

# Proposed Hospital

35-45 Water Street, Wahroonga

## Part 3A Major Project Environmental Assessment



murlan

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## STATEMENT OF VALIDITY

### Submission of Environmental Assessment

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

### Environmental Assessment prepared by

|                |                                                                             |
|----------------|-----------------------------------------------------------------------------|
| Name           | Robert Chambers                                                             |
| Qualifications | Dip TP                                                                      |
| Address        | BBC Consulting Planners<br>Level 2, 55 Mountain Street<br>Broadway NSW 2007 |
| In respect of  | Proposed hospital at 35-45 Water Street, Wahroonga                          |

### Applicant and Land Details

|                      |                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------|
| Applicant name       | Murlan Consulting Pty Ltd                                                                     |
| Applicant address:   | Suite 110/26 Pirrama Road, Jones Bay Wharf,<br>Pyrmont NSW 2009                               |
| Land to be developed | The land to which the project application relates<br>comprises 35-45 Water Street, Wahroonga. |
| Lot and DP           | Lot 1 in DP 375262.                                                                           |

### 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-General's requirements (dated 3 December 2008) and that to the best of my knowledge, the information contained in the environmental assessment is neither false nor misleading.



Signature

Date

7 April 2009

## EXECUTIVE SUMMARY

### Project Overview

This Environmental Assessment relates to the erection of a proposed hospital on land in Water Street, Wahroonga, the site of the former John Williams Memorial Hospital.

The project involves demolition of non-heritage-significant existing buildings on the site, removal of various non-heritage-significant landscape elements, adaptive re-use (for hospital and related purposes) of the heritage-significant buildings, restoration of heritage-significant landscapes, preparatory excavation and bulk earthworks, protection of almost all of the Blue Gum High Forest community on the site and the enhancement of this community, and construction and operation of a hospital providing for a variety of high dependency needs.

The hospital facility will comprise of 129 patient care suites or beds distributed throughout two new interlinked buildings, the Main Building and the East building. Each patient will have his or her own room and own ensuite bathroom.

The Main Building contains wards, a rehabilitation centre, an admissions clinic and medical consulting rooms. An ambulance bay is located outside the reception with an additional ambulance bay on the basement car park level below the reception. This building also contains hospital services such as main kitchen, laundry, stores and plant rooms. The East Building contains parking and wards.

The heritage-listed Rippon Grange building is to be restored to a café, chapel, administration and management offices and consulting and conference rooms.

The professional health care services to be provided to in-patients include integrated rehabilitation, medical, psychiatric and post natal health services. A description of the services to be provided at the hospital is contained in the *Hospital Services Plan* contained in **Appendix 2**. Discussions have been held with NSW Health in the formulation of this plan.

Vehicular and pedestrian access will be from Water Street and Young Street.

The new hospital buildings will be located so as to ensure minimal impact on the Blue Gum High Forest and on Rippon Grange. Rippon Grange will be conserved as a consequence of implementing the project. Important heritage landscapes will be restored.

The new hospital will provide much needed professional health care services to the North Shore community, while complementing the acute level of health services provided by the Sydney Adventist Hospital and the Hornsby Hospital and alleviating demand otherwise required to be serviced by those and other facilities.

The project involves the carrying out of the following works:-

- preparatory works to facilitate the implementation of the project, such as the erection of safety fencing and the like;
- demolition of non-heritage-significant existing buildings;
- removal of various non-heritage-significant landscape elements;

- implementation of construction management safeguards such as erosion and sedimentation control devices;
- protection of almost all of the Blue Gum High Forest community on the site;
- excavation and earthworks to achieve the required building platform;
- erection of the proposed hospital buildings to provide for a variety of high dependency needs;
- adaptive re-use (for hospital and related purposes) of the heritage-significant buildings;
- landscaping of the site including restoration of heritage-significant landscapes and the enhancement of the Blue Gum High Forest community; and
- associated works, including provision of utility services on the site.

The capital investment value of the project is \$44.23 million.

### **Permissibility**

Pursuant to the provisions of the Ku-ring-gai Planning Scheme Ordinance (“KPSO”), the site is zoned 5(a) Special Uses (Hospital)

Within the 5(a) Special Uses Zone, hospitals are permissible with consent. The proposed development is for the purposes of a hospital.

There are no development controls specifically applying to hospitals in the KPSO.

### **Planning Process**

Section 75B of the *Environmental Planning and Assessment Act, 1979* (“the EP&A Act”) provides that Part 3A of the EP&A Act applies to the carrying out of development that is declared to be a project to which this Part applies. The Director-General, as a delegate of the Minister, has formed the opinion that the proposed development constitutes a major project, to which Part 3A applies.

The project application was lodged in November 2007. The Director-General of the Department of Planning issued final Environmental Assessment Requirements (DGRs) for the project on 3 December 2008. This Environmental Assessment report addresses the issues raised in the DGRs, a copy of which is provided in **Appendix 1**.

### **Environmental Assessment**

An assessment of the impacts of the proposed development indicates that subject to the implementation of appropriate mitigative measures and in particular, those identified in the Draft Statement of Commitments forming part of this Environmental Assessment, the project will not result in any significant adverse long-term environmental outcomes but will deliver a high-quality, high-care hospital facility.

### **Biodiversity and Tree Loss**

The design of the development has been informed by detailed analysis of the existing flora and fauna on the site including the area of Blue Gum High Forest (BGHF) habitat in the eastern and southern parts of the site. The location of the BGHF habitat has been



determined during Court proceedings and with the advice of the Court expert Dr Smith being accepted by the Court which resulted in the identification of an area of 6,350m<sup>2</sup> of the site being BHHF habitat. This area has been further investigated and analysed by Cumberland Ecology who confirm that remaining vegetation on the subject site consists of landscaped gardens with a variety of exotic and native species. The BGHF does not extend beyond the area mapped by Smith because very few species characteristic of the community occur in surrounding gardens and lawns, and native species are limited to colonising ground cover species, not BGHF canopy, small tree and shrub species. Such species are commonly found in disturbed areas and are not an indication that an area will regenerate as BGHF or any other community.

The vegetation in the BGHF habitat is highly degraded, with a high level of weed invasion.

The proposed development would involve clearing 116m<sup>2</sup> or 1.8% of BGHF. This includes only four trees, at least one of which is likely to have been planted. The retained forest community will be restored by weeding and replanting according to a Vegetation Management Plan (VMP). Additional areas totalling 1770m<sup>2</sup> made up of small patches in the south east and south west portions of the subject site will also be revegetated as BGHF according to the VMP. This will increase the area of native vegetation on the subject site and improve the condition of the BGHF community through weed control works and additional plantings of locally native species typical of the community. An area of 583m<sup>2</sup> of early works plantings in the south of the subject site will provide additional buffering to the BGHF. As a consequence of the development and its associated VMP, there will be an increase in the area of BGHF of approximately 26% and its condition will be greatly improved.

Consideration has been given in the Environmental Assessment to a range of direct and indirect impacts of the development on the BGHF and other vegetation on the site, including impacts on individual tree species. These include detailed consideration of hydrogeological impacts of excavation on groundwater flows, edge effects of construction, impacts on critical root zones and shadowing impacts.

It is considered that the proposed development will not have a significant impact on the viability of the BGHF community on the site or within the locality.

A range of long-term mitigation measures are proposed for the site. These include assisted natural regeneration and supplementary planting (reconstruction) within the BGHF, and management of construction to avoid unnecessary impacts on the vegetation.

### Heritage Impacts

The design of the proposal has been informed by the preparation of a Conservation Management Plan for the site endorsed by the Heritage Council of NSW (see Appendix 19). The heritage consultant, Rod Howard and Associates Pty Ltd finds that the proposed development is supportable in heritage terms for the following reasons:

- It will retain the entire site on one title, thus allowing conservation of significant items both individually and in their historical relationships;
- It conforms to the policies and guidelines contained within the Conservation Management Plan and endorsed by the Heritage Council of New South Wales;

- An appropriate and sympathetic adaptive use will be provided for “Rippon Grange” that will enable conservation of significant fabric, ongoing maintenance and public access that will enhance understanding of the place and its heritage significance. The adaptive reuse of the building will result in the demolition of intrusive and detracting additions;
- The significant relationships of the house and its grounds will be regained. The section of the grounds that was used for recreational purposes to the east of “Rippon Grange” will be conserved and important elements reconstructed so that the presentation of the house and its grounds to the locality will be greatly enhanced. The proposed development recognises the combination of significant building forms and cultural and remnant natural landscape forms;
- The proposed new buildings are located to the south of “Rippon Grange” and away from the house. Their footprint and placement has been determined by the constraints on development within the curtilage that are set out in the CMP.
- The impact of the proposed buildings on the place is minimised by their placement on the site, strictly controlled building height, modulation and breaking up of building mass, materials that are compatible with the existing building materials at the place. These means will minimise visual impacts both on “Rippon Grange” and on the locality, including nearby heritage items;
- The former Stable, although modified, is to be conserved and appropriately adapted to new uses;
- The Summer House will be reconstructed;
- The Swimming Pool is to be retained and conserved;
- Significant cultural plantings and regrowth of native trees are retained. The proposed development will enable the proper maintenance of these important site components. The carefully considered envelope of the new buildings ensure that the maximum number of Blue Gum trees and associated species are retained, thus providing an optimal balance between cultural plantings and natural vegetation;
- The proposed development will enable ongoing funding to ensure the proper conservation (which includes ongoing maintenance over time) of “Rippon Grange”, other built items; the formal site elements such as the entrance driveway, terraces on the north eastern part of the site, the croquet lawn, and cultural and native plantings.

A detailed Heritage Impact Statement is provided in Appendix 20.

#### Amenity Impacts

The modelling/stepping of the building form which characterises the western wing of the Main Building is both a response to the need to ensure that the shadow impacts are minimised and that the bulk and scale of the hospital appropriately respond to the site conditions and its interface/relationship with adjoining properties to the west and south-west. Shadow diagrams illustrate that impacts are considered to be reasonable.

The detailed design of the hospital reflects that careful consideration has been given to the need to protect neighbour privacy and solar access and in this regard attention is drawn to

the generally substantial setbacks and existing and proposed landscape screening around the periphery of the site.

A detailed traffic report (see **Appendix 17**) concludes that the proposed hospital will not present any unsatisfactory traffic capacity, safety or environmental related implications, and will incorporate a suitable and appropriate parking provision for the nature of the development proposed.

An acoustic report demonstrates that appropriate safeguards and amelioration can be put in place to ensure that noise emissions do not disturb the amenity of the area (see **Appendix 18**).

In order to ensure that the amenity of the locality is adequately protected during the demolition, excavation and construction phase, a detailed Construction Management Plan has been prepared (see **Appendix 16**). It identifies measures to mitigate potential amenity impacts.

Measures are to be adopted in the building design and operation to minimise energy usage and reduce greenhouse gas emissions (see **Appendix 13**).

A detailed BCA assessment (see **Appendix 14**) confirms that the proposed building can comply with the BCA provisions applying to the relevant class of building subject to some further design development or otherwise via an engineered solution.

Finally, the proposed hospital is the subject of a detailed Waste Management Plan prepared to ensure that when the hospital is operating, waste is appropriately stored, recycled and removed from the site (see **Appendix 15**).

The various technical and other reports submitted with this Environmental Assessment, where relevant, contain measures to mitigate impacts. These have been consolidated into the Proponent's Draft Statement of Commitments contained in Section 4.4. Implementation of the measures identified in Section 4.4 will ensure that the environmental impacts of the proposal are minimised.

# 1. INTRODUCTION

## 1.1 Purpose of the Report

This Environmental Assessment report ("EA") has been prepared on behalf of Murlan Consulting Pty Ltd to accompany an application to the Director-General under Section 75E of the *Environmental Planning and Assessment Act 1979* ("EP&A Act") for approval to carry out a project as defined in Part 3A of the Act ("a major project").

The major project to which this Environmental Assessment relates is the erection and use of a hospital on land in Water Street, Wahroonga.

The Minister for Planning has expressed an opinion through his delegate, the Director-General of the Department of Planning, that the proposed development constitutes a major project. In doing so, the Director-General satisfied himself that the development proposal is of state or regional environmental planning significance and that Part 3A of the EP&A Act applies.

The Director-General of the Department of Planning issued Environmental Assessment Requirements (DGRs) for the project on 3 December 2008 (**Appendix 1**). This Environmental Assessment report addresses these requirements.

A draft Statement of Commitments for the project has been prepared and is contained in Section 4.4.

## 1.2 Approvals Framework

State Environmental Planning Policy (Major Projects) 2005 was gazetted in May 2005 and aims to identify development of economic, social or environmental significance to the State, or regions of the State, so as to provide a consistent and comprehensive assessment and decision-making process for that development. The Minister for Planning is the consent authority for development of the type, value, or in a location, generally as identified in the SEPP, and Part 3A of the Act applies to the development, referred to as "projects" or "major projects".

Schedule 1 of the SEPP is entitled "Part 3A Projects – Classes of Development". "Hospitals" are included in Schedule 1 as development of a kind that is declared to be a project to which Part 3A of the Act applies. Category 18, Group 7 in Schedule 1 states as follows:-

*"18 Hospitals*

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

- (a) *day surgery, day procedures or health consulting rooms, or*
  - (b) *accommodation for nurses or other health care workers, or*
  - (c) *accommodation for persons receiving health care or for their visitors, or*
  - (d) *shops or refreshment rooms, or*
  - (e) *transport of patients, including helipads and ambulance facilities, or*
  - (f) *educational purposes, or*
  - (g) *research purposes, whether or not they are used only by hospital staff or health care workers and whether or not any such use is a commercial use, or*
  - (h) *any other health-related use.*
- (2) *For the purposes of this clause, professional health care services include preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, care or counselling services provided by health care professionals."*

The proposed hospital is consistent with this definition and hence, the proposal is for a Part 3A project as it has a capital investment value in excess of \$15 million.

### 1.3 Schedule of Environmental Assessment Requirements

The following table presents the Director General's Environmental Assessment Requirements and indicates where each requirement is addressed in this report.

| Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where addressed                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>General Requirements</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |
| <i>The Environmental Assessment must include:</i><br><i>an executive summary;</i><br><i>a description of the proposal comprising:</i> <ul style="list-style-type: none"> <li>• <i>textual and diagrammatic articulation of the proposal;</i></li> <li>• <i>description of the site, including cadastre and title details;</i></li> <li>• <i>design, construction, operation, maintenance, rehabilitation and staging as applicable;</i></li> <li>• <i>project objectives and need;</i></li> </ul> | Pages (ii) – (vi)<br>Section 2 |

| Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                               | Where addressed                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <p><i>an assessment of the environmental impacts of the proposed project, with particular focus on the key assessment requirements specified below;</i></p> <p><i>a 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</i></p>                                                        | Page (i)                                                                                                 |
| <b>Key Assessment Requirements</b>                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                          |
| <p><b>Part A – Heads of Consideration</b></p> <ul style="list-style-type: none"> <li>• <i>Suitability of the site;</i></li> <li>• <i>Likely environmental, social and economic impacts;</i></li> <li>• <i>Justification for undertaking the project, including evidence of need for hospital in local area;</i></li> <li>• <i>Consideration of alternatives; and</i></li> <li>• <i>Public Interest.</i></li> </ul>                                        | <p>Section 4.1.1</p> <p>Section 4.1.2</p> <p>Section 4.1.3</p> <p>Section 4.1.4</p> <p>Section 4.1.5</p> |
| <p><b>Part B – Review of EPIs, Guidelines and other requirements to be addressed</b></p> <ul style="list-style-type: none"> <li>• <i>Planning provisions applying to the site including permissibility and the provisions of all plans and policies; (including the Ku-ring-gai PSO, relevant DCPs SEPP 11, SEPP 19, SEPP 53, SEPP 55, and SEPP 65.</i></li> <li>• <i>Nature and extent of compliance with the relevant EPIs;</i></li> </ul>              | <p>Section 4.2.1</p> <p>Section 4.2.2</p>                                                                |
| <p><b>Part C – Key Issues to be addressed</b></p> <p><i>Requirements of the Department are as follows:</i></p> <p><b>Previous Land and Environment Court Judgements</b><br/><i>Key matters to be addressed include:</i></p> <ul style="list-style-type: none"> <li>• <i>outline/comparison of proposal with previous Court judgements; and</i></li> <li>• <i>response to Court findings by proposal (ie how have concerns been addressed).</i></li> </ul> | <p>Section 4.3</p> <p>Section 4.3.1.1</p> <p>Section 4.3.1.2</p>                                         |
| <p><b>Hospital Land Use</b><br/><i>Key matters to be addressed include:</i></p> <ul style="list-style-type: none"> <li>• <i>Type of Health Care Facility proposed (eg. Private Hospital, Public Hospital, Aged Care Facility etc), identification of relevant regulatory jurisdictions and approvals required;</i></li> </ul>                                                                                                                             | <p>Section 3.2 and Section 4.3.2.1</p>                                                                   |

| Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Where addressed                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <i>Comment as to how the proposal differs from 'residential care facilities' such as those defined in the Senior Housing SEPP;</i></li> <li>• <i>General compliance with the 'Health Facilities Guidelines' including:</i> <ul style="list-style-type: none"> <li>◦ <i>Role delineation and levels of service the facility is designed for;</i></li> <li>◦ <i>Staff profiles;</i></li> <li>◦ <i>Health Planning Units (HPU's) and schedule of accommodation; and</i></li> <li>◦ <i>Functional relationships diagram;</i></li> </ul> </li> <li>• <i>Evidence the proposed hospital uses can be licensed as a private hospital premises under the Private Hospitals and Day Procedures Centres Act 1988.</i></li> <li>• <i>Funding arrangements and evidence of any applications/ approvals for funding;</i></li> <li>• <i>Confirmation the proposed building complies with Class 9A building requirements under the Building Code of Australia;</i></li> <li>• <i>Staging/timing of approvals process, building construction and operation of facility.</i></li> </ul> | <p>Section 4.3.2.2</p> <p>Section 4.3.2.3</p> <p>Section 4.3.2.4</p> <p>Section 4.3.2.5</p> <p>Section 4.3.2.6</p> <p>Section 4.3.2.8</p> |
| <p><b>Urban Form and Design</b><br/>Key matters to be addressed include:</p> <ul style="list-style-type: none"> <li>• <i>urban design, height, density, bulk and scale of the proposal in relation to the surrounding development, landscape and topography;</i></li> <li>• <i>impact on streetscape/landscape; and</i></li> <li>• <i>details of proposed areas of and nature of landscaping and open space.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Section 4.3.3.1</p> <p>Section 4.3.3.2</p> <p>Section 4.3.3.3</p> <p>Also see Appendices 4 and 7</p>                                   |
| <p><b>Amenity Impacts on Neighbours</b></p> <ul style="list-style-type: none"> <li>• <i>visual impact, privacy and overshadowing.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Section 4.3.4</p>                                                                                                                      |
| <p><b>Transport Traffic &amp; Access</b><br/>Key matters to be addressed include:</p> <ul style="list-style-type: none"> <li>• <i>demonstrate compliance with the RTA Guidelines for Traffic Generating Development;</i></li> <li>• <i>existing traffic conditions, road network and road capacity on and in the vicinity of the site;</i></li> <li>• <i>proposed internal road access arrangements;</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>Section 4.3.5.1</p> <p>Section 3.10</p> <p>Section 3.10 and Section 4.3.5.3</p>                                                        |



| Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Where addressed                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <i>measures to promote public transport usage and modal share including bus &amp; train networks and connections;</i></li> <li>• <i>pedestrian and bicycle linkages;</i></li> <li>• <i>proposed car parking arrangements; and</i></li> <li>• <i>proposed emergency evacuation and public access.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Section 4.3.5.4</p> <p>Section 4.3.5.5</p> <p>Section 3.10 and Section 4.3.5.6</p> <p>Section 4.3.5.7</p> <p>Also see Appendix 17</p> |
| <p><b>Heritage</b><br/><i>Key matters to be addressed include:</i></p> <ul style="list-style-type: none"> <li>• <i>a conservation management plan for the site;</i></li> <li>• <i>a Heritage Impact Study (HIS) prepared in accordance with NSW Heritage Council guidelines. The HIS should address:</i> <ul style="list-style-type: none"> <li>o <i>the relationship between the proposed new hospital and the heritage components of the site and the visual impact of the new buildings;</i></li> <li>o <i>measures to minimise and mitigate potential adverse heritage impacts; and</i></li> <li>o <i>impacts on the curtilage and any significant landscape elements of the heritage item itself and heritage items within the precinct.</i></li> </ul> </li> <li>• <i>any archaeological impacts</i></li> </ul> | <p>Section 4.3.6.1 and Appendix 19</p> <p>Section 4.3.6.2 and Appendix 20</p>                                                            |
| <p><b>Bushfire Risk Assessment</b></p> <ul style="list-style-type: none"> <li>• <i>demonstrate compliance with the NSW Rural Fire Services Planning for Bushfire Protection.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Section 4.3.7</p>                                                                                                                     |
| <p><b>Biodiversity</b><br/><i>Key matters to be addressed include:</i></p> <ul style="list-style-type: none"> <li>• <i>impact of the development on existing native flora and fauna and their habitats, including identified threatened species, having regard to the Threatened Species Assessment Guidelines;</i></li> <li>• <i>a Species Impact Statement addressing the endangered ecological community of Blue Gum High Forest;</i></li> <li>• <i>a Vegetation Management Plan providing for the on-going care, retention and improvement of the Blue Gum Forest community; and</i></li> </ul>                                                                                                                                                                                                                   | <p>Section 2.3 and Appendix 22</p> <p>Appendix 22 and Section 4.3.8.2</p> <p>Appendix 23 and Section 4.3.8.3</p>                         |



| Requirement                                                                                                                                                                                                                                                                                                                                                                                                   | Where addressed                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>assessment of the significance of trees on the site and their condition if/when proposed to be removed.</li> </ul>                                                                                                                                                                                                                                                     | Section 4.3.8.4 and Appendix 21                                                                                                                                                                                      |
| <b>Planning Agreements and/or Developer Contributions</b>                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>address and provide the likely scope of a planning agreement and/or developed contributions between the proponent and the local council.</li> </ul>                                                                                                                                                                                                                    | Section 4.3.9                                                                                                                                                                                                        |
| <b>Construction and operational impacts</b><br>Key matters to be addressed include: <ul style="list-style-type: none"> <li>any likely geotechnical impacts for the development on the site;</li> <li>flooding, drainage and stormwater management issues, including: on-site detention of stormwater, WSUD, and drainage infrastructure;</li> <li>noise and vibration; and</li> <li>air pollution.</li> </ul> | Section 4.3.10 and Appendices 25 and 26<br><br>Section 4.3.10 and Appendix 10<br><br>Section 4.3.10 and Appendices 16 and 25<br><br>Appendix 16. See also Sections 3.2, 3.6, 3.9, 3.12, 4.3.2, 4.3.5, 4.3.10 and 4.4 |
| <b>ESD measures</b><br>Key matters to be addressed include: <ul style="list-style-type: none"> <li>details of development's proposed ESD measures including NatHERS ratings, BASIX water sensitive urban design measures, energy efficiency, recycling and waste disposal;</li> <li>details of any cut and fill and whether any fill is proposed to be imported or exported to/from the site.</li> </ul>      | Section 4.3.11.1 and Appendix 13<br><br>Section 4.3.11.2 and Appendix 26                                                                                                                                             |
| <b>Services</b><br>Key matters to be addressed include: <ul style="list-style-type: none"> <li>capacity of water, sewer, stormwater, gas, power and telecommunications infrastructure which will serve the project; and</li> <li>any upgrading works to infrastructure necessary to service the development and contributions applicable under any adopted contributions plans.</li> </ul>                    | Section 4.3.12.1 and Appendix 11<br><br>Section 4.3.12.2                                                                                                                                                             |
| <b>Part D – Draft Statement of Commitments</b> <ul style="list-style-type: none"> <li>Proposed mitigation and management of residual impacts; and</li> </ul>                                                                                                                                                                                                                                                  | Section 4.4                                                                                                                                                                                                          |

| Requirement                                                                                                                                                                          | Where addressed |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <ul style="list-style-type: none"> <li>A Statement of Commitments detailing measures for environmental management and mitigation measures and monitoring for the project.</li> </ul> |                 |

## 1.4 Consultation

The DGRs state that during the preparation of the Environmental Assessment, the Proponent should undertake an appropriate level of consultation with the relevant Local or State Government authorities, service providers, community groups and other stakeholders. The DGR's state that in particular, the Proponent should consult with:-

- Ku-ring-gai Council;
- NSW Health (including Private Health Care Branch);
- NSW Heritage Office;
- NSW Roads and Traffic Authority;
- NSW Department of Environment and Climate Change; and
- All utility providers.

Ku-ring-gai Council is highly familiar with the site through its involvement with current and previous redevelopment proposals. The Proponent will continue to liaise with Council as required throughout the period that the Environmental Assessment report is being considered by the Department of Planning and the Minister.

NSW Health has been consulted in detail in relation to the proposal. Correspondence with NSW Health is included in the EA (see Appendix 3).

NSW Heritage Office has been consulted previously in relation to the site and has endorsed the Conservation Management Plan for the site which has guided the design of the development. They have been consulted by Rod Howard & Associates in the preparation of the Heritage Impact Statement.

The traffic consultant who has undertaken the assessment of traffic and parking implications, Traffix, has consulted with the RTA in the preparation of the traffic impact assessment.

Representatives of the Department of Environment and Climate Change ("DECC") attended an on-site meeting to discuss relevant issues with the proponent and the Department of Planning. All of the key issues raised by DECC in its letter to the Department dated 10 January 2008 have been addressed in the Environmental Assessment report.

Utility providers (Energy Australia, Alinta, and Sydney Water) have each been consulted in relation to the provision of services to the development.



## 2. SITE AND SURROUNDING LOCALITY ANALYSIS

This section provides an analysis of how the site integrates with the existing urban and natural surrounds and identifies and describes the key characteristics of the site.

The site analysis has been informed by a detailed site survey and a range of studies undertaken as part of the project design and environmental assessment process. This includes a Conservation Management Plan (**Appendix 19**), an Aboricultural Impact Assessment (**Appendix 21**), a Species Impact Statement (**Appendix 22**), a Vegetation Management Plan (**Appendix 23**) and by the site contamination, geotechnical and hydrogeological assessments (**Appendices 24 to 26**). Tanner Architects have prepared a Site Analysis Plan (included in the volume of drawings) summarising the key characteristics of the site. The process of undertaking these studies influenced the project design, culminating in the proposal described and assessed in this EA.

### 2.1 Site Description

#### 2.1.1 Site Location and General Description

The site is located within the suburb of Wahroonga, approximately 1km north-east of Wahroonga railway station and around 450m walking distance from local shops in Eastern Road (south of Tennyson Avenue), as shown on **Figures 1, 2, 3a and 3b**.

The site comprises 35-45 Water Street, Wahroonga comprising Lot 1 in DP 375262 (see **Figure 2**).

The site has frontages to Water Street of approximately 152m and to Young Street of 135m and has an area of approximately 21,320m<sup>2</sup>. The site has a rectangular shape.

The last use of the site was as John Williams Memorial Hospital.

Erected on the site, adjacent to Water Street, is Rippon Grange, a distinctive example of a Federation Arts and Crafts dwelling. Elsewhere on the site are various other structures, as illustrated on the diagram on page 5 of Appendix 20 and on the site survey plan in Volume 3 of this EA.

### 2.2 Geology, Soils, Local Hydrology, Climate

#### 2.2.1 Topography

The site falls from a flat peak at around RL 200m AHD at the north-western corner by about 17m to the south-eastern corner which is at RL 183m AHD. The site is gently sloping (about 10%) with an outlook to the south and east.

## 2.2.2 Geology, Hydrogeology and Soils

The geology is mapped as Ashfield Shale, a substrate of the Wianamatta Group Shales. It typically comprises black to dark-grey shale and laminate refer to Report on Geological Investigation by Douglas Partners contained in **Appendix 25**).

The site is underlain by variably weathered shale of low strengths to depths of approximately 9 metres. Below the shale, stronger laminate is present.

It is anticipated that free groundwater will be present below depths of approximately 6 metres. Minor groundwater inflows into excavations may occur as local seepage flows along joints within the residual clays and along joints in the weathered shale and the bedding planes.

The site is located on the Glenorie Soil Landscape Unit. Glenorie soils are erosional landscapes, comprising shallow to moderately deep red podsolic soils on crests, moderately deep red and brown podsolic soils on upper slopes, deep yellow podsolic soils on lower slopes and humic gleys, yellow podsolic soils and gleyed podsolic soils along drainage lines. Glenorie Soil Landscape comprises undulating to rolling low hills with a local relief of 50-80m, and slopes of 5-20%. Ridges, hillcrests and valleys are typically narrow.

## 2.2.3 Local Hydrology

The site is within Lovers Jump creek catchment draining to Cowan Creek. There is no significant external catchment flow onto the site. Existing stormwater drainage on the site discharges to the street system at Billyard Avenue. There are no natural drainage lines within, or in close proximity to the site. Site hydrogeological conditions are discussed in the report contained in **Appendix 26**.

## 2.2.4 Climatic Details

The mean daily maximum temperature is 22.3°C, with highest temperature recorded in December, January and February. The mean daily minimum temperature is 11.0°C, with lowest temperatures recorded in June, July and August. Mean annual rainfall is 1,068.0mm, with February, March and April recording the highest mean levels (Bureau of Meteorology 2006, Pennant Hills #067047).

## 2.3 Flora and Fauna

### 2.3.1 Trees

The site contains a mix of lawns, gardens, abandoned recreation facilities (tennis courts and croquet lawn), planted exotic and Australian native tree species and remnant bushland tree species.

The vegetation on the site reflects the use of the site as a private residence in the period 1898 to 1951 during which time the grounds were developed and extensively landscaped.

Parts of the grounds, particularly in the south-western part of the site, were used to provide food for the residents: chicken coops, vegetable gardens and a small orchard. Other parts were used for composting and work sheds. During the period that the site was owned by the NSW State Government, some parts of the grounds were neglected, with invasive garden plants and other weeds establishing in the stand of simplified Blue Gum High Forest ("BGHF") which occupies around 6,350m<sup>2</sup> of the eastern and southern parts of the site.

The 310 trees on the site are the subject of a detailed Aboricultural Impact Assessment prepared by Tree Wise Men Pty Ltd (see **Appendix 21**). All trees have been numbered and labelled on site by the surveyors. Tree numbers are indicated on Drawing LSDA.04D.

The assessed trees on the site have been rated for their significance, according to the following criteria:-

1. **Most Significant.** Warrants retention and major design changes to ensure this (eg. movement of building footprint, realignment of roadway).
2. **Highly Significant.** Warrants retention and minor design changes to ensure this (eg. level changes, pavement detail).
3. **Less Significant.** Can be a good specimen, however if complying development is to be confined because of its retention it can be considered for removal.
4. **Least Significant.** Removal would not result in any loss of site amenity. Can include weed species.
5. **Hazardous.** Should be removed irrespective of any development.

Of the 310 trees on the site:-

- 8 have a significance rating of 1;
- 21 have a significance rating of 2;
- 105 have a significance rating of 3;
- 167 have a significance rating of 4; and
- 9 have a significance rating of 5.

### 2.3.2 Blue Gum High Forest ("BGHF")

The site contains remnant BGHF habitat. The understorey vegetation has been severely modified and consists predominantly of introduced species, both plantings and weeds.

In his report dated April 2007, Dr Smith (who was the Court appointed ecological expert in the appeal ultimately lodged in relation to a previous DA<sup>1</sup>) described the BGHF he had identified on the site as follows:-

*"I have previously carried out a vegetation survey and prepared a report for the Commonwealth Department of the Environment and Heritage (Smith*

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<sup>1</sup> Murlan Consulting Pty Limited v Ku-ring-gai Council and John Williams Neighbourhood Group Inc [2007] NSWLEC 374

2006) to determine whether the Water Street site contains the critically endangered ecological community, Blue Gum High Forest, as listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

*I found that parts of the site support tall open-forest or tall woodland with tree species composition that is consistent with Blue Gum High Forest. However, the understorey vegetation has been severely modified and consists predominantly of introduced species, both plantings and weeds. The Threatened Species Scientific Committee (2005), in its advice to the Minister, stated that 'Single isolated trees or stands of trees, characteristic of the canopy of Blue Gum High Forest of the Sydney Basin Bioregion, without a native understorey are considered important as biodiversity reservoirs. However, due to having been severely modified, these areas fall outside the definition of this ecological community and therefore do not form part of this listing. I therefore concluded that the vegetation at the site does not satisfy the definition of Blue Gum High Forest as listed under the Commonwealth Act. That remains my opinion.*

*However, Blue Gum High Forest is also listed as an endangered ecological community under the NSW Threatened Species Conservation Act 1995, and it is the State listing that is relevant to Issue 4, not the Commonwealth listing. Therefore, does the vegetation at the Water Street represent Blue Gum High Forest as listed under the NSW Act? In the original determination to list Blue Gum High Forest as an endangered ecological community, the NSW Scientific Committee (1997) did not address the issue of whether or not sites with a severely modified understorey form part of the listing. However, the NSW Scientific Committee (2005) has recently made a preliminary determination to upgrade the listing of Blue Gum High Forest from endangered to critically endangered. In this latter determination, the committee states that 'highly modified relics of the community also persist as small clumps of trees without a native understorey', and that 'a number of stands of Blue Gum Forests have highly modified understories, in which the native woody component has been largely replaced by woody exotic species or by increased abundance of native and exotic grasses'. Since these statements are not accompanied by any indication that such stands are excluded from the listing, I conclude that they form part of the NSW listing. Thus, parts of the subject site contain Blue Gum High Forest as listed under the NSW Threatened Species Conservation Act 1995.*

*I have mapped the extent of Blue Gum High Forest at the site from the tree map and schedule compiled by Tree Wise Men Australia (2006), confirmed by my site visit on 26 March 2007 (Figure 1). A stand of Blue Gum High Forest with a canopy of native trees but an understorey of predominantly exotic species occurs along the eastern and southern sides of 35 Water Street, occupying an area of about 6350m<sup>2</sup>, or about 28% of the site (Figure 1). Five additional Blue Gum High Forest trees occur as isolated trees outside the stand.*

*In compiling the map, I did not include *Pittosporum undulatum* trees occurring outside the Blue Gum High Forest stand, since this species, although it is a*



*natural component of the community, has become an invasive and troublesome environmental weed around Sydney (Rose 1997). Nor did I include Brachychiton acerifolius, which is listed as a Blue Gum High Forest species by Tozer (2003), but appears to be an introduced species in the northern suburbs of Sydney, derived from plantings (Benzon and McDougall 2001). Similarly, Livistona australis, Melia azedarach and Syzgium paniculatum, which are likely to be plantings rather than natural occurrences at the site, have not been mapped. Occurrences of Cyathea australis in the gardens outside the Blue Gum High Forest stand are also likely to be plantings and have not been mapped."*

The Land and Environment Court agreed with the delineation of BGHF identified by Dr Smith which is as shown on the plans contained in the volume of drawings. This delineation of BGHF has informed the design of the project.

The location and condition of BGHF habitat has been assessed and described in the Arboricultural Impact Assessment (**Appendix 21**), Species Impact Assessment (**Appendix 22**) and Vegetation Management Plan (**Appendix 23**).

## 2.4 Heritage Significance

The site is heritage listed under Schedule 7 of the Ku-ring-gai Planning Scheme Ordinance ("KPSO") and contains a Federation Queen Anne house ('Rippon Grange') and associated garden structures and features, a grove of Eucalypts and various former hospital additions. Rippon Grange is also classified by the National Trust and is listed as an 'indicative place' on the Australian Heritage Commission's Register of the National Estate. According to the Heritage Office of NSW, the site has heritage significance for the following reasons:-

- *The property includes a fine Federation Queen Anne house designed by the prominent architect Howard Joseland, and retains much of its original fabric and integrity. The 1954 alterations and additions were designed by Cobden Parkes, Government Architect.*
- *The house and surviving grounds are generally in the form created for Frederick George Sargood. The grounds retain much of the original layout of paths and driveways and include early garden features such as croquet lawns, rock retaining walls and octagonal seating, and mature gum trees.*
- *The property is also associated with Ernest Robert Williams, a founding director of Woolworths."*

Rippon Grange was designed by the architectural firm Sulman and Power and probably by Mr John Sulman and was completed in around 1898 with additions in 1905 by Joseland and Gilling, architects. 'Rippon Grange' is the main building and was originally constructed as a two-storey dwelling house with ancillary structures. Around 1952, the land was donated to the State government for use as a hospital, firstly to provide respite child care for polio sufferers and then expanded to infectious diseases. Further, mostly intrusive, additions to 'Rippon Grange' were made by the hospital administration at that time. Following cessation of the hospital use in 2002, the site stood vacant until sold by the State government in 2005 to interests associated with the proponent.



