support services adjoining the public hospital.

The SDHS redevelopment collectively satisfies the Metropolitan Strategy's vision for Centres as summarised below:

- It reinforces Hornsby as an attractive place to live, work and invest;
- It facilitates the provision and creation of high skilled, high quality jobs, strong education and health facilities, attractive streets, good urban design and high quality public places;
- It will offer a range of health care opportunities and experiences for people of different ages, background and circumstances.
- It provides a place and location for economic activity and employment within the Sydney Region;
- It optimises the opportunities available to cluster business and knowledge based activities in strategic centres;
- It concentrates activity near public transport connections.

The proposed development will capitalise on the site's strategic location on the periphery of the Hornsby Major Centre, with its high level of public transport links, together with strengthening the cluster of medical uses supporting the adjoining the Hornsby and Ku-ring-gai Hospital.

Draft North Sub-regional Strategy

The Draft North Subregional Strategy was released in November 2007. It forms a key part of the implementation of the Metropolitan Strategy and when adopted is intended to guide land use planning in the Hornsby local government area to 2031.

Economy and Employment

The Draft North Subregional Strategy sets an employment capacity target of 9,000 new jobs for the Hornsby LGA by 2031. Hornsby and Ku-Ring-Gai Hospital and the Hornsby TAFE campus are identified as the major employers in the sub region, with the public hospital having more than 1,500 staff caring for over 250,000 people living in the Hornsby Ku-ring-gai area and surrounding areas.

A number of jobs are generated through the existing medical uses on the subject site, including the existing SDSH. The proposed redevelopment of the site, providing a new and enlarged facility, will generate a significant increase in medical related jobs (approximately 100 staff to be employed) thereby supporting the employment capacity target for Hornsby. A large number of direct and indirect jobs will also be generated during construction of the proposal.

Centres and Corridors

The provision of the new and enlarged SDHS on the periphery of the Hornsby Major Centre (refer to **Figure 21** below) will support and reinforce the role of the Major Centre as the focus of economic development in the sub-region.

The Hornsby and Ku-ring-gai Hospital performs a vital social, economic and employment role which generates subregional-wide benefits. The medical support precinct adjoining the Hospital, in which the site is located, supplements the functions and services of the Hospital. The provision of a new, modern, and enlarged SDHS strengthens the SAN's role in the subregion and provides an opportunity to provide contemporary and enhanced hospital and health care services.



Figure 21 – Hornsby Major Centre

6.3 Relevant State Environmental Planning Policies

The following State Environmental Planning Policies are relevant to the proposal and are discussed further below:

- SEPP (Major Development) 2005
- SEPP (Infrastructure) 2007
- SEPP 33 – Hazardous and Offensive Development
- SEPP 55 – Remediation of Land

6.3.1 State Environmental Planning Policy (Major Development) 2005

State Environmental Planning Policy (Major Development) 2005 (Major Development SEPP) together with EP&A Act provides the planning framework for the assessment of State and Regionally Significant projects.

Clause 18 of Schedule 1 of the Major Development SEPP provides for development with a Capital Investment Value (CIV) greater than \$15 million to be considered as a Major Project under Part 3A of the Act. The proposed development has an estimated CIV of \$43 million.

All development on the site has been declared a Major Project by the Minister. This EAR has been prepared in response to the Director General's Environmental Assessment Requirements in accordance with Part 3A of the EP&A Act.

A copy of the quantity surveyors calculation, WT Partnership, is provided at **Appendix D**.

6.3.2 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) came into force in December 2007. The 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 Hornsby Local Environmental Plan 1994 (Hornsby LEP) – refer to Section 6.4.

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. Notwithstanding, we note that the Department of Planning is likely to refer a copy of the application to the RTA during the statutory exhibition period.

6.3.3 State Environmental Planning Policy No 55 – Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The DGRs require the EAR to consider whether the land is contaminated, and that if the land is contaminated whether or not the land can be made suitable for the proposed use.

The Contamination Report prepared by Douglas Partners (refer to **Appendix I**) identifies the site as suitable for its continued use as a hospital. Refer to Section 6.12 for further assessment of contamination.

6.3.4 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 under by Aecom Australia (refer to **Appendix S**).

The findings from the assessment reveal that SEPP 33 does not apply to the proposed hospital as the type of Dangerous Goods to be stored and used on site (i.e. oxygen cylinders) are not captured by SEPP 33.

6.4 Hornsby Shire Council Planning Controls

We note that in determining a major project, the Minister for Planning is not bound by the provisions of an environmental planning instrument, other than a State Environmental Planning Policy (refer to Section 75R(3) of the EP&A Act). In the giving of approval for a Project Application the Minister may take into account (but is not required to) the provisions of any environmental planning instrument that would apply but for the application of Section 75R.

It is worth highlighting however that the Hornsby LEP and Medical Support DCP are over 16 years and 14 years old respectively. Given their age, their relevance as planning instruments is somewhat questionable. Nonetheless, the following discussion addresses the DGR requirement of the proposal to justify any proposed departures from the development standards in Hornsby LEP 1994 and any relevant Hornsby DCPs.

Hornsby LEP 1994

The Hornsby LEP 1994, as the principal environmental planning instrument applicable to the site, establishes the permissibility of uses in particular zones, and prescribes a small range of general and specific controls in relation to development. **Table 8** summarises the proposal's compliance with the applicable controls of the Hornsby LEP.

Table 8 – Director General's Environmental Assessment Requirements

Standard/Control	Requirements	Compliance
Zoning	The site is zoned Residential AM (Low Density—Medical Support). This zone permits with consent a large range of uses including hospitals, medical centres, veterinary hospitals, child care facilities, community facilities, multi-unit housing, places of worship.	The proposal is defined as a hospital and is therefore permissible within the zone. The proposed cafe at ground floor is ancillary to the main use of the building as a hospital.

Standard/ Control	Requirements	Compliance
Zoning objectives	<p>Zone objectives for Zone Residential AM:</p> <ul style="list-style-type: none"> - to provide for the housing and medical service needs of the population of the Hornsby area. - to promote a variety of housing types and other land uses, including medical support services, compatible with a low density residential environment. - to provide for development that is within the environmental capacity of a low density residential environment. 	<p>The proposal involves the provision of the redeveloped SDHS that will continue to serve the needs of the Hornsby and wider community. The proceeding sections of this chapter demonstrate the proposal's compatibility with the surrounding area.</p>
Floor Space Ratio	A floor space ratio of 0.4:1 is specified for the Residential AM (Low Density—Medical Support) zone.	The proposal does not comply with Council's existing density controls. Refer to Section 6.4.1 and Section 6.5 for justification.

Medical Support Development Control Plan

The Hornsby LEP 1994 is supported by the more specific detailed controls included within the Medical Support Development Control Plan. The DCP is a zone specific Plan prepared in 1996, which outlines specific controls for development within the Residential AM Zone.

Controls address density, setbacks, design, height, privacy, solar access, landscaping, drainage control, soil and water management, vehicle access and parking, acoustics fencing, waste minimisation and management, energy efficiency and services, urban streams and crime prevention.

6.4.1 Compliance with Key Local Planning Controls

Density

The planning controls within the Hornsby LEP and Medical Support DCP that apply to the Residential AM Zone reflect the historic context of how medical related uses were first established in the pocket of former residential dwellings bound by Northcote Road, Balmoral Street, Burdett Street, and Palmerston Road. In other words, they reflect controls that support the conversion of former residential dwellings into medical related uses or support new medical buildings of a residential design and character. The floor space ratio of 0.4:1 and site coverage of 40% within the Medical Support DCP would only support a building of a size comparable to a traditional single storey residential dwelling.

There is often a natural progression, whether purposely planned or not, for ancillary and support uses to 'pop up' and locate adjoining to or close by hospitals and other institutional land uses. This would seem to be the case for the medical uses that operate from within the Residential AM Zone, which have obviously been drawn to the precinct by the adjoining Hornsby and Ku-ring-gai Hospital, and have taken advantage of the co-location and clustering benefits that a large Hospital offers.

The proposed development results in a floor space ratio of 1.95:1, which conflicts with the Hornsby LEP and Medical Support DCP. Despite the conflict, the resulting form of development being proposed is considered to be acceptable given the site's context, outdated planning controls, proposed hospital uses, and the strategic planning objectives set by the State Government for the Hornsby LGA and subregion. Further discussion is provided within Section 6.5.

Setbacks

The proposal complies with all setbacks prescribed within the Medical Support DCP. In particular, the proposal provides a 6 + m setback from the primary front boundary (Northcote Road), over 4m setback to the side street frontage (Palmerston Road), over 3m to the rear (Balmoral Street), and over 3m to the side (No. 104 Balmoral Street and No. 53 Palmerston Road).

Height

Similar to density, the controls within the Medical Support DCP in relation to height reflect built form outcomes for single and two storey residential dwellings. The maximum height prescribed for buildings fronting Balmoral Street and Northcote Street is 3.6m, with buildings fronting Palmerston Road to have a maximum height of 9m.

