



State Significant Development Environmental Impact Statement

10 Herbert Street, St Leonards Hospital

Submitted to Department of Planning and Environment
On Behalf of Ramsay Health Care

July 2016 ■ 14653

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This report has been prepared by:



Robert Stark

1/07/2016

This report has been reviewed by:



James Harrison

1/07/2016

Statement of Validity

Development Application Details

Applicant name	Ramsay Health Care
Applicant address	Level 8, 154 Pacific Highway St Leonards NSW 2065
Land to be developed	10 Herbert Street (Frederick Street), St Leonards
Proposed development	Hospital

Prepared by

Name	Robert Stark
Qualifications	Bachelor of Urban and Regional Planning, MPIA
Address	Level 7, 77 Berry Street, North Sydney
In respect of	State Significant Development Application for a hospital (mental care) at 10 Herbert Street, St Leonards

Certification

I certify that I have prepared the content of this EIS and to the best of my knowledge:

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;
- all available information that is relevant to the environmental assessment of the development to which the statement relates; and
- the information contained in the statement is neither false nor misleading.

Signature



Name

Robert Stark

Date

1/07/2016

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- K** Preliminary Construction Management Plan
Richard Crooke Constructions
- L** Services Infrastructure Due Diligence Report
David Shreeve & Associates
- M** Overland Flow Study
ACOR Consultants
- N** Street Tree Letter
Site Design + Studios
- O** BCA Assessment
McKenzie Group
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Douglas Partners
- Q** Capital Investment Value Statement
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Executive Summary

Purpose of this Report

This submission to the Department of Planning and Environment (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the proposed development of a hospital for mental health care at 10 Herbert Street, St Leonards.

As the proposed development is for a hospital and has a capital investment value in excess of \$30 million, it would be a State Significant Development (SSD) for the purposes of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The capital investment value of the project is \$60.5 million.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 5 April 2016. The SEARs were issued on 5 May 2016.

This EIS is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

The Site

The site is located at 10 Herbert Street, St Leonards approximately 200 metres north of North Shore Private Hospital and 625 metres north of St Leonards Railway Station, as shown in **Figure 1**. An aerial photo of the site is provided at **Figure 2**.

Overview of the Project

This EIS will accompany a SSD application for the demolition of existing structures on the site, remediation of the site, and development of the site with an eight storey hospital including:

- 112 beds;
- 25 consulting suites;
- associated offices, treatment rooms, kitchen, dining rooms and lounge rooms;
- 139 car parking spaces (81 spaces at ground level and 58 at first floor level);
- building identification signage; and
- landscaping works and augmentation of infrastructure services as required.

A photomontage of the proposed development is shown in **Figure 3**.

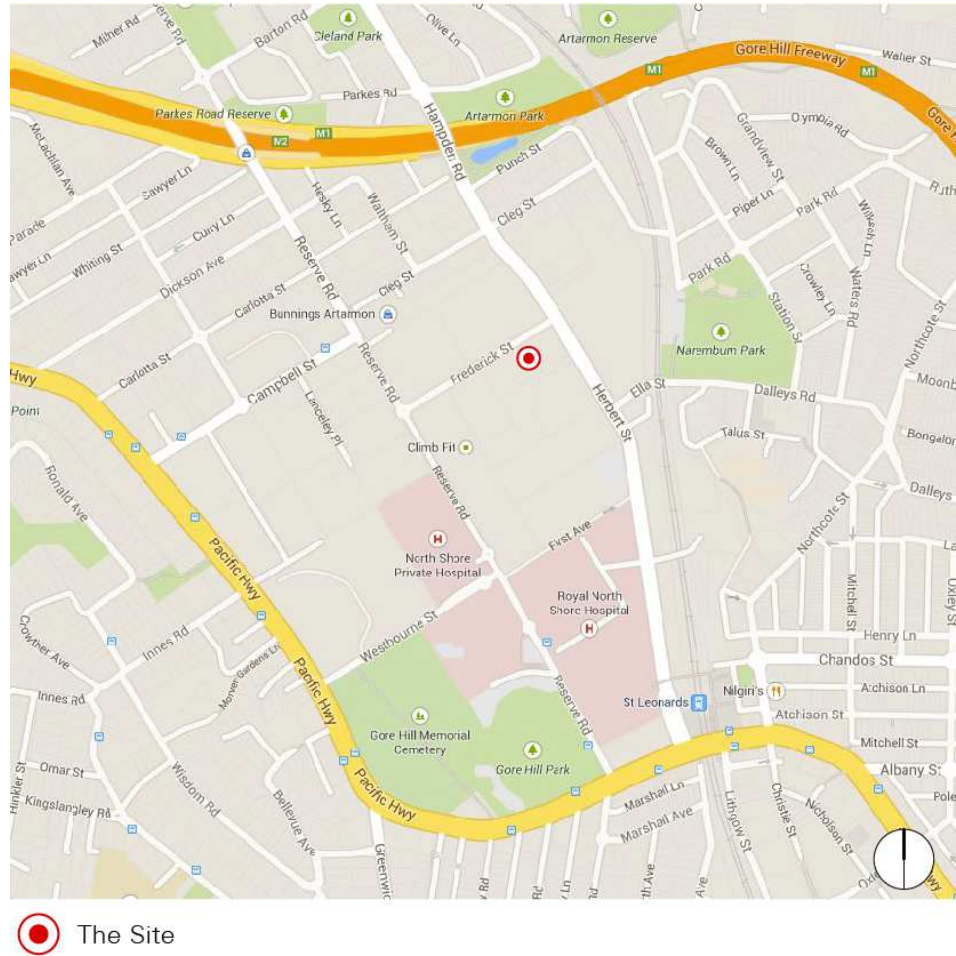


Figure 1 – Site location

Source: Google Maps



Figure 2 – Aerial view of the site (outlined in red) and area to developed with the hospital (outlined in blue)

Source: NearMaps



Figure 3 – Photomontage of the proposed hospital as viewed from Frederick Street

Planning Context

Section 5 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs. The site is zoned IN2 – Light Industrial under the *Willoughby Local Environmental Plan 2012* (Willoughby LEP) which ordinarily prohibits hospitals, however these are included as an additional permitted use for this site in Schedule 1 of the LEP.

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by the applicant to manage and minimise potential impacts arising from the development.

Conclusion and Justification

This EIS fulfils the requirements of the EP&A Act and addresses the SEARs.

Section 6 sets out the mitigation measures to ensure that the potential impacts of the development are acceptable and are able to be managed.

Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning and Environment (Department) in support of a State Significant Development Application (DA) for the development of 10 Herbert Street, St Leonards as a hospital. Although the street address is 10 Herbert Street, the land addresses Frederick Street and is formally known as Lot 2 in DP1212720.

This EIS has been prepared by JBA Urban Planning Consultants Pty Ltd on behalf of Ramsay Health Care Ltd (the proponent), and is based on the Architectural Drawings provided by STH Architects (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

The DA seeks approval for the demolition of existing structures on the site, remediation of the site, and development of the site with an eight storey hospital including:

- 112 beds;
- 25 consulting suites;
- associated offices, treatment rooms, kitchen, dining rooms and lounge rooms;
- 139 car parking spaces (81 spaces at ground level and 58 at first floor level);
- building identification signage; and
- landscaping works and augmentation of infrastructure services as required.

This report describes the site, its environs, the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

1.1 Background

Ramsay Health Care was established in Sydney by Paul Ramsay in 1964 and has grown to become a global hospital group operating 151 hospitals and day surgery facilities across Australia, the United Kingdom, France, Indonesia and Malaysia.

Ramsay Health Care facilities cater for a broad range of health care needs from day surgery procedures to highly complex surgery, as well as psychiatric care and rehabilitation. The company is well-respected throughout the health care industry for operating quality private hospitals and for its excellent record in hospital management and patient care.

Ramsay are experienced in developing and operating mental health care facilities having completed developments at the following locations since 2010;

- Hollywood Private Hospital, Western Australia;
- Hillcrest Rockhampton Private Hospital, Queensland;
- Warners Bay Private Hospital, NSW;
- Northside Macarthur Clinic, NSW; and
- Mitcham Private Hospital, Victoria.

In addition, in close proximity to the proposed site Ramsay Health Care operates North Shore Private Hospital, a 272 bed hospital established in 1997. This hospital provides acute medical and surgical services, including maternity, and is a teaching hospital of the University of Sydney.

Ramsay Health Care is one of the top five private hospital operators in the world. With approximately 25,000 beds, Ramsay employs over 50,000 staff across five countries and treats over 2.5 million patients each year.

The proposed site meets the specialised transport, technical, spatial and servicing requirements of a mental health hospital. The development will provide significant employment, with approximately 140 full time equivalent jobs created. Coupled with the obvious community benefits from providing a new hospital facility, the employment generated will create a significant positive social impact.

The site is subject to the *Willoughby Local Environmental Plan 2012* (Willoughby LEP). Under the Willoughby LEP, the site is zoned IN2 Light Industrial which ordinarily prohibits health services facilities such as the proposed development. In order for the site to be redeveloped as envisaged by the proponent, changes to the LEP were required, with the amendment being formally gazetted in February 2016. The amendments:

- allow the additional permitted use of a health services facility (which includes hospitals) on the site; and
- permit a maximum floor space ratio of 2.5:1 across the site.

The proposed development is consistent with the indicative scheme presented in the planning proposal.

1.2 EIS Requirements

A request for the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement was submitted to the Department on 4 April 2016. On 4 May 2016, in accordance with Section 89G of the EP&A Act, the Secretary of the Department issued the requirements. A copy of the SEARs is included at **Appendix B**.

The SEARs established that the proposal must meet the requirements of Schedule 2 of the EP&A Act, specifically the form specifications in Clause 6 and the content specifications in Clause 7. Several stakeholders were identified with whom consultation must occur during the preparation of the EIS.

Table 1 provides a summary of the individual matters listed in the SEARs and identifies where these requirements are addressed in this report and the accompanying technical studies.