The heritage significance of the site has been assessed in the Conservation Management Plan prepared by Rod Howard and Associates, Heritage Consultants (**Appendix 19**). The Conservation Management Plan has been submitted to and endorsed by the NSW Heritage Council. It contains recommendations and policies for the management of the heritage significance of the site including a recommended heritage curtilage to Rippon Grange.

## **2.5 Surrounding Locality**

The surrounding area is predominantly residential with large, prestigious dwellings set in landscaped gardens, many of which comprise substantial trees. Scattered throughout the area are schools, churches, other special uses and small parks. The well-established, predominantly residential precinct within which the site is located is notable for its heritage and overall landscape significance.

Streets in the immediate vicinity are generally narrow and tree lined. The street network primarily forms a grid pattern.

The built form comprises predominantly 'traditional' domestic residential architecture of diverse style, including timber framed, vertically proportioned openings, hipped and gabled tiled roofs interspersed by 'Special Use' institutional buildings. Brick construction dominates (including painted and rendered finishes). The age of dwellings varies from late 19th/early 20th Century onwards.

Residences in the 'Grand Mansion style' and those of the Federation era, or reflecting Federation character (in terms of materials, roof form and pitch, fenestration, detailing) significantly influence and provide a defining contributor to the local character, although more modest dwellings co-exist.

Landscape generally dominates built form, particularly in terms of streetscapes.

Further description of the character of the area can be found in Section 4.3.1 of this EA dealing with the previous court judgement.

### **2.5.1 To the North**

To the north of the site beyond Water Street are one and two storey detached dwellings. To the north east, with a frontage to Water Street is the "Bush School".

### **2.5.2 To the East**

Adjoining the site to the east is Young Street, beyond are a number of single and two storey dwellings with frontages to Young Street.

### **2.5.3 To the South**

Adjoining the southern boundary are one-, two- and three-storey dwellings, beyond which is Billyard Avenue. A former nurses' accommodation building associated with the former John

Williams Hospital stands on No. 64 Billyard Avenue at the north-western corner of Billyard Avenue and Young Street. No. 64 adjoins the south-eastern corner of the site.

#### 2.5.4 To the West

To the west of the site are one-, two- and three-storey detached dwellings, several of which incorporate swimming pools and tennis courts.

### 2.6 Urban Services

Electricity, telephone, gas, water and sewerage services are all available to the site. These services will be extended and expanded, where necessary, to meet the demands of the proposed development.

### 2.7 Access

Existing traffic conditions are described in the Traffic Impact Assessment report prepared by Traffix contained in **Appendix 17**.

The road hierarchy in the vicinity of the site includes:

- F3 Freeway, an RTA State Road (MR 6003) that acts as the main link for vehicles travelling north-south from Sydney to Newcastle. It carries approximately 78,000 vpd.
- Pacific Highway, an RTA State Road (MR 10) that carries 71,000vpd in the vicinity of the site. The road runs from North Sydney to Hornsby.
- Eastern Road, a local collector (Regional) Road (RR 7351) that runs in a north south direction from Turramurra in the south to Junction Road in the north. It carries about 21,000 vpd in the vicinity of the site.
- Water Street, a local road that runs east-west along the northern site frontage connecting with Mona Street in the east and Cleveland Street in the west. It carries approximately 2,000 vpd.
- Young Street, a local road that runs north/south adjacent to the site and connects Water Street in the north with Bangalla Street in the south. It carries approximately 1,500 vpd.
- Billyard Avenue a local road that runs east west between Eastern Road to the east and Cleveland Street to the west. It carries approximately 5,500 vpd.

Water Street is constructed with a 5.5 metre wide sealed carriageway with a gravel shoulder along the northern side which provides an effective minimum width of 6.5 metres. The southern side (along the site frontage) is provided with kerb and guttering. It thus carries single lane traffic flow in each direction. There are permanent 'No Parking' restrictions along the southern side that extend along the site frontage from its intersection with Young Street.

On the northern side of Water Street 'No Parking' restrictions apply between 8.30-9.30am and between 3.00-4.00pm to manage traffic activity associated with the rear of the Burns Bay Road Bush School which is located opposite the site.

Young Street is also constructed with a 5.5 metre wide carriageway and carries single lane traffic flow in both directions. It forms the stem of a 'T Junction' with Water Street in the north with periodic 'No Parking' restrictions during peak school hours along both approaches between Water Street and Randolph Street.

Young Street forms a cross intersection with Billyard Avenue to the south of the site, with priority given to vehicles travelling north-south along Young Street. The intersection is controlled by 'Stop' signs for east and west travelling vehicles. Billyard Avenue is constructed with an 8 metre wide carriage way and carries one traffic lane in either direction.

A 50km/h speed restriction is in place for all streets within the general locality of the site, except at standard 'School Times' when a 40 km/h speed restriction applies.

Existing public transport services in the locality include Routes 575 and 576 which respectively connect to Turramurra and Wahroonga Stations. In addition to these services, school bus services operate in the locality.

## 2.8 Contamination

The site has been the subject of a Stage 1 Environmental (Contamination) investigation undertaken by Thornton Consulting Pty Ltd for the Department of Ageing, Disability and Home Care (**Appendix 24**). This involved a review of the history of development on the site and a site inspection. No evidence of gross contamination was evident during site inspection. There were no diesel fuelled boilers found and no evidence of any underground storage tanks. There is the possibility of asbestos containing materials on the site and other hazardous building materials.

## 3. DESCRIPTION OF PROJECT

### 3.1 Summary of Project

The project, which is illustrated on the set of plans provided in Volume 3 of this EA, involves demolition of non-heritage-significant existing buildings on the site, removal of various non-heritage-significant landscape elements, adaptive re-use (for hospital and related purposes) of the heritage-significant buildings, restoration of heritage-significant landscapes, preparatory excavation and bulk earthworks, protection of almost all of the Blue Gum High Forest community on the site and the enhancement of this community, and construction and operation of a hospital providing for a variety of high dependency needs.

The project application seeks the Minister's approval for the development of the site for the purposes of a hospital. The hospital will provide rehabilitation, medical, psychiatric and post natal health services to in-patients accommodated in wards containing 129 patient care suites or rooms.

The hospital facilities will be located primarily within two new interlinked buildings, the Main building and the East building. The west and north wards are located in the Main Building over 6 levels and the east wards are located in the East Building over 5 levels.

The Main Building contains a rehabilitation centre, an admissions clinic and medical consulting rooms with access to an adjoining pool. An ambulance bay is located outside the reception with an additional ambulance bay in the basement car park level below the reception. This building also contains hospital services such as main kitchen, laundry and stores.

The heritage significant Rippon Grange is to be restored for use as a café, chapel, administration and management offices and consulting and conference rooms.

The proposed professional health care services to be provided to in-patients are to primarily be integrated rehabilitation, medical, psychiatric and post natal health services. A description of the services to be provided at the hospital is contained in the *Health Services Plan* contained in **Appendix 2**. Discussions have been held with NSW Health in the formulation of this plan.

Vehicular access and pedestrian access will be from Water Street and Young Street.

Each of the new hospital buildings will be located so as to ensure minimal impact on the Blue Gum High Forest and on Rippon Grange. Rippon Grange will be conserved as a consequence of implementing the project. Important heritage landscapes will be restored.

The capital investment value of the project is \$44.23 million.

Proposed works include:-

- demolition of some existing structures including later (intrusive) additions to Rippon Grange;

- provision of a total of 129 patient care suites and associated hospital services;
- erection of 2 buildings, interconnected at two levels, in the south-western and central parts of the site;
  - o the Main Building is an L-shaped building with a north wing and a west wing. The north wing comprises two basement parking levels (including two loading spaces and ambulance bays); a rehabilitation centre with hydrotherapy pool and associated patient care suites; a main entry level with admissions clinic, consulting rooms, administration and staff training areas; and three upper levels of patient care rooms each with nurse stations, dining areas and associated service areas;
  - o the west wing of the Main Building comprises a basement level containing the hospital services such as central kitchen, store, laundry and plant rooms; and four levels or part levels containing patient care rooms;
  - o the East Building is located to the south of the former croquet lawn and comprises basement parking (linked to the Main Building basement car park); and five levels of patient care rooms each with nurse stations, dining areas and associated service areas;
  - o construction of interconnected basement car parking containing a total of 79 parking spaces plus 2 spaces for loading/unloading and an ambulance bay;
- restoration of the former croquet lawn;
- restoration of the former tennis courts;
- repairs to the existing pool for ongoing use and installation of new roof structure;
- stabilisation and restoration of the former stables;
- reconstruction of the former summer house;
- reconstruction of Killara Cottage (a children's cubby house);
- conservation and adaptation of 'Rippon Grange' for communal facilities including:-
  - o a chapel;
  - o offices; and
  - o a café; (note: the café will be available for patients and their visitors, but will also be accessible to the public, in order that the restored Rippon Grange can be more widely appreciated); and
  - o a total on-site parking provision of 92 spaces (comprising 79 basement level spaces, 11 at-grade spaces adjacent to the Young Street access, and 2 at-grade spaces within the carriage loop) plus an ambulance bay and 2 loading bays.

Vehicular access to the development is to be provided via a proposed main entry and exit driveway off Water Street. This driveway will provide access to the interconnected underground car park to the Main and East Buildings. An additional entry and exit driveway will also be provided off Young Street. It will provide access into the basement car park beneath the East Building, which is interconnected with the basement car park under the Main Building.

## 3.2 Hospital Services

Hospital services to be provided at the site are described in the Health Services Plan contained in **Appendix 2**.

### 3.2.1 Proposed Health Care Facilities and Services

#### Wards

Patient wards will have between 6 to 18 patient care suites or beds per ward. Each patient will have their own room and their own ensuite bathroom. The wards are designed to be interchangeable between health care functions, to enable flexibility as the pattern of demand between health services varies over the coming decades. They are also designed to facilitate effective and efficient nursing provision.

The following is an indicative schedule of accommodation outlining the planned ward arrangement and health care services:

|                                             | Main Building                  |                                  |                |          | East Building           |            | Hospital ancillary facilities                                             |
|---------------------------------------------|--------------------------------|----------------------------------|----------------|----------|-------------------------|------------|---------------------------------------------------------------------------|
|                                             | Ward                           | Proposed Health Service          | Total Beds     |          | Proposed Health Service | Total Beds |                                                                           |
| <b>Level 3</b><br><i>RL 209.65</i>          | Ward B - North                 | Psychiatric                      | 7              |          |                         |            |                                                                           |
| <b>Level 2</b><br><i>RL 204.5</i>           | Ward B - North                 | Psychiatric                      | 14             |          |                         |            |                                                                           |
| <b>Level 1</b><br><i>RL 201.35</i>          | Ward B - North                 | Medical services                 | 18             | ↔ Link ↔ | Medical services        | 3          |                                                                           |
| <b>Ground</b><br><i>RL198.20</i>            | Ward A -West                   | Rehabilitation                   | 11             | ↔ Link ↔ | Rehabilitation          | 7          | Reception, admissions clinic, consulting rooms, staff training & changing |
| <b>Upper Garden (B1)</b><br><i>RL195.05</i> | Ward A -West<br>Ward B - North | Rehabilitation<br>Rehabilitation | 12<br>12<br>24 |          | Post Natal              | 10         | Rehabilitation                                                            |
| <b>Garden Flr (B2)</b><br><i>RL 191.25</i>  | Ward B - North                 | Psychiatric                      | 15             |          | Post Natal              | 10         | Carparks plus Ambulance and loading bay                                   |
| <b>B3</b><br><i>RL 188.25</i>               |                                |                                  |                |          | Post Natal              | 10         | Kitchen, Laundry, store, carpark , plantrooms.                            |
| <b>TOTAL</b>                                |                                |                                  | <b>89</b>      |          |                         | <b>40</b>  |                                                                           |

Each ward will have a nurse's station, treatment room and utility rooms located near the entrance to the ward, orientated for good visibility lines to patient care suites and common spaces to each ward. Wards will also have common spaces in the form of dining and/ or sitting areas for patient and visitor interaction.

Each ward will have the ability to be physically secured from other wards and common spaces. The physical separation of health care functions such as psychiatric and post natal is of particular importance. Bedrooms and nurses stations will be equipped with the latest technological health care and patient services equipment.

### ***Medical Services***

It is proposed to allocate 21 beds to the provision of **general medical services** to patients. These include:

- Post-operative / Post-acute professional healthcare services including:
  - o post-surgery treatment such as pain management, wound care management, medication management;
  - o nurse administered clinical procedures such as care of peritoneal dialysis catheter site, tracheotomy care;

(These services will support the acute medical and surgical services of nearby acute and surgical hospitals);

- Chronic pain management and treatment; and
- Palliative care.

### ***Psychiatric Services***

It is proposed to allocate 36 beds to the provision of psychiatric services to patients. The psychiatric conditions that will be assessed, managed and treated by qualified psychiatric medical practitioners and staff to the psychiatric wards will include:

- Mood and anxiety disorders, including depression;
- Post traumatic stress disorder;
- Behavioural disorders;
- Eating disorders;
- Drug and/or alcohol addictions;
- Mental illness; and
- Aged psychiatric care.

Psychiatric services will be provided to three wards which are located so as to be appropriately secured and isolated from other hospital areas.

### ***Postnatal Services***

It is proposed to allocate 30 beds to postnatal care services. The professional health care services to be provided will focus on the management and treatment of physical or psychological complications arising from giving birth, or subsequent to giving birth.

### ***Rehabilitation Centre***

A rehabilitation centre is proposed on the lower floor of the main building near the former Rippon Grange and will include a hydrotherapy pool, gymnasium, multiple use rooms to deal with physiotherapy, speech therapy, occupational therapy, diversional therapy and other rehabilitation and post-operative medical services. This facility will be available to all patients within the hospital. This centre may also be used by a limited number of outpatients.

It is proposed to allocate 42 beds to rehabilitation patients located within wards in close proximity to the Rehabilitation Centre. The rehabilitation wards will include patients being treated for orthopaedic rehabilitation, leg fractures, hip/knee replacements, arthritic and spinal conditions, cardiac rehabilitation, neurological rehabilitation such as stroke, spinal, post-surgical, Parkinson's disease, Multiple Sclerosis, and Oncology patient rehabilitation.

### ***Other Hospital Facilities***

An **admissions clinic** and **medical consulting rooms** are located on the ground floor of the main building. The admissions clinic also includes a triage room, waiting area, meeting rooms, offices and public toilet facilities. An ambulance bay is located outside the reception/ admissions clinic level. There is also an additional ambulance bay in the basement car park level below the reception/ admissions clinic.

**Staff facilities** including a multi use training/ break out room and changing rooms adjoin the admissions clinic. Staff will also be able to access outside garden areas and the café during break periods.

Rippon Grange is to be restored to a **café, chapel, administration and management offices and consulting and conference rooms**.

A **commercial kitchen** is located in the lower level of the west wing of the Main Building to cater for patients and staff requirements while the café to Rippon Grange will cater to staff, patients, and their visitors.

Basement and on grade car park facilities will cater for doctors, staff and visitors.

### ***Design requirements***

The specific areas of functions of the hospital facility will be designed and constructed to the Australian Health Guidelines, the Private Hospitals Regulation 1996, Private Hospitals & Day Procedure Centres Act 1988, Mental Health Act 2007, the BCA and other relevant regulatory requirements.



### **3.2.2 Admissions and Registration**

All patients will be admitted in a planned manner (i.e. there will be no emergency admissions). A registered medical practitioner (Medical Doctor) will assess the patient, will prescribe the levels of health care services required for the patient while at the facility and will admit the patient accordingly. This will occur with the assistance of appropriately qualified registered nurses and health care staff.

Patient admittance and registration will occur within the admissions clinic area to the upper garden level. This admittance clinic will have direct access to covered ambulance and patient drop-off and pick-up area.

All patients in the hospital are expected to be in-patients. All necessary in-patient admittance/ registration/ clinical record documentation will be completed in accordance with NSW Health guidelines and other relevant statutory requirements. All in-patients will be charged a fee for services.

### **3.2.3 Staffing**

Health care services staffing will include Specialist Consultants, Doctors, Registered Nurses, Nurses, Nurses Aides, Personal Care Assistants, Occupational & Diversional Therapists, physiotherapists and professional health carers.

Health carer staff ratios will be, as a minimum, in accordance with NSW Health guidelines and other relevant statutory requirements. The rehabilitation wards and centre will be staffed to comply also with Standard 2005 of the Adult Rehabilitation Medicine Services in public and private hospitals as prepared by the Royal Australasian College of Physicians.

An indicative schedule of health care staff to the proposed facility is provided below. This staffing schedule is preliminary and as a part of compiling the Operations Management Plan (OMP), is subject to further review.