The proposed development has a height ranging from 15.2m along Palmerston Road, 17m along Northcote Road, and 14.9m along Balmoral Street.

The disparity between the height of the proposed hospital building and that of the current local planning controls is acknowledged. Nonetheless, the built form responds to the strategic planning objectives set by the State Government, for the Hornsby LGA and subregion, particularly in relation to:

- the provision of high quality health care services and facilities,
- strengthening industry and knowledge clusters, and
- supporting job creation around key employment centres.

Further, the height is also heavily influenced by the special design requirements of the hospital, together with providing a hospital of a size which ensures the project is commercially viable.

The design of the proposed building has had due regard to protecting privacy, solar access and views of surrounding residential dwellings.

Further discussion is provided within Section 6.5.

Car Parking

The issue of car parking and compliance with relevant requirements and standards is discussed in detail in Section 6.6.

Compliance with Other DCP Provisions

A number of design principles and objectives for the site from the Medical Support DCP have been considered in the design development of the Project Application, including:

- Providing outdoor relaxation areas through the incorporation of an outdoor terrace at ground floor level;
- The design of the building relates to the slope of the land, stepping down from the higher Palmerston Road to the lower Balmoral Street, thereby minimising earthworks;
- An access ramp for disabled persons is to be provided from Palmerston Road connecting to the building's main pedestrian entry point;
- Landscaping has been retained where possible and replacement planting proposed in order to soften the built form of the development and complement the established green character of the area;
- Providing efficient drainage systems which will appropriately control the flow and quality of water on and off the site;
- Adopting suitable soil and water management measures during the construction of the development;

- Utilising existing access points and ensuring the proposal provides safe and efficient ingress/egress;
- Providing car parking that will meet the projected needs of the redeveloped SDHS, including provision of disabled parking;
- Ensuring the operation of the redeveloped SDHS does not adversely affect the occupants of surrounding dwellings in terms of noise and vibration impacts;
- Maximising the reuse and recycling of excavated material, demolition and builder's waste during in the construction of the proposed development;
- Adopting waste minimisation and management techniques during the operation of the redeveloped SDHS;
- Providing measures for the efficient usage of water, including provision of rainwater tanks;
- Providing a built form and layout that optimises natural heating and cooling and using materials that improve energy efficiency; and
- Providing increased street activation through incorporating a cafe and outdoor terrace, together with the natural surveillance provided from the terrace, reduce crime risk and minimise opportunities for crime.

6.5 Built Form

This section of the report provides an assessment of the proposed hospital and particularly provides an assessment of the following:

- Size, scale, height and form of the hospital;
- Building façade design and visual impact;
- Overshadowing;
- Views;
- Visual privacy;
- Wind impacts; and
- Landscaping.

Height, bulk and scale of the proposal

The existing structures on the site comprise an outdated and inefficient cluster of buildings of various ages and styles, and predominately of a single storey nature. Disparate car parking areas for each of the existing services was provided with multiple driveways.

The Project Application proposes a built form that considers the:

- context of the site;
- opportunities presented through the amalgamation of a number of lots;
- special design requirements of a Day Surgery;
- proximity of the site to Hornsby and Ku-ring-gai Hospital; and
- close proximity to public transport.

The new hospital is designed in a series of levels, and up to four levels, stepping down along the site to Balmoral Street. Whilst the local height and density controls are proposed to be exceeded, the new hospital building delivers an architectural form that responds to the functional demands of the SAN, the local environmental and contextual conditions, and seeks to optimise the site's strategic location within an existing (and growing) medical precinct.

The building form generally follows the topography of the site, exploiting the fall from Palmerston Road to Balmoral Street, this 'stepping' breaks down the form of the building and reduces the height to a comparable scale in relation to the adjacent multi unit residential property to the north of the site on Northcote Road. Similarly the rooftop plant has been setback significantly from the facade line, such that it is unlikely to be perceivable from within the street. This approach ensures there is consistency between the proposed built form and that of surrounding residential and medical buildings.

The proposed building setbacks, articulated façades, and materials will also deliver a built form that is consistent with the large buildings to the east (Hornsby and Ku-ring-gai Hospital) and south of the site, which is not out of character with the area.

The built form of the proposed building is considered acceptable for the following reasons:

- Buildings in the immediate locality of three and four storeys are not uncommon (refer to **Figure 22** for a selection of photographs of buildings in the surrounding locality).
- The most recent development at the adjoining Hornsby and Ku-ring-gai Hospital involving the Emergency, Maternity and Paediatrics complex reflects a modern three storey building.
- The site is located in a precinct that shares a strong nexus with and provides medical support services to the adjoining Hornsby and Ku-ring-gai Hospital. A built form is proposed that reflects this relationship and connection.
- The proposed building makes efficient use of the land, capitalising on the amalgamation of three underutilised allotments which are removed from surrounding residential dwellings.
- The proposed building height and density of development is appropriate given the site's accessibility to public transport.
- The viability of the new hospital relies on a critical mass of functions and design requirements, which cannot be accommodated in a building the size which has existed on site to date.
- The hospital use includes functions and design requirements which cannot be afforded in a building the size of a typical single residential dwelling.
- The height of the building is influenced by the demand for higher floor to ceiling heights in order to accommodate the surgical equipment and services associated with the operation of a hospital.
- The arrangement of mass and height across the site, which is reflective of the existing topography, together with the highly articulated facade, ensure minimal impact on adjacent residential dwellings in terms of views, solar access and overshadowing.
- The resulting built form provides a positive urban design outcome and will reinvigorate the quality of medical services and facilities in the locality.
- The bulk and scale of the proposed development is comparable to the planned expansion and strategic future master plan of the Hornsby and Ku-ring-gai Hospital precinct.

An appropriate response to the topography of the site has also been incorporated into the design of the building (achieved through the stepping down of the building towards Balmoral Street), which further ensures the massing and bulk of the development is reduced. Overall, the development is of a scale appropriate to its relationship and function as part of a cluster of medical uses, anchored by the public Hornsby and Ku-ring-gai Hospital.



Emergency, Maternity, and Paediatric Complex within Hornsby and Ku-ring-gai Hospital



Medical building within Hornsby and Ku-ring-gai Hospital



Medical building within Hornsby and Ku-ring-gai Hospital fronting Palmerston Road



Retirement village within the broader grounds of the Hornsby and Ku-ring-gai Hospital



Apartment buildings to the north of the site



Multi-unit dwellings to the north of the site



Adjoining medical buildings to the south of the site



Medical Centre along Balmoral Street



Medium density residential development to the west of the site towards Hornsby Town Centre



High density residential development within Hornsby Town Centre adjacent Hornsby Station

Figure 22 – Photographs of surrounding medium density development

The SAN seeks to redevelop the site, taking advantage of the increasing demand for day surgery operations experienced across both its main Wahroonga Hospital and the existing SDSH. There has been a significant shift in expectations of medical care since the SDSH was first established (back in 1986), from both health care providers and the general public.

Redevelopment of the existing SDSH with a building comparable to the existing height, bulk and scale of the current SDSH building would neither enable the SAN to respond to increasing demand for services, nor allow sufficient floor area to house the medical equipment and support services required to provide a high quality and modern hospital facility that meets the communities and Government's expectations.

Further, in providing redeveloped hospital facilities, there is a threshold whereby a minimum number of ward beds and theatres must be provided in order to make the project viable for the SAN.

Ultimately, the design and configuration of the redeveloped SDSH represents a balance between providing a hospital that serves the growing medical needs of the community, providing high quality and modern health care services, respecting the green character of the surrounding area, taking advantage of an underutilised site strategically located within a medical cluster of uses, minimising impacts on surrounding residential dwellings, and providing a building of a size that ensures the project is commercially viable.

Overshadowing

The SDSH site does not adjoin any residential dwellings. Being located on two corners, the site only shares a common boundary with properties to the south, which are currently used for medical related purposes. The nearest residential dwellings are to the north across Northcote Road and to the west, across Balmoral Street. The separation distance between the site and adjacent residential dwellings is over 20m.

The shadow diagrams included with the Architectural Plans at **Appendix A**, illustrate that during the winter solstice (21 June) the proposed development will generally cast shadows towards the south between Balmoral Street and Palmerston Road.

The shadow diagrams demonstrate all overshadowing as a result of the proposed development will be limited to the medical related properties to the south, and a small landscaped area within the adjoining Hospital grounds to the east.

Given that there will be no shadowing impacts on any adjacent residential dwellings (either in Stage 1 or Stage 2), the proposal and its resulting built form is considered to be acceptable and will not cause undue overshadowing or solar access impacts on any nearby sensitive land uses.

Building façade design and visual impact

Appendix A shows preliminary elevations and materials for the development as well as photomontages. These images show how the palette of materials selected creates a distinct and identifiable presence for SDSH, while maintaining a human scale that responds to nearby properties. It also complements and will blend sympathetically to the strong sense of landscaped streets that provide a strong visual impact in the surrounding street network.

