

# PREFERRED PROJECT REPORT

Sydney Adventist Hospital Alterations and  
Additions (MP10\_0070)

November 2010

urbis

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# 1 Introduction

This Preferred Project Report (PPR) has been prepared on behalf of Sydney Adventist Hospital and in association with the proposed alterations and additions to the existing hospital. The report has been prepared in accordance with the provisions of Section 75H(6) of the Environmental Planning and Assessment Act 1979 (the Act) which states:

*The Director-General may require the proponent to submit to the Director-General:*

- (a) a response to the issues raised in those submissions, and*
- (b) a preferred project report that outlines any proposed changes to the project to minimise its environmental impact, and*
- (c) any revised statement of commitments.*

The PPR provides a brief history of the project, including the key steps associated with the preparation, lodgement and assessment of the Part 3A application and outlines the proponent's response to the issues raised by the stakeholders and the issues arising from the public exhibition of the application. A revised Statements of Commitments to mitigate and/or minimise the potential impacts of the development is also included. The relevant sections are listed below:

- Section 2 – Overview of Project.
- Section 3 – Identification of Key Issues and Responses.
- Section 4 – Modifications to the Part 3A Application.
- Section 5 – Revised Statements of Commitments.
- Section 6 – Summary and Conclusion.

The PPR is supplemented by the following documents:

- Updated architectural drawings and visual analysis prepared by Morris Bray Architects.
- A construction management plan prepared by Morris Bray Architects.
- Supplementary reports and correspondence prepared by the following consultants:
  - Australian Bushfire Protection Planners
  - C&M Consulting Engineers
  - Coffey Environmental
  - Cumberland Ecology
  - Graham Brooks & Associates
  - Morris Bray Architects
  - Umow Lai
  - Urbis
  - Warren Smith & Partners

## 2 Project Overview

The Part 3A Project Application for alterations and additions to the Sydney Adventist Hospital, Wahroonga was submitted in accordance with the provisions of the Wahroonga Estate Concept Plan. The Concept Plan, which was approved by the Minister for Planning on 31 March 2010, specifically included an additional 28,000m<sup>2</sup> of hospital floor space and 3,500m<sup>2</sup> for an upgraded faculty of nursing, subject to the lodgement and approval of a more detailed application under Part 3A or Part 4.

The Director-General of the Department of Planning issued correspondence on 13 May 2010 declaring the alterations and additions to the Sydney Adventist Hospital to be a Project to which Part 3A of the Major Project SEPP (now known as the Major Development SEPP) applies. The Director-General's Environmental Assessment Requirements (DGRs) for the Part 3A Project were subsequently issued by the Department of Planning on 10 June 2010.

The Environmental Assessment (EA) was prepared in accordance with Part 3A of the Act and the provisions of the DGRs. The EA was lodged for 'test of adequacy' on 15 July 2010. Correspondence was issued by the Department of Planning on 5 August 2010 confirming that the project documentation satisfactorily addressed the DGRs, subject to the provision of additional information regarding compliance with the Wahroonga Estate Concept Plan. This additional information was incorporated into the final EA, which was lodged with the Department of Planning on 27 August 2010.

The EA was publicly exhibited at the Department of Planning and Ku-ring-gai Council from Wednesday 15 September 2010 to Friday 15 October 2010. Advertisements were placed in metropolitan and local newspapers and individual letters were sent to nearby land owners and residents advising the relevant details of the public exhibition of the EA. Three public submissions were received as a result of the public exhibition.

Key stakeholders were also consulted by the Department of Planning during the public exhibition period. Written submissions were received from the following authorities:

- Ku-ring-gai Council.
- Roads and Traffic Authority NSW
- Transport NSW.
- NSW Health.
- Department of Environment, Climate Change and Water NSW.
- Sydney Water.

The public and stakeholder submissions were made available to the proponent for review within ten days of the closure of the public exhibition, accompanied by correspondence from the Department of Planning requesting that further information and consideration be given to a number of specific issues.

The key issues raised in the Department of Planning's correspondence and the stakeholder and public submissions and the proponent's responses to those issues are outlined in the following section of this report.