Notwithstanding the specialist nature of the wards, there will be a number of professional health staff that will be integrated through all wards so that the varying needs of the patients can be met. This will be the case for therapists, nurses and carers and to some extent registered nurses. Doctors will generally be focused on the patients in wards relating to their specialist area of expertise. Though a number of patients located in a particular ward may require specialist advice from a number of specialist medical practitioners.

|                                                 | Main Building                  |                                  |                |      | East Building              |               | GP's/<br>Medical<br>Practitioners | Registered<br>nurses | Nurses & Carers         |                                       | Diversional<br>Therapist | Physio<br>therapist &<br>physio aids |
|-------------------------------------------------|--------------------------------|----------------------------------|----------------|------|----------------------------|---------------|-----------------------------------|----------------------|-------------------------|---------------------------------------|--------------------------|--------------------------------------|
|                                                 | Ward                           | Proposed<br>Health Service       | Total<br>Beds  |      | Proposed<br>Health Service | Total<br>Beds |                                   |                      | Day<br>time             | Night                                 |                          |                                      |
| <b>Level 3</b><br><i>RL 209.65</i>              | Ward B - North                 | Psychiatric                      | 7              |      |                            |               | see below                         | see below            | shared<br>with<br>below | 1 +<br>shared<br>float                | 2                        | Shared -see<br>below                 |
| <b>Level 2</b><br><i>RL 204.5</i>               | Ward B - North                 | Psychiatric                      | 14             |      |                            |               | see below                         | see below            | 4                       | 1 +<br>shared<br>float                | 2                        | Shared -see<br>below                 |
| <b>Level 1</b><br><i>RL 201.35</i>              | Ward B - North                 | Medical services                 | 18             | Link | Medical services           | 3             | see below                         | see below            | 4                       | 1 +<br>shared<br>float                | 2                        | Shared -see<br>below                 |
| <b>Ground</b><br><i>RL198.20</i>                | Ward A -West                   | Rehabilitation                   | 11             | Link | Rehabilitation             | 7             | see below                         | see below            | 4                       | 1 +<br>shared<br>float                | 2                        | Shared -see<br>below                 |
| <b>Upper<br/>Garden (B1)</b><br><i>RL195.05</i> | Ward A -West<br>Ward B - North | Rehabilitation<br>Rehabilitation | 12<br>12<br>24 |      | Post Natal                 | 10            | see below                         | see below            | 8                       | 2 +<br>shared<br>float                | 2                        | Shared -see<br>below                 |
| <b>Garden Flr (B2)</b><br><i>RL 191.25</i>      | Ward B - North                 | Psychiatric                      | 15             |      | Post Natal                 | 10            | see below                         | see below            | 4                       | 1 +<br>shared<br>float                | 1                        | Shared -see<br>below                 |
| <b>B3</b><br><i>RL 188.25</i>                   |                                |                                  |                |      | Post Natal                 | 10            |                                   |                      |                         | 2 (shared<br>with<br>P.Natal<br>flrs) | 1                        | Shared -see<br>below                 |
| <b>TOTAL</b>                                    |                                |                                  | <b>89</b>      |      |                            | <b>40</b>     | <b>5 to 6</b>                     | <b>6 to 8</b>        | <b>25</b>               | <b>11</b>                             | <b>12</b>                | <b>2 + 2</b>                         |

In addition to Health Services staff, there will be approximately 24 support staff including management, administration, receptionists, kitchen and café staff, cleaning staff, maintenance and sub contractors. This will make for a total of around 76 to 79 staff during daytime mid week periods.

### 3.2.4 Facility Operation

Existing regulatory frameworks for the licensing and operation of a hospital requires a high level of management and administration to establish a facility and to maintain compliance with the regulatory and licensing requirements during on-going operations.

An initial requirement of the proponent and its appointed operator would be to prepare and implement an Operations Management Plan (OMP). This OMP will cover all compliance and regulatory requirements relating to the on-going hospital activities including but not limited to:

- Establishing private hospital bed licensing and professional health care services standards requirements.
- Establishing protocols for the formation and administration of the Medical advisory committee (MAC) for the hospital.
- Health providers and health fund and insurer compliance requirements;
- Medicare and NSW Health compliance requirements;
- Establish protocol for the admission of patients and administration of their registration and clinical records;
- Staffing compliance requirements including staffing numbers, staffing quality, O,H&S, professional development and training;

- O,H & S compliance relating to patients and visitors;
- Establishment and review of standards in the preparation and provision of food and beverages within the facility;
- Establishment and review of Facility Management Plan (FMP) including medical equipment certification, maintenance & replacement schedule and fire safety certification;
- Waste management compliance requirements, including safe disposal of medical waste;
- Implementation and review of Quality Assurance system for all facets of the facilities operational activities;
- Establish Community liaison protocol in relation to reporting and actioning community and neighbour concerns relating to any operational activities;
- Other professional health care operations compliance requirements.

### 3.2.5 Waste Management

A waste management plan detailing measures to be employed to manage waste during the operation of the facility has been prepared and is contained in **Appendix 15**.

### 3.3 Design Statement

A design statement has been prepared by Tanner Architects (**Appendix 4**). This statement also addresses the Director-General's Requirements in relation to urban form and design and amenity impacts on neighbours. A schedule of external materials colours and finishes is contained in **Appendix 6**.

### 3.4 Built Form

The height of the proposed buildings is as shown on the drawings in Volume 3 of the EA with the Main Building having a height of up to 5 levels above basements and the East Building also having a height of 5 levels above basement.

The Main Building is carefully located across the site with generous set backs around (18m excluding balconies) from the southern wall of Rippon Grange. This allows the existing building to continue to be read as a free standing building located on the highest part of the site, and ensures the highly significant relationship between it and its formal garden components/spaces to the east and west (and to the pool) are maintained. The separation also allows the opportunity for substantial landscaping between the buildings, while the orientation and position of the new building in relation to Rippon Grange, mean the full length of the new building is not read against the existing building. This, along with the modulated forms and considered use of materials in the new buildings helps reduce any adverse impact on the existing house.

The East Building is located to south of the former croquet lawn and to the west of the existing pathway running north south through the site. An 11m separation is provided from

the Main Building to maintain a visual and physical connection between the more formal, exotic landscape to the north of these buildings and the more native bush landscape to the south. It's north elevation is set back from that of the Main Building north wing in order to open up the outlook to the east from Rippon Grange house. Its modulated footprint and form is in direct response to the identified location of the BGHF, with the aim of minimizing adverse impacts upon this community.

The existing roof ridge of Rippon Grange was recommended by the Heritage Council as a maximum height for any new buildings on the site in order to maintain its predominance on the site. This has been adopted as a guiding principle for the new building design. The Main Building to the south of Rippon Grange has a height no higher than the ridge of Rippon Grange, and this height generally presents as approximately 3.5 storeys to the carriage loop forecourt upon entry from Water St. The top floor envelope is setback from the main building line and broken up into smaller forms to reduce any impact upon Rippon Grange. This has the added benefit of allowing the existing landscape of mature trees to be read as a backdrop when viewed from Water Street.

The new buildings also sit well within the height and scale of the existing mature trees that surround them, and the careful placement of the new buildings around the significant existing trees, based on detailed and specific arboricultural advice in each case, allows the new buildings to sit comfortably within its bushland setting.

The East Building is of a similar height above ground to the Main Building's north wing and steps down the site following the topography. Similarly, the west wing of the Main Building steps down the site to follow the fall of the land, so as to limit any impacts upon neighbouring properties. This west wing is designed to present a more domestic scale when viewed from the west, and the built form is for the most part within the 45° height envelope plane suggested by the Ku-ring-gai Residential Development Control Plan.

In relation to other neighbouring properties, the new buildings present varying heights. While the adjacent property in Water St (No 33) is an equivalent height to Rippon Grange house, the sloping site means many of the neighbouring properties, including those across Young St, are located downhill from the new buildings. This obviously requires careful management to minimize adverse impacts, and this is addressed by the location of most of the new built form away from those properties with opportunity for screen planting within the setback areas.

The density of the development is considered appropriate for the site. The development has a gross floor area of 12,398 square metres resulting in a floor space ratio of 0.58:1. The large site and scale of the existing landscape means that buildings of the scale proposed can be accommodated with generous setbacks and little adverse impact on the surrounds. The larger buildings here are also a result of the approach taken to increase the height of the buildings so as to reduce the footprint, and thus the impact on the BGHF.

The bulk and scale of the development is appropriate to the size of the site allowing minimal impact on the street and surrounding buildings with generous, landscaped setbacks. The bulk and scale of the new buildings will also fit comfortably within the mature landscape setting and in relation to the existing heritage listed items.

### 3.5 Works to Rippon Grange

Detailed consideration has been given to the design of works for the adaptive reuse of Rippon Range for its continuing use as a hospital. These works are detailed in the scope of works contained in **Appendix 5**.

### 3.6 Earthworks and Excavation

Excavation for basement and car parking levels is proposed and for building foundations and services. Excavations will be designed and constructed to restrict the edge effects of construction on nearby vegetation. Proposed excavation methods are described in the Hydrogeology report contained in **Appendix 26**. It is expected that approximately 15,600 cubic metres of excavated material will be removed from the site.

### 3.7 Landscaping

The landscape drawings included in the volume of drawings propose a comprehensive approach to site landscaping designed by Taylor Brammer Landscape Architects Pty Ltd whose design statement is contained in **Appendix 8**, extracts from which are reproduced below.

The landscape design approach complements the natural and cultural conservation values as outlined in the endorsed Conservation Management Plan (**Appendix 19**) in relation to the significant landscape elements located within the site. These elements include the rehabilitation of the stratified BGHF to the eastern and southern portions of the site and the reinstatement of the formal gardens to the east and the west of the house, thereby reinforcing the historic curtilage immediately around the house and reinstating an important historical relationship between house and garden. In addition, a substantial number of the existing trees will be retained and supplemented with further planting. To the eastern edge of the site, the existing stratified BGHF will be retained and protected.

The proposed landscape design aims to introduce a landscape that is complementary to the architectural style and character of Rippon Grange within the historic landscape curtilage to the house consisting of the croquet lawn, lawn tennis court, gardens, terraces and entry drive. The landscape design of the immediate house curtilage is realised in a style that is supported by documentary evidence in the contemporary photographs and plans of Rippon Grange from prior to and after World War 1. The accompanying and important garden elements associated with the heritage curtilage including the summerhouse and other garden elements such as the fishpond and arbors will be restored or reconstructed.

The carriage loop will be retained and planted with period roses, reflecting historic photographic documentary evidence. The surface of the entry drive off Water Street will be reinstated with a stabilised gravel surface, replacing the current bitumen surface. In addition, works will involve the removal of weeds and overgrowth and the removal of the more recent buildings constructed as part of the John Williams Memorial Hospital on the eastern portion of the site so that the relationship of the garden and house may be further appreciated.

To the south and east of Rippon Grange, works to the existing BGHF area seek to enhance the existing bushland character and will be undertaken under the direction of the Vegetation Management Plan with further planting of native species endemic to the area, reflecting the former use of portions of the site as a bushland retreat within the estate.

Other areas to the south of the house that have been extensively cleared in the past and used for pragmatic purposes such as chicken runs, orcharding and other utilitarian uses will be incorporated both as BGHF in nominated BGHF areas under the direction of the Vegetation Management Plan and as a location for proposed new buildings. The location of the plunge pool and existing driveway will be retained as evidence of the former patterns and use of the site.

The majority of existing vegetation on site is retained outside the footprints of the proposed buildings and further planting is proposed to provide appropriate settings and surrounds for the proposed built form. The existing areas of stratified BGHF on site are retained and enhanced. Minor incursions are made into the area nominated as BGHF to the south eastern portion of the site to accommodate driveway access and building setbacks, with appropriate balanced areas of vegetation more than supplementing these minor incursions.

The landscape design incorporates species already identified on site and is careful to reflect the intent of the planting design in the immediate heritage curtilage of Rippon Grange. This immediate curtilage incorporates all areas of high significance as identified in the Conservation Management Plan graduating to the bushland peripheral areas of the site and incorporating the identified sections of the stratified BGHF.

### **3.8 Vegetation Management**

UBM Ecological Consultants Pty Ltd has prepared a Vegetation Management Plan (“VMP”) for an area of BGHF within the site (**Appendix 23**) to guide proposals to preserve and rehabilitate the existing community and construct significant additional areas elsewhere on the site. The primary aim of the VMP is to identify appropriate management strategies and actions for the rehabilitation and future management of the BGHF habitat occurring within the site.

The VMP provides guidelines for the reconstruction of additional areas of BGHF Habitat, principally in those areas retaining only canopy trees characteristic of the BGHF Ecological Community (e.g. Sydney Blue Gums, Blackbutt and others). Further, the VMP has been designed to accommodate the retention of a number of early garden plantings, principally those trees listed as ‘significant’ – as identified in the Arboricultural Impact Assessment Report prepared by Tree Wise Men (**Appendix 21**).

The proposed rehabilitation and restoration of BGHF habitat will be undertaken over a period of at least 10 years.

## **3.9 Access, Car Parking, On-site Circulation, and Associated Roadworks**

### **3.9.1 Access**

Access arrangements for the hospital reflect existing main access arrangements with the primary access from Water Street and a separate access from Young Street. Existing driveways will be upgraded as required.

The main entry is from Water Street which leads to the existing “carriage loop” which will be retained and enhanced. There is provision of a set-down/pick up facility off the carriage loop with capacity for a minimum of 2 spaces. This driveway also leads to basement car parking, loading areas and ambulance bays.

The secondary Young Street entry provides access to grade parking areas and the basement parking to the East Building.

### **3.9.2 Car parking**

The development provides 79 basement level car parking spaces (on two levels) and 11 at-grade spaces adjacent to the Young Street access (existing spaces realigned). Additionally, the carriage loop can accommodate 2 spaces resulting in a total of 92 spaces. Disabled spaces are provided.

Parking for ambulances is provided near the main entry and in the basement level to the Main Building.

Basement parking spaces are integrated internally and may be accessed from both the Water Street and Young Street entrances.

There is provision for spaces for deliveries and waste collection.

## **3.10 Stormwater Management**

A drainage concept plan for the development has been prepared by the LHO Group and is contained in **Appendix 10**. Civil services drawings are contained in volume of drawings.

The stormwater management concept has been prepared having regard to the requirements of the Council and in consultation with Council officers. It is proposed to connect the stormwater discharge from the site to the Council stormwater drainage main in Billyard Avenue via a 450mm-diameter pipe.

On-site detention is to be provided in accordance with Council's requirements. It is anticipated that 458m<sup>3</sup> of on-site detention will be provided.



Roof drainage capacity will be for 1 in 20 year rainfall, with 1 in 100 year rainfall drainage capacity in areas at higher risk of ponding and water damage such as box gutters and enclosed courtyards. Overflows will be provided to all building areas.

External areas will be served by drains having capacity for 5 –20 year rainfall intensities subject to location and tolerance of ponding. Areas at risk of flooding and water damage shall have 1 in 100 year rainfall capacity and overflow back-up. Note that all rainfall run-off must be drained to the detention and retention storage tanks regardless of capacity of various sections of the drainage system.

Rainfall runoff from surrounding properties and roads will be diverted in grass swales around the site drainage system and be directed to flow to the streets below the site (Young Street).

### **3.11 Utility Services**

#### **3.11.1 Hydraulic Services**

A Hydraulics Services Report for the development has been prepared by the LHO Group and is contained in **Appendix 11** and is summarised below.

##### ***Sewer***

It is proposed to connect the sanitary drainage discharge from the site to the Sydney Water Corporation's 150mm diameter sewer at the intersection of Young Street and Randolph Street. The site will have a load of approximately 1300 fixture units.

##### ***Domestic Cold Water***

The maximum site water demand is likely to be around 14.0 litres/second and should be capable of being supplied by the existing 150mm diameter water main in Water Street.

##### ***Section 73 Application***

As advised by LHO Group, an application is to be made to Sydney Water Corporation. Sydney Water has issued their guidance notes for the proposal and confirmed the availability of water and drainage services and their capacity to service the site. In addition Sydney Water has advised of capital works contribution charges that will apply to the development of the site. This will also be set out in Sydney Water Corporation's Section 73 Notice of requirements.

##### ***Domestic Hot Water***

The hot water heating plant is likely to be a gas fired hot water system. Heating plant could be 5 mains pressure gas hot water heaters manifolded to provide simultaneous supply.

Hot water control in the building can be at the heaters and circulated at 39oC temperature to patient areas and ablutions and at 65oC temperature to non patient areas not including ablutions.

##### ***Rainwater Harvesting***



A rainwater on-site retention provision of 115m<sup>3</sup> for re-use is proposed for landscape watering. This water supply is only going to be available following periods of reasonable rainfall and will need to be backed up with main's pressure potable water. The main's pressure water will be protected from contamination by suitable backflow protection devices such as an air gap or Reduced Pressure Zone device and valve assembly.

### **3.11.2 Fire Hydrant Services**

The buildings will require hydrant protection and the system is likely to be designed to provide 20 litres/second water flow. The service could be best supplied by the existing 150mm diameter water main in Water Street.

#### ***Fire Hose Reel Service***

The buildings will require internal hose reel protection and the system would be connected to the domestic potable cold water service.

#### ***Fire Sprinkler Service***

The basement car park areas for the buildings form a combined parking area for more than 40 cars. This area will require fire sprinkler protection unless the basement car park areas are compartmentalised into fire separated areas containing less than 40 car spaces. Fire sprinkler installation is to comply with AS2118.1 – 1999. The service could be best supplied by the existing 150mm diameter water main in Water Street.

### **3.11.3 Gas**

It is proposed to connect the gas service to the existing 75mm diameter gas main in Water Street. The site will require gas for domestic hot water heating, pool heating and cooking. Total gas demand is expected to be up to 3,000MJ/hour.

### **3.11.4 Electricity and Emergency Power**

Energy Australia have advised that services can be provided with a requirement for two kiosk substations on the site (**Appendix 12**).

### **3.11.5 Medical Gases**

Medical gases such as oxygen will be delivered in cylinders and stored in the based storage areas for use as required. Oxygen will be reticulated throughout the hospital and into each patient care suite.

### **3.11.6 In-ground Services**

Notwithstanding the indicative location of in ground pipe work on the drawings, all in-ground pipe work is to be located clear of the critical root zone of all retained trees and vegetation and co-ordinated with any hydrogeology relief measures that may be required.

Parameters for the design, development and installation of all in-ground services to the property have been established due to the presence of Blue Gum Habitat and heritage landscape items.

All new in-ground services connections and pipe work will be designed and installed to avoid interference with the Blue Gum habitat as documented in the Species Impact Statement by Cumberland Ecology and heritage landscape items as identified in the Conservation Management Plan as prepared by Rod Howard and Associates. Where it is not possible to locate in-ground pipe work outside the Blue Gum habitat then it is to be installed to enable adequate spacing between the pipelines and trees so not to damage tree roots during construction. Excavation to these areas will be by hand (boring may be an alternative in certain locations such as in critical root zones) and proper erosion control measures will be used to minimise any disturbance to the existing natural ground. Drainage installation will also be co-ordinated with any hydrogeology relief measures that may be required.