The composition of the façade of the building has been developed to respond to the internal arrangements whilst also responding to the scale of the adjacent residential density, and medical and consulting buildings. The combination of a range of masonry brickwork and windows provides a modulated form. The proposed material selection provides a contemporary response to the brickwork found on adjacent buildings. To minimise overlooking of adjacent residential properties, windows have not been located on the western facade.

The site's location on two corners means the prominence of any redevelopment scheme on the site is going to be high. This does not however need to form a constraint to redevelopment, as the site's medical context and positioning as a gateway to the adjoining Hospital provides an opportunity for a new and modern building to be established.

The compatibility of a new modern hospital building in the locality will also increase as redevelopment plans within the adjoining Hornsby and Ku-ring-gai Hospital are realised. The shift from older to new and improved medical facilities and modern residential buildings has already started in the area and will continue in the future as the market and health service providers take advantage of the area's proximity to a major centre, accessibility to public transport, and the clustering of medical, research, and knowledge facilities.

The physical separation between the site and adjacent dwellings to the north and west is significant in reducing the visual impact of the proposed development from these properties. The substantial vegetation planting along the frontage of residential properties to the west along Balmoral Street, together with the larger setback of the building to Northcote Road (over 6m) also ensures that the visual impact from the development will be minimised. Retained planting and replacement planting along the site's street frontages will also assist with softening the bulk and scale of the development and assist with ensuring the green streetscape continues around the site.

The scale of the proposed building envelope is proportionate to the existing scale and massing of development within the adjoining Hornsby and Ku-ring-gai Hospital, and is also generally reflective of larger residential buildings scattered around the site.

The proposed building envelope is appropriately setback in accordance with Council requirements as set out within the Medical Support DCP. The proposed development does not materially affect the view from adjacent properties, particularly given their respective commercial function. Views along the site boundaries of the site are improved through the activated street fronts and the superior architectural design.

Perimeter landscaping has also been proposed along all edges to provide important improvements to privacy for residents and passersby.

Internal Amenity

The proposed layout maximises the use of the site whilst providing good amenity for staff, patients and visitors. All patient wards and recovery rooms for example are located on the perimeter of the building, thereby maximising access to daylight. The majority of these rooms also face north, also maximising solar access.

The general layout of the development has been configured to accommodate the particular medical needs undertaken by the SAN in operating the SDHS. The large floor plates are to provide sizable ward beds and operating theatres, while serving to provide associated central support areas.

The external terrace area at ground floor level will not only provide street activation, but will provide an area that will allow staff, patients, and visitors opportunities to enjoy the outdoors, particularly during lunch breaks.

The entry foyer to the building provides a clear entry to the building, and serves to separate uses within the building, whilst also denoting public and staff/patient areas. Amenities are spread throughout the development to adequately serve the needs of staff, patients, and visitors.

The provision of shower and change room facilities for bicyclists will not only serve to encourage staff and visitors to cycle to the development, but will also serve the needs of those staff wishing to exercise during work hours.

Wind Impact

An assessment of the proposed development against existing wind conditions has been undertaken by Heggies Pty Ltd, included within **Appendix J**. The relevant winds affecting the site are typical in the Sydney “regional context”, including two primary wind seasons being:

- most common summer winds from the northeast with the strongest summer gusts from the south and south east; and
- winds during early spring / winter mainly from the west and south, with winds from the west also providing the strongest winds during winter and all year round.

Close to the ground, the Sydney regional wind patterns described above are affected by the local terrain and topography. Due to the terrain, topography and surrounding developments, the local wind environment receives reasonable shielding at lower levels from the low rise developments surrounding the development site. As such, existing winds at ground level are likely to be below the walking comfort criterion (i.e. less than 16 m/s) for most onshore prevailing wind conditions given the nature of the surrounding development.

The Wind Report tested the impact on the local winds against the acceptability criteria that is currently referenced by many Australian Local Government DCPs, with the general objective for an annual 3-second gust wind speed to remain at or below 16 metres per second. A higher criterion of 10m/second is more commonly used for dining areas with outdoor seating.

This 16m/second value represents a maximum level of wind intensity which the majority of the population would find acceptable for comfortable walking on a regular basis at any particular location. Given the understanding that existing wind conditions on the site are likely to be below the 16 m/second “walking comfort”, the analysis was based on Heggies experience with wind tunnel testing on similar scaled developments.

In terms of the future wind environment with the proposed development, the following features of the development are noted as being of most significance:

- The development site receives reasonable shielding at lower levels from the low rise developments and existing landscaping surrounding the development site.
- The proposed development features a large awning over the main entry which will minimise the potential for “downwash” winds to occur, i.e. winds which impact on any facades of the development and are then deflected back towards the ground.
- Pedestrian areas located on the west, north and east side of the development are protected from adverse winds by abundant landscaping.
- The outdoor dining area for the café is shielded by the proposed development itself and existing and planned landscaping.

The assessment identifies that all areas are anticipated to be below the 16m/sec walking comfort criterion for all prevailing wind conditions including north easterly, southerly, south easterly and westerly winds.

A higher criterion for outdoor dining of 10m/second is applied. Using this criteria it is anticipated that the Doctor's Terrace and the Cafe Outdoor Terrace will have the potential impact of exceeding the 10m/second. As such windbreak features for these areas are proposed as follows:

- Canopy over the Cafe Outdoor Terrace; and
- Vertical windbreaks on the west and north of the Doctor's Terrace plus horizontal windbreak elements (e.g. canopies, shade cloths etc).

Subject to these minor additional amelioration measures, the assessment concludes that:

...predicted that ground levels wind speeds along all surrounding public footpaths and public access areas within the development itself will either remain at their present levels or decrease slightly with the addition of the proposed development and its wind mitigation treatments.

The proposed wind speeds throughout the development will be at or below the 16m/second walking comfort criterion and the 10m/second outdoor dining criteria and are therefore acceptable for Project Application approval. The additional amelioration measures have been included in the Statement of Commitments at Section 7.0.

Streetscape and Landscaping

New species will be planted to create a landscape feature along Northcote Road and Palmerston Road. The proposed landscaping along the perimeter of the development is compatible with the surrounding area in that it:

- maintains much of the existing landscaping along Northcote Road;
- integrates with existing street planting adjoining the site;
- includes species that are suited to the shading and wind conditions in and around the site;
- provides an attractive outlook for users of the cafe and outdoor terrace; and
- revitalises the Northcote Road and Palmerston Road streetscapes to further define and activate the medical support precinct.

The main impact associated with the proposed development is the removal of trees along the site's western boundary. Replacement planting together with the relocation of two palm trees along this street frontage will assist in softening the bulk of the building and ensure an appropriate response to the site's green context is achieved.

The proposed redevelopment will deliver an outdoor environment that is significantly improved when compared to the existing SDHS and associated properties. However, this is less than Hornsby Shire Council's 40% landscaping requirement.

These departures from the landscaping control are considered reasonable in this case, given the following circumstances:

- The proposed landscaping will complemented and enhanced by the outdoor terrace associated with the café;
- The landscaping controls are intended for residential development, and not at the proposed hospital use, which has different requirements for open space;
- The proposed open space is appropriate for the hospital and creates areas with a pleasant outlook for patients, staff and carers, while providing valuable open space for quiet reflection and relaxation; and
- Sufficient landscaped area is provided to meet the storm water management objectives for the site.

Trees proposed to be removed as a result of the development are generally of a low value, consisting mainly of commonly planted landscape species. The Arborist Report (refer to **Appendix G**) concludes that the proposed building is approximately on the line of the existing building and bitumen car park so that no disturbance need to occur to root systems of the retained trees, subject to appropriate protection measures being adopted.

The recommendation from the Arborist Report has been included in the Statement of Commitments at Section 7.0. On this basis, the proposed landscaping elements are appropriate for the development.

6.6 Transport and Accessibility

A Traffic and Accessibility Impact Assessment has been prepared by Arup Pty Ltd (**Appendix F**) to ensure that adequate parking has been provided on site to accommodate the proposed development and to assess the impact of the proposed development on the surrounding road network.

Vehicular Access and Parking

The proposed access and parking arrangements have been described in Section 4.5. As outlined in the report, the 141 parking spaces proposed on the site will meet the requirements of the Hornsby Shire DCP. The proposed parking provisions meet, or exceed, the DCP minimum controls with relation to total parking spaces, parking spaces for the mobility impaired and parking spaces for service vehicles.

The proposed parking numbers have also been assessed against the Peak Parking Accumulation rates for a private hospital under the RTA's Guide to Traffic Generating Developments. Based on the provision of 79 beds and a maximum of 100 being staff on-site at any one time, the peak demand for the car park is predicted to be approximately 75 vehicles during peak periods. The proposed development provides 139 car parking spaces, and so will ensure ample parking is available for employees, patients and service providers during peak periods.

Traffic Generation

The RTA's Guide to Traffic Generating Developments has also been used to assess the traffic impact of the proposed development. Based on these guidelines, the development will result in 33 trips in the AM peak period and 57 trips in the PM peak period.