## 3 Identification of Key Issues and Responses

### 3.1 Overview

This section of the report outlines the responses to the matters raised by the Department of Planning in their preliminary assessment of the application. It also responds to the issues raised in the stakeholder and public submissions received by the Department of Planning during and following the public exhibition of the Project Application, including:

- Transport NSW.
- Roads and Traffic Authority NSW
- NSW Health.
- Department of Environment, Climate Change and Water NSW.
- Sydney Water.
- Ku-ring-gai Council.
- Public Submissions.

The proposed modifications to the development are outlined in **Section 4** and a revised Statement of Commitments is provided in **Section 5**.

### 3.2 Department of Planning

The responses to the matters raised by the Department of Planning are outlined in the following table.

**Table 1 – Department of Planning Response Table**

Issue	Response
Demonstrate compliance with Concept Plan approval:	
<ul style="list-style-type: none"> <li>▪ Biodiversity</li> </ul>	<p>It is acknowledged that the Biodiversity Management Plan needs to be approved by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) before the Project Application can be determined.</p> <p>Ongoing liaison has been held between Johnson Property Group (the proponents for the Wahroonga Estate Concept Plan) and the Sydney Adventist Hospital (SAH) during the preparation of the Project Application. The layout and design of the proposed alterations and additions to the hospital (and associated/ancillary infrastructure) are consistent with the key matters identified by DSEWPC during the assessment of the Concept Plan and the Biodiversity Management Plan.</p> <p>It is our understanding that approval of the Biodiversity Management Plan is imminent and the final version is consistent with the documentation reviewed by the consultant team for the Sydney Adventist Hospital during the preparation of the Project Application. We will issue a copy of the approved Biodiversity Management Plan to facilitate determination of the Project Application in accordance with the Concept Plan approval.</p>
<ul style="list-style-type: none"> <li>▪ Contamination</li> </ul>	<p>Coffey Environments has reviewed the site contamination assessment reports submitted with the Project Application to confirm whether or not these reports meet the requirements for a Phase 2 Environmental Site Assessment and address each of the areas of environmental concern (AEC) identified in the Concept Plan documentation. While the Coffey report meets the relevant requirements, it does not include each of the AEC and further analysis is required to confirm compliance with Condition B13(a)</p>

Issue	Response
	Coffey has confirmed that this work can be completed within one month and that there will be no changes to the approved plans. The supplementary report will include recommendations to remediate the site, if required. Appropriate provision has been made in the Revised Draft Statement of Commitments in Section 5. A copy of the supplementary report will be submitted to the Department of Planning for review at the earliest opportunity to facilitate the timely determination of the Project Application.
<ul style="list-style-type: none"> <li>Construction management and staging</li> </ul>	A Construction Management Plan has been prepared by Morris Bray Architects and is submitted with the Preferred Project Report as <b>Appendix A</b> .
<p>Clarify visual impacts:</p> <ul style="list-style-type: none"> <li>Selection of colours, materials and finishes</li> <li>Section/elevation details</li> <li>Photomontages</li> <li>Reduced building bulk and visual prominence</li> </ul>	<p>Additional documentation is submitted with the Project Report, including:</p> <ul style="list-style-type: none"> <li>Materials Board prepared by Morris Bray Architects.</li> <li>Supplementary architectural drawings prepared by Morris Bray Architects that include additional section and elevational details.</li> <li>Photomontages prepared by Morris Bray Architects (shown as <b>Figures 1-3</b> on the following pages).</li> <li>Written correspondence prepared by Morris Bray Architects which confirms the way in which the proposal has responded to the recommendations of the Visual Impact Analysis.</li> </ul>
Address encroachment of temporary car park, building heights and gross floor area allocation	<p>A drawing has been prepared by Morris Bray Architects to demonstrate the integration between the alterations/additions to the hospital and the development approved by way of the Wahroonga Estate Concept Plan (refer to <b>Figure 4</b> on page 6). The written submission from Morris Bray also confirms the agreement with the Australasian Conference Association (land owner) to utilise the area of the temporary car park for 12 months from the start of construction of the multi-deck car park. Once the structure is complete, the site will be made available to the ACA for development as per the Concept Plan approval.</p> <p>Additional architectural drawings and a gross floor area schedule have also been produced to clarify the compliance of the proposed development with the relevant planning controls.</p>
Noise impacts (demolition, construction and operation) on surrounding land uses	<p>SLR Heggies (acoustic consultant for Sydney Adventist Hospital) has confirmed that it was not appropriate to assess or provide recommendations for the child care centre and nurses accommodation based on the following reasons:</p> <ul style="list-style-type: none"> <li>There is no relevant legislation or criteria in relation to setting limits to a proponent's own activities from demolition/construction noise and vibration</li> <li>The impact upon these receivers will be managed by the proponent (in liaison with relevant personnel) to control internal levels to those consistent with hospital use.</li> </ul> <p>Internal management procedures to be adopted during the demolition/construction phases could include arranging demolition/construction down-times to coincide with respite times for the child care centre and, if necessary, arranging for nightshift nurses to be housed on the quiet side of the accommodation or even be temporarily relocated.</p> <p>However, given that the child care centre and the nurses accommodation are further from the proposed works than the existing Clinical Services Building and the existing hospital building, construction methods and measures developed (as part of the noise and vibration management plan) to control noise and vibration impacts to the closer receivers are likely to be adequate to control the impact to the more distant locations.</p> <p>SLR Heggies has also responded to the proposed conditions of consent recommended by Council. Their proposed revisions are reflected in the revised Statement of Commitments in <b>Section 5</b>.</p>



