

Project Application for New Mental Health Facilities Hornsby Ku-ring-gai Hospital



Environmental Assessment

June 2011

Prepared for



**Health
Infrastructure**

By

UPO Pty Ltd

PO Box 6101

Malabar NSW 2036

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Executive summary

This Environmental Assessment has been prepared for Health Infrastructure. It accompanies a Major Project application for the demolition of an existing hospital building and replacement with expanded mental health units at Hornsby Ku-ring-gai Hospital. Works also include associated parking and landscaping. Hornsby Hospital is located at 38-76 Palmerston Road, Hornsby.

Overview of Proposal

This Major Project application is seeking Project Approval for:

- A new Adult Acute Mental Health Unit (AAMHU);
- A new Child and Adolescent Mental Health Unit (CAMHU);
- Staff office and support facilities for both units co-located on an upper floor;
- A CAMHS Community Service;
- Car parking on site; and
- Landscaping and signage.

The proposed development is defined as a Hospital and has a Capital Investment Value of \$29.74 million. The Minister has confirmed that the proposed works are deemed to be a 'Major Project' to be determined under Part 3A of the Act. This Project Application is submitted to the Department of Planning for assessment as a Part 3A Major project under the *Environmental Planning and Assessment Act 1979* (the Act) and Schedule 1 of State Environmental Planning Policy (Major Development) 2005.

The Environmental Assessment specifically responds to the Director General's Environmental Assessment Requirements dated 23 December 2010.

Design Intent

The design and form of the proposal is primarily guided by the need to facilitate the efficient operation of the hospital while providing needed Adult, Child and Adolescent Mental Health Unit facilities and maintaining adequate amenity to surrounding residential development. The proposal has been designed in response to the North Sydney Central Coast Area Health Service (NSCCAHS) Mental Health Service Plan 2006-2016, with particular emphasis on:

- Appropriate urban design response to the site, situated on a corner;
- Landscape treatment to enhance and compliment materials and building form;
- Suitable parking access to the site and efficient maneuverability within and around the Hospital site; and
- Built form height and appearance to remain cognisant of adjacent residential neighbourhood.

The building has been designed to present as a contemporary built form to significantly upgrade the visual appearance of the Hospital campus.

Internally, the design significantly improves the functionality and amenity of the mental health facility, bringing it in line with modern standards. The proposed internal planning of the facility will improve clinical operations and address current issues related to:

- Adequate accommodation for the treatment of both inpatient and day patient services;
- Provision of efficient adjacency of departments improving clinical flows;
- Provision of staff support areas currently deficient in the existing Hospital;
- Provision of inpatient accommodation to meet current market expectations for Mental health care facilities; and
- Provision of secure courtyard for passive patient therapy use.

Social and Economic Benefits

The project will have clear social and economic benefits, providing an upgraded and much needed mental health facility at this established Hospital site. Additional benefits are recognised through increased employment opportunities and efficiencies in site management strategies to accommodate this upgraded health facility.

Permissibility

The proposed facilities are permissible with consent in their Special Uses zoning as per Hornsby Shire Local Environmental Plan 1994.

Heritage

There is a heritage item located within the Hornsby Ku-ring-gai Hospital site. This item is listed as being of Local significance and is known locally as Cottage Chapel. The item is situated approximately 42 metres to the southwest of the proposed redevelopment and will not be impacted by the proposal.

Environmentally Sustainable Design

The key sustainable development objectives for the Hornsby Ku-ring-gai Hospital Redevelopment are based on the three principles of social, environmental and economic sustainability. These encompass a range of initiatives from increased local employment, improvement to social infrastructure in this region, to the upgrade of building fabric to introduce a purpose built, energy efficient building. The ESD design principles are taken to the design and maintenance of the landscaped area with native, drought proof species introduced, and vegetation utilised to shade paved surfaces and components of the building itself.

Transport, Traffic and Access

Parking will be provided on site to relocate existing parking and to introduce additional car parking to cater to the proposed new facility. In total, 155 car parking spaces will be provided as part of the development, comprising reconfiguration of 95 spaces currently onsite, plus an additional 50 spaces required for demand generated by the development. This is considered an appropriate level of parking for the development site.

Disabled parking is provided at the main entry to the new buildings. The proposed development is expected to have a minimal impact on the road system and intersection performance of the area. An assessment of traffic generation for the proposed development has been considered and findings indicate that any increase in traffic is minimal and is within the capacity of the current operation of the road network in the area.

Landscape and Tree Removal

The landscape for the Mental Health Unit is designed to complement and enhance the surrounding urban context and provide amenity for all users and visitors to the Hornsby medical campus.

The two primary objectives for the landscape design are;

- Provide a complimentary setting and visual amenity for the MHU within the broader urban fabric and the existing campus
- Providing a supporting environment to the various healthcare service functions.

Some trees will require removal to facilitate the development and other are proposed for transplantation. The Arborist has made recommendations on how this will be undertaken to ensure minimal damage to the trees to be retained.

Neighbour Amenity

The interface of public and private space was explored in the design process so that the amenity of neighbours and patients could be fully addressed. The nearest residents to the proposed development are situated along Palmerston Road, directly opposite the exiting Child and Adolescent Family Team (CAFT) building. These residents are separated from the proposed facility by a road, and as such, there are no visual links created between the proposed facility and residential properties.

The current building is two storeys in height and causes no overshadowing to these neighbours; therefore no overshadowing is anticipated through this proposal.

Consultation

In accordance with the Director General Environmental Assessment Requirements, further consultation with Hornsby Shire Council; Roads and Traffic Authority; Ministry of Transport; Utility Providers was undertaken during the preparation of the Environmental Assessment. Issues raised in these consultations have been considered in the final design detailing of the scheme and this Environmental Assessment.

Conclusion

This Environmental Assessment, prepared on behalf of Health Infrastructure, accompanies a Major Project application for the demolition of an existing hospital building and replacement with expanded mental health units at Hornsby Ku-ring-gai Hospital located at 38-76 Palmerston Road, Hornsby. The Environmental Assessment has been prepared in response to the Director General's Environmental Assessment Requirements and is supported by a range of specialist documentation.

The Assessment finds that the proposed upgrade of the Hornsby Ku-ring-gai Hospital is appropriate having regard to:

- The established use and function of the site and the growing demand for medical facilities within the Sydney Metropolitan Area.
- The appropriate zoning of the site, designated to support Hospital functions.
- The built form, landscape and overall urban design response is considerate of the surrounding residential development and will ensure continued residential amenity.
- The provision of on-site parking spaces will meet the demand of the new facility, while maintaining the established parking capacity of the site.

When assessed against all relevant matters in the Director General Environmental Assessment Requirements, and Part 3A of the *Environmental Planning and Assessment Act 1979* the Project Application is recommended for approval.

1 Introduction

1.1 Purpose of the Report

This Environmental Assessment has been prepared to accompany a Major Project application for the redevelopment of the mental health facilities at Hornsby Ku-ring-gai Hospital, located at 38-76 Palmerston Road, Hornsby.

The Project Application seeks approval for:

- A new Adult Acute Mental Health Unit (AAMHU);
- A new Child and Adolescent Mental Health Unit (CAMHU);
- Staff office and support facilities for both units co-located on an upper floor;
- Car parking across the site; and
- Landscaping and signage.

The Environmental Assessment specifically responds to the Director General's Environmental Assessment Requirements dated 23 December 2010 and is supported by the following specialist documentation:

- Site Survey by Craig and Rhodes and SP Site Setout Pty Ltd
- Site and Architectural Plans prepared by Hames Sharley
- Storm Water Drainage Statement prepared by TTW
- Traffic and Parking Assessment Report prepared by URaP-TTW
- Waste Management Plan prepared by NSW Health
- Utility and Services Report prepared by Jim Hatz and Associates
- Hydraulic Services Drawings and Report prepared by GDK Hydraulics Consulting
- Aboricultural Impact Assessment prepared by The Aborist Network
- Quantity Surveyors Report prepared by MBMPL Quantity Surveyors.

The report includes the following Chapters:

1. Introduction and background to the application;
2. Description of the site and its broader strategic context;
3. Detailed description of the proposed redevelopment;
4. An Environmental Assessment;
5. Draft Statement of Commitments; and
6. Conclusion

1.2 Background to Hornsby Ku-ring-gai Hospital

Hornsby Ku-ring-gai Hospital is a part of the Northern Sydney Local Health District (NSLHD). This District extends from Sydney Harbour north to Pittwater and west to Ryde and includes Hunter's Hill, Lane Cove, Mosman, North Sydney, Ryde, Willoughby, Hornsby, Ku-ring-gai, Manly, Pittwater and Warringah local government areas.

Mental Health Services within NSLHD include:

- Macquarie Hospital at North Ryde which has a mental health specialist tertiary referral unit that provides non acute, long stay and very long stay service modalities. This facility focuses on recovery and rehabilitation strategies.
- Coral Tree Family Services on the Macquarie Hospital campus provides a state-wide child & family mental health service.



Figure 1: showing the various NSLHD services (Source NSW Health Web site)

The Hornsby Ku-ring-gai Hospital has been providing health care to the region stretching from the Hawkesbury River to Lindfield, east to St Ives and west to Pennant Hills, Cherrybrook and Epping since 1933. The Hospital is a teaching Hospital of the University of Sydney and offers a range of services over its numerous hospitals, health centres and education centres. Specifically, Hornsby Ku-ring-gai Health Service offers the following specialised services:

- Coronary and intensive care;
- Child and adolescent Unit ;
- Emergency Department ;
- Rehabilitation and aged care service ;
- Maternity and obstetric care, and women's health;
- Allied health services (physiotherapy, occupational therapy and social work);
- Medical and Surgical Services; and
- Counselling and Mental Health Inpatient Services.

The proposal seeks to partially redevelop the existing Hornsby Ku-ring-gai Hospital to offer a new Acute Adult Mental Health Unit (AAMHU), Child and Adolescent Mental Health Unit (CAMHU) and a Child and Adolescent Mental Health(CAMH) Community Service. The implementation of this project will address a number of key NSLHD needs for child and adolescent mental health and adult acute mental health services as there are currently no CAMH in-patient unit in the Northern Sydney Local Health District.