These results were analysed using SIDRA to determine the degree of saturation, average vehicles delay and level of service for three surrounding intersections. These include the intersections of Sherbrook Road and Northcote Road, Palmerston Road and Edgeworth David Avenue and Myra Street and Edgeworth David Avenue. The analysis indicated that the three surrounding intersections will continue to operate at a satisfactory, or above satisfactory, level of service.

The report concludes that the proposed development will have no adverse impact on the surrounding road network in terms of traffic capacity or road safety. There will also be no need for road or intersection upgrades / improvements as a result of the additional traffic movements from the proposed SDSH redevelopment.

Public Transport

There are several modes of transport available for users of the proposed facility. The site is located within 50 metres of a bus stop which is serviced by the Transdev TSL route 575. This service provides access to transit links including Hornsby and Turramurra Railway Stations as well as shopping and recreational facilities at the Macquarie Centre. Hornsby Railway Station (approximately 1.5km away) provides links to greater Sydney with frequent services to Sydney Central Station, Chatswood, the Inner West and Hills District. The proposed development will not inhibit existing transport use, and may increase the demand for public transport services in the future.

Pedestrians and Cyclists

The site is well connected through local pedestrian footpath networks. A pedestrian crossing is located adjacent to the site on Palmerston Road, providing a safe link between the hospital and the bus stop. The bus stop is located 50 metres from the site, and so is within the 400 metre walkability limit set by the NSW Planning Guidelines for Walking and Cycling. The close proximity of the bus stop to the site is particularly important given that pedestrians visiting the site are likely to be vulnerable, impaired or elderly.

Cycling is facilitated in the area with dropped kerbs and slow speed limits encouraging cycling as a mode of transport. Similarly, the roads are relatively wide, providing ample space for cyclists and motorists to share the road safely. The NSW Planning Guidelines for Walking and Cycling sets the bicycle catchment for a five minute ride at approximately 1.5 kilometres. The Hornsby Railway Station is located within 1.5 kilometres of the site meaning that cyclists can access rail services to the greater Sydney area.

Site Travel Plan

The report recommends that a green travel plan be developed for the site to promote the use of public transport, walking and cycling for work related trips. The report puts forward measures that could be incorporated into the travel plan including:

- public transport timetables and maps;
- key local walking and cycling routes;
- possibly subsidising / salary sacrificing the cost of public transport tickets for staff;
- development of a travel plan booklet for staff and visitors; and
- establishment of transport information packs to new staff explaining the various ways (other than motor vehicle) of travelling to the site.

Implementing these measures would reduce the reliance on private vehicles, and would increase the use of non-care modes of travel for staff and patients. The preparation of a Site Travel Plan has been included in the Statement of Commitments at Section 7.0.

Traffic and Transport Conclusions

Overall it is concluded that:

- The proposed development provides adequate parking facilities given the requirements outlined in the applicable Hornsby DCP, thereby reducing the parking impact on local residents;
- The proposed development is forecast not to have any adverse effect on the operation of the local road network, which operates within capacity with the estimated additional development flows on the respective junctions;
- Potential users of the proposed development have several modes of transport available for accessing the site. Each mode provides access to a wider area given the extent of modes of public transport offered, such as rail and bus.
- The proposed development in no way hinders the existing use of public transport and may increase demand for public transport in the area in future years; and
- Provision of a green travel plan would reduce reliance on private vehicles for hospital staff and patients, and lead to an increase in non-car modes of travel to the site.

6.7 Crime and Public Safety

The proposal has been assessed against the core principles of Crime Prevention Through Environmental Design (CPTED):

Principle 1 - Natural Surveillance

A terrace and cafe are proposed in the north-eastern section of the building at ground floor. The proposed cafe will have frontages to both Northcote Road to the north and Palmerston Road to the east and will link with adjoining lobby area off the main pedestrian entrance off Palmerston Road. It is expected that outdoor seating will be accommodated on the adjoining terrace which extends for approximately half of the Northcote Road frontage and three-quarters of the Palmerston Road frontage. The proposed cafe and public lobby area will include a glazed facade with the bi-fold doors opening up from the cafe onto the adjoining terrace.

The design of the ground floor entrance and adjoining cafe space encourages the integration of outdoor and internal space and will ensure that casual surveillance of both the Northcote Road and Palmerston Road frontages is provided.

Visual barriers at the main entrance to the building have been removed to ensure that patients and visitors entering the building can be clearly seen. The space has been designed as an active space (eg cafe use) to ensure that there will be a constant flow of people in this location to provide casual surveillance of the entry. The provision of a reception area at the main entrance will also ensure that people entering the building can be clearly monitored.

The proposed doctors' lounge and adjoining terrace at Level 3 will also encourage casual surveillance of the hospital and surrounds from a high vantage point.

Principle 2 - Access Control

The main pedestrian entry to the building will be centrally located at the Palmerston Street frontage. The provision of a single entry to the building in a location which will be the subject of high user traffic will ensure that people entering and existing the building can be clearly seen and monitored if necessary.

Three vehicle entries/exits will be provided to the lower ground and basement level car park. It is expected that access to the car park will be controlled via gates, with the detail arrangements to be decided as part of the detailed design stage. This approach will ensure that entrance to and from the car park will be controlled.

Three lifts are proposed with a separate lift provided for clinical staff. It is expected that a key card will be required to operate the clinical lift and to reach the proposed doctors' lounge at level 3 and other back-of-house areas.

Principle 3 - Territorial Reinforcement

Boundary landscaping at the Balmoral Street and Northcote Road frontage, as well as the entrance to the building off Palmerston Road will reinforce the separation of the hospital grounds from the public domain and adjoining footpath.

In addition, the small setback at all street frontages will enhance the presence of the building in its setting. The provision of security-controlled entrances to the car park will also emphasise the separation of the public and private domain.

Principle 4 - Maintenance

Durable and high-quality materials are proposed which will ensure that minimal maintenance is required for the proposed development. The use of varied facade treatments and provision of landscaping at the boundaries of the site will also discourage graffiti or vandalism of the building facades.

The hospital grounds will be well-maintained by a landscaping contractor and the maintenance of the hospital buildings will be controlled by dedicated facilities manager. The continued maintenance of the building and its grounds will ensure that it does not become degraded and will ensure that vandalism of the property is strongly discouraged.

6.8 Ecologically Sustainable Development

Sustainable Built Environments Pty Ltd (SBE) have prepared an Ecologically Sustainable Development (ESD) Statement outlining the ESD initiatives to be incorporated into the development (refer to **Appendix H**). Regard has been had to the DG's requirements for the proposed development.

The ESD statement also demonstrates that the proposed development has the potential to achieve a minimum 4 star Green Star rating (under the Green Building Council of Australia's Green Star Healthcare v1 Design Tool).

The assessment also notes that a Section J compliance statement in accordance with the provision of the BCA will be required at the Construction Certificate stage. This is consistent with the recommendations of the BCA report at Section 6.12. ESD measures to be adopted include:

Energy

- The building incorporated passive solar design by being elongated along the east west axis and shorter along the north south facades for optimal solar orientation.
- All patient wards and recovery rooms are strategically located on the perimeter of the building, maximising day light penetration and reducing the need for artificial lighting.
- Glazing will comply with Section J of the Building Code of Australia or better, improving the efficiency of climate control technology.
- Insulation will comply with Section J of the Building Code of Australia or better, reducing the heating and cooling load of mechanical systems and improving energy efficiency.
- Installed heating, cooling and ventilation systems will require minimum energy input.
- Artificial light fittings, lighting layout and lighting levels will be designed and specified to comply with Section J Energy Efficiency provisions of the Building Code of Australia (BCA) or better.
- Energy efficient lighting will be provided linked to daylight levels and movement activated controls will be installed in appropriate areas such as store rooms.

Water

- Significant reductions in potable water use will be made through the selection of water efficient faucets, toilet cisterns, low water use urinals, showerheads and water using appliances.
- A Water Sensitive Urban Design (WSUD) strategy will be developed during the design process and implemented on the site. Initiatives are likely to include minimising impervious surfaces and infiltration trenches.
- Rainwater tanks will be installed in the car park and the collected rainwater will be stored and reused for non potable applications.
- Efficient landscape watering systems, such as soil moisture sensors, will be installed where appropriate. Drought resistant native species will be used and planting will be zoned to optimise water efficiency.
- Individual building meters will be installed for any large water uses on site, linked to the developments Building Management System.

Indoor Environment Quality

- Natural day lighting has been prioritised in the layout spaces of the building
- Wards and recovery rooms are situated to facilitate access to views to aid patient recovery.
- The design of the development will incorporate good practice sound attenuation levels in accordance with, or better than, AS2107 -2000 Acoustics.
- Where appropriate glare control devices, such as external louvres or internal blinds, will be installed.
- Where possible, staff and patients will be given individual control over heating, cooling, ventilation and lighting systems to minimise usage where not required.