Table 1 – Summary of SEARs requirements

Requirement	Location in EIS
General	
Statement and Declaration	EIS Declaration
Summary of EIS	Refer to Executive Summary
Statement of the objectives and description of the development	Section 1.4
Analysis of alternatives	Section 1.5
Capital investment value	Appendix Q
Environmental assessment of the development	Section 5
Mitigation measures	Section 6
List of necessary approvals/licenses	Section 5.2.1
List of accompanying documents	Table of Appendices
Justification for carrying out the development	Section 7
Key Project Specific Issues	
1. Statutory and Strategic Context	Section 5.1
2. Policies	Section 5.2
3. Built Form and Urban Design	Section 5.3 and Appendix A
4. Environmental Amenity	Section 5.4 and Appendix A
5. Transport and Accessibility	Section 5.5 and Appendix G
6. Ecologically Sustainable Development	Section 5.6 and Appendices H and I
7. Noise and Vibration	Section 5.7 and Appendices J and K
8. Contamination	Section 5.8 and Appendix F
9. Utilities	Section 5.9 and Appendices L and R
10. Contributions	Section 5.10
11. Drainage	Sections 5.11 and Appendix D
12. Flooding	Section 5.12 and Appendix M
13. Waste	Section 5.13 and Appendix E
Plans and Documentation	
Architectural drawings	Appendix A
Site survey plan	Appendix A
Site analysis plan	Appendix A
Stormwater Concept Plan	Appendix D
Sediment and Erosion Control Plan	Appendix D
Shadow diagrams	Appendix A
View analysis/photomontages	Appendix A
Landscape Plan	Appendix B
Preliminary Construction Management Plan, inclusive of a Construction Traffic Management Plan	Appendix K
Geotechnical and Structural Report	Appendix P
Accessibility Report	Appendix O
Arborist Report	Appendix N
Acid Sulphate Soils Management Plan	N/A
Schedule of materials and finishes	Appendix A

1.3 Overview of Proposed Development

This application seeks approval for the demolition of existing structures on the site, remediation of the site, and development of the site with an eight storey hospital including:

- 112 beds;
- 25 consulting suites;
- associated offices, treatment rooms, kitchen, dining rooms and lounge rooms;
- 139 car parking spaces (81 spaces at ground level and 58 at first floor level);
- building identification signage; and
- landscaping works and augmentation of infrastructure services as required.

Figures 4 and 5 below provide photomontages of the proposed development.



Figure 4 – Proposed development as viewed from Frederick Street



Figure 5 – Proposed development as viewed from Herbert Street

1.4 Objectives of the Development

The proposed development has undergone a thorough design process, including consultation with various stakeholders and an analysis of the existing site conditions and surrounding locality. There have been several key objectives which have guided this process and the design of the proposed development. These objectives include:

- Providing a best-practice facility that will meet the needs of patients, staff and visitors to enable excellent health care to be delivered to the community;
- Providing an appropriate response to the existing and desired future character of the streetscape; and
- Providing a landmark building with new distinctive architectural qualities and befitting the character of the precinct.

1.5 Analysis of Alternatives

A number of options were considered by Ramsay Health Care in considering the parameters for the development. Alternative options are discussed below.

Do Nothing

Ramsay Health Care has recognised over recent years a growing need for more mental health services in all areas of Sydney, but in particular on the lower North Shore, Northern Beaches and Upper North Shore. Existing Sydney facilities are experiencing lengthy waiting lists, in addition to increasing demand from local community health centres and private practitioners.

If the proposal to construct a new mental health care facility was abandoned, there would be no opportunity to alleviate the growing mental health care deficit in the area.

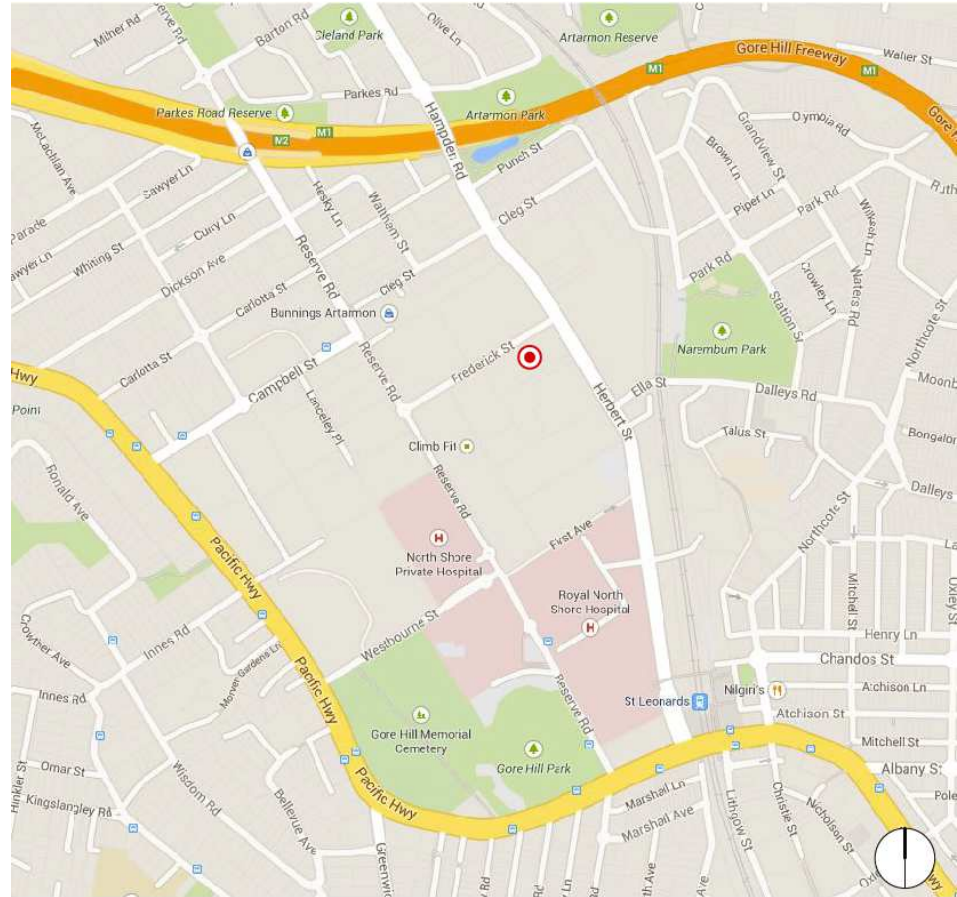
Alternate Sites

Ramsay Health Care undertook a search for suitable sites from Chatswood to North Sydney as well as North Ryde, Lane Cove and Lane Cove West. Discussions have also been undertaken with other health organisations with a view to exploring opportunities for co-location. Despite these efforts a suitable parcel of land was not found, co-location possibilities were ruled out and various buildings canvassed for conversion into a hospital did not prove suitable for a variety of reasons.

2.0 Site Analysis

2.1 Site Location and Context

The site is located at 10 Herbert Street, St Leonards approximately 200 metres north of North Shore Private Hospital and 625 metres north of St Leonards Railway Station, as shown in **Figure 6**.



 The Site

Figure 6 – Site context

2.2 Site Description

The land is approximately 5,789m² in area and generally rectangular in shape with frontage of approximately 100 metres to Frederick Street and a depth of approximately 58 metres. The portion of the site on which the proposed building is to be constructed has an area of approximately 3,988m² (refer **Figure 7**).

2.3 Existing Development

The existing building on site is shown in the aerial photo at **Figure 2**. It is a double-height 1 to 2 storey brick and metal cladding warehouse and car service garage with at-grade car parking. The building is currently used for storage. A photo of the existing development is presented in **Figure 8**.



Figure 7 – Aerial view of the site (outlined in red) and area to developed with the hospital (outlined in blue)



Figure 8 – Existing hardstand and building (right)

2.4 Topography

The general area has a gentle slope from Herbert Street down to the south west. The site itself has been cut into this slope. The site is level with the surrounding land at its south western corner, and is approximately 2 metres below street level at the north eastern corner.

2.5 Vegetation

There is no significant existing vegetation located on the site.

2.6 Public Transport

The site is conveniently located in relation to public transport services which include the St Leonards Railway Station and the numerous high frequency bus services operated along the Pacific Highway. These bus services include connections to Lane Cove, Chatswood, Macquarie Centre, North Sydney and the Sydney CBD.

The railway station is approximately a 12 minute walk from the site, with pedestrians able to use the elevated crossing that connects the hospital precinct to the station.

2.7 Infrastructure and Services

The site is presently serviced by water, electricity, sewer, gas, and telecommunications. Consultation has begun with the various authorities to confirm what upgrades, if any, are required to support the proposed development on the site.

2.8 Surrounding Development

The precinct is not a traditional industrial area. Although there are individual industrial uses present in the locality, it is largely dominated by lower order retailing and business support activities.

Immediately to the north east of the site is a single storey rendered brick and glass showroom building located on the eastern portion of the site, with at-grade car parking at the lower ground level when viewed from Frederick Street. The building is currently used as a car showroom (refer **Figure 9**). This site together with the subject site previously formed a single site occupied by a larger car dealership.

To the south of the site, at 6-8 Herbert Street, is a large industrial/warehouse unit complex (refer **Figure 10**). This contains a diverse range of businesses, many of which have ancillary office and showroom components.

Development to the north of the site, across Frederick Street, is dominated by the SBS Studios (refer **Figure 11**). This consists of a number of interconnected buildings containing television and radio studios, technical workshops, commercial offices and ancillary services.

Neighbouring the site to the south west, along Frederick Street, is a large warehouse building that accommodates several businesses including furniture and plumbing companies.

To the north east of the site, across Herbert Street, is located a business park that incorporates significant commercial office space with extensive warehousing (refer **Figure 12**).



Figure 9 – Car showroom to the north east of the site



Figure 10 – Industrial units to the south of the site



Figure 11 – SBS Studios are to the north of the site across Frederick Street



Figure 12 – Business park to the east of the site

2.9 Key Planning Controls

The *Willoughby Local Environmental Plan 2012* (Willoughby LEP) sets out the local planning controls across the Willoughby LGA, including the site. The recent planning proposal amended the Willoughby LEP to facilitate the proposed hospital on the site.

Land Use Zoning

The site is zoned IN2 Light Industrial under the Willoughby LEP (refer to **Figure 13**). The land to the south east and north east is also zoned IN2 Light Industrial, and the land to the south west and north west is zoned IN1 General Industrial.

The permitted land uses for the IN2 Light Industrial zone are presented in **Table 2**.