All in-ground services installations must observe the constraints and management systems established in the Tree Aboricultural Statement prepared by Tree Wise Men (see **Appendix 21**) and in the VMP prepared by Urban Bushland Management Consultants (see **Appendix 23**).

### **3.12 Construction Management**

The proposed hospital will be constructed in accordance with the Construction Management Plan ("CMP") provided in **Appendix 16**. The CMP seeks to minimise disruption to the amenity of the locality during the process of demolition, excavation and construction.

### **3.13 BCA Compliance and Fire Safety Strategy**

A BCA Compliance assessment prepared by Steve Watson and Partners is provided in **Appendix 14**. It identifies that the proposed hospital is capable of compliance with the relevant provisions of the BCA, subject to the resolution of various matters or otherwise via a fire engineered solution.



## 4. KEY ASSESSMENT REQUIREMENTS

### 4.1 Part A – Heads of Consideration

#### 4.1.1 Suitability of the Site

The site has a long history of association with hospital use. The site is zoned 5(a) Special Uses (Hospital), a specific zoning that reflects a hospital use. The site has been recognised by Council as being suitable for the type of use proposed.

The site is not constrained by contamination or by any other physical impediments to development. Significant impacts on any threatened species, populations or ecological communities can be managed by implementation of the measure proposed in this Environmental Assessment. The architectural design response has appropriately integrated new buildings into the existing topography, ensuring a stepping and modulation of the building mass and appropriate setbacks to street frontages, boundaries and existing heritage items on the site. Combined with the comprehensive landscaping proposed, this ensures that the perception of bulk when seen from surrounding properties and streets and from Rippon Grange will be reasonable.

The site is accessible to vehicles via Water Street and Young Street at existing site access points used by the former hospital on the site.

The site was previously used as a hospital and derives part of its heritage significance from this use. It is in a modified state, and the proposed development will not impinge on any significant ecological values subject to implementation of appropriate compensatory measures, as proposed.

A hospitals is a permissible use under the existing Special Uses Zone and is the clear planning intention of the zoning.

Having regard to all of the above, it is considered that the site has all the characteristics that make it suitable for the proposed use.

#### 4.1.2 Likely environmental, social and economic impacts

##### Environmental

All relevant environmental impacts of the proposal are discussed elsewhere in this Environmental Assessment. A Species Impact Statement (see **Appendix 22**) has been undertaken and concludes that the proposal will have no significant impact on any threatened species population or ecological community. Furthermore, the BGHF on the site will be restored, augmented and rehabilitated in accordance with a VMP (see **Appendix 23**).

A comprehensive Conservation Management Plan (see **Appendix 19**) for the site and its buildings has been prepared and endorsed by the Heritage Council of NSW. A Heritage

Impact Statement (see **Appendix 20**) has been prepared which assesses the impacts of the development on the heritage significance of the site. It finds that the impact of the proposal on the significance of the identified item and the stylistic and horticultural features of its setting are reasonable and appropriate.

The site is to be comprehensively landscaped in accordance with the plans provided in the volume of drawings and the Landscape Design Statement (**Appendix 8**). Combined with the VMP to be implemented within the BGHF (and in areas outside of the identified BGHF in which the forest is to be restored), the landscape plans will result in a significant positive improvement to the landscape design qualities of the site.

The traffic impact assessment (see **Appendix 17**) shows that traffic generation will be relatively low and that existing road infrastructure is capable of accommodating the proposed development. Furthermore, adequate parking will be provided on-site. Adequate loading and unloading arrangements will also be provided and space will be made available on-site for an ambulance.

The proposed hospital will not be a significant generator of noise. In fact, it will provide a particularly quiet environment, as is standard for most hospitals.

Careful configuration, placement, massing, and modelling of the proposed building has ensured that overshadowing impacts are not unreasonable and that the privacy of neighbours will be appropriately and adequately protected.

From a land use compatibility perspective, use of the land for the purposes of a hospital is both reasonable and appropriate. This is reflected in the permissibility of hospitals under the existing zoning.

Whilst some short-term adverse environmental impacts will arise throughout the construction period, these are capable of being mitigated with the implementation of appropriate precautionary measures which are documented in the various reports which accompany this Environmental Assessment and in the Construction Management Plan in **Appendix 16**.

## **Social**

The proposed hospital will result in the positive social impacts, because it will meet a need for this type of facility which is well recognised not only on the upper North Shore, but throughout the State.

People who will need to be admitted to the proposed hospital as in-patients presently have few alternatives from which to choose in terms of receiving the care which they need. It will be highly beneficial both to the prospective in-patients and to their family members, if they are able to receive the high level of care which they require within the upper North Shore area.

Through the provision of high-level care, the proposed hospital will result in a reduced burden on other more acute hospital facilities which will be better able to meet demands placed on them both now and in the future.

## **Economic**

The construction of the proposed hospital will have positive economic impacts throughout the construction period and through its operation. It will generate demands for labour, goods and support services, most of which will be capable of being met locally. Additional jobs will be created during the operations phase.

The proposal represents the conservation and adaptive reuse of a heritage item for a use for which the site is zoned and for which the site has been used in the past.

The proposed hospital will also have a positive economic impact in that it will reduce the burden on public facilities in the area.

### **4.1.3 Justification for Undertaking the Project**

The following justification can be provided for undertaking the project:

- The proposal is permissible with consent under the zoning;
- There is a substantial demand for the type of high-level care that will be provided in the proposed hospital;
- There are increasing expectations for quality facilities and extra services of the type to be provided in the proposed hospital;
- The site has a long history of association with hospital and health care uses; and
- The potential adverse environmental impacts arising out of the proposed development can be adequately mitigated, ensuring that the resultant long-term impacts are not unreasonable.

This facility will provide much needed professional health care services to the North Shore community, while complementing the acute level of health services provided by the Sydney Adventist Hospital and the Hornsby Hospital and alleviating demand otherwise required to be serviced by those facilities.

The unique approach to the provision of integrated rehabilitation, medical, psychiatric and postnatal professional health services at the facility will be sought after as the future demand for health care services increases over the coming decades. It is considered the balance and quantity of health care functions proposed are such that they will complement one another while generating sufficient economy of scale to make a facility of this nature economically viable.

### **4.1.4 Consideration of Alternatives**

Pursuant to the provisions of the Ku-ring-gai Planning Scheme Ordinance ("KPSO"), the site is zoned 5(a) Special Uses (Hospital). Within the 5(a) Special Uses zone, hospitals are permissible with consent. Other permissible development is limited to purposes such as utility installations and special events.

The Seniors Housing SEPP also applies to the site providing the option for aged care. Two development applications have been lodged for seniors housing on the site. Both have been refused by Ku-ring-gai Municipal Council and one by the Court on appeal. Seniors housing is the only possible use of the site other than as a hospital. As proposals for seniors housing have twice been refused by the Council, the proponent has decided to pursue the only other available land use alternative which is a hospital.

#### **4.1.5 Public interest**

The public interest is best served by the delivery of high-quality, place-responsive, and environmentally well-considered developments which are consistent with objectives of the zoning and which meet a need without giving rise to unreasonable or excessive environmental impacts. In this regard, hospitals are effectively the only permissible use of the site.

However, in this case the proposal will serve a much broader public interest. It will provide a facility for which there is a recognised need. In doing so, it will relieve pressure on other facilities in the system: facilities that would need to meet the demands which will be met by the new hospital, if it were not to be constructed and operated.

It can be concluded, reasonably, and notwithstanding that some impacts will arise, that the proposal is in the public interest.

## **4.2 Part B – Relevant EPIs, Guidelines and other requirements to be addressed**

### **4.2.1 Planning provisions applying to the site including permissibility and the provisions of all plans and policies (including the Ku-ring-gai Planning Scheme Ordinance, relevant DCPs, SEPP (Infrastructure 2007), SEPP 53, SEPP 55, SEPP 65**

#### ***4.2.1.1 Draft North Subregional Strategy***

The North Subregion Draft Subregional Strategy ("Draft Subregional Strategy") was placed on public exhibition from 31 October 2007 to 8 February 2008. When finalised, the Draft Subregional Strategy will guide land-use planning until 2031 in the Hornsby and Ku-ring-gai local government areas.

Subregional strategies have been identified by the NSW State Government as the next step in translating planning objectives for the whole city into strategies for each grouping of local government areas and the many communities of Sydney. The subregional strategies are based on the Metropolitan Strategy and propose actions to be undertaken by State Government agencies and local government.

The key directions of the Draft Subregional Strategy are:-

- Improving access to a variety of housing choice in response to demographic trends;

- Strengthening the subregion's Major Centre of Hornsby and enhancing local centres such as Epping and Gordon;
- Improving public transport access to, from and within the subregion;
- Managing rural and resource lands to protect them from inappropriate and incompatible uses; and
- Protecting the valuable environment and life of the subregion.
- The Metropolitan Strategy and each of the related subregional strategies consist of seven strategies.

The seven strategies are:-

- Economy and Employment
- Centres and Corridors
- Housing
- Transport
- Environment, Heritage and Resources
- Parks, Public Places and Culture
- Implementation and Governance

In relation to the economy and employment, the strategy seeks to build on existing concentrations and clusters of knowledge-based activities, such as universities and hospitals. Council's are encouraged to consider opportunities for such clusters. The strategy also seeks to encourage a mix of housing types to help ensure diversity in the supply of local labour, particularly transport, retail, tourism employees and hospital staff.

The hospital proposal is consistent with the Draft Subregional Strategy as it will provide an additional hospital facility to support and extend the range of services in existing health facilities in the sub-region.

#### ***4.2.1.2 Ku-ring-gai Planning Scheme Ordinance***

##### **Zoning and Permissible uses**

Pursuant to the provisions of the Ku-ring-gai Planning Scheme Ordinance ("KPSO"), the site is zoned 5(a) Special Uses (Hospital (see **Figure 4**).

Within the 5(a) Special Uses zone, hospitals are permissible with consent. "Hospital" is defined to mean:-

*"a building used or intended for use as a hospital, sanatorium, health centre or dispensary, nursing home or home for aged, infirm, incurable or convalescent persons, whether public or private, and includes a shop or dispensary used in conjunction therewith, but does not include an institution.*



The proposed development is permissible with consent under the KPSO. Other permissible development is limited to purposes such as utility installations and special events.

### **Development Standards and Controls**

The KPSO contains no controls or standards relating to the proposal.

### **Heritage Provisions**

No 35-45 Water Street is identified as a heritage item in Schedule 7 of the KPSO, but:-

*“(only that part of the land comprising Lot 1, D.P. 375262, as shown edged heavy black on Sheet 2 of the map marked ‘Ku-ring-gai Local Environmental Plan No.174’ deposited in the office of the Council)”.*

Clauses 61D, 61E and 61F of the KPSO contain heritage considerations.

The heritage impacts of the development are discussed in Section 4.3.6 and in **Appendix 20**.

#### ***4.2.1.3 Relevant DCPs***

There are no DCP's specifically relevant to the development of a hospital on land zoned special uses within the Ku-ring-gai LGA.

Provided below are details of existing DCP's which have general relevance to the subject land and/or development.

#### **Development Control Plan No.47 – Water Management**

Stormwater Concept Plans are provided in the volume of drawings. A Drainage Concept Plan report is provided in **Appendix 10**. The proposal is consistent with the relevant provisions of DCP No. 47.

#### **Ku-ring-gai Development Control Plan No.40 – Construction Waste and Demolition Waste Management**

A Waste Management Plan has been prepared for the proposed development (**Appendix 15**). The proposal is consistent with the relevant provisions of DCP No. 40.

#### ***4.2.1.4 SEPP 11 Traffic Generating Development***

SEPP 11 was repealed on 1 January 2008 with the gazettal of the SEPP (Infrastructure) 2007. The provisions of SEPP (Infrastructure) 2007 regarding hospital projects indicate that the proposal does not need to be referred to the RTA.

#### ***4.2.1.5 SEPP 55 Remediation of Land***

*State Environmental Planning Policy No 55 – Remediation of Land* (“SEPP 55”) provides that a consent authority must not consent to the carrying out of development on land unless it has considered whether the land is contaminated. Furthermore, SEPP 55 requires that a consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned, carried out in accordance with the contaminated land planning guidelines before determining an application for consent to carry out development that would involve a change of use on that land.

A Preliminary (Stage 1) Contamination Assessment for the subject site was undertaken by Thornton Consulting Pty Ltd for the Department of Ageing, Disability and Home Care in October 2004, as a precursor to the sale of the land by the NSW State Government. This assessment considered the likelihood of contamination of the subsurface soils on the site. A copy of the assessment is provided in **Appendix 24** of this EA. The assessment concludes as follows:-

*“Based on the review of the above site historical information and the information received from the site inspection the following conclusions can be made about the site:*

*The site was originally vacant and part of a larger parcel of land;*

*The site was subdivided and ‘Rippon Grange’ was constructed in 1898;*

*In 1951 the site was donated to the NSW Government and became the John Williams Hospital;*

*The only previous areas of environmental concern are as follows:*

- The most recent use as a small hospital. USTs associated with diesel boilers and backup diesel generators pose issues of environmental concern, however no evidence of any USTs, diesel backup generators or diesel boilers were observed during the site inspection.*
- There is historical evidence that a small sewerage plant may have existed on the site, however no evidence was noted during the site inspection;*
- Suspected asbestos containing materials (not laboratory tested) were noted during the site inspection.”*

It is proposed that any demolition and conservation works would be undertaken in a manner such that the removal of any asbestos, lead based paints and PCB's would comply with relevant NSW WorkCover requirements.

#### **4.2.2 Nature and extent of compliance with relevant EPIs**

Relevant EPI's (and other strategic planning considerations) are addressed above in Section 4.2.1 of this Environmental Assessment and in Section 1.5 which sets out the relevant provisions of the Major Projects SEPP, pursuant to which hospitals with a capital investment value of more than \$15 million fall within Part 3A of the EP&A Act. Were it not for Part 3A, then Ku-ring-gai Council would be the consent authority for the development of the land. In this regard, hospitals are permissible with consent. There are no relevant development standards applicable to hospitals in the deemed LEP. Accordingly, no non-compliances with development standards arise.

The proposal does not give rise to any non-compliances with any other gazetted environmental planning instrument.

## 4.3 Part C – Key Issues to be addressed

### 4.3.1 Previous Land and Environment Court Judgements

Key matters to be addressed include:

- Outline/comparison of proposal with previous Court judgements;
- Response to Court findings by proposal (ie how have concerns been addressed);

#### *4.3.1.1 Comparison of Proposal with Previous Court Judgements*

The proposed development for the purpose of a hospital is different in several respects from that previously determined by the Court. The site and an adjoining parcel of land at No 64 Billyard Avenue was the subject of a development application (DA No. 855/06) lodged with Ku-ring-gai Council in August 2006 for seniors housing consisting of 78 self-contained dwellings in 6 separate buildings, basement car-parking and landscape works and the restoration of 'Rippon Grange' ("the previous DA"). In December 2006, Council refused DA No. 855/06. Following its refusal by Council, DA No. 855/06 was the subject of an appeal to the Land and Environment Court in June 2007 (*Murlan Consulting v Ku-ring-gai Council* [2007] NSWLEC 374). The Court refused DA No. 855/06, primarily because of alleged adverse ecological impacts on the BGHF (which between the time the previous DA was lodged and the time it was determined by the Land and Environment Court became listed as a Critically Endangered Ecological Community under the *NSW Threatened Species Conservation Act 1995*) and alleged adverse heritage impact on 'Rippon Grange' and its gardens.

The project to which this EA relates differs from the proposal in DA No. 855/06 in a number of important respects:

- The previous proposal was for seniors housing and the current proposal is for a hospital;
- There is a significantly different building footprint as can be seen from the comparison diagram contain in **Appendix 9**<sup>2</sup>; and
- The current proposal addresses the substantive issues raised by the Land and Environment Court.

#### *4.3.1.2 Response to Court Findings*

The new proposal has been informed by the recent Land and Environment Court proceedings, by a Species Impact Statement prepared by Dr David Robertson of Cumberland Ecology, by a Conservation Management Plan (and Heritage Impact Statement) prepared by Rod Howard and Associates, Heritage Consultants, by a thorough analysis of the site and its surrounds and further consideration of the built form to reduce impacts on the amenity of the locality.

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<sup>2</sup> The diagram contained in the Appendix 9 also refer to a separate development application to the Council for a 61 unit seniors housing project. This application was also refused.

## Ecological Issues

Dr Smith (who was the Court appointed ecological expert in the appeal lodged in relation to the previous DA) identified the extent of the BGHF community on the site. This is discussed in Section 4.3.8 of this Environmental Assessment. Furthermore, the Land and Environment Court identified a range of steps that need to be undertaken and considered to ensure the continued health and vigour of BGHF. These include:

*The development of buildings and related infrastructure outside of the footprint of the Blue Gum High Forest. Any such future development would need to have a minimum buffer determined by the canopy spread or 3m from the trunk as per the council's tree preservation order whichever is the greater.*

*Future assessment has to take into account and establish properly the effects of shading, impacts on sub and surface hydrology, root zone disturbance and other edges effects that would ensue from any excavation, underground and above ground development that may occur.*

*While adjoining patches of BGHF are significant for the maintenance of the ecological community as a whole, they cannot be considered in exchange for either offset or as component in any calculation for a development proposal that aims to remove or degrade the BGHF at 'Rippon Grange'. Any future applicant for development should only consider the vegetation that is within the boundaries of the land.*

*Where species or communities have been listed as critically endangered, the preservation and protection of a few neighbouring isolated trees can contribute to the long-term viability of a greater community and should be preserved. No community can regenerate if the seed banks or sources of those seeds have been removed.*

*Where a community once existed there remains a distinct possibility that viable seed banks may be retained in the surrounding soils. Therefore, even where fire hazard reductions of the understorey have been undertaken it is quite possible that viable seed banks will remain in the soil such that natural regeneration has the potential to occur particularly, when assisted by sensitive planning and environmental management.*

*With respect to the connectivity and fragmentation of endangered and critically endangered species, a few remaining trees may well provide a critical link to maintaining and contributing to the long-term viability of refugia. Indeed, the cross-pollination of fragmented individuals and stands of eucalypt trees (including BGHF) may occur over extended distances.*

*While seed dispersal contributes to regeneration it is less significant and effective than the genetic transfer associated with pollination. Pollination occurs in eucalypts such as those characterising the BGHF via a variety of active, non-specific pollinating vectors such as generalist insects and animals.*

*Insects regularly disperse pollen over 100m but they also have the capacity to disperse pollen over distances of at least 1.6km. Species of eucalypts (including BGHF) that are subject to pollen dispersal by larger animals such as birds (e.g. lorikeets) are likely to be subject to cross-pollination over*

*significantly longer distances. Such distances may be as great as 6km from a pollen source for eucalypts. Consequently, even relatively distal and isolated species can contribute significantly to the long-term genetic viability of endangered and critically endangered communities.*

*In terms of protecting ecological communities, buffer zones play a significant role in mitigating undesirable edge effects associated with urban development. Edge effects are more marked in narrow buffers. Thus it would be prudent where feasible to maintain as large a buffer as possible. Even where exotic vegetation surrounds native bushland (including BGHF), the removal of such vegetation is likely to have a negative impact, especially when it is replaced by urban development. Due to the effects of light, runoff, litter etc.*

*An applicant should avoid development that would truncate, fragment or disconnect a BGHF stand at 'Rippon Grange'.*

The current proposal has had regard to the outcomes of the Court case including the agreed extent of the BGHF community and the guidelines indicated by the Court. A Species Impact Statement (see **Appendix 22**) and a Vegetation Management Plan have been prepared (see **Appendix 23**). The Vegetation Management Plan will guide and govern future maintenance and enhancement of the BGHF.