Transport

- The site has good public transport access and is located within 1km of Hornsby Train Station. Bus services set down at the front entrance of the hospital.
- The proposed development will have weather-protected, secure parking for bicycles for staff and visitors on the basement level. Bicycle facilities (including staff change rooms with toilets, shower facilities and lockers) will also be provided on the same level.
- Total car parking provision will consist of 139 car parking spaces. The provision of dedicated spaces for small cars (including hybrid and electric cars, motorbikes, mopeds, scooters) will aim to encourage more efficient use of private transport.

Materials, Waste and Resources

- Preference will be given to building materials that are recycled, recyclable, renewable, locally sourced or have a reduced impact upon the environment.
- A Construction Waste Management Plan will be prepared and waste reduction targets set.
- Dedicated spaces will be provided within the development to facilitate recycling. An Operational Waste Management Plan will be prepared.
- Steps will be taken to reduce the amount of PVC and other harmful materials used during the construction and fit out of the proposed development.

Social Issues Health and Well Being

- The building and surrounding site provide opportunities for staff, patients and visitors to relax, socialise and eat or drink, which can lead better recovery time for patients. These spaces include a North-facing outdoor terrace for patients on the Ground Floor, a North and East facing outdoor terrace for visitors adjoining the café and lobby on the Ground floor, an outdoor terrace for Doctors on Level 3, as well as the landscaped public spaces surrounding the building.
- A Building User's Guide will be provided to the Sydney Adventist Hospital Hornsby and staff. The Guide would contain information on the building's architectural design and engineering systems and how they are operated to optimise sustainability performance during the operational phase of the development.

Other ESD Measures

Other potential ESD measures will be explored for their feasibility during the detailed design stage such as:

- Provision of a co-generation plant;
- Provision of a solar hot water heating system;
- Provision of renewable energy generation through photo-voltaic technology.

However, detailed feasibility on these measures will be explored post approval and therefore these measures are not included in the Statement of Commitments.

Recommendations

The following measures from the above assessment have been included in the Statement of Commitment at Section 7.0.

- Preparation of a Construction Waste Management Plan and Operational Waste Management Plan prior to issue of a Construction Certificate (CC).
- Preparation of Water Sensitive Urban Design (WSUD) strategy prior to issue of a CC.
- Preparation of a Building User's Guide prior to issue of the Occupation Certificate (OC).
- Provision of other key measures as outlined in the ESD Report (July 2010).

6.9 Stormwater and Drainage

A Stormwater Concept Plan has been prepared by Enstruct Group Pty Ltd which illustrates the proposed works (**Appendix P**).

The site will be provided with a stormwater drainage connection to the Hornsby Council drainage system (refer to **Appendix P** for concept details). Stormwater drainage from roof outlets and downpipes will consist of a downpipe and drainage system to convey stormwater which will gravitate to two rainwater detention tanks. When full, the rainwater reuse tank will overflow to connect to the site stormwater drainage system.

Basement levels will be provided with subsoil drainage and perimeter dish drains and the drainage pipe work will gravitate to a drainage pump out pit, and will collect stormwater.

The stormwater drainage system will be sized for a 1 in 20 year rainfall intensity. Over flow systems will be sized for a rainfall intensity in excess of the 1 in 100 years.

The design will minimise negative impacts on surrounding neighbours. The final design of the stormwater infrastructure will be developed and integrated into the ground plane design as part of construction works.

The site is situated close to a natural ridge in Hornsby and there are no natural

watercourses nearby. The probability of the site experiencing flooding is therefore considered by Enstruct to be low. Enstruct also note that the effect of sea water level rise will be insignificant due to the site's significant elevation above current sea water levels.

6.10 Contamination and Acid Sulphate Soils

Douglas Partners have undertaken a Phase 1 Contamination Assessment of the subject site, included within **Appendix I**. The Assessment confirms:

- The site was predominately used for residential purposes up until 1979, with the site being used exclusively for medical related activities since 2002.
- The site has not been declared to be a significantly contaminated site under Section 59(2) of the *Contaminated Land Management Act 1997* or subject to any Site Audit Statements.
- The site is not listed on the NSW WorkCover dangerous goods database.
- The site is not listed as a contaminated site under Section 58 *Contaminated Land Management Act 1997*. There are also no listed sites with close proximity to the site.
- The site is not listed as receiving an environmental protection licence under the *Protection of the Environment Operations Act 1997*.
- There was no evidence indicating the presence of any underground storage tanks, and no chemical odours were noticed.
- The site is located in an area of no known occurrence of acid sulphate soils on the Department of Land & Water Acid Sulphate Soil Risk Map Series 1:25 000, Edition II.
- The early residential use of the site poses low concern with regards to contamination.

Potential areas of contamination from past and present land uses include:

- Placement of fill to develop the site with material from an unknown source; and
- Asbestos containing material, which may be present from past building structures and within filling material;

The assessment recommends the following actions be undertaken prior to any future development occurring:

- Prior to disturbance of any soils on site, an assessment of the filling materials and surface soils is to be undertaken;
- Prior to demolition of any structures, a Hazardous Materials Survey is to be carried out to identify potentially hazardous building materials (such as asbestos) requiring specific handling and disposal protocols.

The assessment concludes that the subject site appears suitable for its continued use as a medical facility. Compliance with the recommendations of the Phase 1 Contamination Report has been included in the Statement of Commitments at Section 7.0.

6.11 Noise

An Acoustic Assessment has been prepared for the proposed development by Heggies Pty Ltd (**Appendix K**). The assessment has been commissioned to address the potential impact of operational, plant, traffic noise, and construction noise on surrounding sensitive noise receivers.

Background Noise Monitoring Results

As part of the assessment noise loggers were placed at two (2) locations around the site in order to develop an understanding of existing background noise levels and to set targets for both the construction and operational phases of this development. Of particular note in the report are the residential dwellings, commercial and hospital uses surrounding the proposed site. The location of the most sensitive noise receivers is shown in **Figure 23** below.

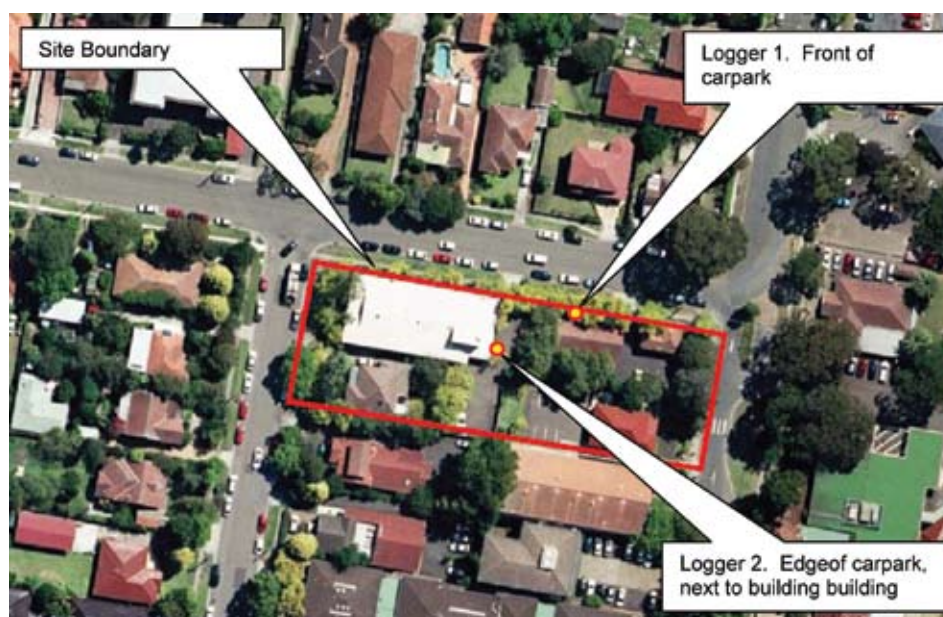


Figure 23 – Location of the Most Sensitive Receivers

Noise logging found that background noise around the site was predominately controlled by distant and local road traffic noises, with little noise impact coming from nearby commercial or hospital operations. These results were used to develop noise impact targets for construction and operation in order to minimise any effects on the amenity of surrounding land uses.

It is noted that the full 7 day graphical results included occasional 'spikes' at some of the loggers. It was clear (because of the levels involved) that these events were spurious and uncharacteristic, most likely caused by very loud noises of very short duration close to the noise loggers. As such these events are excluded from the data used to determine noise emission criteria.

Noise Criteria and Guidelines

The Acoustic Assessment assesses the proposal against the following relevant criteria and guidelines:

- DECCW's Industrial Noise Policy (INP);
- DECCW's Interim Construction Noise Guideline; and
- DECCW's Environmental Criteria for Road Traffic Noise (ECRTN)

Operational Noise

The report and analysis find that the ongoing operational noise levels of the proposed development (associated with fixed mechanical plant, visitor/patient vehicles, and outdoor cafe/terrace areas) will have minimal impact on nearby sensitive receivers, and will be adequately controlled through the use of conventional mitigation and minimisation measures such as attenuators, acoustic louvres, barriers, enclosures, and the careful location and orientation of air inlets /outlets and items of plant.