1.3 Compliance with Director-General's Requirements

Issue	Location
1. An executive summary	Page i
2. A description of the proposal including: (a) description of the site including cadastre and title details; (b) a thorough site analysis and description of the existing environment; (c) suitability of the site for the proposed development; (d) likely environmental impacts; (e) design, construction, operation, maintenance, rehabilitation and staging as applicable; and (f) justification for undertaking the project, taking into consideration the environmental impacts of the proposal, the suitability of the site and whether or not the project is in the public interest	Chapter 3, page 10
3. A consideration of the following with any variations to be justified: (a) all relevant State Environmental Planning Policies; and (b) applicable local planning instruments and relevant legislation and policies.	Chapter 4
4. A draft Statement of Commitments, outlining commitments to the project's management, provision of infrastructure, mitigation and monitoring measures with a clear identification of who is responsible for these measures.	Chapter 5
5. A conclusion justifying the project, taking into consideration the environmental and construction impacts of the proposal, mitigation measures to address these impacts, the cumulative impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest.	Chapter 6
6. A signed statement on the validity of the Environmental Assessment, the qualifications of person(s) preparing the assessment and that the information contained in the Environmental Assessment is neither false nor misleading.	Page 6
Key Assessment Requirements	
Urban Form and Design <ul style="list-style-type: none"> Urban design, height, density, bulk and scale of the development and relation to the surrounding development, landscape and topography; Floor space calculations; Site analysis and architectural plans; External materials and finishes, including a sample board; Photomontages and view analysis; Details of proposed areas of landscaping and open space 	Chapter 3 and Section 4.10 Appendix C
Amenity Impacts on Neighbouring Properties <ul style="list-style-type: none"> Address the visual impact, privacy and overshadowing of the development on adjoining properties, with particular regard to any sensitive uses. 	Section 4.18

<p>Transport, Traffic & Access</p> <ul style="list-style-type: none"> ▪ Provide a Transport and Accessibility report that takes into consideration the objectives of the North Subregional Strategy and addresses the following: <ul style="list-style-type: none"> ○ Surrounding context and how proposal responds to transport and traffic management; ○ Measures to encourage mode shift to public transport and reduce reliance on on-site car parking; ○ Identify existing public transport services in the site, together with other transport services offered by the hospital; ○ Detail existing pedestrian and cycle movements within the vicinity of the subject site and determine the adequacy of the proposal to meet the likely future demand for increased pedestrian and cycle access. May include facilities for secure bike storage; ○ Identify Travel Demand Management (TDM) measures that will optimise the opportunity provided by the project site's proximity to public transport; ▪ Demonstrate compliance with the RTA <i>Guidelines for Traffic Generating Development</i>; ▪ Internal road and access arrangements including entry points, drop off points, traffic management and hierarchy; ▪ Off street car parking provision and management of on street parking; ▪ Service delivery; ▪ Proposed emergency evacuation and public access. 	Section 4.15
<p>Impacts on Adjoining Heritage Item</p> <p>An assessment should be provided detailing the impacts of the proposal on adjoining heritage items including the Cottage Chapel. Impacts should be minimised and mitigated where appropriate.</p>	Section 4.9.2
<p>Construction Impacts</p> <ul style="list-style-type: none"> ▪ Traffic management during construction including car parking requirements for construction workers; ▪ Address any likely geotechnical impacts; ▪ Flooding, drainage and stormwater management issues, including: on-site detention of stormwater, Water Sensitive Urban Design, and drainage infrastructure; ▪ Air pollution, soil and erosion and waste material; ▪ Noise and vibration; ▪ Details of any cut and fill and whether any fill is proposed to be imported or exported to/from the site. 	Section 4.16; Chapter 5
<p>Operational impacts</p> <ul style="list-style-type: none"> ▪ Address noise generated from plant and equipment; ▪ Waste management including biomedical, infectious or toxic wastes, storage of any chemicals / hazardous materials; ▪ Site security; 	Section 4.17

<ul style="list-style-type: none"> ▪ Emergency and evacuation procedures; ▪ Fire safety; ▪ Lighting; ▪ Signage. 	
ESD measures Address proposed ESD measures including thermal massing, water sensitive urban design measures, energy efficiency, recycling and waste disposal.	Section 4.11
Services Address capacity of utilities including water, sewer, stormwater, gas, power and telecommunications infrastructure which will serve the project.	Section 4.14
Quantity Surveyor's report for the project	Appendix I

Submission of Environmental Assessment

Prepared under Part 3A of the *Environmental Planning and Assessment Act 1979*

Environmental Assessment prepared by

Name: Leoné McEntee

Qualifications: BA (Geog), Grad Diploma Urban and Regional Planning, Grad Dip Natural Resources Law

Address: UPO Pty Ltd
PO Box 6101
Malabar NSW 2036

In respect of: Redevelopment of Hornsby Ku-ring-Gai Mental Health

Applicant & Land Details

Applicant name: Health Infrastructure

Applicant Address: Level 8, 77 Pacific Highway North Sydney

Land to be developed: Hornsby Hospital, Palmerston and Lowe Roads, Hornsby

Lot & DP: Lot A DP 329121 and Lot B DP 329121

Environmental Assessment

An environmental assessment is attached

Statement of Validity: I certify that I have prepared the contents of the environmental assessment in accordance with the Director Generals Environmental Assessment Requirements dated 23 December 2010, and that to the best of my knowledge, the information contained in the environmental assessment is neither false nor misleading.

Signature

Date

28th June 2011

2 Description of the Site

2.1 Regional Context

The subject site is situated in the north metropolitan region of Sydney, in close proximity to Hornsby and approximately 25 kilometres north of the Sydney CBD and 19 kilometres north east of Parramatta CBD. The subregional Major Centre of Hornsby offers a diverse and rich mix of residential, rural, business, industrial and natural landscape settings. Hornsby is a mixed use centre, well serviced by public transport connecting Sydney's transport system to the Central Coast and Lower Hunter. The population in Hornsby was approximately 157,400 in 2006 (North Subregion Draft Subregional Strategy, 2008) and covers an area of 462 square kilometres.

2.2 Site Location

The Hospital site is located approximately one kilometre to the east of the Hornsby Town Centre and occupies an area of approximately 6.4 hectares. The legal description of the area to be redeveloped at the hospital site is Lot A DP 329121 and Lot B DP 329121. A full site Survey is attached at Appendix B.



Figure 2: Showing the proximity of Hornsby Ku-ring-gai Hospital to Hornsby Major Centre and major transport routes

Hornsby Station is located approximately 1.5 kilometres east of the site, 1.8 kilometres north east of Waitara station and 2 kilometres south east of Asquith station. The Pacific Highway, F3 Freeway,

Pennant Hills Road and the main North and North Shore Rail lines make Hornsby accessible and a key interchange to the wider area.

The full Hospital site will not be affected by this application. The area of the Hospital subject of this application is identified in detail below.



Figure 3: Subject Site and area of redevelopment

The northern boundary of the site is bounded by Lowe Road and sits adjacent to James Park. James Park is regularly used as a sports facility. To the east, the site is bounded by Derby Road. Land uses are characterised by low density residential units.

The western frontage is bounded by Palmerston Road, the main access to the Hospital, with the southern boundary of the Hospital being Burdett Street. Two private properties (109 and 89 Burdett street) are situated in between the Hospital buildings.

Burdett Street is occupied by low density residential units and is the main access route to the Hospital from Hornsby Station in the west.

2.3 Established Land Uses

Hornsby Ku-ring-gai Health Service is a teaching Hospital of the University of Sydney and offers a range of services over its numerous hospitals, health centres and education centres.

The Hornsby Ku-ring-gai Hospital supports six community health centres and 10 early childhood centres, and offers support services for patients, as well as community based services such as Meals on Wheels.



Figure 4 Hospital Services

The current Child and Adolescence Family Team operates from a relatively dilapidated one and two-storey masonry and timber building known as Building 6. This will be demolished to construct the new mental health building. This building does not meet current hospital guidelines for treatment of patients and requires redeveloping.

There is a heritage item located on the Hornsby Ku-ring-gai Hospital site, approximately 42 metres south of the proposed building. There will be no change to this building or its setting. This is discussed further in Section 4.9.2 of this report.

2.4 Site Topography

The proposed site of the new building is within the north-western portion of Hornsby Hospital on an area currently occupied by (Building 6). Building 6 is surrounded by asphaltic concrete (AC) paved carpark and grassed areas with mature trees. A one and two-storey masonry building (MIHCU Building) and a three-storey reinforced concrete building (Building 5) are both located within about 10 - 20 m of the existing Building 6 to the east and south, respectively.

The existing Building 6 and associated carpark area is approximately 90m² and dips gently at less than 1° towards the north and west.

Reference to the Sydney 1:100 000 Series Geological Sheet indicates that most of the site is underlain by Hawkesbury Sandstone of Triassic age. This formation typically comprises medium to coarse grained quartz sandstone with minor shale bands or lenses and was confirmed by the boreholes. Ashfield Shale is located immediately to the south-east of the site and was not encountered in the boreholes laid down by Douglas Partners.

3 Description of the Proposal

3.1 Project Objectives and Need

Mental health services are provided to people of all ages, in community and inpatient settings, and include emergency and acute care, community care and recovery services.

Child and adolescent mental health is managed and delivered on an Area-wide basis and there are currently no child and adolescent mental health inpatient services in the Northern Sydney Local Health Network. As a result, the implementation of this project will address a number of key needs for Child and Adolescent Mental Health and Hornsby acute mental health in-patient services. These include:

- Provision of identified infrastructure to meet service needs at Hornsby for Adult Mental Health to 2016;
- Compliance with Mental Health Service Plan 2005-2016
- Provision of identified infrastructure to meet service needs for an NSCCAHS child and adolescent mental health service for young people aged under 18 years of age;
- Allow for the development of new models of care and enhancing existing models through improved facilities; operational efficiency; and
- Enable the area to improve equity of access to its catchment population requiring mental health services through addressing disparity of service provision as identified in the Clinical Service Plan developed for this facility.

This proposal is critical to the ongoing provision of mental health services to the broader Northern Sydney Local Health District. The development objectives of the new Hornsby Adult Acute Mental Health Inpatient Unit & CAMH Inpatient Unit and CAMHS Community Service at Hornsby Ku-ring-gai Hospital are to:

- Facilitate the delivery of improved mental health services to the community;
- Provide flexible building design to allow for future modification and expansion to meet anticipated growth in demand for services and changes in clinical practice.
- Provide a site strategy that is consistent with the future development of the Hornsby Ku-ring-gai Hospital in the future;
- Develop a facility that promotes normalisation in treatment of mental health;
- Ensure development provides harmony and balance with the surrounding areas; by developing a built environment that promotes a human scale;
- Provide a high quality urban environment through a high standard of landscape and built form design; and
- Provide adequate car parking on site to maintain the existing parking provisions and meet the additional parking needs generated by the proposed development.

3.2 Redevelopment of Hospital Buildings

The architectural drawings (Appendix C) show the detailed plans for the proposed demolition and construction of the Mental Health Facility. Drawing 50441 SK12-B dated 31 May 2011 shows the proposed development in context of the existing Hospital site plan.