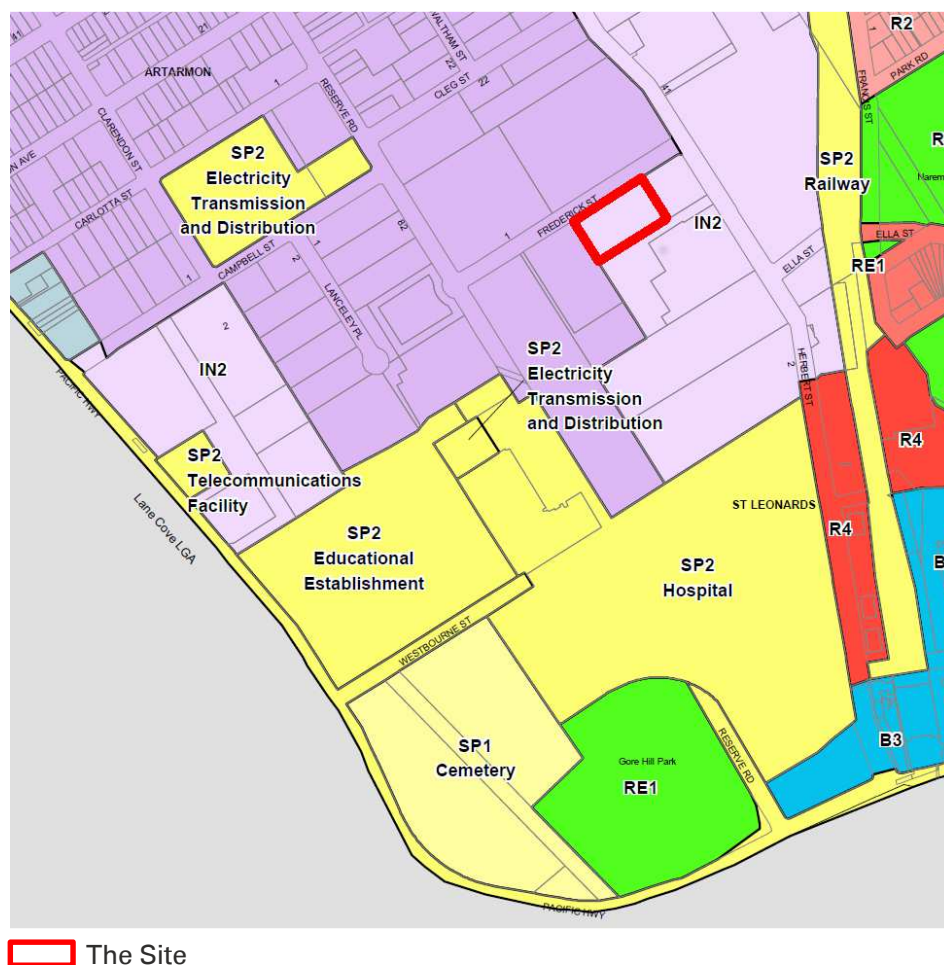


Figure 13 – Extract of Willoughby LEP Zoning Map

Floor Space Ratio

The Willoughby LEP prescribes a maximum floor space ratio of 2.5:1 on the site.

Building Height

The Willoughby LEP does not prescribe a maximum building height for the site.

Table 2 – Permissible land uses in the IN2 Light Industrial Zone and additional permitted uses on the subject site

Permissible Land Uses	
2. Permitted without consent	Nil
3. Permitted with consent	Building identification signs; Business identification signs; Depots; Industrial training facilities; Light industries; Neighbourhood shops; Pubs; Roads; Take away food and drink premises; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4.
4. Prohibited	Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Health services facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industries; Information and education facilities; Marinas; Mortuaries; Open cut mining; Passenger transport facilities; Port facilities; Recreation facilities (major); Registered clubs; Research stations; Residential accommodation; Restricted premises; Rural industries; Sewage treatment plants; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies
Additional Permitted Uses on the Subject Site under Schedule 1 of the Willoughby LEP	Health services facility (which includes hospital)

3.0 Proposed Development

This chapter of the report provides a detailed description of the proposed development. Architectural drawings prepared by STH Architects are included at **Appendix A**.

3.1 Development Description

This application seeks approval for the demolition of existing structures on the site, remediation of the site, and development of the site with an eight storey hospital including:

- 112 beds;
- 25 consulting suites;
- associated offices, treatment rooms, kitchen, dining rooms and lounge rooms;
- 139 car parking spaces (81 spaces at ground level and 58 at first floor level);
- building identification signage; and
- landscaping works and augmentation of infrastructure services as required.

Figures 14 and 15 below provide photomontages of the proposed development.



Figure 14 – Proposed development as viewed from Frederick Street



Figure 15 – Proposed development as viewed from Herbert Street

3.2 Urban Design Principles

The design intent of the project is to provide a high quality mental health care hospital that meets the needs of the staff, patient and visitors. In addition to providing a best practice medical facility, the scheme seeks to ensure that it is contextually appropriate and makes a positive contribution to the streetscape.

The following design principles were applied:

- Locating consulting suites towards the street, providing activation and casual surveillance;
- Provide appropriate boundary setbacks to the main hospital building;
- Provide a landscaped podium that provides outdoor space to a variety of staff and patient rooms;
- In relation to car parking:
 - Locating the car parking behind more active uses, so it is screened from view;
 - Providing appropriate drop-off, loading dock and ambulance bay facilities.

In addition the design needs to ensure that appropriate amenity is provided for future staff and patients, including in relation to solar access, natural ventilation, room size and outlook.

The design is also required to provide a legible street address, safe and secure access, appropriate communal open space, car parking and circulation space, waste management and servicing.

Turning to the potential environmental impact of the future building, the design is required to be acceptable in terms of overshadowing, view impacts, aesthetics and its contribution to the streetscape.

3.3 Need for the Facility

According to SANE Australia:

- Nearly half (45%) of the population will experience a mental disorder at some stage in their lives;
- Almost one in five Australians (20%) will experience a mental illness in a 12-month period;
- During a one-year period, anxiety disorders will affect 14% of the population and depression will affect 6%;
- Depression is one of the most common conditions in young people and increases during adolescence; and
- At least one third of young people have had an episode of mental illness by the time they are 25 years old.

It is anticipated that the hospital will have over 2,200 inpatient admissions each year, and over 9,000 day patient admissions each year.

The hospital will provide inpatient and day patient clinical services in the following areas:

- Drug and alcohol;
- Mood disorders;
- Acute psychiatry; and
- Eating disorders.

The hospital will also provide an outpatient consulting service through the on-site medical consulting suites. In addition, the hospital will host community information sessions, a GP education program, and a professional psychiatrists' development program.

The hospital will also be utilised as a training facility, offering the following programs that are not currently available in the local area:

- Nurse Graduate Plus program;
- Mental Health Registrar training; and
- Psychologist development training.

These programs will be affiliated with all major Sydney universities.

3.4 Employment

Approximately 140 full time equivalent employees will be employed at the facility. Full time, part time and casual positions will be available in the following areas:

- Hospital Management;
- Administration;
- Secretarial;
- Medical Records;
- Medical;
- Nursing;

- Catering;
- Housekeeping; and
- Maintenance.

Ramsay Health Care is a family-friendly company offering flexible working arrangements across all employment areas. The Ramsay Training Institute provides a range of educational services to employees across Ramsay Health Care, from annual mandatory eLearning and specialised online modules in health care and business to consulting services and education resources.

The hospital will also set up partnerships with universities already existing in other Ramsay facilities for medical, nursing and psychology students.

3.5 Proposed Facility

The following is a level by level description of the proposed development:

- Ground floor:
 - 5 consulting rooms and associated waiting and support staff areas
 - Staff car parking for 81 vehicles
 - Loading dock and ambulance bay
 - Refuse, storage and mechanical services rooms
- First floor:
 - 7 consulting rooms, waiting areas and support staff areas
 - Pedestrian entry from Frederick Street and main entry lobby
 - Patient drop off area for 5 vehicles
 - Medical records room
 - Main reception area
 - Small café
 - Parking for 58 vehicles
 - Storage and mechanical services rooms
- Second floor:
 - 6 consulting rooms and associated waiting and support staff areas
 - Group, interview, art and massage rooms
 - Dining room and kitchen
 - Gardens and outdoor dining areas
- Third floor:
 - 7 consulting rooms and associated waiting and support staff areas
 - Gym
 - ECT ward
 - Education rooms
 - Executive and clerical staff offices
 - Staff change rooms
 - Plant rooms
- Fourth to seventh floors:
 - Patient rooms, each with an ensuite bathroom
 - Nurses station and offices
 - Group room and lounge areas (with balconies accessible from lounges)
 - Plant rooms

- Roof level
 - Plant room

The typical floor plate of the ward levels has an area of approximately 1,200m². The 'L' shaped configuration is spatially efficient, maximises amenity to the rooms, and ensures that a significant portion of the building's volume is set back from the street (refer to **Figure 16**).

To protect the amenity of staff and patients, as well as that of existing and future development on surrounding sites, the indicative scheme provides setbacks to the upper levels of the building. The setbacks proposed are as follows:

- 5.815 metres to the rear boundary;
- 3.57 metres to the north eastern side boundary.
- 7.885 metres to the south western boundary fence, which will be site boundary subject to a future subdivision application.

The car parking is split into separate areas, with visitor and staff parking on separate levels accessed by separate driveways.

The proposal has a total gross floor area of 9,217m².

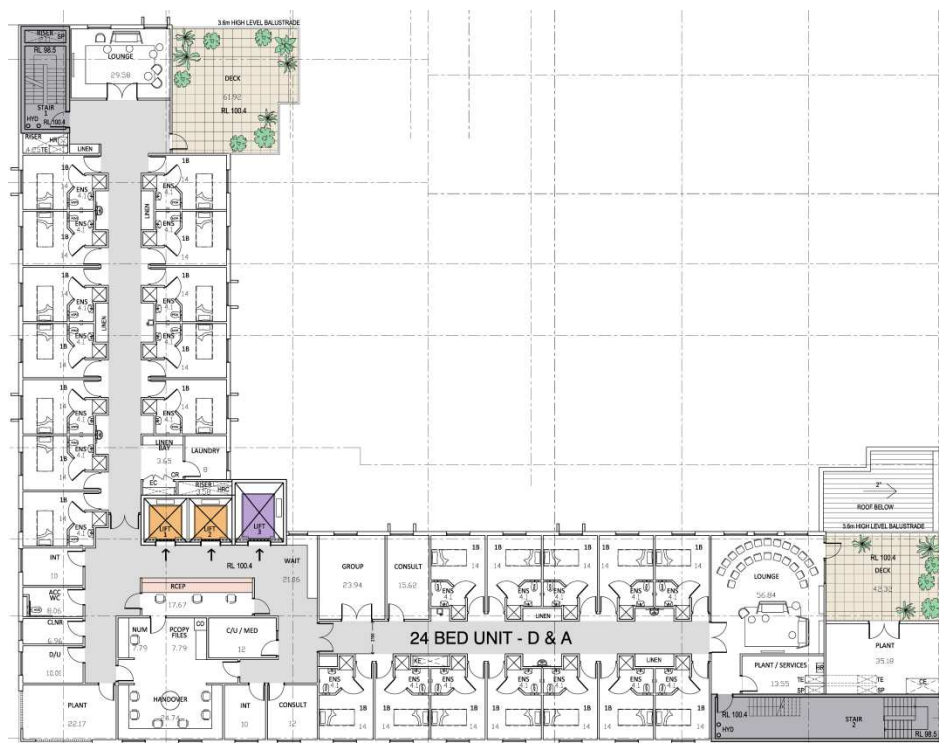


Figure 16 – Typical upper level floor plan

3.6 External Materials and Finishes

The proposed external materials and finishes are shown on the architectural drawings prepared by STH Architects (refer **Appendix A**). Proposed materials include aluminium composite panels, mesh with a perforated pattern and glass. The exposed portions of the car park that address the street will be screened with a 'green wall' of climbing plants.