The following criteria (based on the more stringent criteria outlined in the acoustic report) are proposed for the closest off-site receivers, being:

- Day 47 dBA
- Evening 44 dBA
- Night 40 dBA

However, given that the majority of the plant can be expected to operate continuously; it is likely that controlling noise to the night-time criterion will be the governing factor in terms of noise control treatment. Compliance to the night-time criterion will also ensure compliance with the daytime and evening criteria. Since the noise logging was not conducted at the adjacent receiver locations, the above criteria should be treated as indicative.

A Statement of Commitment has been included requiring that further logging be conducted to verify the noise criteria and requiring compliance with the verified noise criteria during operation of the hospital.

Road Traffic Noise

Access points to the site are similarly to the existing locations.

An analysis of the change in traffic flows as a result of the proposed development has been undertaken during peak am and pm periods. This information has been used to predict the likely change in traffic noise during these periods as a result of the proposed development.

The report finds that although there will be more vehicles entering and exiting the carpark, the noise levels from such movements should not lead to an increase in existing noise levels of more than 2 db (complying with ECRTN Guidelines for Road Traffic Noise at Residences).

Construction Noise

The assessment predicts construction noise levels in the range of 70 dBA to 106 dBA are expected at the most noise affected receivers for typical earthworks (including rockbreakers). The Noise Management Levels (NMLs) are exceeded by up to 36 dBA at the most affected receivers.

In addition, noise levels in the range of 60 dBA to 96 dBA are expected at the most affected receivers for typical building construction works. The NMLs are exceeded by up to 26 dBA at the most affected receivers.

The proposed construction activities are therefore likely to exceed the noise goals by clear margins, and it is recommended in the report that particular effort is directed to employing reasonable noise mitigation and management strategies and noise monitoring at the nearest and most affected sensitive receivers over the course of the proposed works.

Potential noise control measures to be adopted are included within **Table 9** below. These approaches are to be included within a comprehensive site and activity-specific Construction Noise and Vibration Management Plan. The preparation and adoption of a Construction Noise and Vibration Management Plan prior to commencement of works is included in the draft Statement of Commitments at Section 7.0.

Table 9 – Potential noise control measures

Item	Description
Construction Hours	Works will be carried out within standard Construction Hours.
Deliveries	Deliveries will be carried out within standard Construction Hours.
Site Layout	Where possible, plant will be located and orientated to direct noise away from sensitive receivers. The existing building will, where possible, increase acoustic shielding to the adjacent receivers.
Quietest Suitable Equipment	Plant and equipment will be selected to minimise noise emission, in so far as possible whilst maintaining efficiency of function. Residential grade silencers will be fitted and all noise control equipment will be maintained in good order.
Reversing Alarms	Mobile plant and trucks operating on site for a significant portion of the project will have reversing alarm noise emissions minimised in so far as possible, recognising the need to maintain occupational safety.
Fixed Plant	Fixed plant will be provided with noise controls to comply with the NSW Industrial Noise Policy.
PA System	No public address system will be used at this site.
Noise Barriers	Hoardings will be provided around the boundary of the site prior to the commencement of the works.
Vibration Buffer Zones	General safe working distances for rockbreaking and vibratory compaction. Monitoring should be carried out to confirm these buffer zones at locations where buildings are closest.
Vibration Monitoring	Vibration monitoring will be carried out where vibration intensive activities (eg rockbreaking or vibratory compaction) are required to be carried out within the established buffer zones, or where there is considered to be a risk that levels may exceed the relevant structural damage criteria.
Truck Noise (off site)	All trucks regularly used for the project are to have mufflers and any other noise control equipment in good working order. Trucking routes will use main roads where feasible.
Community Liaison	Community liaison would form a critical element in the management of the impacts. If provided with adequate warning, affected sensitive receivers are sometimes willing to accept excessive noise for a short period of time or be willing to be relocated in the short-term whilst construction activities are conducted at the near point to the residence.
Training	Site induction training will include a noise awareness component.

6.12 BCA

McKenzie Group Consulting has undertaken a review of the proposal for compliance with the Building Code of Australia (BCA) and prepared a Preliminary Report (**Appendix L**).

The building is assessed as a 'health care building' in accordance with the provisions of Section C2.5 of the BCA and contains Class 5, 7a and 9a facilities for the purposes of the BCA. The report finds that the proposed development is capable of satisfying all prescriptive compliance requirements of the BCA and Australian Standards, particularly in relation to the proposal's Egress, Fire Resistance, Fire Services and Equipment, Ventilation and Smoke Hazard Management and Sanitary Facilities.

The report deems the proposal to satisfy all relevant installation standards, codes and conditions for fire safety, and in addition it identifies a number of further detailed measures in order to improve the design at the Construction Certificate (CC) stage to ensure full compliance with these provisions. Should fire engineered solutions be proposed at CC stage they would need to be approved after consultation with the NSW Fire Brigade as part of the CC process.

It is noted in the report that the proposed development shall be in accordance with Part J of the BCA 2010 which relates to energy efficiency, and that statements of compliance for this part will be required before a Construction Certificate is issued for the project. Compliance with Part J is also discussed in the ESD Section of this report at Section 6.10.

Compliance with the recommendations of the BCA Report has been included in the draft Statement of Commitments at Section 7.0.

6.13 Accessibility

An Access Review of the proposal has been prepared by Morris Goding Accessibility Consulting (**Appendix N**). This review assesses the proposal against the requirements of the Federal Disability Discrimination Act (DDA), Building Code of Australia (BCA), the Australian Standards (AS) 1428.1 (Design for Access and Mobility) and 1428.2 (Enhanced and additional requirements – buildings and facilities) and the Hornsby Shire Council Access and Mobility DCP.

The report finds general compliance with these standards and in particular reviews specific components of the proposal including site access, ingress and egress, circulation areas, passenger lifts, accessible car parking, accessible sanitary facilities, lighting and signage. Continuous accessible paths of travel are designed within the building, and the proposal demonstrates a reasonable degree of accessibility at the Project Application stage.

The recommendations within the report pertain to detail associated with the building's detailed design and would be carried out during the detailed design/construction certificate documentation stage. The recommendations provided will ensure overall compliance with the standards cited above.

The following recommendations from the Access Review have been included in the Statement of Commitments at Section 7.0:

- The proposal will be compliant with the recommendations of the Access Review (June 2010) in order to achieve optimum compliance with the following standards:
 - AS 1428.1 – (80% of people with disabilities accommodated)
 - AS1428.2 – (90% of people with disabilities accommodated)
 - AS1735.12- (Lifts, Escalators and Moving Walks – Facilities for Persons With Disabilities)
 - Building Code of Australia
 - Disability Discrimination Act
 - Hornsby Shire Access & Mobility DCP
- 3-4% of total parking will be designated as accessible parking and be reasonably located adjacent to the passenger lifts.
- The width of the entry ramp between handrails will be a minimum of 1200mm and provide a 1500mm long mid landing where there is a 180 degree turn.
- Accessible car bays will comply with AS2890.6 (2.4m wide accessible car bay with a 2.4m wide shared zone).

6.14 Waste

Morris Bray Architects Pty Ltd has prepared a Waste Management Report outlining the details of how demolition and construction waste material will be handled for waste management (**Appendix O**). Regard has been had to the DG's requirements for the proposed development.

Proposed Demolition and Site Preparation Approach

- The reuse of excavated material on site will be undertaken where possible and disposal of any excess to an approved site;
- Concrete will be crushed and reused on-site where possible with disposal of any excess to an approved site;
- Steelwork will be recycled off-site;
- Green waste will be mulched and reused in landscaping on site or off-site;

- Bricks and tiles will be reused on-site as appropriate or recycled off-site;
- Plasterboard will be reused in landscaping on-site or returned to supplier for recycling;
- Framing timber will be reused on-site or recycled elsewhere;
- Windows, doors and joinery will be recycled off-site;
- All asbestos, hazardous materials and / or intractable wastes will be disposed of in accordance with Workcover Authority and EPA requirements to licensed off-site facilities;
- Locations of on-site storage facilities for material to be reused on-site or separated for recycling off-site will be accessible to each of the demolition areas;
- Destination and transport routes of all materials to be either recycled or disposed off-site to be nominated by the contractor;
- Demolition Contractors will prepare a Demolition Plan to develop processes to maximise separation of building components for stockpiling or recycling; and
- A Waste Tracking System (WTS) will be used to manage and monitor the movement and placement of waste material to either recycling centres or licensed landfill facilities.

Off Site Waste Disposal

- Any material that cannot be recycled or reused during the demolition phase or stockpiled for later reuse will be disposed to an approved landfill facility if it cannot be accommodated on-site;
- Stockpiles of material for off-site disposal will be characterised in accordance with the Guidelines for Acceptance of Solid Waste to Landfill (DEP, 2001);
- Material will be transported off-site once approval has been provided by the landfill operator;
- Application for a Permit to Remove Controlled Waste from Premises to be approved;
- All movement of material off-site will be recorded using the WTS;
- Trucks will be roadworthy and operated in accordance with transport regulations;
- Two-way radios or mobile phone will be provided in all trucks in case of emergency;
- All truck loads will be within legal weight limits; and
- Off-site transport routes will be determined so that travel is along the major arterial roads to the landfill facility.