The proposed works seek to:

- Demolish the existing Building 6, the former maternity department now containing a number of health related departments including the Child and Adolescent Family Team building, located at the north western corner of the site (on the corner of Palmerston and Lowe Roads).
- Construct a new two storey Inpatient Mental Health facility which will house:

- A 35 bed Adult Acute Mental Health Unit, replacing the existing 25 bed Lindsay Madew Unit, currently on the eastern side of the site. This existing building is now dysfunctional and no longer considered appropriate to contemporary medical practice nor is it large enough to accommodate the demand;
- A 12 bed Child and Adolescence Mental Health Services (CAMHS);
- Staff office and support facilities for both of the units co-located over both floors.
- Staff office and support facilities for the CAMHS Community Team will be located on the first floor and integrated with the Inpatient Unit. The CAMHS Community Service will relocate the existing Hornsby Sector Team into new accommodation and will consolidate a number of staff who are currently located at Hillview in Turramurra.
- Create a series of car parking spaces across the site to meet the demand of 155 spaces over all.
- Development of associated landscaping and signage which will be in keeping with landscaping established within the hospital and surrounding precincts to make the development as complementary to the surrounding environment as possible.

3.3 Building Height and Floor Space

The building form proposed will be predominantly two storey to maximise potential open space on the site surrounding the building, with a third element located centrally and hidden from view to accommodate rooftop mechanical services plant.

The maximum RL for the development is 188.500, a height of 10 metres above ground.

The proposed floor space for the Hospital expansion is summarised in the table below:

Building Level	Activity	Proposed Gross Floor Area
1	AAMHU Inpatient Unit	2,740m ²
2	CAMHS Inpatient Unit & CAMHS Community Team	2,496m ²
Total		5,236m ²

3.4 Cut and Fill

Removal of the existing building footings and replacement of the existing services will form part of the redevelopment to a two-storey building with anticipated column loads in the order of 1000 – 2000 kN. The proposed floor level is likely to be close to the existing surface levels on the site and will require only minor cut and fill for site preparation, as no basement level is proposed.

The boreholes undertaken by Douglas Partners indicate that minor excavation to achieve the design floor levels for the new building will mostly require removal of the pavement materials, filling and natural soils. Sandstone bedrock of extremely low, very low and medium strength may be encountered within the deeper excavations for the footings.

Excavation of near-surface soils and extremely low and very low strength rock should be readily achieved using conventional earthmoving equipment such as tracked hydraulic excavators. Excavation of low or greater strength sandstone for the construction of footings will probably require the use of a relatively large piling rig of sufficient torque capacity for effective excavation.

3.5 Vehicular and Pedestrian Access Arrangements and Parking

The key components of this proposal in relation to the movement of traffic and pedestrians are:

- Entry and exit for ambulance and service vehicles is proposed off Lowe Road between the proposed building and the exiting Mental Health Intensive Care Unit (MHICU) building to the South, and will service both this proposed MHU building and the existing MHICU.
- Access to the CAMHS, AAMH and CAMHS Community Team Units for both cars and pedestrians will be via Palmerston Road.
- Patient and Visitor Access to the AAMHU Inpatient Unit will be located in a dedicated entrance on the southern face of the building directly in front of the car park for ease of access.
- Patient and Visitor Access to the CAMHS Inpatient Unit and the CAMHS Community Team unit will be located in a dedicated entrance on the southern face of the building, separate to the AAMHU Inpatient Unit, and directly in front of the car park for ease of access.
- The new facilities are to be linked to the existing Main Hospital circulation system by a covered pedestrian footpath to provide for staff access and hotel services including linen, food and waste.
- Pedestrian links are provided to the existing adjacent MICHU to facilitate patient movement from the new Adult Acute Unit.
- 26 VMO car bays replace the existing 25 VMO car bays on site and are accessed through swipe card accessed boom gates.
- The Parking Strategy will involve parking as follows:
 - 115 car parking spaces at MHU site including 26 VMO spaces;
 - 25 car parking spaces at rear of buildings 12 and 19;
 - 9 car spaces on the revised MICHU entry road;
 - Creation of a net 4 additional spaces through revised line marking to the immediate north of building 2 (space for ambulance unloading (1 only) to be retained);
 - Creation of 2 spaces at the rear of building 31.

Further details of the parking strategy and access routes are included in the architectural drawings provided in Appendix C and the Traffic and Parking Report at Appendix E.

3.6 Statement of Design Intent

The design and form of the proposal is primarily guided by the need to facilitate the efficient operation of the hospital while providing needed Child and Adolescent Mental Health Unit facilities and maintaining adequate amenity to surrounding residential development. The proposal has been designed in response to the NSCCAHS and the Mental Health Service Plan 2006-2016, with particular emphasis on:

- Appropriate urban design response to the site, situated on a corner;
- Landscape treatment to enhance and compliment materials and building form;
- Suitable parking access to the site and efficient maneuverability within and around the Hospital site; and
- Built form height and appearance to remain cognisant of adjacent residential neighbourhood.

The building has been designed to present as a contemporary built form to significantly upgrade the visual appearance of the Hospital campus.

Internally, the design significantly improves the functionality and amenity of the mental health facility, bringing it in line with modern standards. The proposed internal planning of the facility will improve clinical operations and address current issues related to:

- Adequate accommodation for the treatment of both inpatient and day patient services;
- Provision of efficient adjacency of departments improving clinical flows;
- Provision of staff support areas currently deficient in the existing Hospital;

- Provision of inpatient accommodation to meet current market expectations for Mental health care facilities; and
- Provision of secure courtyard for passive patient therapy use.

The proposed floor plan, sections, elevations and photomontage accompany this project application. Please refer to drawings in Appendix C.

3.7 Materials and Finishes

This proposal intends a significant upgrade of the existing built form that is reflective of contemporary Australian architecture.

The new Mental Health Facility has been designed to be sympathetic to the surrounding residential vernacular, as well as reinforcing the aesthetic established by the MHICU. The base palette of the MHICU is taken as the point of departure for the design of this facility, and includes:

- Three (3) of the four bricks used on the MHICU Building
- The white mini-orb “Colorbond” cladding
- Skillion roofs.

This is best represented on the Northern (Lowe Road) Elevation, where the combination of the MHICU and the New Mental Health Unit will help to identify these two buildings as the Mental Health Precinct of the hospital. This Northern (Lowe Road) Elevation, however, also incorporates new materials not used in the MHICU, including elements of Fiber Cement which sit in relief to the buildings base façade (variations on red, orange and yellow) and the Charcoal cladding of the first floor terrace.

The Western (Palmerston Road) Elevation presents the ends of two accommodation wings with the skillion roof form expressed but with the end elevations clad with light olive Colorbond cladding, with a large vertical opening containing louvers and glazing colored to reflect the yellow on the Northern elevation. The screening to the courtyard between these two wings is a composition of Charcoal concrete block and charcoal perforated metal screen, again with hints of the three colors on the Northern elevation.

The southern part of the building has two distinct components: the South West Residential Wing, and the Entrance / Administration Wing, both of which face on the main car park and the rest of the hospital beyond.

The Composition of the South West Residential Wing is much like the Northern (Lowe Road) Elevation.

The composition of the Entrance / Administration Wing is broken in to two:

- The relatively sedate Administration Component to the eastern side – the cladding of which mimics the Colored Fiber Cement on the Northern (Lowe Road) Elevation; and
- The entrance Component – full height commercial glazing where the spandrels are colored to also reflect the accent colors on the Northern (Lowe Road) Elevation, framed in charcoal gladding which defines the staircase in the middle of this Entrance/Administration Wing, and the cladding the western elevation facing Palmerston Road.

The palette of materials is seen to be muted and restrained in texture and color. The overall strategy is one that will be complimentary to the therapeutic use of the facility as well as blend with the landscape treatment. The following will be incorporated into the development:

- Walls are a mixture of masonry, and lightweight materials.

- Roofs are in dark colorbond and steel framing in natural galvanised or painted finish.
- Windows clear glass and aluminium frames in charcoal powdercoating

Additional details are provided on the Materials and Finishes Board and in Appendix C.

3.8 Landscape

The landscape for the Mental Health Unit is designed to complement and enhance the surrounding urban context and provide amenity for all users and visitors to the Hornsby medical campus.

The two primary objectives for the landscape design are;

- Provide a complimentary setting and visual amenity for the MHU within the broader urban fabric and the existing campus
- Providing a supporting environments to the various healthcare service functions

The plan has been prepared with consideration for the Hornsby Council Landscape Code for Development Applications, design principles. The relevant and applicable design principals applied address the justification criteria for;

- Using native & endemic species wherever appropriate
- Retention of existing tree canopies
- Improving the aesthetics of the development
- Enhancing the streetscape
- Minimising heat glare from buildings
- Increasing the value of the development
- Enhancing goodwill in the eyes of the community
- Providing a pleasant work and living environment
- Ensuring the design is feasible, economic and complements the built and natural environment

The existing trees adjacent to the street will be retained where practical to preserve the streetscape and to provide shade and visual amenity for the medical centre. New trees will be planted adjacent and within the car park, selected from the Shire of Hornsby recommended species. All existing trees to be removed are currently unsuitably positioned for the proposed building works or could become potentially unsafe following building and servicing works.

In keeping with the initial plans, a total of 23 trees were identified as falling within the construction zone. A report prepared by Louise Bennett of The Aborist Network has identified that sixteen (16) trees on site are to be removed including two (2) that will be transplanted. Of these most have aboricultural reasons for their removal such as poor structure, health or limited viability; others are removed based on their location. The remaining trees will be retained and protected in accordance with the Aborist Impact Assessment Reports (refer Appendix J).

3.8.1 Specific Landscape Treatments

Car park and surrounds

The landscape surrounding the car park is focused on circulation. This is a public area and will service other campus visitors. The soft landscape elements will be restricted to existing lawn, and existing and proposed low planting with trees. The use of shrubs in this area will be minimal to improve legibility and way-finding, and to address security issues associated with public areas.

The car park will have shade tree planting in and surrounding at a rate of 1 tree for every 6 bays overall, these tree numbers may include existing trees adjacent to the car parking to maintain a sense of continuity with the existing landscape elements.

Streetscape interface

The proposed building is of a similar scale to the existing building, and like the existing building does not have street entry/s. Most of the existing trees to remain are currently taller than the proposed building and will help set the building into the streetscape and foil the re-orientation closer to the boundaries. The soft landscaping to the perimeter will be detailed to further articulate the architectural elements designed to reduce the apparent bulk of the building. Careful screening of the courtyards is included to complement the therapeutic requirements of the services provided.

Entry frontage

The entry frontage includes two parts, a landscaping area adjacent to the path and a screened area defined by a second facade. The area adjacent to the path will be fully soft landscaped with no active uses to provide a quiet environment for the adjacent ward rooms. The building entries are within the area defined by the second facade/screen, this allows separation to the MHU entries from the general campus activity. The spaces will be shady and treated with soft lush forest floor plants for a serene and relaxed ambience.

Courtyards

The courtyards are part of the therapeutic areas and their functions determine the treatments.

The northern courtyard is an extension space to an activity room and will be used for organised activities. This space is screened from the street, with an outlook on the west side to some external planting and trees. The landscape treatment is simple and functional.

The main western courtyard is designed to allow for passive and organised activities. The space is designed to have an interior exterior relationship to the interior shared space, and to encourage exploration and movement. The design includes a series of smaller subspaces for a more intimate scale with a sense of refuge, and has a western view through an open screen fence to more garden planting.