3.7 Landscaping and Public Domain

The proposed landscaping design is simple yet appropriate to the site and its use (refer **Appendix C**). Areas between the building and street will be planted with shrubs and feature trees. Appropriately sized planter beds are proposed to support the green wall along the car park, and planters are also provided along the rear boundary. Where appropriate, these have integrated seating to improve the amenity of the associated spaces. Planter boxes are provided to external terraces where appropriate.

3.8 Signage

It is proposed to provide five signs on the façade of the building. These identify the name of the facility (Northside Clinic) and the operator of the facility, being Ramsay Health Care. The signage has been integrated into the design of the building, providing visual interest as well as assisting visitors to identify the main entrance to the building.

3.9 Water Cycle Management

The Stormwater Drainage Drawings prepared by ACOR Consultants (refer **Appendix D**) detail the stormwater management system for the development, which includes appropriate measures relating to the following:

- stormwater detention;
- stormwater pollution control;
- water management; and
- erosion and sedimentation control during construction.

3.10 Waste Management

A Waste Management Plan has been prepared by Northside Clinic (refer **Appendix E**) that details the proposed waste management during the operational phases of the development. This includes details regarding the management of the following waste streams:

- General waste;
- Clinical waste;
- Confidential waste;
- Recycling; and
- Grease trap.

4.0 Consultation

A schedule of consultations held, and intended future consultations, has been provided below. The proponent will undertake further consultation with the relevant environmental agencies during the assessment of the EIS. Those issues raised during consultation undertaken have been detailed in **Table 3** below.

Table 3 – Comments arising through preliminary consultation.

Comments	
Willoughby City Council	The proponent had many meetings and discussions with Council during the Planning Proposal process. Subsequent to these meetings, the project team met with Council on 29 October 2015 to specifically discuss the proposed development. The following comments were raised by Council: – Streetscape: Council identified the need to ensure that the built form appropriately addressed the street, arrival points were clearly legible, and opportunities for casual surveillance of the street were provided. – Parking: Council confirmed the car parking rates applicable to the site, and utilisation rates (with patients not permitted to drive to the facility) were discussed. – Flooding: Council requested that potential flooding impacts were considered. – Visual impact: Council requested that perspectives from both Frederick ad Herbert Street be provided so the bulk and scale of the proposal could be assessed. – Signage: Council requested that proposed signage was included on the architectural package; and – Materials and finishes: Council requested that the proposed materials and finishes be consistent with a modern hospital facility, rather than being consistent with the existing industrial character of the area.
Water	Consultation with Sydney Water was undertaken to verify the condition, capacity, compliance, reliability and efficiency of the existing Sydney Water sewer mains and water mains infrastructure. These have been found to be acceptable for connection. Formal section 73 application to Sydney Water is required upon DA approval of the building to confirm exact Sydney Water requirements.
Gas	Consultation with Jemena was undertaken to verify the condition, capacity, compliance, reliability and efficiency of the existing Jemena gas mains infrastructure. These have been found to be acceptable for connection.
Electricity	Consultation was undertaken with Ausgrid to determine the electrical requirements for the development. Ausgrid confirmed that a substation will be required on the site, and that this is capable of being serviced by existing infrastructure.
Telecommunications	Application was made to NBNCo. in relation to NBN availability to the site. This application was rejected as development does not meet NBNCo. criteria and no NBN Services are available near the site. An application has been made to Telstra in relation to telecommunication services to the proposed development.

As detailed above, consultation has been undertaken as required by the services consultants with the relevant service authorities to inform the design of the project. This consultation will continue as required throughout the detailed design and construction phases of the project.

Furthermore, the proposed development will be placed on public exhibition for 30 days in accordance with Clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period, Council, State agencies and the public will have an opportunity to make submissions on the project.

5.0 Environmental Assessment

This section contains our assessment of the environmental effects of the proposed development as described in the preceding chapters of this report.

Under section 79C(1) of the EP&A Act, in determining a development application the consent authority has to take into account a range of matters relevant to the development including the provisions of environmental planning instruments; impacts on the built and natural environment, the social and economic impacts of the development; the suitability of the site; and whether the public interest would be served by the development.

The assessment includes only those matters under section 79C(1) that are relevant to the proposal. The planning issues associated with the proposed development are listed in **Table 4** below.

The Mitigation Measures at **Section 6.0** complement the findings of this section.

5.1 Statutory and Strategic Context

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed below and in **Table 8**.

5.1.1 Environmental Planning & Assessment Act 1979

The SEARs require that the consistency of the project with the objects of the EP&A Act be considered. Clause 5 of the Act sets out that the Objects of the Act are:

- (a) *to encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (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 Objects of the Act relevant to the proposed are (a)(i),(ii), (vi), (vii) and (viii). The SSD Application is consistent with the Objects of the EP&A Act, for the following reasons:

- It provides a new mental health care hospital for the specific purpose of promoting the welfare of the community.
- It provides for the orderly and co-ordinated use of the land by revitalising the site with a high quality development.
- It provides an ecologically sustainable development.
- There will be few or no environmental impacts arising from the construction and operation of the development, and none that cannot be managed.

5.1.2 State Environmental Planning Policy (State and Regional Development) 2011

As the proposed development is for a hospital and has a capital investment value in excess of \$30 million, it is State Significant Development (SSD) in accordance with the provisions of State Environmental Planning Policy (State and Regional Development) 2011.

5.1.3 State Environmental Planning Policy (Infrastructure) 2011

Under clause 104 and Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007 (ISEPP), development including a hospital with more than 200 beds or parking for more than 200 cars must be referred to NSW Roads and Maritime Services (RMS).

Given the proposed development provides 112 beds and 139 car parking spaces, this application is not required to be referred to the RMS for comment.

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

State Environmental Planning Policy No.55 - Remediation of Land provides controls and guidelines for the remediation of contaminated land. In particular the policy 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. As discussed in **Section 5.7** and **Appendix F**, the site can be made suitable for the development.

5.1.5 State Environmental Planning Policy No.64 Advertising and Signage

SEPP 64 applies to all signage that under an environmental planning instrument can be displayed with or without development consent and is visible from any public place or public reserve.

Due to the fact that the proposed signs fall within the definition of a 'business identification sign', the additional restrictions imposed by Part 3 of the SEPP do not apply. In this instance only the objectives of the SEPP and the criteria in Schedule 1 of the SEPP need to be considered.

Clause 3 states the aims and objectives of SEPP 64 which are:

- (a) to ensure that signage (including advertising):*
 - (i) is compatible with the desired amenity and visual character of an area, and*
 - (ii) provides effective communication in suitable locations, and*

- (iii) *is of high quality design and finish, and*
- (b) *to regulate signage (but not content) under Part 4 of the Act, and*
- (c) *to provide time-limited consents for the display of certain advertisements.*
- (d) *to regulate the display of advertisements in transport corridors, and*
- (e) *to ensure that public benefits may be derived from advertising in and adjacent to transport corridors.*

The proposal is consistent with the above objectives in that the proposed signage is consistent with the architectural character of the building design and provides effective identification of the building.

Schedule 1 of SEPP 64 contains a range of assessment criteria which are matters for consideration by the consent authority in assessing applications incorporating signage. The way in which the proposed development meets the assessment criteria is set out in the following table.

Table 4 – Compliance with SEPP 64 criteria

Assessment criteria	Comments	Compliance
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed signage is compatible with the existing character of the area and furthermore, the style of signage is consistent with that located on other buildings in the locality. The proposed design of the signage will be compatible with the area, reflecting the mixed use character of the locality.	Y
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	There is no particular theme for signage in the locality. However, the proposed signage is consistent with the existing signage of St Leonards in that it displays a business name and logo.	Y
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposal does not detract from the visual quality of the area and is not within any environmentally sensitive, heritage, natural conservation, open space, waterway, rural landscape nor in direct proximity to residential development.	Y
Does the proposal obscure or compromise important views?	The proposed signs are below the parapet of the building. This results in no impact on views.	Y
Does the proposal dominate the skyline and reduce the quality of vistas?	The proposed sign is within the building envelope and does not dominate the skyline.	Y
Does the proposal respect the viewing rights of other advertisers?	The proposed signage is contained within the envelope of the building and does not have any effect on existing signage.	Y
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, form and proportion of the proposed signs is appropriate for the setting, and is considered appropriate for the locality.	Y
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The proposed sign will contribute to the visual interest of St Leonards. There is a diverse range of signage in the area, and the proposed sign will be integrated with the character of the skyline. The signs are of a proportionate nature to the building and will not overpower the landscape.	Y

Assessment criteria	Comments	Compliance
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	The proposed signs will not result in visual clutter and therefore the proposed signs will continue to provide an attractive and proportionate addition to the skyline of St Leonards.	Y
Does the proposal screen unsightliness?	The proposal will not screen any unsightliness.	N/A
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signage does not protrude above the building structure.	Y
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The proposed signage is designed to be compatible in scale and proportion with the approved building.	Y
Does the proposal respect important features of the site or building, or both?	The proposed signs are respectful in their design and they will not dominate the surrounding locality. In particular the signs have been dimensioned to match the architectural rhythm of the building's facade.	Y
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The sign has been designed to reflect the corporate branding of Ramsay Health Care.	Y
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	The proposed signage incorporates LED illumination to emphasise the signs in the evening. The signage contains logos which are an integral part of the branding and identification of the tenant.	Y
Would illumination result in unacceptable glare?	The illumination of signs proposed will not result in an unacceptable glare. The illumination will be at parapet level and not have any adverse effect on surrounding uses.	Y
Would illumination affect safety for pedestrians, vehicles or aircraft?	Due to the height, location and scale of the proposed signs, the proposal will not reduce pedestrian or road safety. The location of the signage at parapet level is consistent with surrounding signage in St Leonards and within the building envelope and therefore they will not affect aircraft.	Y
Would illumination detract from the amenity of any residence or other form of accommodation?	The proposed signage will not detract from the amenity of any residence or other form of accommodation due to the height, scale and orientation of the sign.	Y
Can the intensity of the illumination be adjusted, if necessary?	The proposed LED illumination has the ability to be adjusted post installation if required.	Y
Is the illumination subject to a curfew?	The illumination is subject from a curfew from 1.00am to 6.00am.	Y
Would the proposal reduce the safety for any public road?	Due to the design, scale and location of the proposed signs, the proposal will not reduce road safety.	Y
Would the proposal reduce safety for pedestrians/cyclists?	Due to the design, scale and location of the proposed signs, the proposal will not reduce pedestrian or cyclist safety.	Y

Assessment criteria	Comments	Compliance
Would the proposal reduce safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The proposed signs will be located at parapet level within the building envelope and will not obscure sightlines from public areas.	Y

5.1.6 Willoughby Local Environmental Plan 2012

The *Willoughby Local Environmental Plan 2012* (Willoughby LEP) sets out the local planning controls across the Willoughby LGA, including the site. An assessment of the proposed development against the relevant applicable provisions of the LEP is provided below.