Surface Runoff

- All stormwater inlets servicing the project area will be sealed to prevent ingress of any runoff;
- Disturbed sections of the site will be surrounded with a small bund of clean earth to capture eroded material runoff in the event of an intense rainfall event. Once completed the embankment will be immediately covered with a geofabric warning barrier which will stabilise the surface;
- A dust suppressant comprising see will be applied over the clean soil cover following placement to stabilise the ground surface;

- Truck loads will be covered with tarpaulins prior to leaving the site to prevent dust emissions whilst in transit;
- Trucks will exit through a vehicle shakedown area to remove any material that may be adhering to tyres and wheels. The shakedown will be self contained with a sealed base to prevent leaching into the soil; and
- The Demolition Contractor will continuously monitor the road condition at the entrance / exit to the work site and sweep / wash as necessary.

Long Term Management of the Site

The long-term management of the site during the construction stage will be by the Head Contractor. The Head Contractor will prepare operating plans that will identify the following:

- Environmental objectives;
- Control systems supporting each objective;
- Maintenance requirements for each control system;
- Routine monitoring requirements for each control system;
- Range of acceptable values for monitored parameters;
- Action levels which trigger intervention in response to monitoring observation;
- A documentation protocol to record maintenance activities, monitoring results, non-conformances, and actions to rectify any non-conformance; and
- A reporting procedure to ensure effective communication of information.
- These procedures will continue into the full construction phase of the proposed development.

The following recommendations of the waste report have been included in the draft Statement of Commitments (refer Section 7.0):

- Preparation of a Demolition Plan and Waste Tracking System (WTS) prior to commencement of works;
- Preparation of an Erosion and Sedimentation Control Plan prior to issue of a construction certificate; and
- General compliance with the provisions of the Waste Management Plan prepared by Morris Bray Architects (July 2010) during construction.

6.15 Heritage

European Heritage

The nearest heritage item relates to land within the adjoining Hornsby Hospital (38 – 76 Palmerston Road) and reflects a local item listed by Hornsby Council under its 1994 LEP. More specifically the listing relates to “Collingridge House”. It is understood that this building, located within the centre of the Hospital Grounds, is now used as a Chapel. Given the large separation distance between the site and this local heritage item, it is not expected that the proposed development would adversely affect its local heritage significance or setting. Other locally listed heritage items in the surrounding area (e.g. 75 Balmoral Street, 62 Burdett Street, and 47 Burdett Street) are also located sufficient distance away such that the proposal will not cause undue harm to their local heritage significance.

Aboriginal Heritage

An Aboriginal Heritage study was conducted by Hornsby Council in 1996 for the whole Shire, excluding national parks. The study found that the LGA was rich in archaeological evidence of Aboriginal occupation. The study concludes that it is not possible to produce a predictive model for site distribution that will indicate the specific location of site, but does indicate the likely parts of the landscape where sites are more likely to occur, e.g. estuarine foreshore areas, ridgetops and creek beds. Further, the study also recognises that many sites have been destroyed during past development, especially in the southern part of the Shire where intensive urban development has occurred.

Historical searches of the site undertaken by Douglas Partners as part of their contamination assessment (**Appendix I**) reveal that buildings on the site have been present since at least the 1930's. Given the site is highly disturbed and does not generally match the description of landscape where aboriginal sites would typically occur in Hornsby LGA, the potential for the site to contain aboriginal archaeology is limited. Further, Section 149 Certifies issued by Hornsby Council reveals that there are no known Aboriginal sites or places on the land (refer to **Appendix I**).

6.16 Flora and Fauna

A Threatened Species Assessment has been prepared by Conacher Environmental Group (**Appendix Q**) to assess existing habitats on the site and to identify whether the proposed activity will have any impact on threatened species, endangered populations or threatened ecological communities.

Conacher Environmental Group carried out a search of the Atlas of NSW Wildlife and conducted a field survey of flora and fauna to identify the occurrence of flora species, as well as the extent and location of vegetation communities on the site.

The study found that whilst there is suitable habitat on the site for several threatened flora and fauna species, none were observed within the subject site. Similarly, whilst several endangered populations are known to occur in the local government area, neither these species, nor any suitable habitat for these species were identified on the site.

The report states that no threatened flora or fauna species, or migratory fauna species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) were observed within the subject site. Similarly, no endangered ecological communities listed under the EPBC Act were present on the site. The report concludes that the proposed development does not constitute a matter of National Environmental Significance and that the proposed development will not impact on the long-term survival of any threatened species, populations or ecological communities in the locality.

6.17 Hazards

6.17.1 Dangerous Goods

Aecom Australia Pty Ltd has undertaken a review of the Dangerous Goods to be stored and handled on site (refer **Appendix S**). The review finds that there will only be one Dangerous Good (as defined under the provisions of the Australian Dangerous Goods Code) stored and handled at the redeveloped SDSH, being oxygen cylinders located in patient resuscitation equipment. Aecom concludes that given the minor size of the cylinders, only 10 to 30 litres water capacity, the hazards and risks associated with these storages are minor.

The Occupational Health and Safety (Dangerous Goods Amendment) Regulation – 2005 (The Regulation) recognises that Dangerous Goods use, such as oxygen resuscitation equipment has negligible risk and therefore the Regulation excludes these DGs from the requirements for compliance (Clause 174E(g) of the Regulation).

Notwithstanding this, the SAN commit to monitoring the cylinder condition and content/use on a regular basis, following procedures developed for the safe management and use of the resuscitation equipment. All staff will be trained in the use of the resuscitation equipment following procedures. This commitment is included within the draft Statement of Commitments at Section 7.0.

The review by Aecom also finds that SEPP 33 does not apply to the proposed SDSH redevelopment, with Class 2.2 gases (e.g. oxygen) not captured by SEPP 33.

6.17.2 Waste

Aecom Australia Pty Ltd has undertaken a review of the Biological and Trade Waste for the redeveloped hospital (refer to **Appendix S**). Regard has been had to the DG's requirements for the proposed development.

The review finds that the redeveloped SDSH will operate two separate waste systems:

- Contaminated and biological wastes
- General sewage wastes

The redeveloped SDSH will not use any nuclear materials for its operations, and as such collection for this material is not required.

Contaminated and biological wastes

The contaminated and biological waste system will not be connected to the sewage discharge system and will consist of solids and liquid containers for the retention of wastes on the Clinic site. These containers will be collected by a registered and approved biological hazards waste contractor. The SAN currently uses "SteriHealth" for its biohazards waste management operations at its main Hospital. This contract will be extended to cover the SDSH redevelopment.

General sewage wastes

General Sewage will be connected to the Sydney Water Sewer. Only general sewage articles will be permitted for discharge to the sewer. Measures to be adopted to ensure the appropriate disposal of waste will include:

- Training of staff to dispose of contaminated and potentially contaminated wastes (including biological hazard wastes) into the appropriate receptacles for collection by the biowastes and contaminated wastes contractor.
- Erection of signs all discharge points to sewer indicating that "Non-Hazardous Wastes Only" shall be discharged to sewer points.

The above procedures and actions in relation to the appropriate handling, storage and disposal of hazardous wastes are included within the draft Statement of Commitments as Section 7.0.

6.18 Utilities

Sewer and Water

As discussed above, the site is to connect with existing Sydney Water sewer and water mains surrounding the site. Confirmation of the sewer and water connection points to supply the proposed development is to be agreed with Sydney Water once development consent has been approved. The requirement to obtain approval from Sydney Water is outlined in the draft Statement of Commitments at Section 7.0.

Telecommunications

The site is to connect into the existing telecommunications infrastructure currently servicing the site. The potential requirement to upgrade the existing infrastructure to accommodate the future development will be agreed with the relevant service provider once development consent has been approved.

Electrical Services

The proposed development is to connect with the existing electrical supply system currently servicing the site. The potential requirement to upgrade the existing infrastructure to accommodate the future development will be agreed with the relevant service provider once development consent has been approved (refer to **Appendix R**).

Natural Gas

The proposed development will connect with one of the three Jemena gas mains serving the site. Confirmation of the connection point to supply the proposed development is to be agreed with Jemena once development consent has been approved. The requirement to obtain approval from Jemena is outlined in the draft Statement of Commitments at Section 7.0.

6.19 Economic and Social Benefits

The Hornsby and Ku-ring-gai Hospital is one of the major employers in the north subregion, employing over 1,500 people and caring for over 250,000 people residing in the surrounding area.