The small western courtyard serves the needs of patients that require smaller area for movement or more isolation, this allows for some walking and has an outlook to gardens through an open screen fence.

The eastern courtyard is for observational patients. The emphasis is for landscaping that do not allow self harm, this includes no woody plants, or plants that are poisonous if ingested. The therapeutic emphasis is for safe access to open and natural elements. This court has a view to gardens to the east.

3.9 Signage

Building identification signage will be introduced on the new Hospital building, and adjacent to carpark entries to facilitate driver orientation.

The size and location of signage will be integrated into the design of the proposed building form and appropriately reflect the function of the building or facility it relates to. Building identification signage will be flush wall mounted and non illuminated. The signage will be consistent with other signage used across the hospital site.

Within the site, a series of way finding signage will be introduced throughout the car park areas, to appropriately guide visitors and staff through the site to achieve safe and convenient pedestrian traffic movement.

3.10 Operations

The new facility will operate in accordance with the Hornsby Ku-ring-gai Hospital campus established operational policies. A typical length of stay in the in-patient units would be 28 days. Some admissions would be shorter, some longer. The length of stay will in part reflect the capacity within community CAMHS to manage more complex cases through more intensive options such as day programs.

The staffing will be structured to meet patient needs and the units would run continuously for 24 hours.

3.11 Utilities and Services

3.11.1 Electrical Services

The new Adult, Child and Adolescent MHU will require the establishment of a new kiosk style substation preferably along either the Palmerston Rd or Lowe Rd frontages. Existing major electrical switchboard infrastructure on the site is too distant and has insufficient capacity to adequately cater for the proposed development.

A single padmount transformer of 1,000kVA will be required to be dedicated to the new building.

3.11.2 Generator Supply

The new Adult, Child and Adolescent MHU will require the establishment of a new dedicated diesel generator to supply essential lighting, power, communications, fire, security and mechanical services equipment in the event of a general Supply Authority power failure.

The new generator system shall be capable of seamless (No Break) transfer of load to/from the generator system. Existing diesel generators on the site have insufficient capacity to supply the proposed new development.

Existing generator power supply to the old emergency department will be sufficient for its possible reuse to totally or partly accommodate the CAMHS unit if this becomes necessary under the project. The electrical services and generator supply are discussed further in the Utility and Services Report in Appendix D.

4 Environmental Assessment

4.1 Suitability of the Site

The suitability of the site to support expanded Hospital services is determined having consideration to the current function of the site, the land use and built form character of the immediate surrounds.

The Hornsby Ku-ring-gai Health Service site is appropriately used for medical purposes, and will support the redevelopment of this Hospital use. NSCCAHS and NSW Health, through the NSCCAHS Mental Health Service Plan, support the establishment of a purpose-built area Child and Mental Health (CAMHS) Inpatient Unit of 12 beds with a co-located CAMHS Community Service and a new 35 bed Acute Adult Inpatient Mental Health Unit to replace the existing 25 bed Lindsay Madew Unit at the Hornsby Ku-ring-gai Hospital site as part of its strategy to enhance access to mental health services for the NSCCAHS residents.

Adult Acute Mental Health Services are managed in four sectors with provision that the new Mental Health Intensive Care Unit, based at Hornsby will be managed as an Area Service. CAMHS are managed and delivered on an area-wide basis; however there is currently no child and adolescent inpatient mental health service in the NSCCAHS.

The site is considered suitable for the proposed project.

4.2 The State Plan

Chapter 4 of the NSW State Plan 2010 deals with Healthy Communities and has as one of its priorities to improve outcomes in mental health. The plan acknowledges that mental illness can have a devastating impact on a person's life as well as on the lives of their family and friends. It also acknowledges that mental illness has a significant economic and social cost for communities.

The State Plan aims to help to improve the health of people with mental illness by providing:

- *extra resources for community based mental health programs*
- *expanded services for Aboriginal communities*
- *increased mental health rehabilitation programs in the community*
- *enhanced early intervention and support services for young people*
- *new mental health facilities*
- *a new NSW Suicide Prevention Strategy and*
- *specialist treatment and care in the new 135 bed Forensic Hospital.*¹

The Hornsby Mental health Facility is consistent with this strategy and builds on the significant investment made in mental health infrastructure throughout the State.

4.3 NSCCAHS Mental Health Service Plan 2006-2016

The development of the two services are key strategic recommendations of the NSCCAHS Mental Health Service Plan 2006-2016. The Plan, which has been approved by NSW Health provides a blueprint for delivery of mental health services in the area and projects resource requirements to

¹ State Plan 2010 pp 35

2016. The Plan identifies future physical planning capacity and acknowledges the geographic strategic location of Hornsby Ku-ring-gai Hospital and supports the establishment of a mental health precinct.

The Plan established that the mental health precinct on the Hornsby Ku-ring-gai Hospital site will require expansion to include acute and other area-wide services. With the amalgamation of the area health services, the location of Hornsby Ku-ring-gai Hospital makes it an advantageous location for area-side services such as the Mental Health Intensive Care Unit and Inpatient Child & Adolescent Services.

Hornsby Ku-ring-gai Hospital has been identified as the preferred location for the area-wide CAMHS Inpatient Service. This is a result of its central location and the development of a Site Strategy to 2005 to provide a dedicated Mental Health Precinct. This was enabled through the recently constructed MHICU facility and the proposed replacement of the existing Adult Acute facility on the site.

This Project Application addresses the requirements for the AAMHU for the Hornsby Sector and a new Area CAMHS In-patient Unit and co-located CAMHS Community service. The MHICU project, which is outlined in the Mental Health Service Plan and a four bed Psychiatric Emergency Care Centre (PECC) have already been completed on the site.

The development of the CAMHS in the area is highlighted as a priority in the NSCCAHS Mental Health Service Plan and the improved bed capacity aligns with these plans.

4.3.1 Draft Site Strategic Plan

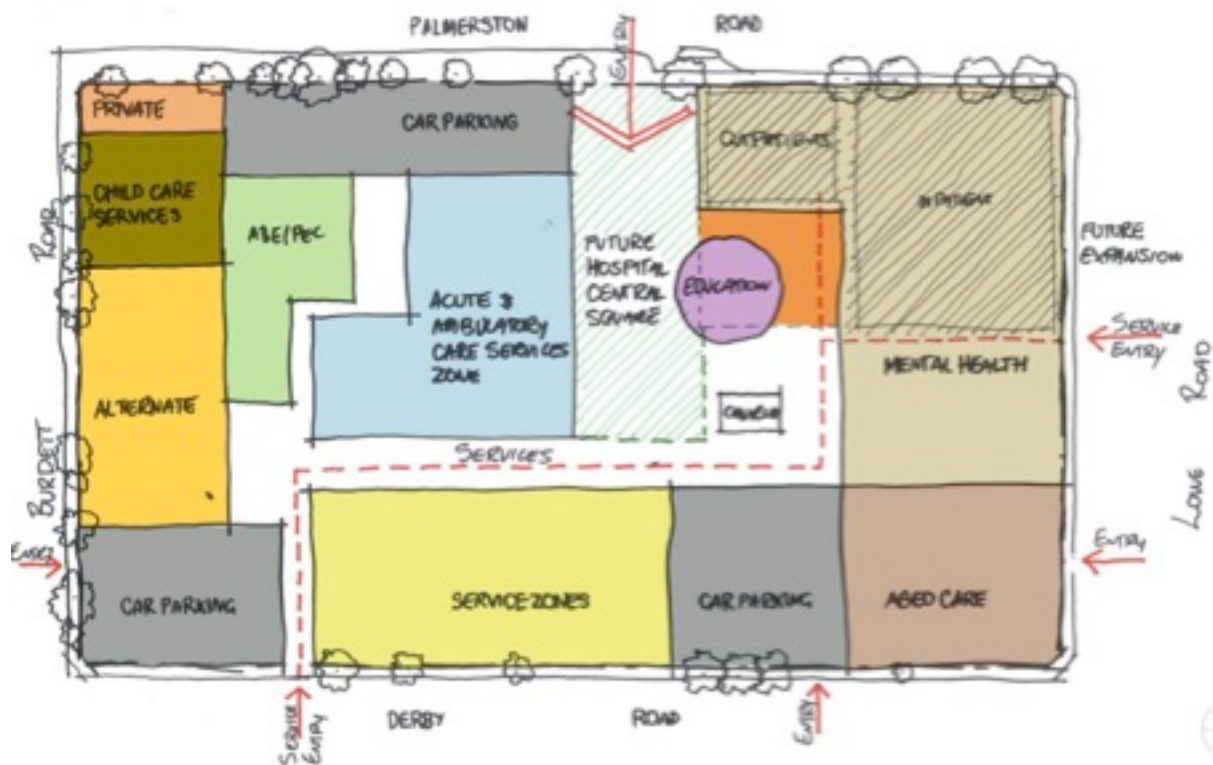


Figure 5 Showing site zoning as part of the master plan in the Site Strategic Plan 1995

The Hornsby Ku-ring-gai Hospital established a Site Strategic Plan in 1995 to identify and allocate future land uses across the Hospital site. The “site zoning” plan in Figure 5 above guides the location of new buildings. The project is consistent with this mater plan.

The proposed car parking is however relocated to adjacent to the building as the two storey design allows for better located and a greater number of car parks.

This Project Application remains in keeping with the principles of the 1995 Draft Site Strategic Plan by locating in the proposed areas of the Hospital and providing a carefully considered development rather than an ad hoc approach.

4.4 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 is the current strategic planning document for Sydney building on the Metropolitan Strategy 2025: Cities of Sydney. Both documents aim to determine the forward planning of the City in terms of managing growth, connectivity, public transport, urban development and sustainability.

The Metro Strategy determines where the key centres in the Sydney Metropolitan area are located to determine opportunities for growth and employment generation.