Land Use Zone

Land Use Zone

The site is zoned IN2 Light Industrial under the Willoughby. Hospitals, which are a type of health services facility, are ordinarily prohibited in the IN2 zone. However, health services facilities are permitted on the subject site through Schedule 1 – Additional Permitted Uses of the LEP in accordance with clause 2.5.

Building Height

The Willoughby LEP does not prescribe a maximum building height for the site.

Floor Space Ratio

The Willoughby LEP prescribes a maximum floor space ratio of 2.5:1 on the site. The proposed floor space ratio across the entire site is 1.59:1. If the area of the site that only relates to the proposed building is used, the proposed floor space ratio is 2.31:1.

Acid Sulfate Soils

The objective of clause 6.1, relating to acid sulfate soils, is to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage. Clause 6.1(2) provides that development consent is required for works described in the associated table, and clause 6.1(3) provides that development consent required under this clause must not be granted unless an acid sulfate soils management plan is required. The site is classified as Class 5, and works in class 5 that trigger this clause are:

Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

There is no Class 1, 2, 3 or 4 land within 500 metres of the site, and there is no land within 500 metres of the site that is below 5m AHD. Therefore, it is impossible for the proposed development to lower the water table by more than 1 metre on such land, as none exists. Given that the proposed works are not works as described in the table relevant to Class 5 land, development consent for the works is not required by virtue of this clause and the requirement for an acid sulfate soil management plan does not apply.

Furthermore, the geotechnical investigations for the site (refer **Appendix P**) did not find any acid sulfate soils on the site.

Signage

The proposed development's consistency with the signage provisions of the LEP (clause 6.5) are addressed in **Section 5.14** of this report.

5.2 Policies

An assessment of the proposed development against relevant policies is provided in **Table 5** below.

Table 5 – Assessment against relevant policies

Instrument/Strategy	Comments
Strategic Plans	
NSW State Priorities	The proposed development is consistent with a number of State Priorities, including the requirement to provide much needed social infrastructure and the provide additional employment opportunities.
A Plan for Growing Sydney	A Plan for Growing Sydney aims to ensure Sydney remains a competitive economy with world-class services and transport. The proposed development accords with a number of Directions provided by the Plan, including: Direction 1.6: Expand the Global Economic Corridor to support jobs' growth Direction 1.7: Grow centres that provide more jobs closer to homes Direction 1.11: Deliver infrastructure Direction 3.3: Create healthy built environments Direction 4.3: Manage the impact of development on the environment
NSW Long Term Transport Master Plan	The project is consistent with the Masterplan in that it will: – encourage public transport use by providing employment uses in close proximity to rail and bus services; and – support a reduced reliance on private vehicles, assisting in improving the modal split between cars and public transport.
Sydney's Cycling Future	The project is well integrated into the surrounding public domain to facilitate cycling, supporting a reduced reliance on private vehicles.
Sydney's Walking Future	The project is well integrated into the surrounding public domain to facilitate walking, supporting a reduced reliance on private vehicles.
Healthy Urban Development Checklist	See below.
Crime Prevention through Environmental Design Principles	The clear definition of the sequences of the common spaces, including entry foyers and naturally lit lobbies, will positively contribute to the safety and security of the future inhabitants of the development. The entries have been designed to provide architectural, landscape and spatial interest and a clear address. The design of the development optimises safety and security, both internal to the development and for the public domain. Safety and security has also been considered in accordance with Crime Prevention Through Environmental Design principles of surveillance, access, territorial reinforcement and space management

Healthy Urban Development Checklist

The Healthy Urban Development Checklist 2009 has been prepared by NSW Health as a tool for informing and reviewing the health effects of urban development policies, plans or proposals. An assessment of the proposed development against the principles of this checklist is provided in **Table 6** below.

Table 6 – Assessment against the Healthy Urban Development Checklist

Issue	Response
Healthy Food	The proposed development will not impact agricultural lands or local food production.
Physical Activity	The development will have strong pedestrian linkages to surrounding centres including St Leonards, encouraging incidental pedestrian activity.
Housing	The proposed development does not relate to housing.
Transport and Physical Connectivity	The site is accessible by public transport, with St Leonards Station within walking distance. The proposal encourages employees to travel to work by bicycle.
Quality Employment	The proposal will provide significant employment opportunities within an existing employment centre.
Community Safety and Security	The proposed development has been designed in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
Public Open Space	Provision of public open space is not relevant to the proposal.
Social Infrastructure	The proposed development specifically responds to an identified gap in health services in the area. The proposal will generate efficiencies in the delivery of social infrastructure by being located close to the existing Royal North Shore Hospital precinct.
Social Cohesion and Social Connectivity	The proposed development will deliver a facility that specifically addresses mental health issues in the community.
Environmental Health	The proposed development will not result in any medium to long-term environmental impacts. Short-term impacts as a result of construction works will be minimised through the employment of comprehensive construction site management and environmental protection measures.

5.2.1 Other Approvals

As required by Clause 7(1)(d)(v) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*, no additional approvals are required in order to permit the proposed development to occur (as detailed in **Table 7** below).

Table 7 – Additional approval requirements

Act	Approval Required
Legislation that does not apply to State Significant Development	
Coastal Protection Act 1979	N/A
Fisheries Management Act 1994	N/A
Heritage Act 1977	N/A
National Parks and Wildlife Act 1974	N/A
Native Vegetation Act 2003	N/A
Rural Fires Act 1997	N/A
Water Management Act 2000	N/A
Legislation that must be applied consistently	
Fisheries Management Act 1994	No
Mine Subsidence Compensation Act 1961	No
Mining Act 1992	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	No
Roads Act 1993	No
Pipelines Act 1967	No

5.3 Built Form and Urban Design

Height, Bulk and Scale

The proposed building has a maximum height of 40 metres, being eight storeys, roof level and a plant level above. It should be noted that the Willoughby LEP does not proscribe a maximum building height for the site. In terms of the streetscape, the 'L' shaped configuration of the building means that a significant portion of the bulk of the building is set well back from the street. Furthermore, the upper levels of the building 'step-in' to ensure that the visual impact of the proposed development is minimised.

In terms of building footprint, the existing area is characterised by large industrial and commercial buildings. The proposed footprint is smaller than the existing buildings to the north and west, and consistent with the scale of the existing building to the south.

The proposed building height is consistent with other significant buildings in the area, including Royal North Shore Hospital, Gore Hill Technology Park, and the Northern Sydney Institute (TAFE). The proposed building height is significantly lower than the mixed use towers above St Leonards Station, the tallest of which is 38 storeys (120 metres) high. More broadly, the site is set below the level of the significant ridge to the west, meaning that the building will not dominate district views.

Density

The proposed floor space ratio across the entire site is 1.59:1. If the area of the site that only relates to the proposed building is used, the proposed floor space ratio is 2.31:1. Both of these calculations are under the maximum of 2.5:1 permitted under the provisions of the Willoughby LEP.

Setbacks

There are no setback controls applying to the proposed development. In any case the proposal provides setbacks to all boundaries to provide amenity for patients, staff and visitors, as well as for existing and future development on neighbouring sites.

Safety and Security

The clear definition of the sequences of the common spaces, including entry foyers and lift lobbies, will positively contribute to the safety and security of the future occupants of the development. The entries have been designed to provide architectural, landscape and spatial interest and a clear address.

The design of the development optimises safety and security, both internal to the development and for the public domain. Safety and security has also been considered in accordance with Crime Prevention Through Environmental Design principles of surveillance, access, territorial reinforcement and space management.

Design Quality

The overall site layout has been developed incorporating the following objectives:

- Provide excellent amenity for patients, staff and visitors;
- Provide an appropriate and legible arrival point;
- Separation of drop-off and permanent parking access points;
- Provision of suitable loading facilities, including ambulance bay;

- Activation and casual surveillance of the street where possible;
- Provide excellent amenity to indoor and outdoor communal spaces;
- Maximise opportunities for ground floor rooms to access open space;
- Set back a significant portion of the building's bulk from the street;
- Ensure adequate setbacks to existing and future neighbouring buildings are provided;
- Ensure that rooftop plant is integrated into the design of the building;
- Ensure that the building performs appropriately acoustically and in terms of ESD principles;
- Ensure that opportunities for future expansion are considered.

The composition of building elements, textures, materials and colours reflects the use, internal layout and structure of the proposed hospital. The form and materiality relates in form and scale to the surrounding developments.

The elevations are carefully articulated to provide a cohesive and synthesised whole. Colour and materials have been selected to complement the building composition. A variety of tones and smooth and textural surfaces of glass, concrete and metal contribute to the refined aesthetics of the building. The design development of the building has ensured that landscaping and building identification signage are appropriately integrated aesthetically.

Service Integration

The existing characteristics of the site have been utilised to ensure that services are appropriately and discretely provided. Using the topography of the site, loading facilities have been located lower than street level. These facilities will be used for waste collection, deliveries and ambulance services. The proposed arrangement also allows the back of house services to be located addressing the internal driveway, rather than directly addressing the street. These services include:

- Substation
- Car park entry;
- Ambulance bay;
- Gas store;
- Waste holding room; and
- Fire stair egress.

If these services were located addressing the street, there would be a significant impact on the visual quality of the building and a significant reduction in opportunities for the consulting rooms to address the street,

The roof top plant is elevated above the roof deck to allow for the potential future expansion of the hospital. The plant is located in the 'corner' of the building, set well back from the street. The plant does not cover the majority of the roof, but rather is consolidated into a single location. The roof top plant is entirely surrounded by solid walls or louvres (depending on the ventilation requirements of the plant behind), ensuring that the plant is screened from view from all aspects. The visual quality of the materials and finishes of the plant screen is consistent with those of the overall building, ensuring that the plant is visually integrated.