**Figure 1** – View from The Comenarra Parkway



**Figure 2** – View from the signalised intersection of The Comenarra Parkway and Fox Valley Road



**Figure 3 – View from Fox Valley Road****Figure 4 – Integration of Wahroonga Estate Concept Plan and Sydney Adventist Hospital**



### 3.3 NSW Transport

NSW Transport raised concerns regarding a perceived 'pro rata' increase in existing car parking and the potential impacts on achieving the sustainable transport measures. The submission also requested that consideration be given to a car share scheme and the provision of bicycle parking in a weather protected and visible location.

Transport and Traffic Planning Associates provided the following response to each of the raised by NSW Transport:

- Pro-Rata Increase in Car Parking - the existing car park is inadequate and frequently exceeds capacity, resulting in indiscriminate on-site parking and overflow to on-street parking. Further, car parking for a large hospital is not a simple floor space pro-rata relationship. The peak demand is a result of a complex combination of factors including:
  - Shift change (hospital staff require overlap for shift change)
  - Super peak demand days (Monday – Tuesday)
  - Intensity of patient servicing and provision for heightened future servicing.

The proposed car parking is based on a Population Schedule submitted with the Environmental Assessment.

- Car Share Provision - the hospital is not appropriate for a car share scheme, however, the hospital is willing to allocate spaces for use within an estate managed car share scheme. There is already the provision for parking spaces to be shared between staff, visitors and church attendees (as well as vehicles generated by other uses in the area). Consideration will be given to designation of 'priority spaces' for high car occupancy. The Environmental Assessment has outlined the way in which the hospital already fosters, promotes and supports car sharing with staff.
- Location of Bicycle Spaces - bicycle spaces will be located in areas which are sheltered and subject to surveillance.

### 3.4 Roads and Traffic Authority

The Sydney Regional Development Advisory Committee submission notes that a Deed of Agreement is to be entered into to facilitate compliance with the Concept Plan approval issued for the Wahroonga Estate, which includes the alterations and additions to the Sydney Adventist Hospital. However, it is noted that Ku-ring-gai Council is not a party to the Deed as per the current wording of Condition B7 of the Concept Plan approval. Any modifications to the conditions within the Concept Plan approval will need to be agreed to by Johnson Property Group.

It is understood that a meeting was held on 27 October 2010 between the Roads and Traffic Authority, Ku-ring-gai Council and Johnson Property Group (the proponent of the Wahroonga Estate Concept Plan) to discuss timing for execution of the Deed of Agreement. Sydney Adventist Hospital does not have a role in the resolution of this matter, however, it is acknowledged that release of the Construction Certificate for the alterations and additions to the hospital will be reliant on the execution of the Deed in accordance with the Concept Plan approval.

No objection is raised to the imposition of Conditions 1-4 as listed in the RTA submission, which are standard conditions of consent.

### 3.5 NSW Health

The Northern Sydney Central Coast Health Service (Health NSW) raised concerns regarding the accuracy of information provided in Appendix B of the Social and Economic Benefits Assessment prepared by Urbis and lodged with the Environmental Assessment. This appendix included two tables

summarising the services currently available within public hospitals in Northern Sydney and private hospitals within close proximity of the Sydney Adventist Hospital.