Figure 6 showing the Cities and centres (source: Department of Planning, Metropolitan Plan for Sydney 2036)

There are several key policy directions and strategies arising from the Plan as identified below:

Strengthening a city of cities

- Make Sydney a more resilient, compact, connected, multi-centred and networked city
- Strengthen Sydney's role as a globally competitive city
- Strengthen Parramatta's role as the premier Regional City and second CBD
- Support key economic gateways with integrated land use, infrastructure and transport planning
- Plan to grow global businesses, investment, innovation and research & development
- Strengthen links to NSW regional cities, Australian capital cities and South East Asia

Growing and Renewing centres

- Locate at least 80% of all new homes within the walking catchments of existing and planned centres of all sizes with good public transport
- Focus activity in accessible centres
- Plan for centres to grow and change over time
- Plan for new centres in existing urban areas and greenfield release areas
- Plan for urban renewal in identified centres
- Support clustering of businesses and knowledge-based activities in Major Centres and Specialised Centres

Growing Sydney's economy

- Plan for 760,000 new jobs, with half planned for Western Sydney focusing on cities and centres
- Extend Sydney's Global Economic Corridor to Parramatta from Macquarie Park
- Develop detailed land use, transport and infrastructure plans for Western Sydney employment areas
- Support high growth and high value industries through clustering
- Increase the proportion of homes within 30 minutes by public transport of jobs in a Major Centre, ensuring more jobs are located closer to home

Tackling climate change and protecting Sydney's natural environment

- Reduce greenhouse gas emissions from the manufacturing and commercial sectors
- Review the scope and stringency of BASIX
- Prepare a climate change adaptation strategy for Sydney
- Integrate environmental targets into land use and infrastructure decisions
- Implement water, air and biodiversity plans for Sydney

Transport for a connected city

- Implement the Metropolitan Transport Plan's \$50.2 billion in projects and enhancements
- Target development around existing and planned transport capacity
- Improve passenger rail capacity for Sydney's South West and North West and the Sydney–Parramatta–Penrith corridor
- Enhance rail freight paths and intermodal terminals
- Enhance capacity on Sydney's motorways at key locations
- Identify long-term transport corridors for passengers and freight
- Improve local opportunities for walking, cycling and using public transport

Housing Sydney's population

- Plan for 770,000 additional homes with a range of housing types, sizes and affordability levels for a growing and ageing population
- Locate at least 70% of new homes in existing suburbs and up to 30% in greenfield areas
- Drive delivery through subregional targets and Local Environment Plans with follow-through on outcomes and yield

Achieving equity, liveability & social inclusion

- Consider social impacts in planning and assessment
- Protect places of special cultural, open space and heritage value
- Strengthen the State's lead on best practice urban renewal for improved liveability
- Set affordable housing targets for State urban renewal projects on a case by case basis

Balancing land uses on Sydney's fringe

- Contain Sydney's urban footprint by focusing greenfield development in the North West and South West Growth Centres
- Maintain and protect Sydney's rural and resource lands

Delivering the Plan

- Establish new mechanisms to achieve urban renewal (Sydney Metropolitan Development Authority and the Urban Renewal State Environmental Planning Policy)
- Continue to identify transport capacity and opportunities for residential and employment growth
- Strengthen strategic infrastructure planning processes
- Prioritise nationally significant infrastructure
- Drive implementation through subregional strategies
- Simplify the land release process to ensure sufficient land is available for development
- Prepare an annual Metropolitan Plan Update Report with councils.

The Hornsby Local Government Area has a target of 9000 new jobs and will emerge as a 'jobs, services and residential location' by 2031. With 3000 of these 9000 targeted for the major Centre of Hornsby the proposed redevelopment of the Hospital means increased capacity of the medical capabilities with the expansion and refurbishment of the rehabilitation department. A further 86 staff are estimated as a result of the 47 new beds across the facilities.

It is considered that the project complies with the general aims of the Metropolitan Strategy for Sydney as it supports the aim to strengthen economic growth by adding to the target of 9000 jobs while balancing social and environmental impacts. The proposal will assist to meet the aims of the Sydney Metropolitan Strategy by strengthening the region's economic prosperity, providing jobs away from the declining industrial industry and offering diversity and specialist services in line with the above strategies for Sydney as a whole.

4.5 Draft Subregional Strategy- Northern Region

Due to the size and complexity of the metropolitan region, 10 subregions have been established, with each developing a draft Subregional Strategy to interpret the actions and objectives of the Metropolitan Strategy at the subregional and local level. Hornsby Shire Council is part of the North Subregion which also includes Ku-ring-gai Local Government Area.



Figure 7 showing the location of the northern region (Source: North Subregion draft Subregional Strategy)

Hornsby offers a diverse and rich mix of residential, rural, business, industrial and natural landscape settings, and includes the subregional Major Centre of Hornsby. Hornsby centre is the key Major Centre of the North Subregion and further improvements need to be made in the centre through the promotion of these mixed uses and improving general amenity. Employment and commercial uses need to be encouraged in the centre to service the expanding population.

The upgrade of Hornsby mental health is listed as a State Infrastructure Strategy project in the North Subregion and the Hornsby Ku-ring-gai Hospital are major employers. This is important in relation to Hornsby Council's plan to implement the Employment Capacity Target of an additional 3000 jobs for the Hornsby Major Centre.

The Hornsby Ku-ring-gai Hospital has more than 1,500 staff caring for the over 250,000 people living in the Hornsby Ku-ring-gai and surrounding areas. The service incorporates six community health centres and ten early childhood centres. A \$21 million Emergency, Maternity and Paediatrics complex opened in November 2006.

Whilst the North Subregion does not currently contain any Specialised Centres, the Draft North Subregional Strategy identifies opportunities to focus on innovation around knowledge activities where the subregion has particular strengths. Hornsby Ku-ring-gai Hospital and the medical activities surrounding it allow opportunities to consolidate on the relatively high number of people working in education and health in the subregion

The North Subregional Strategy states that the region has a number of existing clusters of business activity associated with knowledge infrastructure identified above and the skill base of its resident workforce, which can be leveraged for ongoing success. Again, education at Hornsby Ku-ring-gai Hospital is identified.

The Rail Clearways program will increase capacity and reliability on the North Shore and Northern Rail Lines, in particular through improvements at Hornsby Station. To encourage greater use of buses, the services of the bus network in the North will be improved by the implementation of four Strategic Bus Corridors, linking Hornsby to its surrounding Strategic Centres, including Castle Hill, Parramatta, Chatswood and Macquarie Park. This will make the Hospital site more accessible for its visitors and patients.

4.6 The Public Interest

The proposed expansion of the Hospital is in the public interest. The enhancement of Adult Acute Mental Health and Child and Adolescent Mental Health units to the established Hospital facility will

have a positive social and economic impact through the provision of much needed inpatient services in NSLHD area.

Hornsby Ku-ring-gai Hospital currently employs over 1,500 staff caring for over 250,000 people living in the Hornsby Ku-ring-gai area and surrounding areas. The projected total staffing employed for the CAMHS Inpatient Service is approximately 43 employees, of which the maximum on site at any time is approximately 30. The Hornsby Sector CAMHS Community Team currently consists of approximately 12 employees. The proposed new facility will consolidate both the existing Hornsby CAMHS Community team and the team currently at Hillview in Turramurra, giving a total approximately 20 persons in the CAMHS Community Team. The AAMHU will employ approximately 46 staff members additional to those at the current Lindsay Madew unit, of which the maximum additional on site at any time is approximately 30. In total the development has the potential to offer an additional 98 jobs to the Hornsby Ku-ring-gai site. Of these additional staff, it is expected that there will be a maximum of approximately 65 employees at the hospital at any time.

Hornsby Ku-ring-gai Hospital and the medical activities surrounding it also allow opportunities to consolidate on the high number of people working in education and health in the subregion.

4.7 Social Benefits

The following social benefits are expected from this project:

- Integration of a range mental health services on the Hornsby Ku-ring-gai Campus;
- Improved clinical outcomes for people experiencing mental health issues by providing specialist mental health services in a purpose-built clinical facility;
- Purpose built facilities which provide safe in-patient treatment and promote and improve quality and safety of care;
- Improved in-patient amenity through the provision of a facility with flexible accommodation options for the care of patients with a wide variety of clinical and social needs;
- Reduction in time spent in hospital emergency departments or other units for patients waiting for acute mental health beds to become available;
- The CAMHS Unit will provide an Area service which enhances treatment options not currently available in the Area and will ensure there are the required range of services and the equitable distribution of resources;
- The Hornsby Acute Adult Mental Health Unit will meet acute in-patient needs for the sector's projected population to 2016;
- The sharing of expertise between members of the multi-disciplinary clinical teams and enhanced opportunities for cross referral between the mental health and other specialties improving treatment outcomes;
- Efficiencies and savings by sharing resources & facilities through reducing duplication;
- Improved education & training of staff and students with the co-location of a range of Mental Health and other health services; and
- Improved functional arrangements between in-patient units and other services at Hornsby Ku-ring-gai Hospital.

4.8 Economic Benefits

The Hornsby Ku-ring-gai Hospital acts as a major employer in the region contributing to local employment. The upgrade of the mental health services are listed in the North Subregional Strategy as a significant State Infrastructure Strategy project and will help to achieve Hornsby's Employment Capacity Target of an additional 3000 jobs for the Major Centre of Hornsby. It will also provide a facility which promotes the recruitment, retention and training/education of staff with an appropriate mix of skills and experience relating to mental health services.

As there is currently no CAMHS Inpatient Unit in the area, the project brings additional employment benefits. The facility will need to factor in the additional requirements for family, group and individual treatments for CAMHS and the necessary interagency liaison in care planning. In groups, day programs and in-patient services, supervision requirements for children and adolescents are also high. These factors result in a higher staff-to-patient ratio for CAMHS than for general mental health services. The staffing profile will be multidisciplinary and includes Nurses, Psychologists, Social Workers, Dieticians a pharmacist and other health professionals and support staff.

As mentioned earlier, the projected total staffing employed for the CAMHS Inpatient Service is approximately 43 employees of which the maximum on site at any time is approximately 30. The Hornsby Sector CAMHS Community Team currently consists of approximately 12 employees. The new facility proposed will consolidate both the existing Hornsby CAMHS Community team and the team currently at Hillview in Turramurra, giving a total approximately 20 persons in the CAMHS Community Team. The AAMHU will employ approximately 46 staff members additional to those at the current Lindsay Madew unit, of which the maximum additional on site at any time is approximately 30. In total the development has the potential to offer an additional 98 jobs to the Hornsby Ku-ring-gai site.

4.9 Legislation and Environmental Planning Instruments

The following environmental planning instruments affect the subject site:

- The *Environmental Planning and Assessment Act 1979*;
- The *Heritage Act 1977*;
- State Environmental Planning Policy (Major development) 2005
- State Environmental Planning Policy (Infrastructure) 2007;
- Hornsby Shire Local Environmental Plan 1994;

The proposal's compliance with these planning instruments is discussed below.

4.9.1 The Environmental Planning and Assessment Act 1979

The objectives of the *Environmental Planning and Assessment Act 1979* (EP&A Act) are:

- a) to encourage:
 - i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,
 - ii) the promotion and co-ordination of the orderly and economic use and development of land,
 - iii) the protection, provision and co-ordination of communication and utility services,
 - iv) the provision of land for public purposes,
 - v) the provision and co-ordination of community services and facilities, and
 - vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
 - vii) ecologically sustainable development, and
 - viii) the provision and maintenance of affordable housing, and
- b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and
- c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The proposed development is consistent with the objects of the Act in that its siting and design are appropriate to the proper management and development of a city to promote social and economic welfare of the community and a better environment. It promotes and is part of the coordination of the orderly and economic use of land through its location within an existing hospital campus and in close proximity to its client base.

The proposed development will not impact on the protection or conservation of native animals and plants as it is an existing urban site. It is also consistent with the principles of ESD. The consultations between the applicant, Council and the State Government have been consistent with the approach of sharing responsibility for planning and the exhibition process will provide opportunities for the involvement of the public in the process.