In the case of the DA No. 855/06, Dr Smith concluded that the footprint of the development then proposed would result in a loss of 19% of the BGHF ecological community on the site, would have a fragmenting effect, dividing the stand in two, and would result in the removal of 21 of the 89 native trees in the stand.

The proposal which is the subject of this project application significantly reduces the extent of impact on the BGHF habitat (from 19% for the development that was the subject of the Court case to 1.8%).

## **Heritage Issues**

The appeal process led to the identification of points of agreement between Howard Tanner, the project architect, and Zoltan Kovacs who was Council's appointed heritage consultant in the Land and Environment Court proceedings relating to the previous DA. These general points of agreement concisely set out key heritage principles applying to the site:-

*"The nature and character of Rippon Grange as existing has adequately been discussed in the existing Conservation Management Plan.*

*Tanner and Kovacs discussed the general background of the matter and confirmed their agreement with regard to the following principles:*

- *the property at 35 Water Street, Wahroonga known as Rippon Grange, and comprising a large c.1900 house and its grounds is an item of heritage significance*
- *the expansion of the railway network in the late 19<sup>th</sup> century allowed wealthier and urban citizens to enjoy a quasi-rural lifestyle, with a grand house dominating a landscaped setting. While this concept can still be grasped at Rippon Grange, the general context has changed*

- *apart from family ownership and a similar name, and general estate principles, there are no specific parallels to be drawn between Rippon Lea, Elsternwick and Rippon Grange, Wahroonga*
- *Rippon Grange has loosely been styled 'Federation Arts and Crafts' but it has little to do with William Morris' craft tradition, though it originally used brick and timber shingles expressing the 1890s vogue for honest use of materials. The Sulman house is of limited architectural interest; the latter chiefly derives from Joseland & Vernon's later west elevation and billiards room. This provides 'British manorial' character and interest to this part of the house*
- *both the house and the grounds, in their use as a hospital in the second half of the twentieth century, have been poorly altered and maintained, and now require extensive and expensive works if they are to be retained*
- *if the house and grounds are left to decline much longer their conservation and restoration may become unfeasible*
- *the land under the local planning scheme, is zoned 'Special Uses – Hospital', and the permissible uses are hospital and aged care / seniors living accommodation*
- *while the immediate surrounding uses include parkland and a school, the predominant use is residential, generally houses, including some substantial houses in gardens*
- *it is agreed that the Wahroonga area, while substantially residential is punctuated by a number of institutional buildings and sites*
- *it is agreed that it would be an unfortunate and retrograde step to subdivide this site. The creation of numerous individual holdings would prevent the site from being managed in a co-ordinated way into the future*
- *it is agreed that the reduction of curtilage around the heritage item(s) from the lot boundaries is accepted in principle*
- *it is understood that in recent years no individual or organisation has come forward to conserve the property as a grand house in grounds*
- *while the whole property is of interest, the more significant surviving heritage features of the site are:*
  - *the house known as Rippon Grange*
  - *the western carriage loop and its enclosing plantings*
  - *the sequence of garden spaces to the east of the house, providing an outlook down to and including a former croquet lawn*
  - *key cultural trees*
  - *the former stables and the swimming pool*



- *It is acknowledged that the current proposal retains, re-establishes and works with these elements, noting that certain elements of the house, and, for example, the rustic shelter will require reconstruction*
- *certain existing secondary relationships will change under the proposal; through the insertion of new buildings*
- *it is agreed that the house Rippon Grange requires extensive conservation works and is best placed in a single use, and not subdivided, in a manner which ensures regular maintenance, and public access from time to time*
- *it is agreed that the primary landscape features of the site require extensive conservation work and reinstatement in a manner which ensures regular maintenance and public access from time to time*
- *it is agreed that a carefully resolved hospital or aged care/seniors living scheme (the allowable uses) could meet the above requirements*
- *it is acknowledged that, to have a future, Rippon Grange requires a constructive outcome."*

The new proposal is consistent with all of the above principles, previously agreed between the Council's and the proponent's heritage advisors.

The Conservation Management Plan which accompanies this project application (Issue C) incorporates additional material and represents a further refinement of the previous two versions considered by the Land and Environment Court. Revisions which have been made address issues raised by objectors to the previous DA and include additional oral evidence and photographic evidence supplied by Mr and Mrs Peter Williams (Peter Williams, a former occupant of Rippon Grange is one of the sons of Ernest Williams, who owned the site from the second half of the 1930's to the beginning of the 1950's and is the brother of John Williams, after whom the hospital which occupied the site after 1952 was named).

This additional information clarifies and expands earlier research and further confirms and refines the understanding of the heritage significance of the site. This enables a more precise articulation and strengthening of the assessment of heritage significance, conclusions and conservation recommendations. Amongst other things, it has led to a fuller appreciation (and acknowledgement) of the role that the Braddock family played in consolidating, elaborating and enhancing the so-called "Federation" character and aesthetic qualities of the grounds of 'Rippon Grange', the general layout of which had been established by the original owners, the Sargood family.

The recommended heritage curtilage has also been refined to address difficulties that became evident in the Land and Environment Court proceedings relating to DA No. 855/06 over the interpretation of the heritage curtilage.

A copy of the Conservation Management Plan (Issue C) prepared by Rod Howard and Associates, Heritage Consultants, is provided in **Appendix 19**. The Conservation Management Plan has been endorsed by the NSW Heritage Council.

## Character Issues

The surrounding area is predominantly residential with large, prestigious dwellings set in landscaped gardens, many of which comprise substantial trees. Scattered throughout the area are schools, churches, other special uses and small parks. The well-established, predominantly residential precinct within which the site is located is notable for its heritage and overall landscape significance. The locality also contains a number of institutional uses such as schools and colleges mostly on land zoned for special uses as is the site.

In the Land and Environment Court proceedings in relation to DA No. 855/06, the Council's planning consultant, the applicant's planning consultant and the applicant's urban design consultant prepared a joint town planning statement in which they identified the desirable elements of the location's current character. Their joint statement includes the following:-

*"It was agreed between the experts that the predominant character of the site's context is that of a low density residential area comprised of one, two and three storey detached dwelling houses set in generous grounds characterized by mature landscaping, with minor/ancillary development such as tennis courts, swimming pools and the like.*

*It was agreed between the experts that this area is interspersed by 'Special Use' institutional buildings including, but not limited to, Knox Grammar School, Wahroonga Public School, the Holy Name Priory Church and the development on the subject site which co-exist in established residential streetscapes.*

*It was agreed between the experts that the characteristics that define the particular quality and identity of this area are:*

- *Brick construction (including painted and rendered finishes);*
- *Predominantly 'traditional' domestic residential architecture of diverse style, including timber framed, vertically proportioned openings, hipped and gabled tiled roofs interspersed by 'Special Use' institutional buildings;*
- *Age of dwellings vary from late 19<sup>th</sup>/early 20<sup>th</sup> Century onwards;*
- *Residences in the 'Grand Mansion style' and those of the Federation era, or reflecting Federation character (in terms of materials, roof form and pitch, fenestration, detailing) significantly influence and provide a defining contributor to the local character, although more modest dwellings co-exist;*
- *Landscape is a dominant part of the established character, including both formal domestic gardens and significant natural areas of native vegetation and tall, upper canopy trees;*
- *Landscape generally dominates built form, particularly in terms of streetscapes;*
- *Narrow tree-lined streetscapes;*
- *Formal and informally landscaped gardens containing a mixture of exotic and native landscape elements including large canopy trees;*



- *The retained items of heritage significance.”*

These factors have guided design development for the current proposal.

#### 4.3.2 Hospital Land Use

##### ***4.3.2.1 Type of health care facility proposed (eg private hospital, public hospital, aged care facility etc), identification of relevant regulatory jurisdictions and approvals required***

The proposal is for a hospital as defined in Schedule 1 of the Major Projects SEPP. It will be a private hospital within the context of that definition as it will not be funded by the State Government.

Professional health care services which will typically be provided in the proposed hospital have been described in Section 3.2 and include:

**Medical Services** - It is proposed to allocate 21 beds to the provision of **general medical services** to patients. These include:

- Post-operative / Post-acute professional healthcare services including:
  - o post-surgery treatment such as pain management, wound care management, medication management;
  - o nurse administered clinical procedures such as care of peritoneal dialysis catheter site, tracheotomy care;

these services will support the acute medical and surgical services of nearby acute and surgical hospitals;

- Chronic pain management and treatment;
- Palliative care.

**Psychiatric Services** - It is proposed to allocate 36 beds to the provision of psychiatric services to patients. The psychiatric conditions that will be assessed, managed and treated by qualified psychiatric medical practitioners and staff to the psychiatric wards will include:

- Mood and anxiety disorders, including depression;
- Post traumatic stress disorder;
- Behavioural disorders;
- Eating disorders;
- Drug and/or alcohol addictions;
- Mental illness;
- Aged psychiatric care.

Psychiatric services will be provided to three wards which are located so as to be appropriately secured and isolated from other hospital areas.

**Postnatal Services** - It is proposed to allocate 30 beds to postnatal care services. The professional health care services to be provided will focus on the management and treatment of physical or psychological complications arising from giving birth, or subsequent to giving birth.

**Rehabilitation Centre** - A rehabilitation centre will include a hydrotherapy pool, gymnasium, multiple use rooms to deal with physiotherapy, speech therapy, occupational therapy, diversional therapy and other rehabilitation and post-operative medical services. This facility will be available to all patients within the hospital. 42 beds to rehabilitation patients located within wards in close proximity to the Rehabilitation Centre. The rehabilitation wards will include patients being treated for orthopaedic rehabilitation, leg fractures, hip/knee replacements, arthritic and spinal conditions, cardiac rehabilitation, neurological rehabilitation such as stroke, spinal, post-surgical, Parkinson's disease, Multiple Sclerosis, and Oncology patient rehabilitation.

Relevant regulatory jurisdiction and approvals required are detailed in the legal advice provided in the *Health Services Plan* contained in **Appendix 2**.

#### ***4.3.2.2 Comment as to how the proposal differs from 'residential care facilities' such as those defined in the Seniors Housing SEPP***

A "Residential care facility" is defined in the Seniors Housing SEPP to mean:-

*"residential accommodation for seniors or people with a disability that includes:*

- (a) meals and cleaning services, and*
- (b) personal care or nursing care or both, and*
- (c) appropriate staffing, furniture, furnishings and equipment for the provision of that accommodation and care,*

*not being a dwelling, hostel, hospital or psychiatric facility."* (our emphasis)

It will be appreciated from the above definition that a residential care facility need not provide nursing care. The high level of health care services to be provided to patients (not residents) in the proposed private hospital is not typical of a residential care facility. More importantly, however, "Hospital" is not defined in the Seniors Housing SEPP. However, the proposal is a hospital as defined in the Major Projects SEPP. Accordingly, the proposal is not a "residential care facility" as defined because it comprises a hospital (as relevantly defined elsewhere). As the proposed hospital meets the criteria of a Major Project in accordance with Part 3A of the Major Projects SEPP it must be assessed under Part 3A and cannot be assessed as a residential care facility. It cannot be categorised as a residential care facility because it is a hospital.

#### ***4.3.2.3 General compliance with the 'Healthy Facilities Guidelines' including: role delineation and levels of service the facility is designed for; staff profiles; Health Planning Units (HPU's) and schedule of accommodation; and functional relationships diagram***

This Director-General's environmental assessment requirement has been addressed in the Health Services Plan contained in **Appendix 2**. Health Facilities Guidelines relate

specifically to public and private hospitals under the jurisdiction of the NSW Department of Health. Compliance against the Healthy Facilities Guidelines will be undertaken during design development stage to ensure that all room facilities and equipment meet the facility guidelines.

***4.3.2.4 Evidence the proposed hospital uses can be licensed as a private hospital premises under the Private Hospitals and Day Procedure Centres Act 1988***

There are a number of regulatory bodies and legislative requirements established to control the licensing and quality of operations of privately operated hospitals and the provision of health care services in New South Wales. These regulatory bodies require consultation and the legislative framework requires assessment and approval from concept through to on-going operations of any health care facility. The proponent has commenced consultation with a number of branches of NSW Health as a part of the preparation of the Hospital Services Plan contained in **Appendix 2**.

The Private Health Care branch of NSW Health has been consulted by the proponent as a precursor to the application for private hospital bed licences from NSW Health. This resulted in correspondence dated 22 October 2008 to NSW Health seeking clarification as to private hospital bed licence application process. NSW Health reviewed the proposal and issued a response letter on 6 November 2008 stating that an application for a private bed licence would be required. It also advised that if all the requirements of the *Private Hospitals and Day Procedures Act 1998* were satisfied, the beds within the premises would be licensed as rehabilitation, general, psychiatric or obstetric-postnatal class beds.

Further consultation with health care providers, health care funds and specialist medical practitioners will be undertaken to ascertain the best balance of health care services and facilities to be provided. This further consultation will result in the preparation of an Operations Management Plan and an application for the bed licenses as required of the *Private Hospitals and Day Procedures Centres Act 1998*. It is anticipated that an application for 129 private hospital licensed beds will be made. The Health Planning Units (as covered in the Australian Health Facility Guidelines) that are relevant to the facility will be clearly defined in the OMP.

Legislative and regulatory requirements to be complied with for the design and construction and/or on-going operation of the proposed hospital include but are not limited to:-

- Private Hospitals & Day Procedure Centres Act 1988;
- Day Procedure Centres Regulation 1996;
- Private Hospitals Regulation 1996;
- Public Health Act 1991 (NSW);
- Private Health Care Facilities Bill 2007 – not in force as at October 2008;
- Australian Healthy facility Guidelines (HFG);
- Aged Care Act 1997 (Cth);
- Mental Health Act 2007 (NSW) s.115 in conjunction with NSW Health Centre for Mental Health and Drugs and Alcohol for a psychiatric class hospital only;
- Australian Faculty of Rehabilitation Medicine Services in Public & Private Hospitals – Standards 2005; and
- The Building Code of Australia.

#### ***4.3.2.5 Funding arrangements and evidence of any applications/approvals for funding***

No applications have been made, nor approvals sought for funding. An application for necessary bed licenses will be submitted to the Department of Health as discussed above and correspondence from the Department of Health in **Appendix 2**.

#### ***4.3.2.6 Confirmation the proposed building complies with Class 9A building requirements under the Building Code of Australia***

Steve Watson and Partners has prepared a BCA compliance assessment of the proposed hospital (see **Appendix 14**). The assessment confirms that the proposed building can comply with the BCA provisions applying to a Class 9a building subject to some further design development (as is standard for large, complex projects), or otherwise via a fire engineered alternative solution. The executive summary of the BCA report states:-

*The design complies with the requirements of the relevant sections of the BCA subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.*

#### ***4.3.2.7 Any evidence of private bed allocation from NSW Health***

Application will be made for bed licences from NSW Health. Correspondence with NSW Health is contained in **Appendix 3**.

#### ***4.3.2.8 Staging/timing of approvals process, building construction and operation of facility***

The Proponent's current staging plan is as follows:-

- July 2009: Obtain Part 3A approval for the major project;
- Within 4 months of approval (say November 2009): Commence construction (20 months duration);
- July 2011: Commence operations

### **4.3.3 Urban form and design**

#### ***4.3.3.1 Urban design, height, density, bulk, scale of the proposal in relation to the surrounding development, landscape and topography***

##### **Urban design**

The design rationale for the proposal is explained in the architect's design statement in **Appendix 4**, whilst the urban design aspects of the proposed hospital are the subject of an assessment by Professor Peter Webber, provided in **Appendix 7**. The urban design is further discussed in Section 3.4 of this EA.

Additionally, it is evident from the architectural plans in the volume of drawings, the visual impact study comprising "before" and "after" photographs from four locations around the site contained in the volume of drawings that considerable effort has been made to reduce the perceived bulk and scale of the proposed development through significant modulation and

articulation of the built form. The incorporation of two wings (northern and western) to the main building and a separate East Building contributes to a fragmented massing when viewed from the adjoining streets and sites. This is further complemented by comprehensive landscaping around the site.

From an urban design perspective, the proposal is considered to be an environmentally responsive, carefully refined and well-considered solution to the development constraints of the site.

The Site analysis, influenced in part by the outcomes of the Court proceedings for a previous development application for aged care, identifies the constraints and opportunities implicit on the site, and in effect determined the footprints of the new buildings.

The constraints presented by the Heritage significant buildings and landscape elements, particularly in the northern part of the site, and by the BGHF within the eastern and southern parts of the site mean the bulk of the built form is primarily located on the central, central west and south-western parts of the site. This has benefits in distributing this bulk away from neighbouring properties and from the street boundaries where the possibility of adverse impacts might be greater. Where the new built form is to be provided in some proximity to the boundary with the neighbours to the west and south west of the site, the building is situated a minimum of 10m from the boundary, to reduce any impacts and allowing the opportunity of substantial landscape screening to further mitigate any adverse impacts.