5.4 Environmental Amenity

Internal Amenity

The design of the proposed development ensures that all rooms frequently used by staff, patients and visitors enjoy access to sunlight and outlook. Outdoor terraces and courtyards are directly accessible from areas such as staff rooms, dining rooms and group rooms.

Solar Access

The proposed hospital has been orientated and designed to maximise where possible northern sun into patient rooms and areas of communal space. In particular, the dining room, patient lounges and balconies all enjoy a northerly aspect, ensuring excellent solar access to these spaces.

Acoustic Impacts

The acoustic impacts of the proposed development are detailed at **Section 5.7** of this report. In summary, the proposed hospital can be designed to satisfy internal noise goals from external sources. The mechanical services design can also be designed to satisfy the goals relating to external noise to surrounding development.

Visual Privacy

The internal layout of the patient and staff rooms has been designed to ensure appropriate levels of visual privacy are maintained. The proposed separation between the hospital and existing and future neighbouring development is such that appropriate visual privacy will be maintained.

View Loss

Given its location, the proposed development will not have a significant impact on any views from residential properties. The impact of the proposed development on long distance views and vistas that may be available to any of the adjoining and adjacent buildings and from the surrounding public domain is not significant. The built form will make a positive contribution to the urban skyline of the locality.

Overshadowing

Shadow Diagrams have been prepared by STH Architects (refer **Appendix A**) for the development. The shadow diagrams have been prepared at the winter and summer solstices at 9am, noon and 3pm. These demonstrate that the neighbouring sites will retain significant access to sunlight, even at mid-winter.

Wind Impacts

The proposed development has been designed to ensure that the external terraces and building entrances will not be significantly negatively impacted by wind. The external terraces have high surrounding screens (for patient security reasons) which mean that these areas are sheltered from wind impacts. The entrance is within a building element that is further forward than the main façade, preventing downwash from upper levels from impacting pedestrian access to the hospital.

5.5 Transport and Accessibility

A report assessing the traffic and parking implications was prepared by Transport and Traffic Planning Associates (refer **Appendix G**). This report specifically addresses each transport item raised in the SEARs. The key findings of this report are provided below.

Traffic Generation

Application of the RMS Guidelines for traffic generating development to the proposed development yields a traffic generation potential of 48 and 60 vehicle trips per hour during the morning and afternoon peak periods respectively.

However, mental health facilities exhibit a lower traffic generation characteristic than normal medical/surgical hospital facilities for the following reasons:

- There are significantly less visitors than normal medical/surgical hospital facilities
- Typical length of stay in a mental health care hospital is 21 days as compared to 3 days in a medical/surgery facility
- Practitioners tend to see 1 patient per hour in a mental health care consultancy suite compared to 2 or 3 per hour in a medical/surgery facility
- It is Ramsay's policy that inpatients at mental health care facilities are not allowed to drive and park their vehicles at the hospital during their stay.

The resultant distribution of the generated traffic has been assessed, and the effects on the local intersections have been modelled using SIDRA. The results indicate that a satisfactory outcome is provided to all intersections during morning and afternoon peaks.

Car Parking

The proposed development makes provision for a total of 139 off-street parking spaces, in addition to a loading dock and ambulance bay.

Having regard for the RMS Private Hospital parking criteria and lower visitor circumstances outlined above, the proposed 139 parking spaces will provide a 'buffer' of some 20-30 spaces to the projected peak demand. This provision includes an appropriate quantum of accessible spaces (four) and motorcycle parking spaces (two).

Bicycle Parking

Bicycle parking is provided on Level 1, with change rooms, showers and lockers available for staff to serve as "end of trip" facilities.

Sustainable Travel Choices

To ensure that sustainable travel choices will be promoted for patients, staff and visitors, a location specific Travel Plan and Access Guide will be prepared. This plan will aim to achieve the following:

- promote a high modal share for public transport, cycling and walking journeys;
- ensure adequate facilities are provided at the site to enable staff and visitors to commute by sustainable transport modes;
- facilitate the sustainable and safe travel of new employees; and
- raise awareness of sustainable transport amongst patients, staff and visitors.

A suitable commitment is provided in the Mitigation Measures in to ensure that this plan will be developed and implemented (refer **Section 6**).

Conclusion

The Assessment of Traffic and Parking Implications provides the following conclusion:

Assessment of the proposed development has concluded that:

- *there will not be any adverse traffic implications*
- *the parking provision will be adequate and appropriate*
- *the vehicle access, internal circulation and servicing arrangements will suitable and the design will comply with Australian Standards*

5.6 Ecologically Sustainable Development

5.6.1 ESD Principles

The EP&A Regulation lists 4 principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- Providing a much needed mental health care facility;
- implementing safeguards and management measures to protect environmental values; and
- facilitating job creation in close proximity to public transport.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction

planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

Improved Valuation, Pricing and Incentive Mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

5.6.2 ESD Measures

A Report on ESD Measures has been prepared by STH Architects and the services consultants (refer **Appendix H**). This report details the ESD measures that will be incorporated into the project, relating to:

- Architectural design;
- Mechanical services;
- Electrical services; and
- Fire and hydraulic services.

Further details on each component are provided below.

Architectural

The architectural related ESD measures (as categorised by the GBCA Green Star Rating tool) are summarised below:

- Operational waste: A Waste Management Plan has been prepared by Northside Clinic (refer Appendix E) that details the proposed waste management during the operational phases of the development. This includes details regarding the management of the following waste streams:
 - General waste;
 - Clinical waste;
 - Confidential waste;
 - Recycling; and
 - Grease trap.
- Acoustic comfort: noise and vibration levels will comply with the applicable standards. High acoustic separation will be provided for the patient bedrooms, in addition to the provision of acoustic ceilings throughout occupied areas.
- Visual comfort: daylight glare will be controlled through internal window blinds and external louvres.

- Sustainable transport: the site is located within walking distance to bus and major rail interchange (St Leonards Station). Cycling and walking/jogging to work is encouraged via provision of end of trip facilities including bike storage, staff lockers, change rooms and showers. Fuel efficient transport encouraged with provision of small car spaces.
- Life cycle impacts: life cycle of building as a whole extended with future proofing of additional floor extension designed within building, roof over this floor is designed for disassembly.
- Responsible building materials: Forest Stewardship Council (FSC) approved timber products, as well low VOC and PVC free or PVC minimised materials and products to be used where feasible.
- Microbial control: Anti-microbial products specified.

Mechanical

The ESD measures that have been incorporated into the mechanical design of the project have been informed by the following:

- Thermal mass and building fabric:
 - Orientation
 - Solar access and glazing
 - Building form and construction
 - Thermal mass assessment
- Water sensitive urban design measures
 - Metering
 - Fixtures and fittings
 - Efficient water use equipment
 - Recycling
- Energy efficiency
 - Mechanical services
 - Electrical services
 - Plumbing services
- Recycling and waste disposal
 - Design and construction phase
 - Operational phase
 - Provision of sorting facilities
 - Recycling schemes

Electrical

The electrical ESD measures are summarised below:

- High efficiency lighting fittings comprising of mostly LED type with some fluorescent fittings. Lower efficiency incandescent and halogen fittings will not be used.
- Power Factor Correction will be installed to correct power losses to 0.90 to 0.95 lagging to meet and exceed the requirements of the NSW Service and Installation Rules.
- Sub Metering will be installed to allow for the monitoring of the different load groups to meet NCC Section J8.3.

Fire and Hydraulic Services

The fire and hydraulic ESD measures are summarised below:

- Fire Services: test water will be recycled by pumping the test water back into the fire services tanks.
- Plumbing Services:
 - thicker domestic hot water insulation will be provided to the flow and return domestic hot water pipes achieving a 26% energy saving when compared to Section J7.2 of the BCA. Low flow 3 star clinical taps will be used.
 - VSD fitted to all pressure pumps for energy savings.
 - No rainwater reuse will be provided due to the ongoing energy / maintenance costs and as risks to public health that out way the benefits.

5.6.3 Certification

It is not proposed to formally submit the design of the building to GBCA for certification. It should be noted that in terms of energy use, the project will be designed to comply with Section J of the BCA, the 'Engineering Services & Sustainable Development Guidelines' prepared by NSW Health, and the 'Australasian Health Facilities Guidelines Part E – Building Services and Environmental Design'.

Ramsay Health Care has prepared a letter (refer **Appendix I**) that confirms that the design documentation of the works will meet or exceed the requirements of the Building Code of Australia Section J and provide a level of sustainability and energy efficiency equivalent to a 4 star Green Star rated Health Building.

5.7 Noise and Vibration

Operation

Wilkinson Murray has prepared a Noise Impact Assessment (refer **Appendix J**) for the development. This report considers the following noise related impacts potentially generated by the development that may affect the surrounding receivers:

- Externally located mechanical plant.
- Additional road traffic noise.

In addition, the following noise related issues are considered that potentially may affect the development itself:

- Externally located mechanical plant or industrial / commercial processes at surrounding sites.
- Road traffic noise.

The noise impacts will be assessed according to guidelines promulgated by the NSW Environment Protection Authority (EPA):

- Noise Guide for Local Government (NGLG).
- Industrial Noise Policy (INP) + Application Notes (December 2010).
- Road Noise Policy (RNP).

In addition to the above guidelines, reference has been made to:

- Willoughby Development Control Plan 2006 (WDCP 2006) – Part F.
- Australian Standard and New Zealand Standard 2107–2000 Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors (AS/NZS 2107).

The most sensitive potentially-affected receivers are residences located along Herbert Street, approximately 300m away. Considering that Herbert Street would be classified under the *Road Noise Policy* as a sub-arterial road, the additional movements generated by the proposed hospital would lead to negligible noise impact at these receivers. Other potentially-affected receivers are commercial or light industrial in nature, and given the significantly higher criteria for such receivers under the *Road Noise Policy*, the impact of traffic associated with the proposed development would also be negligible for these receivers.

On this basis, it is not necessary to assess in detail the noise impact of additional traffic on the road network associated with the operation of the hospital. The report therefore focuses on controlling noise from the surrounding area (road traffic and industry) to internal spaces of the proposed hospital, as well as the impact of mechanical plant noise from the development to surrounding receivers (including residential located approximately 300m away).

In order to characterise the existing acoustical environment in the area, ambient noise monitoring was carried out from Tuesday, 1 December 2015 to Wednesday, 9 December 2015. These measurements were used to determine appropriate acoustic design criteria.