4.9.2 The Heritage Act 1977

The objects of The *Heritage Act 1977* of this Act are as follows:

- (a) to promote an understanding of the State's heritage,
- (b) to encourage the conservation of the State's heritage,
- (c) to provide for the identification and registration of items of State heritage significance,
- (d) to provide for the interim protection of items of State heritage significance,
- (e) to encourage the adaptive reuse of items of State heritage significance,
- (f) to constitute the Heritage Council of New South Wales and confer on it functions relating to the State's heritage,
- (g) to assist owners with the conservation of items of State heritage significance.

The Cottage Chapel is an item of local heritage is located on the Hornsby Ku-ring-gai Hospital site to the south east of the proposed AAMHU and CAMHU. In accordance with Clause 4 (1) of the Heritage Act, a local heritage significance is defined:

"...in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item".

The proposed works are remote from the Chapel and therefore are not considered to impact on the heritage significance of the item.

4.9.3 State Environmental Planning Policy (SEPP) (Infrastructure) 2007

State Environmental Planning Policy (SEPP) (Infrastructure) 2007 aims to provide a consistent planning regime for infrastructure and the provision of service access across NSW, along with providing for consultation with relevant public authorities during the assessment process.

Schedule 3 of the SEPP Infrastructure requires referral to the RTA for proposed Hospital facilities with 100 or more beds having access to a classified road or to a road that connects to classified road (if access within 90m of connection, measured along alignment of connecting road).

The proposed development will introduce provide 47 beds across the AAMHU and CAMHU building so does not require referral. However, consultation with both the RTA and the Ministry of Transport has been undertaken in the context of the Director General Requirements. Comments made as a result of this consultation process are attached at Appendix G.

4.9.4 Hornsby Shire Local Environmental Plan 1994

The relevant local planning instrument for the site is the Hornsby Shire Local Environmental Plan 1994. Council has completed its Comprehensive LEP however it has not been formally placed on public exhibition and is therefore not considered as part of this application.

The subject site is, for the majority, zoned **Special Uses A (Community Purpose)** under the LEP. This is shown in Figure 8 below.



Figure 8- Hornsby LEP 1994 zoning

The objectives of this zone are:

- (a) to provide for the cultural needs of the community.
- (b) to identify land for the provision of community services and facilities.
- (c) to ensure that community uses are compatible with the amenity of the area in which they are located.

Development for the following purposes are permitted within the zone with consent:

Boarding houses; bus stations; car parks; cemeteries; child care centres; commercial home catering; commercial operation of any sites or facilities administered by the Department of School Education; communications facilities; community facilities; defence purposes; demolition; depots; dwellings; educational establishments; entertainment facilities; group homes; home occupations; home offices; **hospitals**; housing for aged or differently abled persons; materials recycling facilities; medical centres; multi-unit housing; passenger transport terminals; places of worship; public buildings; recreation areas; recreation facilities; registered clubs; utility installations; veterinary hospitals.

Under the LEP, Hospital is defined as:

*'A building or place used for the purpose of providing **professional health services** (including preventative care, diagnosis, medical or surgical treatment or counselling) to people admitted as **in-patients**, whether or not out-patients are also cared for or treated at the building or place.'*

On that basis it is considered that the development **is permissible with consent**.

Clause 8 of the Hornsby LEP deals with tree preservation and states at Clause 8 (2) that:

'A person shall not carry out or permit or direct or cause any ringbarking, cutting down, topping, lopping, removing or willful destruction of any tree or trees to which a tree preservation order applies without the consent of the Council'.

The proposed development will require the removal of 14 trees and an additional two (2) trees will be transplanted to accommodate the increased footprint of the new AAMHU, CAMHU building and associated car park. These trees are currently in very close proximity to the existing CAFT building and their removal is unavoidable to accommodate the facilities that are required to provide a thorough service. This includes the service access for ambulance and delivery vehicles. The trees to be removed are shown on the Landscape Plan at Appendix C and discussed in detail including their health in Appendix J.

Trees to be removed will be replaced with additional planting as per the Landscape Plan.

Clause 10 of the Hornsby LEP aims to ensure that all development has adequate water and sewerage services. The clause also states that:

'The Council shall not grant consent to the carrying out of development on land to which this plan applies unless it is satisfied that adequate water and sewerage services are available'.

The proposed development within the Hornsby Ku-ring-gai Hospital includes the appropriate consideration of services needed for the new buildings. A Utility and Services Report is included in Appendix D and a storm water drainage statement is included in Appendix F.

There are sufficient services available to meet the demands of the proposed development.

Clause 15 deals with Floor Space Ratio however, there are no floor space requirements for land within this zone.

Clause 18 deals with Heritage and as mentioned above "Collingridge House" known locally as Cottage Chapel is located with the Hornsby Ku-ring-gai Hospital site. The Cottage Chapel is a historic stone cottage in the midst of the Hornsby Ku-ring-gai Hospital campus, to the rear of the Lumby Building and adjacent to Hydrotherapy. The building is open for prayer and meditation seven days per week, from 8am until 5pm. The closest Hospital entrance point is through the Lowe Road parking area. The grounds of the cottage are excluded from the local listing. The proposed works occur approximately 42 metres away from the building and will not impact on its significance or use.

4.10 Urban Form and Design

The Hornsby Hospital site is largely set in a residential suburban setting. Consequently there is a visual connection that needs to exist between any new development on this site. In responding to those circumstances the scheme has been designed in a residential manner. The design also follows the broad principles as set out in the Hornsby Council DCP's development guidelines that relate to Medical Support or Residential development for that area.

As well as the consideration of the neighbourhood and development controls guidelines, the overall strategy for the design is to build to a functional and integrated masterplan for the Hospital. To that end the scheme follows identified principles as follows;

- Integration of the Mental Health components onto one site
- Parking to perimeter
- Public entrance to the street
- Ambulance and service entry to the internal side (away from street)
- Link to hospitals central square via internal walkways
- Reinforcement and integration of existing external space

4.11 Environmentally Sustainable Design Measures

Evidence Based Design research has shown that access to natural light and vegetation is a positive contribution to the successful treatment of most medical conditions. Direct sunlight can often be detrimental in the treatment of Mental Health Patients due to the sensitivity to sunlight caused by medication, however access to varying levels of sunlight, direct, non direct and otherwise, is always desirable. In this building, a combination of good passive solar design principles, the principles of Evidence Based Design has influenced the orientation of the building, the building form, and the arrangement of spaces both internal and external to the building.

Patient activity/day spaces and in-patient rooms have been located to maximize daylight infiltration to both floors of the facility. Patient activity/day spaces connect directly to patient courtyards. The building has been orientated with the long axis running east west, and deep courtyards facing east and west. Primary day recreation spaces on both floors have been orientated to capture northern light, with secondary spaces also orientated towards the Eastern and Western Courtyards.

During the development of this building, the design team will maximise the benefits of the above initiatives, investigate the integration of appropriate Initiatives which minimize waste and the use of less environmentally friendly materials, and strive to produce a facility which minimizes the use of natural resources and energy within the context of a health care facility.

The Project has been assessed against the following four principles of ecologically sustainable development listed in the *Protection of the Environment Administration Act 1991*:

- the precautionary principle
- the principle of social inter-generational equity
- the principle of biological diversity and maintained ecological integrity
- the principle of improved valuation and pricing of environmental resources.

4.11.1 Precautionary principle

The precautionary principle states 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. In the application of the precautionary principle, public and private decisions should be guided by:

- (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
- (ii) *an assessment of the risk-weighted consequences of various options.*

Serious or irreversible environmental damage from the operation of installed services systems can occur, without proper planning. To this end the services design concept commits to addressing the following:

- Minimising the use of energy (both electrical and gas) through optimum building design, systems design and/or ongoing operation and maintenance of the facility.
- Elimination of the use of environment damaging materials during construction such as ozone depleting substances.
- Waste management to maximise recycling.

On that basis the proposal meets the requirements of the Precautionary Principle.

4.11.2 Principle of inter-generational equity

The principle of inter-generational equity states that:

the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations....

The site is within a highly urbanised environment and on an existing hospital site. The operation of the proposal would not result in any impacts that are likely to impact on the health, diversity or productivity of the environment for future generations.

A number of features have been included in the design to reduce the environmental footprint of the proposal to maintain the environment for future generations. The building has been designed and will be constructed to reduce the embodied energy on a whole of building approach and will incorporate opportunities for improved energy and water use efficiency, less waste and environmental footprint.

The greatest life-time energy impact of a building is its operational energy consumption. Hence the operational environmental management plan will include requirements for periodic auditing and improvement to optimise ESD performance.

The proposal is therefore considered to be consistent with the principle of inter-generational equity.

4.11.3 Principle of biological diversity and ecological integrity

The principle of biological diversity and ecological integrity states that:

Conservation of biological diversity and ecological integrity should be a fundamental consideration.

On the basis that the proposal is the redevelopment on the existing site, it is concluded that impacts upon the ecological integrity will be negligible.

The proposal therefore considers the principle of biological diversity and ecological integrity.

4.11.4 Improved valuation of environmental resources

The principle of improved valuation of environmental resources states that:

environmental factors should be included in the valuation of assets and services, such as:

- (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
- (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
- (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

The proposal has been designed to minimise adverse impacts on the environment by:

- siting infrastructure at locations that have been disturbed by previous land uses, and
- putting in place specific design measures to lessen the environmental impact on the area.

Although these measures increase the costs associated with construction and in some cases the operation of the proposal, it has resulted in a higher quality environmental outcome which significantly reduces the building's impact. This indicates that environmental resources have been assigned a significant value and this has been taken into consideration during the concept design stage.

The proposal therefore appropriately values environmental resources.

4.12 Waste Management

As the proposed development works are for the redevelopment of the existing Hornsby Ku-ring-gai Hospital, procedures for handling and storing waste are already in place and enforced by Hospital Management. Waste management including biomedical, infectious or toxic wastes, storage of any hazardous materials will be processed in accordance with Hornsby Ku-ring-gai Hospital Waste Management and Resource Recovery Plan.

This details Waste Management and Waste Handling, Containment and Transport and Waste disposal including the safe handling, storage, collection and disposal of recycling, general and clinical waste. It also includes:

- Waste Management & Resource Recovery Policy Objectives
- Specific Waste Stream Practices
- Occupational Health & Safety Precautions
- Cleaning of Waste Collection Areas and Equipment
- Emergency Procedures and Incidents
- Incident Reporting
- Incorrect Segregation of Clinical waste into the General Waste Stream
- Clinical Waste
- Spill kits
- Specifications for Sharps Disposal Containers

The Waste Management Plan is provided in Appendix H.

The Hospital redevelopment would be equivalent to a residential unit and would generate general and recyclable waste only. There would be no biomedical, infectious or toxic wastes, storage of any chemicals/hazardous materials as a result of this proposal.