### **Height**

The height of the development varies to provide interest to the built form and to respond to site conditions. The guiding principle has been that the new buildings do not exceed the height of the roof ridge to Rippon Grange, a principle identified by the Land and Environment Court. The higher parts of the buildings (the north wing of the Main Building) are located centrally and are oriented east west. The west wing steps down the site to the south following the slope of the site land. It has generally four levels above existing ground at the northern end with a fifth level set well back from the building line and steps to a two level building above a basement level at the southern end of the building.

Buildings are set well back from adjoining property boundaries and the street. Careful consideration was given to the relationship to neighbouring properties with the buildings presenting facades that vary in height and plan and contain a variety of materials.

### **Density**

The density of the development (floor space ratio of 0.58:1) is appropriate for the size of the site. The large site and scale of the existing landscape means that larger buildings can be accommodated with little adverse impact on the surrounds. The height of the buildings enables a reduced the footprint. The volume of accommodation provided is sustainable in terms of the capacity of the site and the surrounding community and enables the ongoing maintenance and viability of both the BGHF and the heritage items, to the benefit of the community.

## **Bulk and scale**

The bulk and scale of the development is similarly appropriate to the size of the site, allowing the placement of buildings that minimizes impact on the street and surrounding buildings with generous, landscaped setbacks. The bulk and scale of the new buildings will also fit comfortably within the mature landscape setting and in relation to the existing heritage listed items. The buildings present facades that vary in height and plan and contain a variety of materials which reduces the perceived bulk of the development. Generous setbacks to side and street boundaries result in an appropriate scale between the height of buildings on the site and on adjoining and adjacent sites.

## **Character**

A hospital use is compatible with a predominantly residential environment, as recognised by the zoning provisions which apply to the land. The character of the use is thus considered to be entirely appropriate. Furthermore, the design of the proposed hospital is far from indicative of an institutionalised function. It has residential external design characteristics which further complement the locality.

### ***4.3.3.2 Impact on streetscape/landscape***

The overall development will have a positive impact on the streetscape due to the improvements in presentation to the street of Rippon Grange and improvements to the landscape. The new buildings will have little real impact on the streetscape due to the extensive setbacks from both streets, including over 60m to Water Street, and around 29m from Young Street.

Similarly there will be an overall positive impact on the landscape both on and surrounding the site, due to the proposed restoration works to the existing heritage listed landscape items and the BGHF.

### ***4.3.3.3 Details of proposed areas of and nature of landscaping and open space***

Landscape works are described in Section 3.8 and Appendix 8. The net effect of the proposed works will help to restore both the heritage listed landscape elements and gardens to their former glory, and the BGHF to a more sustainable, viable and representative community. The formal landscape areas east and west of Rippon Grange will also have their highly significant relationship to the house restored.

As indicated on Drawing LS.DA.10, a significant percentage of the site (65%) is retained as deep soil area which is greater than the 50% required on larger adjoining sites for residential purposes.

The impact of the landscape proposal is such that the site, which is in a currently degraded condition, will be rehabilitated in accordance with the values that have been identified on the site. A number of mature trees will be removed that are within the footprints of the proposed buildings, the impacts of which are discussed elsewhere in this EA. A number of other cultural plantings of Rhododendrons in particular and palm species will be relocated so as to complement the new buildings and integrate the existing cultural and natural landscape values with the proposal. The new buildings will visually blend with the existing and



proposed planting. Architectural forms are to be softened with vines and substantial planting on rooftops and terraces.

Through the careful management of the site under the direction of the VMP, the presently degraded BGHF will be rehabilitated and enhanced. All weed species will be removed from the site. Ongoing maintenance of the site will be undertaken with full time maintenance personnel trained in both traditional horticulture and bush regeneration techniques so that the appropriate balance is maintained across the site reflecting the cultural, heritage and natural values of the site.

#### **4.3.4 Amenity Impacts on Neighbours**

##### ***4.3.4.1 Visual impact, privacy and overshadowing***

###### **Visual impacts**

Visual impacts will arise in the form of obstructed views (see above) and affectation of outlook and any change in the character of the area or streetscapes.

The visual impacts associated with the proposal will be mitigated by the comprehensive landscaping proposed, which includes the retention of some of the existing trees. Furthermore, materials and colours are to be selected for the new building to ensure that it is compatible with the landscape setting. A materials/finishes board is to be submitted under separate cover to the Department.

The visual impact study comprising “before” and “after” photographs contained in the volume of drawings indicates the visual impact of the proposed development when viewed from adjoining public places. The generous setbacks, retention of boundary landscaping and the planned additional landscaping and the significant modulation and articulation of the built form results in a fragmented massing when viewed from the adjoining streets and sites and limited building visibility from most view points. Rippon Grange remains dominant in the view from Water Street.

The varied building form and its residential appearance together with generous landscaped setbacks result in minimal adverse visual impact from adjoining private residential properties.

###### **Privacy**

The substantial setbacks which are provided between new buildings and the site’s western and southern boundaries ensure that existing vegetation is generally retained, new landscaping can be introduced, and direct overlooking can be minimised.

###### **Main Building (west wing):**

The west wing of the Main Building is setback a minimum of 10 metres (excluding screening frames) from the site’s western and southern boundaries. Existing landscaping will be augmented with additional planting to provide an effective landscape screen. In addition the fenestration facing the western boundary is proposed to be screened with adjustable metal screens to limit any privacy or overlooking issues while also limiting excess solar loading. Similarly there are limited window openings to the southern façade.



Three roof terraces will also be treated with screens and planter boxes to ensure that there is no overlooking into the rear yard of adjoining properties.

North facing balconies on the northern side of the west wing will be fitted with timber screens to prevent side views over adjoining properties.

Given the design and location of the building, measures can be readily applied to ensure there will be little prospect of overlooking from the west wing the south or west.

### East Building

The East Building is setback a minimum of approximately 29 metres from the eastern boundary of the site (Young Street) and 39 metres from the southern boundary. The Blue Gum High Forest stands to the east, south and south-west of the East Building.

The separation distance between the nearest part of the East Building and the nearest dwelling to the south is far in excess of any distance within which a privacy or overlooking issue can reasonably arise.

### Overshadowing

Shadow diagrams for the equinox and mid-winter (at 9:00am, midday and 3:00pm) are provided on Drawing AR.DA.013 in the volume of drawings.

It is readily evident that except for some minor overshadowing of the eastern edge of No. 33 Water Street (east of that property's tennis court), and the easternmost parts of No. 3 and No. 5 Plymouth Close, there is no overshadowing of any residential properties caused by the proposed development at the equinox between 9:00am and 3:00pm.

In midwinter mornings until around 10.15am to 10.30am, there is some shadow affectation of the above properties (all to the west of the site) and to the rear yard of No. 44 Billyard Avenue. From just after mid-morning, the rear yard of No. 44 Billyard Avenue will be partially affected by shadow from the west wing of the Main Building. No. 44 Billyard Avenue has a depth of around 68 metres and a variable width of around 22 metres to around 42 metres. The dwelling on this property is setback around 40 metres (at its nearest point) from Billyard Avenue and around 12 metres from the common (rear) boundary with the subject land. Up until 1.00pm in mid-winter, only the north-eastern corner of No. 44 and north western corner of No 46 will be affected by shadow. At 2:00pm, less than half of the rear yard of No. 46 (ie. that part north of the main rear wall of the dwelling) will be affected by shadow from the proposed development. All of the eastern-half of the rear yard is unaffected by shadow from the proposal until after 2:00pm.

Otherwise, there is very little overshadowing impact from the proposed development on the other Billyard Avenue properties which share a common rear boundary with the subject site (ie No's 50, 52, 62 and 64). These properties are free from shadow affectation throughout the mid-winter day (ie. in the period 9:00am to 3:00pm), except for minor overshadowing of the northern part of the rear yards just after 9:00am and around 3:00pm.

All adjoining properties to the south of the proposed development will continue to enjoy more than three hours of solar access to their living rooms and private open space in mid-winter.

#### **4.3.5 Transport, Traffic and Access**

Traffic and parking implications of the proposed development are discussed in the Traffic Impact Assessment contained in **Appendix 17**.

##### ***4.3.5.1 Compliance with RTA Guidelines***

The Traffic Impact Assessment (**Appendix 17**) finds that the development complies with the parking requirements of the RTA Guidelines. Traffic generation has been determined having regard to trip rates provided in the guidelines. Resulting traffic flows fall well below the environmental threshold goal of 300 veh/hr based on the RTA Guidelines.

##### ***4.3.5.2 Existing Traffic Conditions***

Existing traffic conditions are discussed in Section 3.9 and **Appendix 17**.

##### ***4.3.5.3 Proposed Internal Road and Access Arrangements***

Internal access arrangements are discussed in Section 3.9. Access arrangements for the hospital reflect existing main access arrangements with the primary access from Water Street and a separate access from Young Streets. Existing driveways will be upgraded as required.

The main entry is from Water Street which leads to the existing “carriage loop” which will be retained and enhanced. There is provision of a set-down/pick up facility off the carriage loop with capacity for a minimum of 2 spaces. This driveway also leads to basement car parking, loading areas and ambulance bays.

The secondary Young Street entry provides access to grade parking areas and the basement parking beneath the East Building.

##### ***4.3.5.4 Measures to Promote Public Transport Use and Mode Share***

Existing public transport services in the locality include Route 575 and Route 576 which respectively connect to Turrumurra and Wahoonga Stations. These services will be available to Hospital staff, patients and visitors.

##### ***4.3.5.5 Pedestrian and Cycle Links***

The site is located approximately 2 kilometres from Turrumurra Station and 1 kilometre from Wahoonga Station. There are no Council sponsored cycleways in the vicinity of the site although there are proposals for a cycleway on Burns Road to the north of the site and in the south in the vicinity of Turrumurra and Wahoonga Stations. Pedestrian links are provided along the public street network.

##### ***4.3.5.6 Car Parking Arrangements***

Parking arrangements are discussed in Section 3.9 and **Appendix 17**. The development provides 92 parking spaces comprising 79 basement level car parking spaces (on two

levels), 11 at grade spaces adjacent to the Young Street access and 2 at-grade spaces within the carriage loop adjacent to Rippon Grange. Disabled spaces are provided. Parking for ambulances is provided near the main entry and in the basement level to the Main Building. Basement parking spaces can be accessed from both the Water Street and Young Street entrances. There is provision for spaces for deliveries and waste collection.

#### **4.3.5.7 Emergency Evacuation and Public Access**

Details of emergency evacuation procedures will be included in the Operation Management Plan to be prepared prior to operation. The site has good access to two street frontages providing the opportunity for access in emergencies from the public street system.

### **4.3.6 Heritage**

#### **4.3.6.1 Conservation Management Plan**

Rod Howard and Associates Pty Ltd have prepared a Conservation Management Plan for the site. This report clarifies and expands earlier research and further confirms and refines the understanding of the heritage significance of the site. It identifies a recommended heritage curtilage addressing issues that became evident in the Land and Environment Court proceedings relating to the previous DA.

A copy of the Conservation Management Plan (Issue C) is provided in **Appendix 19**. The Conservation Management Plan has been submitted to and endorsed by the NSW Heritage Council. The following Statement of Significance for the building is taken directly from Section 5.3 of the CMP:

*The house known as “Rippon Grange”, buildings associated with the house, later buildings built to serve the uses of the John Williams Memorial Hospital and the grounds in which they stand, as well as the landscape features within those grounds are significant for the following reasons:*

- “Rippon Grange” and its grounds are linked to a number of historically significant figures. They include Frederick George Sargood, member of an important mercantile family in New South Wales and Victoria, and Ernest Robert Williams, one of the founding directors of Woolworths (Australia) Ltd., who gave the property to the Royal Alexandria Hospital for Children for use as a hospital for treating children with poliomyelitis. The significance of the Braddock family, although evidently prominent members of their community, has not been ascertained;*
- The house and grounds are significant because they were in continuous use for a little over fifty years after 1952, firstly as the John Williams Memorial Hospital and eventually as the John Williams Respite Centre, at first for the treatment of children infected with poliomyelitis and then subsequently for other treatment of sick and disabled children;*
- The original and early portions of “Rippon Grange”, constructed between 1898 and 1905, are relatively significant locally because of associations with important architects. The earliest section of the house is understood to have been designed by the important and influential late nineteenth/early twentieth century architect John Sulman, and is thus one of a number of substantial houses and other buildings designed by Sulman in Ku-ring-gai. Sulman may also have been influential in the area because of his associations with the Wahroonga Progress Association. There is*

*slightly later fabric associated with the house and grounds that was designed by other prominent architects, including the former billiard room and internal modifications undertaken by the firm of Joseland & Vernon. The mid 1930s swimming pool at the rear of the house and a bathroom within the house were the work of noted architect H Ruskin Rowe.*

- *“Rippon Grange” has aesthetic significance and rarity value locally because it is a distinctive example of a Federation Arts and Crafts style house that has retained a large amount of original internal and external fabric, and is unusual because of changes of level within the ground floor. The intact original internal fabric provides important evidence of the taste and lifestyle of the wealthy during the late nineteenth and early twentieth centuries. The house also has rarity value because of physical associations with its remaining grounds. Various items and site works constructed in the grounds and some of the planting that was undertaken between the years 1898 and 1951 are still in place;*

- *“Rippon Grange” and its grounds demonstrate some social significance. The buildings and infrastructure that were provided by the general community and private organisations to assist the John Williams Memorial Hospital furnish evidence of the role of these organisations in the successful operation of a specialised medical institution in the second half of the twentieth century. It is also likely that the place has significance for many people who as children were given health and other care during the second half of the twentieth century at the John Williams Memorial Hospital. In the wider community, the grounds may be associated with affluent members of the North Shore gentry, possibly valued for their evidence of a gracious though vanished lifestyle;*

- *In historical terms the grounds of “Rippon Grange” demonstrate the lifestyle of successful and wealthy businessmen in the early twentieth century, with a range of outdoor recreation facilities, display gardens and horticultural elements able to generate a degree of self-sufficiency in fresh produce. The estate reflects the continuance into the twentieth century of the generous scale and layout of gentry estates established in the second half of the nineteenth century once the colony of New South Wales began to prosper. Surviving original landscape elements reflect trends that developed to provide a gracious setting for Arts and Crafts style dwellings during the Federation period. Subsequent modifications to the grounds provide important evidence of the changing attitudes towards landscape design and the ways that gardens were used for recreation during the inter war period. After 1951, considerable modifications were made to accommodate the functional requirements of a home for children with disabilities and to reduce the costs of maintaining the large grounds.*

- *The grounds of “Rippon Grange” have heritage significance, having satisfied a wide range of assessment criteria and retaining substantial integrity of formal garden components. The removal of institutional additions to the grounds made since the 1950s would allow the restoration of those elements such as the lawn terraces and tennis court which have been much altered or covered over. This would allow their legibility as a garden demonstrating evolution across the Federation and inter war periods to be fully restored.*

*It is considered that the place has state significance and should be preserved because of the important and integral relationship between “Rippon Grange” and the grounds, the scale and relative intactness of the grounds, and the ability of both house and grounds to demonstrate*

*the culture and lifestyle of affluent members of society in New South Wales during the first half of the twentieth century.*

#### **4.3.6.2 Heritage Impact Assessment**

A Heritage Impact Statement (“HIS”) has been prepared by Rod Howard and Associates, Heritage Consultants, to accompany the EA (**see Appendix 20**). The HIS examines the suitability of the development proposal in relation to the Conservation Management Plan.

The HIS concludes (at page 49):-

*The proposed development on the site of “Rippon Grange” is considered to be supportable in heritage terms because of the numerous positive benefits that it will confer.*

*The proposal recognises the informal and irregular form of the place that results from the location of “Rippon Grange” on the high part of the site and the clear division that is evident between the cultural and natural landscape forms. Here there was a combination of the practical issues of sustainability, demonstrated in the past by chicken runs and sheds, fruit trees and the like on the southern or service side of “Rippon Grange”, which contrasted with the formal and recreational gardens on the eastern and western sides of the house. Remnant natural planting remained on the southern part of the site and was introduced as a cultural planting on the eastern site boundary.*

*The proposed development is supportable in heritage terms for the following reasons:*

- It will retain the entire site on one title, thus allowing conservation of significant items both individually and in their historical relationships;*
- It conforms to the policies and guidelines contained within the Conservation Management Plan and endorsed by the Heritage Council of New South Wales;*
- An appropriate and sympathetic adaptive use will be provided for “Rippon Grange” that will enable conservation of significant fabric, ongoing maintenance and public access that will enhance understanding of the place and its heritage significance. The adaptive reuse of the building will result in the demolition of intrusive and detracting additions;*
- The significant relationships of the house and its grounds will be regained. The section of the grounds that was used for recreational purposes to the east of “Rippon Grange” will be conserved and important elements reconstructed so that the presentation of the house and its grounds to the locality will be greatly enhanced. The proposed development recognises the combination of significant building forms and cultural and remnant natural landscape forms;*
- The proposed new buildings are located to the south of “Rippon Grange” and away from the house. Their footprint and placement has been determined by the constraints on development within the curtilage that are set out in the CMP.*
- The impact of the proposed buildings on the place is minimised by their placement on the site, strictly controlled building height, modulation and breaking up of building mass, materials that are compatible with the existing building materials at the place. These means will minimise visual impacts both on “Rippon Grange” and on the locality, including nearby heritage items;*
- The former Stable, although modified, is to be conserved and appropriately adapted to new uses;*



- The Summer House will be reconstructed;
- The Swimming Pool is to be retained and conserved;
- Significant cultural plantings and regrowth of native trees are retained. The proposed development will enable the proper maintenance of these important site components. The carefully considered envelope of the new buildings ensure that the maximum number of Blue Gum trees and associated species are retained, thus providing an optimal balance between cultural plantings and natural vegetation;
- The proposed development will enable ongoing funding to ensure the proper conservation (which includes ongoing maintenance over time) of "Rippon Grange", other built items; the formal site elements such as the entrance driveway, terraces on the north eastern part of the site, the croquet lawn, and cultural and native plantings.

#### 4.3.7 Bushfire Risk Assessment

The site is not bushfire prone land.