The redevelopment of the existing SDSH will deliver a number of economic and social benefits for the region, including:

- Providing a modern, enlarged, high quality, and attractive hospital within a cluster of existing medical uses, further strengthening the medical role of the centre;
- Generating over 100 jobs employed at the redeveloped SDSH, together with creating a number of construction jobs;
- Strengthening the role of Hornsby as the main employment hub of the region;
- Providing additional health care services to a growing population;
- Providing new employment opportunities in an area well connected to public transport;
- Improving the quality of medical facilities available to the public;
- The redevelopment of the site provides an opportunity to establish a clearly identifiable and distinctive Day Surgery with enlarged and improved health care facilities; and
- Providing significant capital investment to an area characterised with an ageing stock of medical buildings, and thereby encouraging revitalisation of the medical cluster.

6.20 Site Suitability and Project Justification

The suitability of the site has been considered from a medical operational perspective as well as from a site, development and environmental capacity perspective. The site is considered suitable for the Project for the following reasons:

- The subject site is currently used for medical related purposes, including as a Day Surgery;
- The site forms part of a medical and knowledge cluster that provides important economic and social benefits to the community;
- The provision of a new and modern medical facility will further support and strengthen the medical cluster of uses;
- The proposal will provide a new identity for the SDSH, so as to improve the profile of the medical cluster and its association with high quality health care;
- The proposal complements redevelopment plans of the adjoining Hornsby and Ku-ring-gai Hospital, which involve updating existing facilities and the construction of new medical buildings, thereby strengthening the synergy between the site and the adjoining Hospital;
- The site is well connected to public transport and is located in close proximity to a Major Centre (Hornsby);
- The area and shape of the site allows for the provision of a new and enlarged hospital building that meets the special design requirements of a medical facility, whilst not resulting in any adverse impacts on surrounding residential dwellings in terms of overshadowing or views;
- The site does not share any common boundaries with any residential properties;
- There is a community understanding that the site, broader medical support precinct, and the adjoining Hornsby and Ku-ring-gai Hospital form part of a medical cluster of uses;
- Buildings with large site coverage are a feature within the medical support precinct;
- The site is suitably zoned to enable the establishment of medical centres and hospitals, subject to consent;
- The provision of dedicated car parking on site to serve the needs of the redeveloped SDSH will reduce parking stress in the surrounding streets;
- The environmental investigations of the site and soil conditions demonstrate that the proposed use and design of the building is suitable for the site based on contamination and acid sulphate soils; and
- The proposal further supports the use and viability of local public transport infrastructure through the provision of additional patronage.

7.0 Draft Statement of Commitments

7.1 Traffic Management

The SAN commit to the following:

- Investigating the provision of a dedicated pedestrian crossing on either Northcote Road or Palmerston Road.
- preparation and adoption of a Green Travel Plan to encourage travel by non-car means;
- preparation and adoption of a construction traffic management plan prior to issue of a construction certificate.

7.2 Ecologically Sustainable Development

The SAN commit to implementing the ESD initiatives as set out within SBE's ESD Statement (July 2010), including:

- Preparation of a Construction Waste Management Plan and Operational Waste Management Plan prior to issue of a Construction Certificate (CC).
- Preparation of Water Sensitive Urban Design (WSUD) strategy prior to issue of a CC.
- Preparation of a Building User's Guide prior to issue of the Occupation Certificate (OC).
- Provision of other key measures as outlined in the ESD Statement (July 2010).

The SAN commit to achieving at a minimum a 4 star Green Star rating (under the Green Building Council of Australia's Green Star Healthcare V1 Design tool).

7.3 Contamination

The SAN commit to the following:

- Preparation of a Hazardous Materials Survey prior to demolition of any structures;
- Further investigations of filling materials and surface soils undertaken prior to commencement of excavation works;
- Undertaking a waste classification assessment for the removal of any filling or soils from the site, in accordance with current waste classification guidelines.
- Compliance with the recommendations of the Phase 1 Contamination Report prepared by Douglas Partners (June 2010).

7.4 BCA and Accessibility

BCA

The SAN commit to providing a development which is compliant with the BCA 2010 and developing alternative solutions where practicable as outlined in the BCA Report prepared by McKenzie Group (July 2010).

Accessibility

- The SAN commits to providing a development which has an equitable and accessible environment for all and complies. The development will comply with the recommendations of the Access Review (June 2010) in order to achieve optimum compliance with the following standards:
 - AS 1428.1 – (80% of people with disabilities accommodated)
 - AS1428.2 – (90% of people with disabilities accommodated)
 - AS1735.12- (Lifts, Escalators and Moving Walks – Facilities for Persons With Disabilities)
 - Building Code of Australia
 - Disability Discrimination Act
 - Hornsby Shire Access & Mobility DCP
- 3-4% of total parking will be designated as accessible parking and be reasonably located adjacent to the passenger lifts.
- The width of the entry ramp between handrails will be a minimum of 1200mm and provide a 1500mm long mid landing where there is a 180 degree turn.
- Accessible car bays will comply with AS2890.6 (2.4m wide accessible car bay with a 2.4m wide shared zone).

Fire Safety

The SAN commit to constructing a building in accordance with the BCA, and where required to developing alternative solutions which comply with the relevant performance requirements of the BCA 2010.

Energy Efficiency

The SAN commit to providing a development that at a minimum complies with Part J of the BCA 2010.

7.5 Construction Management

The SAN commit to implementing the following plans during the construction phase. The following documents will be prepared prior to the commencement of works:

- Construction traffic management plan
- Construction waste management plan
- Construction noise and vibration management control plan
- Erosion and sedimentation control plan
- Demolition plan

7.6 Wind Amelioration

The SAN commit to providing windbreak elements to the Doctor's Terrace and Cafe Outdoor Terrace as outlined in the Wind Impact Assessment prepared by Heggies (July 2010).

7.7 Waste Management

The SAN commits to general compliance with the provisions of the Waste Management Plan prepared by Morris Bray Architects (July 2010) during construction, including:

- Preparation of a Demolition Plan and Waste Tracking System (WTS) prior to commencement of works;
- Preparation of an Erosion and Sedimentation Control Plan prior to issue of a construction certificate; and
- A detailed Operational Waste Management Plan prior to issue of a construction certificate.

7.8 Tree Protection

The SAN commits to implementing the recommendations of the Arborist Report prepared by Treescan (June 2010), including:

- The incorporation of appropriate measures during construction to protect those trees to be retained as part of the development.

7.9 Utilities

The SAN commits to liaise and obtain approval from all relevant service providers in regard to the provision of utility services to the site.

7.10 Operational Noise

The SAN commit to:

- undertaking further noise logging at adjacent receivers (residential) prior to commencement of works to verify noise criteria contained within the Acoustic Assessment Report (July 2010) prepared by Heggies Pty Ltd; and
- Complying with the verified noise criteria during the operation of the development.

7.11 Hazards

The SAN commit to:

- Monitoring the cylinder condition and content/use on a regular basis;
- Developing and adopting procedures for the safe management and use of the resuscitation equipment;
- Training staff in the appropriate use of the resuscitation equipment;
- Employing a registered and approved biological hazards waste contractor for the collection of contaminated and biological waste generated by the operation of the development;
- Training staff to dispose of contaminated and potentially contaminated wastes (including biological hazard wastes) into the appropriate receptacles for collection by the biowastes and contaminated wastes contractor; and
- Erecting signs on all discharge points to sewer indicating that "Non-Hazardous Wastes Only" shall be discharged to sewer points.

7.12 Consultation

This Project Application commits to ongoing public consultation throughout the process as considered relevant and that builds upon the findings and recommendations of the Project Application and supporting appendices.

8.0 Conclusion

The SAN seeks approval for the following works to replace the existing and obsolete SDHS and associated structure at Northcote Road, Hornsby:

- demolition of existing buildings on the site;
- excavation for, and construction of, car parking for 139 spaces over two levels (basement and lower ground);
- staged construction of a new 6,237m² hospital building, including ancillary support services; and
- provision of landscaping and construction of associated physical infrastructure.

The design for the redeveloped SDHS presents a significant improvement to the existing conditions. The internal design will provide the SAN with the flexibility it requires to cater for its services, and will greatly improve internal function, access and circulation arrangements.

The development is permissible within the underlying Residential (Medical Support) zone and complies with the zone objectives, as well as State Government strategic planning documents for the site. Whilst the development does not comply with the local height and density controls, the proposal is of significant merit and will provide a modern hospital that guarantees the long term viability of SAN particularly through the enhanced flexibility offered by the design. The design demonstrates design excellence and minimal visual and overshadowing impacts.

The environmental impacts of the proposal including traffic generation and car parking; acoustic, wind and reflectivity impacts; contamination and geotechnical matters; stormwater, drainage, heritage; and construction are negligible or can be appropriately managed through the adoption of the sub-consultants recommendations and/or preparation of relevant plans of management.

The significant economic and social impacts including the creation of construction and operational jobs, injection of \$43 million into the local economy, strengthening the role of Hornsby as the main employment hub of the region; providing additional health care services to a growing population; providing new employment opportunities in an area well connected to public transport; and improving the quality of medical facilities available to the public.

Having regard to the above, it is considered that the project will provide environmental, social and economic benefits and accordingly we recommend the Minister for Planning approve the application.