4.13 Hazardous Materials

Asbestos materials have previously been identified on site and within the building in 1988. In order to ascertain how these should be managed an Asbestos Material Re-Inspection Survey was conducted by Noel Arnold & Associated between April and June 2010. The survey provided information on the condition of asbestos material previously identified and recommended management strategies for dealing with it. The report (attached at Appendix L) made the following recommendations:

Items that require urgent action (as per the report) should be undertaken as soon as possible;
All asbestos containing materials identified as being damaged or poor condition should be encapsulated or removed under controlled conditions by an appropriately licenced contractor;
An asbestos hygienist should be engaged to conduct air quality monitoring and clearance inspections during the removal of asbestos containing materials;

If asbestos is suspected during demolition, work must cease pending further sampling of suspect material;

A Destructive Hazardous Materials Survey should be undertaken prior to demolition in accordance with Australian Standard AS2601:2001 Demolition of Buildings;

Annual reassessment should be scheduled in accordance with the relevant codes; and

If asbestos containing material is encountered prior to demolition/refurbishment, it should be removed by a suitably qualified contractor.

These recommendations have been adopted via the Statements of Commitment and the Construction Environmental Management Plan.

4.14 Utilities and Services

The design for the new facility will incorporate the following hydraulic services systems to comply with appropriate standards and the current guidelines.

- Potable hot, warm and cold water supply to areas of the facility
- Non-potable water supply to utility rooms etc.
- Sanitary plumbing and drainage
- Trade waste plumbing and drainage
- Downpipes and internal stormwater drainage
- Gas services
- Connection of all hydraulic services reticulation and systems to existing Hospital infrastructure
- Alteration and modification of existing services to allow construction of the new facility

These are discussed in further detail below:

4.14.1 Water

Hot and Cold water supply will be reticulated to all areas requiring services in accordance with AS 3500. Potable cold water to the new facility will be supplied from the existing incoming water supply, taken off after the existing water meter.

A new hot water system will be supplied on a flow and return loop to serve the utility rooms. A warm water system on a flow and return loop will serve all other fixtures. Further detail is given in the Hydraulic Services Report in Appendix D.

4.14.2 Sewage

Sanitary drainage will be connected to the existing site reticulation to convey all waste from all fixtures.

Trade waste drainage will be connected to the sanitary drainage system. Further detail is given in the Hydraulic Services Report in Appendix D.

4.14.3 Stormwater

The stormwater drainage system has been designed to adequately protect all buildings and the environment from damage from storm water and prevents ponding on paved surfaces. The design is such that failure of stormwater systems means that water would not enter the buildings but escape over adjoining paved surfaces. The site stormwater drainage system is designed to comply with Hornsby Shire Council's Medical Support Development Control Plan- Drainage Control 1996, including

- Site water retention will not cause structural damage to excavations or retaining walls
- Capture and filtering of stormwater in sediment control points before entering the legal point of discharge
- Drainage of the site to the legal point of discharge throughout construction

- Prevention of stormwater entering adjoining properties or into the sewerage system

The proposed development will not have adverse impacts on the existing stormwater system flow conditions for both the piped system and the overland flow system. The On Site Detention system has been designed to capture all of the catchment runoff. Reinforced concrete tanks would allow for the maximum required detention volume of 23m³.

Further details of the storm water conditions are given in the Storm Water Drainage Statement by Taylor Thomson Whitting contained in Appendix F.

4.14.4 Gas

Gas service will be connected to the existing site reticulation system.

4.14.5 Power

The new Child and Adolescent MHU will require the establishment of a new kiosk style substation preferably along either the Palmerston Rd or Lowe Rd frontages. Existing major electrical switchboard infrastructure on the site is too distant and has insufficient capacity to adequately cater for the proposed development.

Existing power supply to the old emergency department will be sufficient for its possible reuse to totally or partly accommodate the CAMHS unit if this becomes necessary under the project. The new substation will be located on the Lowe Road frontage.

4.14.6 Telecommunications

A new fibre optic cable and multicore copper telephone cable will be installed between the new CAMHU Building Distributor rack and the existing Hornsby Ku-ring-gai Hospital Campus Distributor /PABX room utilising existing spare underground conduits installed under the MHICU project.

Existing communications infrastructure serving the old emergency department has sufficient expansion capacity to totally or partly accommodate the CAMHS unit if this becomes necessary for the proposed development. The existing communications cabling within the area to be refurbished will be removed back to the existing BD and replaced with new horizontal cabling complying with NSCCAHS Design guidelines.

4.15 Transport, Traffic and Access Impacts

A Traffic and Parking Report has been prepared for the project by URAP-TTW and is attached at Appendix E.

The report states that the proposed development is expected to have a minimal impact on the road system and intersection performance of the area. The current use of the site is similar to its future use with an additional parking capacity of 50 parking spaces.

An assessment of traffic generation for the proposed development was considered and findings indicate that any increase in traffic from the proposed development is minimal and is within the capacity of the current operation of the road network in the area, which operates at a very good level of service.

The additional peak hour traffic generation for the site will be at about 40 - 45 vehicle trips (35 staff (out of 50 during one hour period who drive/arrive to work by car) and 5 visitors/deliveries). Considering that staff arrive or depart within a 2-3 hour period, allowing for shift workers, part time staff and visiting medical officers, a lower peak hour traffic generation would be expected. This level of hourly traffic amounts to less than 1 trip per minute. Therefore, it has no adverse impact on the performance of the road network or intersection operation within the study area or street

system around the HKH campus.

On the basis that the activities of the proposed development are spread during the whole day and therefore its impact on the operation of peak hour traffic would be very minimal.

It should be noted that due to the confined nature of the proposed development and its low traffic generation, no adverse impact will be experienced along road network system including Edgeworth David Avenue and its side streets. On this basis, concerns raised by the RTA with regard to intersection assessment along Edgeworth David Avenue would not be applicable as part of this proposal.

Routes to the site, being Burdett Street, Lowe, Derby and Palmerston Roads have a satisfactory level of service and will continue to have a similar level of service once the proposed CAMHS and other related works are completed.

The proposed development provides an additional 50 parking spaces as part of its parking management scheme. This provides an appropriate level of parking for the development site – considering Hospital's management efforts to encourage staff to use public and/or active transport as their means of travel to and from the Hospital. Accordingly, this complies with RTA's Guide for Traffic Generating Developments and Council's code on the basis of needs assessment.

4.15.1 Access

Drawing 50441 SK02-A describes the general design of the internal and external access patterns in and around the proposed hospital buildings. Pedestrian footpaths are available along Lowe, Derby and Palmerston Roads. The proposed redevelopment site will be designed on the basis of best practice and current guidelines, catering for disabled access and parents with prams.

The vehicular access lay out to the proposed redevelopment site should be in accordance with the Roads and Traffic Authority's (RTA) Guidelines, Australian Standard and Council's Code.

4.16 Construction Impacts

The construction impacts associated with the redevelopment of the hospital will be minimised by a program of works that allows the continued function of the other hospital buildings to serve their patients.

The demolition and construction of the proposed buildings is relatively isolated from the rest of the hospital and will not affect the management of the remaining site. However, development of construction management is important to ensure that this is the case. Therefore, a Construction Management Plan will be prepared prior to construction commencing which will identify and consider potential impacts for users, neighbours, pedestrians and cyclists during the construction of the project including the following:

- noise and vibration;
- soil and erosion control;
- air quality and air pollution;
- waste management;
- cut/fill and retaining structures;
- traffic management, including pedestrian and cyclist circulation and safety and
- car parking for construction workers.

In respect to soil and sedimentation, an Erosion and Sediment Control Plan will be prepared and implemented in accordance with the requirements of the relevant guidelines. This will include the following measures:

- Natural rainwater run-off will be controlled to prevent sediment draining into the stormwater system.
- Upslope water will be diverted to prevent it from travelling through the site.
- Downpipes will be connected as soon as a roof is installed on the site.
- Natural falls of the site will be identified and sediment filters such as straw bales filters, gravel surface barriers, sandbags, pit baskets or geo-textile mesh screens at runoff points will be established.
- Straw bales/geo-textile mesh screens will be replaced on a regular basis so they remain effective.
- Sediment traps or filters will be placed around any drain affected by construction works to prevent sediment entering the stormwater system.
- Water collected at the bottom of excavation sites will be pumped out. If the water contains only sediments, it will be filtered and pumped to stormwater.
- Polluted water will not be allowed to enter the stormwater system and may be pumped to the sewer system with the appropriate approvals from the relevant authority.
- Waste material, including liquid wastes such as paint, concrete slurries and chemicals, will not be discharged into a stormwater drain.

4.17 Operational Impacts

4.17.1 Noise generation

Plant is located central to the main building footprint. All plant will be enclosed and acoustically treated to minimise any potential acoustic disturbance. All residential development is separated from the proposed new building site by Palmerston Road, and as such, there will be minimal adverse impact of noise due to plant received at these properties during the evening and at night when background noise are less intense.

The daily operational noise of the proposed facility will be negligible to adjacent residential properties.

Traffic noise generated will remain consistent with that already received at these properties which is appropriate in its residential context.

4.17.2 Site security

Security & Access Control System

Hornsby Ku-ring-gai Hospital currently operates a PROWATCH Access Control system across the site. The system consists of a combination of card readers, electrical strikes and magnetic locks control panels installed to suit staffing and operational requirements of each specific department.

The existing Access Control system will be extended to service the new CAMHU development complete with hardware and software upgrades and alterations as required. Existing access control services within areas to be refurbished will be altered and rearranged to suit new layouts and staff requirements in consultation with NSLHD Security Department. Integration with the existing Hospital system will be maintained.

CCTV

The Hornsby Ku-ring-gai Hospital currently operates a LAN based multivision Digital Video Recording system. This allows continuous recording of images on recorders installed either locally within departments or centrally located within Security offices.

CCTV cameras will be provided within the new Child and Adolescent MHU at locations both internally and externally to the buildings. Viewing of recorded images will be available at selected

Write up/Nurse Station areas and at Hospital main Security office as appropriate. The new recording system installed within the Child and Adolescent MHU will be interfaced to the Hospital LAN infrastructure to allow for remote viewing of images by authorised persons.

Existing CCTV services within areas to be refurbished will be altered and rearranged to suit new layouts and staff requirements in consultation with NDLHD Security Department. Complete integration with the existing Hospital system will be maintained.

Emergency and evacuation procedures

The Hornsby Ku-ring-gai Hospital currently operates a Whitelite computer monitored **emergency and exit lighting** system complete with CATS 11 system software. This existing system will be extended to service the new Child and Adolescent MHU development complete with hardware and software upgrades and alterations as required. Existing emergency and exit lighting services within areas to be refurbished will be altered and rearranged to suit new layouts and altered egress paths. Complete integration with the existing Hospital system will be maintained.

The Hornsby Ku-ring-gai Hospital currently operates an AUSTCO **nurse call system** across the majority of the existing buildings on the site. This existing nurse call system will be expanded to service the new MHU development complete with hardware and software upgrades and alterations as required.