In response to these criteria, specific design requirements have been prepared to ensure the appropriate acoustic performance of the proposed development. A commitment ensuring that these requirements are integrated into the detailed design of the proposal is provided in the Mitigation Measures at **Section 6**.

The Noise Impact Assessment provides the following conclusions:

The building envelope of the proposed hospital can be designed to satisfy the project-specific goals relating to internal noise goals from external sources.

The mechanical services design as reviewed can be designed to satisfy the project-specific goals relating to external noise to existing commercial buildings and residential buildings.

Construction

Richard Crookes Constructions has prepared a Preliminary Construction Management Plan in relation to the proposed development (**Appendix K**). This includes measures to ensure construction noise and vibration impacts are appropriately managed throughout the construction process. The management plan addresses the following issues:

- Project description;
- Project team;
- Establishment;
- Project management;
- Communications;
- Traffic management;
- Industrial relations management; and
- Programming.

A suitable commitment is provided in the Mitigation Measures in to ensure that a final Construction Management Plan will be developed and implemented (refer **Section 6**)

5.8 Contamination

To inform the recent planning proposal, a Detailed Site Investigation was undertaken by Environmental Investigations in accordance with the requirements of *State Environmental Planning Policy No. 55 – Remediation of Land*.

Site Contaminants

The following conclusions were made based on the investigations:

- Laboratory results revealed that polycyclic aromatic hydrocarbons (PAHs) were in exceedance of the required criteria values at five of the sampled test locations. Three of these locations were identified as hotspots within fill material.
- No asbestos fibres or material were identified in any of the tested samples.

Recommendations

Based on all the above results, Environmental Investigations recommended that the site be remediated to render it suitable for future land uses.

Accordingly, a draft Remedial Action Plan has been prepared by WSP Parsons Brickerhoff (refer **Appendix F**). This plan documents the on-site processes to be followed in order to remove the risks posed by soil contamination to future users. The scope of works includes the following:

- Removal, disposal and soil validation of two decommissioned underground storage tanks.
- Segregation and stockpiling of excavated material on site for waste classification, prior to re-use or off-site disposal to a suitably licenced waste disposal facility.
- Soil validation samples shall be obtained from the excavated areas, analysed for contaminants of potential concern (COPCs) and compared with the adopted validation criteria.
- In locations where site infrastructure is removed, confirmatory validation sampling for COPCs shall be completed in areas where fill material is proposed to remain in-situ.
- The scope of validation sampling shall be developed and documented in a Validation SAQP once plans for the proposed development are finalised.
- Provisions of environmental management and control during remediation works.
- A validation report will be produced documenting the remediation activities at the Site.

The Remedial Action Plan states that:

The recommended scope of works is considered appropriate to meet stakeholder requirements, minimise human health risks to current and future site occupiers and to render the site suitable for the proposed development.

5.9 Utilities

Infrastructure

The site is presently serviced by water, electricity, sewer, gas, and telecommunications. Consultation has begun with the various authorities to confirm what upgrades, if any, are required to support the proposed development on the site. Details of existing services and consultation with the authorities are provided in the Services Infrastructure Due Diligence Report prepared by David Shreeve & Associates (refer **Appendix L**) and are summarised in **Table 8** below.

Table 8 – Summary of utility authority consultation

Utility	Comments
Water	Consultation with Sydney Water was undertaken to verify the condition, capacity, compliance, reliability and efficiency of the existing Sydney Water sewer mains and water mains infrastructure. These have been found to be acceptable for connection. Formal section 73 application to Sydney Water is required upon DA approval of the building to confirm exact Sydney Water requirements.
Stormwater	Consultation with Willoughby Council was undertaken to verify the condition, capacity, compliance and reliability of the existing stormwater drainage system. There are no reports of major failures, blockages or surcharging / flooding of existing storm water mains.
Gas	Consultation with Jemena was undertaken to verify the condition, capacity, compliance, reliability and efficiency of the existing Jemena gas mains infrastructure. These have been found to be acceptable for connection.
Electricity	Consultation was undertaken with Ausgrid to determine the electrical requirements for the development. Ausgrid confirmed that a substation will be required on the site, and that this is capable of being serviced by existing infrastructure.
Telecommunications	Application was made to NBNCo. in relation to NBN availability to the site. This application was rejected as development does not meet NBNCo. criteria and no NBN Services are available near the site. An application has been made to Telstra in relation to telecommunication services to the proposed development.

Water Management

An Integrated Water Management Plan has been prepared by Warren Smith & Partners (refer **Appendix R**), providing detailed information regarding the use of water for the proposed development.

The plan details that the hospital will have a total average daily water demand of 30.35kL. This water will be provided via a new connection to the existing main in Frederick Street. The plan also details the water supply system within the proposed building, including ring main, isolation valves, pressure reduction valves, hose taps, hot water service, balancing valves and thermostatic mixing valves. Water treatment filters will be used to ensure water quality, and low flow taps and sanitary fixtures will be specified where appropriate.

It is not proposed to collect and reuse rainwater, as within a clinical environment the prevention of infection is a priority. The storage of collected rainwater may contain or breed *Legionella*, dead animals, mosquitoes, chemicals, microbial hazards and/or *Escherichia coli*.

5.10 Contributions

The provisions of the Willoughby Section 94A Development Contributions Plan 2011 apply to the proposed development. This plan does not provide any exemptions for hospitals or other health services facilities.

5.11 Drainage

The Stormwater Drainage Drawings prepared by ACOR Consultants (refer **Appendix D**) detail the stormwater management system for the development, which include appropriate measures relating to the following:

- stormwater detention;
- stormwater pollution control;
- water management; and
- erosion and sedimentation control during construction.

5.12 Flooding

An Overland Flow Study has been prepared by ACOR Consultants (refer **Appendix M**). The findings of this study are provided below.

Background

The site is located within the bounds of the Flat Rock Creek Catchment area. The local catchment area above the proposed site upstream area forms a local depression in the surrounding land, channelling flow down through and across Frederick Street. The local upstream catchment area is highly developed and consists primarily of industrial developments, commercial developments, hospital buildings and hardstand areas. Some existing buildings within the local upstream area are both adjacent to and blocking the natural overflow path and also have filled sites to regrade away from the natural overflow path.

The catchment is serviced both by an existing Council drainage system and private drainage systems. Locations and sizes of some stormwater pits and pipes within the area were provided by Willoughby Council as GIS data, others were located via survey or inspection. It is understood that a number of existing privately owned upstream drainage systems were unable to be located or accessed and as such have been omitted from this assessment. This assessment has assumed the worst case scenario for surface flow where the existing system could not be located. A 50% blockage factor was assumed for all pipes and pit inlet capacities for the system in line with Willoughby Council guidelines.

Model

An investigation of flood behaviour in a catchment requires both hydrological and hydraulic analysis to determine the 1% AEP flood levels, velocities and provisional hazard categorisation of surface flow as well as its interactions with the underground pit and pipe system within the area. The TUFLOW modelling software simulates depth-averaged, two-dimension surface flows from floods in addition to a one-dimensional network modelling based on the full one-dimensional free-surface St Venant flow equations. The model simulates the movement of floodwaters through the waterway reaches, storage elements and hydraulic structures. The model calculates flood levels, flow patterns and also models the complex effects of backwaters, roughness, overtopping of embankments, waterway confluences, bridge constructions and other hydraulic structures as applicable.

This model has been undertaken in accordance with Australia Rainfall and Runoff, the *NSW Floodplain Management Manual (2005)* and Willoughby Council's *Floodplain Management Technical Standard*.

Results

The predicted flooding characteristics for the 1% AEP Design storm event are mapped in the Overland Flow Report.

The areas of flooding that have been identified within the model around the site include an overland flow path to the south west of the existing building, and the ponding of water behind the existing car show room.

The overland flow path is not within the proposed building footprint, but rather is located on the residual land to the southwest. Therefore, the proposed development will not have an impact on this overland flow path.

The localised ponding is a result of a local depression collecting rainwater falling on the site itself. This ponding will be dealt with the proposed stormwater system, and is not considered a flood affectation as it does not relate to external water draining onto the site.

Conclusion

The investigation found that the proposed development is not subject to flooding from overland flow. The proposed structures will not impede the passage of floodwater to cause a rise in water upstream, or increase the downstream velocities of any flood flows.

While no flooding has been noted as affecting the property, recommendations have been made to prevent future nuisance water ingress into the property. These recommendations have been incorporated into the Mitigation Measures (refer **Section 6**).

5.13 Waste

A Waste Management Plan has been prepared by Northside Clinic (refer to **Appendix E**) that details the proposed waste management during the operational phases of the development. This plan describes the current policies and procedures for Northside Clinic, and provides goals and targets to ensure ongoing improvements in all aspects of waste management including the generation, handling, storage and disposal of all forms of waste.

This plan is based on *the NSW Health Department - Waste Management Guidelines for Health Care Facilities - August 1998, NSW Health PD2007_036: Infection Control Policy*, relevant legislation relating to Environmental Protection, and Workplace Health and Safety. As legislation and policies are constantly revised, the plan will be reviewed annually.

The plan includes details regarding the management of the following waste streams:

- General waste;
- Clinical waste;
- Confidential waste;
- Recycling; and
- Grease trap.

The plan also details how waste management will be addressed by the following management practices:

- Licencing requirements;
- Health and safety committee;
- Purchasing policy;
- Education and training;
- Policies and procedures; and
- Auditing.

The application of the Waste Management Plan will ensure that the waste streams generated by the proposed development will be appropriately managed.

5.14 Signage

Willoughby Local Environmental Plan

Clause 6.5 of the Willoughby LEP provides provisions for signage. The proposed development is consistent with these provisions in that:

- the signage will not interfere with the visual amenity or safety of the locality;
- the signage is ancillary to the uses on the site; and
- the sign identifies a business carried out at the site.

Willoughby Development Control Plan

Part G.5 of the Willoughby Development Control Plan 2006 (Willoughby DCP) governs outdoor advertising. The following describes the proposed signs' consistency with the controls of the Willoughby DCP.

Objectives

The proposed sign is consistent with the objectives contained in part G.5 of the Willoughby DCP as follows:

- the content of the signs relates solely to the use of the building on which the signs are located;
- the design of the signs is compatible with the desired amenity and visual character of the area;
- the scale of the signs is discrete and complements the architectural characteristic of the building;
- the signs do not break the roof-line of the building or obscure any architectural features of the building;
- the design is coordinated to be effective but restrained;
- although two signs are proposed, this is in response to the symmetry of the building and does not represent unnecessary repetition;
- the signs are not visible from any residences or public open space in the immediate vicinity;
- the signs will be securely fixed to the building;
- the signs will not distract motorists;
- the signs do not require the removal of any trees or shrubs; and
- the signs do not relate to active shopfronts.