#### 4.3.8 Biodiversity / tree loss

##### ***4.3.8.1 Impact of the development on existing native flora and fauna and their habitats***

The development's impacts on existing native flora and fauna and their habitats are the subject of a Species Impact Statement provided in **Appendix 22**.

##### ***4.3.8.2 Blue Gum High Forest - Species Impact Statement***

The Species Impact Statement provided in **Appendix 22** concludes that:

*The subject site contains a highly modified form of BGHF as part of an estate that has been used as a private residential dwelling since 1898 then a hospital since 1952. Remnant trees and other BGHF species occur in an approximate 'L' shape along the southern and eastern boundaries of the subject site, covering an area of 6350m<sup>2</sup> mapped by Peter Smith (2007). The BGHF is extremely degraded due to the historical land uses within the remnant including gardens, a chicken run, a vegetable patch and a compost heap. Currently, it is overgrown with weeds, with the majority of species recorded being introduced and dominating the ground, shrub and small tree strata.*

*The proposal involves the renovation of the heritage-listed house "Rippon Grange" and construction of a new building with three wings for use as a private hospital facility. This will involve clearing of approximately 116m<sup>2</sup> or 1.8% of BGHF.*

*Of the 126 trees within the BGHF, 111 will be retained, including all trees with Significance Ratings of 1, 2 and 3. Of the 15 trees to be removed, 6 are target weed species and 5 are structurally unsound. Only two trees will be removed from the BGHF for the construction of the East Wing and two will be removed for the driveway.*

*Of all the trees to be removed for the construction of the hospital facility, only one native hollow-bearing tree will be removed from the BGHF area and one introduced hollowbearing tree will be removed from the remainder of the subject site, out of a*

*total of 11 hollow-bearing trees. This will ensure habitat for native fauna species is retained, including potential habitat for threatened fauna species.*

*The BGHF on the subject site is linked to larger patches in Turiban and Clive Evatt Reserves via the remnant in Wahroonga Public School across the road, and street trees. This connectivity will remain intact as the majority of the BGHF will be retained. The section to be cleared only represents a small portion (1.8%) of the total BGHF on site and is located at the edge of the remnant.*

*Potential habitat is provided on the subject site for some threatened species, including Tetratheca glandulosa, Superb Fruit-dove, Glossy Black Cockatoo, Gang-gang Cockatoo, Masked Owl, Powerful Owl, Barking Owl, Large-eared Pied Bat, Eastern Bentwing Bat, Yellow-bellied Sheath-tail Bat, Eastern Freetail Bat and Grey-headed Flying-fox. Two planted specimens of Syzygium paniculatum also occur and will be retained on the subject site. Although the Grey-headed Flying-fox and Gang-gang Cockatoo have been observed flying over the site, it is not likely that the site provides exclusive habitat for any threatened fauna species. It is more likely to provide foraging habitat as part of a much larger range, due to its small size and degraded habitat quality. The small area of habitat to be removed and construction of the hospital are not considered to have a significant impact on threatened flora or fauna species.*

*Besides impacts of vegetation removal, there is potential for the BGHF to be affected by changes to the hydrological regime, increased edge effects and construction impacts. Studies into the hydrogeology of the subject site have demonstrated that the excavation of basement levels will not have a significant impact on water table levels available to the BGHF.*

*The BGHF is a small remnant and already subject to edge effects throughout because of its narrow shape. The implementation of the VMP (UBMEC, 2009) will reduce the existing edge effects and mitigate any potential for exacerbation of edge effects by the proposal.*

*The VMP also specifies ameliorative measures for construction impacts on the BGHF through the erection of exclusion fences and sediment fences to prevent construction activities encroaching on the BGHF, trampling, stockpiling and sediment deposits.*

*The VMP will be implemented for 10 years from project approval. This will cover the assisted natural regeneration and reconstruction where necessary of existing BGHF, as well as the reconstruction of an additional 1770m<sup>2</sup> as a simplified form of BGHF. It is anticipated that the BGHF will never recover to a true representation of the native vegetation community because of its existing degraded condition and low to moderate resilience (UBMEC, 2009). This means that the BGHF will always exist as a simplified version of the community. On conclusion of the VMP, the BGHF and reconstruction areas will enter a maintenance phase where the operational budget of the private hospital facility will provide funding for the BGHF in perpetuity.*

*The proposed private hospital facility is not considered to have a significant impact on any threatened species or community. Approximately 98.2% of the BGHF will be*



*retained and the overall area increased by 1770m<sup>2</sup>. The implementation of the VMP will improve the quality of vegetation in the remnant but without ongoing active management, the BGHF will be continually overgrown by weeds. The economic viability of the proposed private hospital facility will ensure ongoing funding for the implementation of the VMP and the maintenance of the BGHF in perpetuity.*

#### **4.3.8.3 Vegetation Management Plan**

UBM Ecological Consultants Pty Ltd has prepared a VMP for an area of BGHF located within the site (**Appendix 23**). The proposal includes the restoration of significant landscape elements and the preservation and rehabilitation existing areas of BGHF and the reconstruction of significant additional areas of this community elsewhere on the site. Some 6,350m<sup>2</sup> of the site comprises a simplified form of BGHF covering about 30% of the site. As the vegetation is mainly comprised of mature canopy trees over exotic garden beds, lawns and weed thickets the remnant community is described as BGHF Habitat to distinguish it from a structurally intact and floristically diverse stand of this community – as described in the Final Determination for BGHF in the Sydney Basin Bioregion. About 98.2% of the total area of BGHF Habitat mapped by Smith & Smith (2006) will be retained and rehabilitated or reconstructed. There will be no net loss of BGHF Habitat.

A Species Impact Statement has been prepared to accompany the project application (**Appendix 22**). The VMP has been prepared in accordance with the recommendation of the SIS to provide a management plan for the remnant BGHF Ecological Community. The VMP provides for the rehabilitation of existing areas of BGHF Habitat via a long-term bush regeneration program, while a simplified form of BGHF Habitat will be reconstructed via an indigenous planting program in those areas where currently only native canopy trees occur. Further, as compensatory offsets, some 1,770m<sup>2</sup> of BGHF Habitat will be reconstructed to extend and enhance existing stands of the community. The net gain in BGHF Habitat will be approximately 1,654m<sup>2</sup> or 26%.

The primary aim of the VMP is to identify appropriate management strategies and actions for the rehabilitation and future management of the BGHF Habitat occurring within the site. The VMP also provides guidelines for the reconstruction of additional areas of BGHF Habitat, principally in those areas retaining only canopy trees characteristic of the BGHF Ecological Community (e.g. Sydney Blue Gums, Blackbutt and others), as listed in the Final Determination of the Scientific Committee for BGHF in the Sydney Basin Bioregion.

Further, as the proposal incorporates buildings and landscape elements of heritage value, the VMP has been designed to accommodate the retention of a number of early garden plantings, principally those trees listed as 'significant' – as identified in the Arboricultural Impact Assessment Report (Tree Wise Men February 2009).

The proposed rehabilitation and restoration of BGHF Habitat will be undertaken over a period of at least 10 years.

#### **4.3.8.4 Assessment of the Significance of the Trees to be Removed**

The 310 trees on the site are the subject of a detailed Arboricultural Impact Assessment prepared by Tree Wise Men Pty Ltd (see **Appendix 21**). This report assesses the impacts of the loss of trees on the site associated with the development. Included in **Appendix 21** is a

detailed table identifying the specifics of each individual tree and whether that tree is to be retained, transplanted or removed. 237 trees (76%) are to be retained on the site. The reasons for removal of 73 trees are as follows:

- 37 trees stand within the proposed construction footprint;
- 5 trees require removal as they had construction activities within the CRZ;
- 9 trees are dead, dying or dangerous;
- 9 trees are TPO exempt;
- 6 trees are semi-mature target weed species;
- 4 trees are inappropriately located in relation to proposed landscaping;
- 3 trees are likely to be affected by construction access.

Of the 4 trees to be removed from within the BGHF, all have a significance rating of 4 – Least Significant.

#### **4.3.9 Planning agreements and/or developer contributions**

##### ***4.3.9.1 The scope of any planning agreement and/or developer contributions between the proponent and Ku-ring-gai Municipal Council***

There is no planning agreement between the Proponent and Council. In relation to the Section 94 Contributions Plan no contributions are required for a development comprising a hospital.

#### **4.3.10 Construction and operational impacts**

##### **Contamination**

Contamination is not an issue on this site (see **Appendix 24**).

##### **Geotechnical Impacts**

Geotechnical issues and their implication on construction and in particular excavation are addressed in **Appendices 25 and 26**.

##### **Noise and Vibration**

Noise and vibration potentially arising out of excavation can be mitigated by the measures identified in both the geotechnical report (see **Appendix 25**) and in the Construction Management Plan (see **Appendix 16**).

##### **Flooding Drainage and Stormwater Management Issues**

Measures to deal with stormwater and surface water during construction are set out on the cover sheet and sediment and erosion control plan forming part of the set of civil services plans in the volume of drawings. Once completed, the drainage regime of the site would be

as per the drainage concept and hydraulic plans and as described in the reports in **Appendix 10**.

### **Air Pollution**

Measures to protect air quality during construction are set out in the Construction Management Plan (see **Appendix 16**).

#### **4.3.11 ESD measures**

##### ***4.3.11.1 Details of the development's proposed ESD measures including, NatHERS ratings, BASIX, water sensitive urban design measures, energy efficiency, and recycling and waste disposal***

The proposed development is the subject of an Energy Efficiency Assessment prepared by Vipac Engineers and Scientists (see **Appendix 13**). The Energy Efficiency Assessment notes that as the proposed development does not contain any residential dwellings, NatHERS ratings and BASIX do not apply.

The assessment therefore focuses on the ESD measures to be adopted such as water conservation, energy efficiency, recycling and waste disposal. The executive summary of the Energy Efficiency Assessment states as follows:-

*"The building in general will have the ability to stabilise changing thermal conditions and reduce diurnal (day-night) temperature changes if attention is paid to design details at the wall interfaces.*

*The following additional recommendations have been made to improve significantly the sustainability within the proposed development:*

- Use of light colouring for the internal walls to maximise the use of natural daylight.*
- Rainwater harvesting tank for landscape irrigations.*
- Minimum R1.3 External Wall insulation.*
- Minimum R2.63 Roof/Ceiling Insulation.*
- Equipment with automatic power off.*
- Use of air-conditioning systems with high coefficient of performance.*
- Negotiating power agreements with local providers.*

*Recommendations regarding lighting, appliances, internal finishes and waste etc. have been made within the body of the report."*

These recommendations will be adopted by the Proponent.

#### **4.3.11.2 Details of Cut and Fill and whether any fill is to be imported to or exported from the site**

Details of cut and fill are provided in the Construction Management Plan (see **Appendix 26**). Proposed excavation methods are described in the Hydrogeology report contained in **Appendix 26**. It is expected that approximately 15,600 cubic metres of excavated material will be removed from the site.

#### **4.3.12 Services**

##### **4.3.12.1 Capacity of water, sewer, stormwater, gas, power and telecommunications infrastructure to service the project**

The availability of stormwater drainage, sewer drainage, water and gas services are addressed in the hydraulic services report in **Appendix 11**.

A Section 73 application is to be made to Sydney Water Corporation. Sydney Water has provided its services information for the proposal and the LHO Group (**Appendix 11**) has confirmed the availability of water and sewerage services and their capacity to service the site. In addition, Sydney Water is to advise of capital works contribution charges that will apply to the development of the site. This will also be set out in Sydney Water's Section 73 Notice of Requirements.

The availability of capacity in electricity supply to the site has been confirmed by Energy Australia.

##### **4.3.12.2 Any upgrading works to infrastructure necessary to service the development and contributions applicable under any adopted contributions plans**

Other than any required upgrade/amplification of utility services to the site (see above), no upgrading works to infrastructure is necessary to service the development. There are no relevant contributions plans applicable to the proposed development.

## **4.4 Part D – Draft Statement of Commitments**

### **4.4.1 Proposed mitigation and management of residual impacts**

The Proponent proposes to mitigate and manage residual impacts with a view to ensuring that any such impacts are minimised. Residual impacts are to be effectively managed and mitigated by:-

- effectively managing the demolition and excavation process to limit amenity impacts on neighbours;
- protecting the trees to be retained;
- limiting erosion and sedimentation;
- controlling and managing the construction process;

- implementing comprehensive landscaping and rehabilitation/restoration of degraded landscape areas outside of the building footprint;
- managing stormwater flows;
- providing adequate car parking and promoting public transport use;
- implementing noise amelioration measures to any external plant where required; and
- operating the new hospital having regard to the sensitivities of neighbouring properties.

The commitments which the Proponent makes to achieve the above outcomes are set out in the following Statement of Commitments.

#### **4.4.2 Statement of Commitments detailing measures for environmental management and mitigation measures and monitoring for the project**

##### **Introduction**

Under Section 75F(6) of the EP&A Act, a Proponent may be required to include a Statement of Commitments within the Environmental Assessment, outlining the measures the Proponent is prepared to make in respect of environmental management and mitigation at the site. The Proponent's draft Statement of Commitments for the project specifies how the project will be implemented and managed to minimise potential impacts both during construction and operation.

##### **A. General**

A1. The development will be undertaken generally in accordance with the Environmental Assessment report prepared by BBC Consulting Planners, including accompanying appendices.

A2. The development will be undertaken generally in accordance with the architectural, landscape, and civil services drawings submitted with the Environmental Assessment report, while allowing for reasonable design development to occur.

A3. The Proponent is committed to the principles of sustainability as defined in the *Environmental Planning and Assessment Act, 1979*.

##### **B. Further Approvals**

B1. The Proponent will obtain all necessary approvals and licences required by State and Commonwealth legislation in implementing and operating the project.

B2. The Proponent will obtain a Construction Certificate prior to the implementation of building works, other than demolition and preparatory site works (including the removal of trees and other site vegetation).

##### **C. Demolition, Excavation and Construction Management**

C1. All demolition, excavation and construction work will be undertaken in accordance with the Construction Management Plan, Hydrogeology Report and Arboricultural Impact Assessment submitted with the Environmental Assessment report.

C2. The Proponent will put in place environmental controls to mitigate the effects of noise, dust, vibration and erosion during demolition, excavation and construction, including the implementation of:-

- excavation methodologies consistent with the geotechnical report and hydrogeology report submitted with the Environmental Assessment report and the mitigative measures for noise and vibration set out therein;
- noise mitigation on construction equipment where necessary;
- management of dust by use of screens and/or hose down; and
- implementation of erosion and sediment control devices as shown in the set of civil services plans submitted with the Environmental Assessment report.

C3. The building contractor will establish a Safety Plan before work commences on-site detailing safe work methods and procedures to be followed on-site and to ensure compliance with OH&S and statutory requirements, such plan to address safety risks during demolition, excavation and construction activity, including:-

- stability of adjacent structures;
- excavation support;
- falls from heights;
- protection of the public;
- traffic controls around the perimeter of the site; and
- working with high voltage electrical supply.

C4. Construction activities (including demolition and excavation) will only occur between 7.00am and 6.00pm, Monday to Friday, and between 8.00am and 1.00pm Saturdays, unless further acoustic analysis of specific noise-producing works has been carried out and endorsed by a qualified acoustic engineer.

C5. The building contractor will be required to arrange sorting and recycling of waste materials to ensure maximum recycling is achieved, in accordance with the Construction Management Plan.

C6. Prior to the commencement of demolition and excavation, a Hazardous Materials Assessment will be undertaken on all structures. Any hazardous materials identified will be disposed of in accordance with statutory and EPA requirements and guidelines.

C7. The Proponent will ensure construction traffic and parking requirements during construction activities are as per the traffic and parking assessment report submitted with the Environmental Assessment report, which recommended:

- management measures be put in place to maximise use of Billyard Avenue to/from the east via Eastern Road, which provides access to Burns Road and Junction Road. No restrictions on the use of rigid trucks are considered necessary due to the expected low truck volumes, with use of Billyard Avenue to/from both the east and west. These are public roads that already carry similar classes of vehicles.
- all construction employee parking demands be contained within the site as far as practicable. The use of basement car parks will be available following their completion. Accordingly, no use of on-street parking is expected.

C8. The Proponent will carry out all construction activities in accordance with relevant environmental protection legislation.

C9. The Proponent will prepare and implement further detailed construction management plan in conjunction with the contractor and submit to the Principal Certifying Authority prior to commencing construction works.

C10. The Proponent will instigate environmental management and mitigation measures during construction activities as per the CMP.

#### **D. Tree Protection**

D1. Designed tree protection measure and general tree protection measures (as appropriate) will be implemented for the trees identified as being retained in the Arboricultural Impact Assessment appended to the Environmental Assessment.

D2. Trees will be protected in accordance with the Arboricultural Impact Assessment appended to the Environmental Assessment.

#### **E. Biodiversity/Tree Loss**

E1. The proponent will implement the Vegetation Management Plan appended to the Environmental Assessment.

E2. The proponent will implement the recommendations of the Species Impact Statement appended to the Environmental Assessment.

#### **F. Promotion of public transport use, walking and cycling**

F1. A workplace travel plan will be developed and maintained and disseminated to staff at the hospital.

F2. On-site provision will be made for staff bicycle storage.



## **G. Acoustic considerations**

G1. Noise and vibration during demolition, excavation and construction will be mitigated in accordance with the recommendations and guidelines in the geotechnical report, Construction Management Plan and acoustic report submitted with the Environmental Assessment report.

G2. The building (which is Class 9a under the BCA) will meet the acoustic requirements for a Class 9c building.

G3. Once plant and equipment has been selected for the new hospital, a separate acoustic assessment will be carried out to ensure that noise emissions are controlled, and compliance achieved with the criteria specified in the DECC Industrial Noise Policy guidelines.

## **H. ESD**

H1. The Proponent will implement the recommendations in the Energy Efficiency Assessment submitted with the Environmental Assessment.

H2. The Proponent will consider the following measures to improve energy efficiency and reduce greenhouse gas emissions:-

- Use of light colouring for the internal walls to maximise the use of natural daylight.
- Rainwater harvesting tank for landscape irrigations.
- Minimum R1.3 External Wall insulation.
- Minimum R2.63 Roof/Ceiling Insulation.
- Equipment with automatic power off.
- Use of air-conditioning systems with high coefficient of performance.
- Negotiating power agreements with local providers.