Fire safety

Required fire hydrant and hose reel services will be connected to existing reticulation and extent and capability of system will be in accordance with BCA.

The Hornsby Ku-ring-gai Hospital is fitted with a Wormalds addressable Fire Detection system. This addressable system will be expanded to serve the new Child and Adolescent Mental Health Unit complete with all necessary hardware and software upgrades/modifications. Existing fire detection services within areas to be refurbished will be altered and rearranged to suit new layouts. Complete integration with the existing Hospital system will be maintained.

4.18 Potential Amenity Impacts on Neighbours

4.18.1 Visual Privacy

The nearest residents to the proposed AAMHU, CAMHU and the CAMHU Community Service Building are situated along Palmerston Road, directly opposite the existing CAFT building. These residents are separated from the proposed facility by a road, and as such, there are no visual links created between the proposed facility and residential properties. Suitable visual privacy will be retained at all residential properties located across from the facility.

The interface of public and private space was explored in the design process so that the amenity of neighbours and patients could be fully addressed.

4.18.2 Overshadowing

Due to all residential properties being located on the opposite side of Palmerston road and the proposed building being limited to two storey scale, there will be no resultant overshadowing. Due to the orientation and location of the building proposed, any overshadowing will remain within the Hospital site, or extend to areas of adjoining roads.

The current building is two storeys in height and causes no overshadowing to these neighbours; therefore no overshadowing is anticipated through this proposal. Shadow Diagrams are attached at Appendix C.

4.19 Consultation

Consultation was initially carried out by the Department of Planning regarding the proposed development with Hornsby Shire Council, The Ministry of Transport and the Roads and Traffic Authority. The comments received were considered in the preparation of the Director-General Requirements.

In accordance with the Director General Environmental Assessment Requirements, further consultation with the following relevant parties was sought during the preparation of the Environmental Assessment.

- Hornsby Shire Council
- Roads and Traffic Authority
- Ministry of Transport
- Utility Providers

As part of consulting with utility providers, Energy Australia and Sydney Water were contacted. Telstra were also contacted on the in February 2009 and declined the opportunity to receive information regarding the development.

These parties were issued with a letter seeking their response to the proposal along with a copy of the floor plans showing the building footprints. Written responses were received from Hornsby Shire Council, Energy Australia and Ministry of Transport. Correspondence received from Sydney Water noted that their comments would be forwarded directly to the Department of Planning. In December 2010, following a redesign of the facility, new letters and plans were issued.

A summary of the comments received is included in Appendix G. All issues have been considered in the final design detailing of the scheme and this Environmental Assessment.

5 Draft Statement of Commitments

The following Commitments are made by the applicant in respect to this project.

5.1 General Commitments

- G1 Health Infrastructure and its contractors are committed to the principles of sustainability as defined in the *Environmental Planning and Assessment Act 1979*. The proposed development will incorporate the following measures in support of the principles of ESD:
- Low energy and resource use building design;
 - Rainwater harvesting for irrigation and to minimise impact on stormwater infrastructure;
 - Optimal use of natural light through responsive building design and materials;
- The construction and operation of the Hornsby Ku-ring-Gai Mental Health facility will be undertaken in accordance with Best Practice environmental management policies in place at the relevant time through the sites development.
- G2 The proponent will obtain all necessary approvals required by State and Commonwealth legislation in undertaking the project.
- G3 The development will comply with the Building Code of Australia.
- G4 The new building will be set out by a registered surveyor to verify the correct position of each structure in relation to property boundaries and the approved alignment levels. The registered surveyor will provide evidence to the Department that structural works are in accordance with the approved project application.
- G5 The development and its uses will be in accordance with the approved Project Application as described in this Environmental Assessment.

5.2 Prior to Commencement of Works

- P1 Detailed construction design drawings will be submitted to the Director prior to the commencement of construction works.
- P2 An Erosion and Sediment Control Plan will be prepared and submitted to the Director.
- P3 Hornsby Ku-ring-gai Hospital will comply with the requirements of relevant service authorities with regard to connection to, and relocation and/or adjustment of, services affected by the construction of the proposed development. In that regard, an application for connection detailing the proposed demand increase will be submitted to Energy Australia at the earliest possible date once a contractor has been appointed.
- P4 All outdoor lighting shall comply, where relevant, with AS/NZ 1158.3: 1999 Pedestrian Area (Category P) Lighting and Australian Standard AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.
- P5 Prior to commencement of works, a Construction Environmental Management Plan (CEMP) will be prepared. This plan will include procedures for the following:
- Contact details of the site manager;

- Air quality/dust control;
 - Noise and Vibration Management;
 - Waste management;
 - Hazardous Materials Management
 - Vegetation protection;
 - Community access and safety;
 - Site specific soil erosion and sediment control;
 - Traffic and pedestrian management;
 - Storage and handling of materials;
 - Environmental training and awareness;
 - Contact and complaints handling procedures;
 - Emergency preparedness and response;
 - Site induction, OHS&R management and training;
 - Services disruption planning and management; and
 - Archaeological and heritage management;
- P6 Prior to demolition a dilapidation report will be undertaken of the adjoining and nearby facilities.
- P7 A licensed asbestos/hazardous materials contractor will be engaged in accordance with the recommendations in the report by Noel Arnold and Associates dated November 2010 to undertake demolition of any parts of the building suspected of containing asbestos or other contaminant and removal of any asbestos or other contaminants from the site.
- P8 Demolition of the relevant parts of the building will be undertaken in accordance with the requirements of Australian Standard AS2601– 2001: The Demolition of Structures which is incorporated into the Occupational Health and Safety Act 2000 administered by WorkCover NSW.
- P9 Final design plans of the stormwater drainage systems shall be prepared in accordance with Council's and Sydney Water's requirements prior to the commencement of construction works. The hydrology and hydraulic calculations shall be based on models described in the current edition of Australian Rainfall and Runoff.
- P10 A Traffic and Pedestrian Management Plan will be prepared that will identify:
- The number and location of car parking spaces required by construction workers,
 - Ingress and egress of vehicles to the site,
 - Loading and unloading, including construction zones,
 - Predicted traffic volumes, types and routes, and
 - Pedestrian and traffic management methods.
- P11 A sign will be erected in a prominent position on the site prior to the commencement of works in indicating the nature of the project and the Project Director and contractor contacts details.

- P12 The design of suitable bicycle parking and storage areas will be provided prior to construction. The bicycle storage area will be designed in accordance with Australian Standard AS 2890.3:1993 Parking Facilities – Bicycle parking facilities.

5.3 During Construction

- D1 Measures to control soil erosion during demolition and construction will be in accordance with currently accepted principles, as described in Managing Urban Stormwater (EPA NSW) and Soil Erosion and Sediment Control (The Institution of Engineers, Australia).

- D2 The Erosion and Sediment Control Plan will be implemented and effectively maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as source of sediment.

- D3 General construction hours will be as follows:
Monday to Friday 7am to 6pm
Saturday 7am to 3pm
No work will be undertaken on Sundays and Public Holidays

For construction work that generates significant noise or vibration impacts, construction hours will be limited to:

Monday to Friday 9am to 12pm and 2pm to 5pm
Saturday 9am to 12pm

- D4 Adequate measures will be taken to prevent dust from affecting the amenity of the neighbourhood, hospital and other workers during construction. These will include:
- Physical barriers erected at right angles to the prevailing wind direction or placed around or over dust sources to prevent wind or activity from generating dust emissions,
 - Earthworks will be managed to minimise the amount of time the site is left cut or exposed,
 - All materials will be stored or stockpiled at the best locations,
 - The surface will be dampened slightly to prevent dust from becoming airborne, without creating runoff,
 - All vehicles carrying spoil or rubble to or from the site will be covered to prevent the escape of dust or other material,
 - All equipment wheels will be washed before exiting the site,
 - Gates will be closed between vehicle movements and will be fitted with shade cloth, and
 - Cleaning of footpaths and roadways will be carried out regularly.

These will also be documented in the CEMP.

- D5 Public ways will at all time to be kept clear of any materials, vehicles, refuse, skips or the like.

- D6 All waste disposal will occur in accordance with the *Protection of Environment Operations Act* and Regulations and EPA Environmental Guideline: Assessment, Classification and Management of Liquid and Non-liquid Wastes (1995).
- All wastes generated by the project shall be beneficially reused, recycled or directed to a waste facility lawfully permitted to accept the materials.
- D7 In the event of any damage being caused to any existing kerb, guttering, stormwater pit, footpath trees and/ or footpath during building operation, the proponent will repair or reimburse Council for the full costs of repairing and making good.
- D8 Public reserves, public roadway or private property will not be used for storage or disposal of building materials or waste or excavated materials.
- D9 The design of facilities will permit effective, appropriate and safe use by all people, including those with disabilities and will be in accordance with:
- AS 1428 Part 1.
 - The Building Code of Australia.
- D10 Access and Safety protocols will be included in a CEMP to maintain access and use of the site during the redevelopment of the site to ensure the safety of work personnel and visitors.
- D11 Roads and other traffic based elements will be designed and constructed in accordance with Australian Standards or RTA as applicable.
- D12 Car parking and loading bays will be constructed in accordance with the relevant Australian Standards.
- D13 In the event that any historical or Aboriginal relics are uncovered during excavations, all excavation and disturbance to the area will stop immediately and the Department of Environment and Climate Change will be informed in accordance with Section 91 of the *National Parks and Wildlife Act 1974*.
- D14 The diversion of the existing services will be carried out in consultation with the Council and/or the relevant agency and in accordance with the necessary requirements.
- D15 All buildings will be ventilated in accordance with relevant codes.
- D16 Plant will be selected and operated in accordance with the DEC Industrial Noise Policy Guidelines and the Protection of the Environment Operations Act. A detailed assessment of plant noise emissions will be conducted once the type and placement of mechanical plant is confirmed.

5.4 Prior to Occupation or Commencement of Use

- O1 A Fire Safety Certificate will be provided to the Department for all the Essential Fire or Other Safety Measures forming part of application.

- O2 Prior to occupation, one (1) full set of works as executed plans, and other supporting documentation will be submitted to the Department and Council for information purposes only.

6 Conclusion

This report, together with the appended technical reports, comprises a comprehensive environmental assessment of the Hornsby Ku-ring-Gai Mental Health Redevelopment. This report describes the process of site analysis and the details of the proposed development along with an assessment of the proposal against the Director- Generals Environmental Assessment Requirements issued on 23 December 2010.

The building will incorporate environmental initiatives, which will provide a future proofing for the facility and assist in meeting their objectives in terms of an environmentally and economically sustainable facility.

The proposal demonstrates a high level of consistency with prevailing planning instruments including the provisions of the SEPP (Major Development) and other relevant SEPPs and local planning instruments.

The assessment concludes that the site is suitable for the proposal and that the implementation of the redevelopment of the Hornsby Ku-ring-Gai Mental Health Redevelopment is consistent with the public interest.

Accordingly, we seek the Minister's favourable consideration of this application.