General Performance Requirements

As outlined above, the proposed signs are satisfactory in terms of design, content, traffic safety, security and impact on landscaping. Accordingly, the signs meet the general performance requirements of the Willoughby DCP.

Advertising in Industrial Zones

As required by the Willoughby DCP, the proposed signs will avoid any likely nuisance to nearby residences as a result of glare or light spillage, due to their orientation away from surrounding residential development and towards the neighbouring industrial development.

5.15 Tree Removal

Although there is no significant vegetation on the site, the development will require the removal of three street trees to facilitate driveway access to the development.

The development site is a new allotment, and as such is not serviced by any existing driveway crossovers. To provide vehicular access to the site, three of the existing streets will require removal. Given the regular spacing of trees along the street frontage, there is no possibility to relocate the driveway crossovers and avoid tree removal.

An assessment of the street trees along the frontage of the development has been undertaken by the landscape architect for the project, Julian Brady¹ of Site Design + Studios (refer to **Appendix N**). The trees are all in poor to fair condition as a result of continual pruning to provide clearance to overhead powerlines. Given the condition of the street trees, there will be no significant impact of their removal to allow for site access.

5.16 Building Code Compliance

An assessment of the proposed modifications against the provisions of the Building Code of Australia (BCA) has been undertaken by McKenzie Group and can be found at **Appendix O**. The assessment concludes that the proposed development is capable of complying with the relevant provisions of the BCA.

The BCA assessment includes consideration of the proposed development against the relevant provisions of the Building Code of Australia and Australian Standards, including those relating to accessibility. The assessment concludes that proposal generally complies, with further detail to be assessed as the design is further developed.

In summary, the assessment finds that the relevant elements of the proposed development either comply with the applicable standards, or that compliance can be readily achieved as part of the detailed design process.

5.17 Geotechnical and Structural Issues

Geotechnical investigations were undertaken at the site with an associated report prepared by Douglas Partners (refer **Appendix P**). The investigation was carried out to provide information on subsurface conditions for the design and planning of earthworks, pavements and foundations. The investigation included the drilling of four boreholes near the corners of the proposed building with laboratory testing of selected soil samples, followed by engineering analysis and reporting.

¹ Mr Brady's qualifications include B.L Arch (HONS) and B.A (Env. Sc), and he is a member of the Australian Institute of Landscape Architects.

The investigations detail that the geotechnical conditions of the site are such that typical construction methods can be utilised. It is noted that only minor excavation is required on the site to accommodate the proposed development.

5.18 Construction Impacts

The proposed construction works for the development are not expected to give rise to any unacceptable detrimental impacts, particularly given the existing industrial and ongoing urban redevelopment character of the area.

A comprehensive Demolition, Construction and Waste Management Plan will be prepared prior to the issue of a construction certificate, based on the Preliminary Environmental Construction Management Plan at **Appendix K**. This plan will set out the environmental management requirements for the following aspects of the project:

- access, egress and compound management;
- civil structures;
- demolition;
- dust management;
- emergency response;
- excavation works;
- flood contingency;
- sewer and water management;
- hazardous material management;
- noise management;
- occupational health and safety;
- soil management;
- traffic management; and
- waste management.

5.19 Acid Sulfate Soils

The site is designated as 'Class 5' on the Willoughby LEP Acid Sulfate Soils Map, which is the class of least significance. This designation is a result of acid sulfate soils not being known to occur in landforms above 10 metres AHD, and the site has an elevation of 75 metres AHD. As there is no potential for acid sulfate soils on or in the vicinity of the site, given its elevation and distance from coastal waterways, an Acid Sulfate Soil Management Plan is not required.

5.20 Environmental Risk Assessment

An Environmental Risk Assessment (ERA) establishes residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for the project has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools with the methodology described below.

The Risk Assessment Matrix at **Figure 17** illustrates how the residual environmental impacts of a proposal are assigned. The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented as follows:

- the significance of impact is assigned a value between 1 and 5 based on:
 - the receiving environment
 - the level of understanding of the type and extent of impacts
 - the likely community response to the environmental consequence of the project; and
- the manageability of environmental impact is assigned a value between 1 and 5 based on:
 - the complexity of mitigation measures
 - the known level of performance of the safeguards proposed
 - the opportunity for adaptive management.

The ERA addresses, as appropriate:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Table 9 presents the environmental risk assessment for this project.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 17 – Risk assessment matrix

Table 9 – Environmental Risk Assessment

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and/or Comment	Significance of Impact	Manageability of Impact	Residual Impact
Key: C - Construction O - Operation						
Biodiversity	C	- Loss of vegetation within the development site - Potential to impact on biodiversity of the site	No significant vegetation present on site. Street trees to be removed during construction for access.	2	1	3 Low
Aboriginal Heritage	C	Potential to encounter unanticipated Aboriginal cultural material during construction	- The potential to encounter Aboriginal cultural material on the site has been assessed as low. - Should unanticipated Aboriginal cultural material be encountered then it is proposed that all works cease, the OEH be contacted immediately, a management strategy be developed, and the find be recorded to mitigate any potential impacts.	2	2	4 Low / medium
Hazards	C	- Potential to encounter asbestos - Potential to encounter contaminated materials	- Should asbestos be encountered then it should be removed by a licenced contractor. - Should any contaminated material be found then an 'Unexpected Finds Protocol' should be implemented.	4	2	6 Medium
Noise and Vibration	C + O	Increase in noise and vibration levels during construction activities	- The Acoustic Assessment details that adequate control of construction noise can be achieved through the development of a Construction/ Demolition Noise Management Plan. - Subject to finalisation of equipment specifications, appropriate sound minimisation measures are to be incorporated within the proposed development.	C – 2 O – 2	C – 2 O – 1	4 Low / medium 3 Low

5.21 Social and Economic Impacts

The proposed development will provide a positive social impact for the community, through the provision of a modern and much needed mental health care hospital.

The proposal will also result in significant economic benefits in that it will provide construction and operational employment opportunities, as well as facilitating opportunities for patients to increase their economic contribution to society.

Overall, the proposed development will have a very positive social and economic impact for the community and will provide a high quality environment for its patients, staff and visitors.

5.22 The Public Interest

As detailed in the proceeding sections of this report, the proposed development will provide a quality mental health services facility that is compatible with the surrounding pattern of development. Furthermore, the amenity of the adjoining properties will not be detrimentally impacted upon by the proposed development. For these reasons the development is considered to be in the public interest.

6.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 10** below. These measures have been derived from the previous assessment in **Section 5.0** and those detailed in appended consultants' reports.

Table 10 – Mitigation Measures

Mitigation Measures
Construction Management and Construction Traffic Management – A final Construction Environmental Management Plan, incorporating a Construction Traffic Management Plan, is to be prepared after the appointment of a head contractor but prior to the commencement of works on the site
Acoustic Impacts – The recommended noise control measures within the Noise Impact Assessment prepared by Wilkinson Murray (Appendix J) and the draft Construction Environmental Management Plan prepared by Richard Crookes Constructions (Appendix K) will be incorporated into the detailed design of the proposed development.
Nuisance Water Ingress – The recommended nuisance water ingress measures within the Overland Flow Study prepared by ACOR Consultants (Appendix M) will be incorporated into the detailed design of the proposed development.
Sustainable Travel Choices – A location specific Travel Plan and Access Guide is to be prepared prior to the occupation of the development. The objectives of the plan are to be as follows: – To promote a high modal share for public transport, cycling and walking journeys; – To ensure adequate facilities are provided at the site to enable staff and visitors to commute by sustainable transport modes; – To facilitate the sustainable and safe travel of new employees; – To raise awareness of sustainable transport amongst patients, staff and visitors.

7.0 Justification for the Proposal

In general, investment in major projects can only be justified if the benefits of doing so exceed the costs. Such an assessment must consider all costs and benefits, and not simply those that can be easily quantified. As a result, the EP&A Act specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not.

Various components of the biophysical, social and economic environments have been examined in this EIS and are summarised below.

7.1 Social and Economic

The proposed development will provide a number of positive social and economic benefits as it:

- Provides essential health care services for the community;
- Provides significant employment opportunities;
- Ensures the full environmental investigation and remediation of the site from its previous uses;
- Allows for greater natural surveillance of internal and external spaces on the site promoting safety;
- Promotes state government initiatives in relation to urban consolidation by increasing the density of employment in proximity to existing services and facilities, in particular public transport; and
- Integrates well with the existing and future character of the locality.

Overall, the proposed development will have a very positive social impact on the community and will provide a high quality environment for its residents and patients.

7.2 Biophysical

The environmental impact assessment of the proposed development has demonstrated that:

- the proposal does not give rise to any impacts on the local road or transport network;
- noise from the operation of the proposed development will not give rise to any impacts on nearby sensitive receivers;
- future occupants of the building will not be subject to adverse noise impacts;
- there is not expected to be any impacts on Indigenous or European heritage values associated with the site;
- water and energy consumption will be reduced in accordance with contemporary standards;
- any potential contamination of the site can be addressed and the site made suitable for the proposed use;
- waste will be managed in an efficient and coordinated manner to avoid potential wastage, odour impacts or pollution;

- the site will be managed during construction to avoid amenity or physical environmental impacts; and
- the proposed development is able to be adequately serviced by existing utilities and stormwater management infrastructure.

7.3 Ecologically Sustainable Development

The EP&A Regulation lists four principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- implementing safeguards and management measures to protect environmental values;
- facilitating job creation and the provision of health services in close proximity to public transport; and
- contributing to the desired future character of the streetscape in the locality.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

Improved Valuation, Pricing and Incentive Mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

8.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of a proposed hospital in St Leonards. The EIS has addressed the issues outlined in the Secretary's Environmental Assessment Requirements and accords with Schedule 2 of the EP&A Regulation with regards to consideration of the proposed development's social, economic and biophysical impacts.

The development is permissible with consent on the subject site, by virtue of the recent amendments to the Willoughby LEP specifically introduced to facilitate this development. The proposal is of significant merit and will provide vital health care services. The physical characteristics of the building will make a positive contribution to the urban fabric of the area.

The environmental impacts of the proposal, including traffic generation and car parking, acoustics, contamination and geotechnical matters, stormwater drainage and construction are negligible or can be appropriately managed through normal conditions of consent and the implementation of the mitigation measures identified in **Section 6.0** of this EIS.

Given the positive impacts and public benefits delivered by the proposal and in the absence of adverse impacts, we have no hesitation in recommending that Council grants consent to this DA.