Urbis has had ongoing liaison with NSW Health to respond to the identified issues. Appendix B1 has been updated and a copy of their revised report is attached to the Preferred Project Report as **Appendix B**.

Further to the above, NSW Health raised issues with regard to the commonality of services to be provided within the expanded hospital (subject of this Project Application) and a separate planning proposal for a Day Surgery Clinic within Hornsby. Sydney Adventist Hospital (SAH) has provided the following response:

*Hardes & Associates Data projects that Sydney Adventist Hospital will experience a 68.68% increase in total patient separations between 2007/08 through to 2026/27. Further to this, it is expected that the ageing population will continue to place significant increased demand on private acute healthcare services in the SAH catchment area in the decades well beyond 2026/27.*

*In order to meet the projected increase in demand for healthcare services over the longer term, SAH is required to plan for significant growth in facilities, infrastructure and services. While SAH is planning major developments onsite at Wahroonga, capacity on this site is limited. Therefore, major development of SAH owned facilities in the local catchment area such as San Day Surgery Hornsby will be vital to meet the projected increase in community demand for healthcare needs into the future.*

Overall, it is considered that the issues raised by NSW Health have been satisfactorily addressed.

### 3.6 Department of Environment, Climate Change and Water NSW (DECCW)

The DECCW submission notes that the Project Application cannot be determined until such as the Biodiversity Management Plan (BMP) is approved and it is confirmed that the Project Application complies with the provisions of the approved BMP, including the Fire Management Plan. DECCW also requests that a commitment be included stating that there will be no additional impacts on the E2 zoned bushland area as a result of the proposal.

We note that this issue has been addressed in Section 3.2 and a copy of the approved Biodiversity Management Plan will be forwarded to the Department of Planning to facilitate approval of the Project Application. It is confirmed that the proposed alterations and additions will not result in any additional impacts on the bushland within the E2 zone.

### 3.7 Sydney Water

The submission received from Sydney Water stated that the drinking water main is required to be upsized to a 200mm main and the wastewater main is required to be upsized to a 400mm main to service the proposed development.

Warren Smith & Partners has reviewed the submission and provided reply correspondence (**Appendix C**). It is acknowledged that the water and sewer mains will need to meet the additional demand generated by the proposal. However, as the proposed works are to be staged over a number of years, these upgrades may not be required in the first phase of work. It is considered appropriate to stage the delivery of services upgrades in line with the increase in demand and this will be resolved with Sydney Water as part of the Section 73 certificate process.

It is also acknowledged that a trade waste permit will be required to enable discharge to sewer and/or site remediation and that a Section 73 certificate will be required to be obtained from Sydney Water during the post-determination phase.

### 3.8 Ku-ring-gai Council

A comprehensive submission was received from Ku-ring-gai Council that responds to each of the Director-General's Environmental Assessment Requirements for the Project Application. The key issues raised in the submission are broadly categorised in the summary table appended to the main body of the submission. Responses to each of these key issues is provided in the following table

**Table 2 – Ku-ring-gai Council Response Table**

Issue	Response
Future Planning	<p>The alterations and additions proposed in the Project Application fit within an overall site masterplan for the long term future growth of the hospital. This masterplan is an internal planning document that was to be prepared to show how the future growth <i>could</i> be accommodated within the existing and proposed development. It was not submitted with the Environmental Assessment to avoid any potential confusion as to the extent of development for which consent is currently being sought from the Minister for Planning. However, a copy of the site masterplan has been provided with the Preferred Project Report to show the potential long term development of the hospital. This masterplan is indicative only and the long term development plans do not form part of this Project Application.</p> <p>The current open space provision will meet the requirements of the expanded hospital as proposed in the Project Application. Roof-top terraces may be considered as an opportunity to expand the open space amenity in the future, when and where considered appropriate. The issues raised with regard to sustainability are addressed in the ESD section of this table.</p>
Documentation	<p>The additional documentation prepared and submitted with the Preferred Project Report is listed below:</p> <ul style="list-style-type: none"> <li>▪ Morris Bray has provided an updated/revised set of architectural which are submitted with the Preferred Project Report and listed in Section 4 of this report.</li> <li>▪ GFA figures has prepared a spreadsheet which provides a breakdown of the proposed floorspace. A copy of this spreadsheet is provided within the Morris Bray correspondence attached as <b>Appendix D</b>.</li> <li>▪ A Construction Management Plan prepared by Morris Bray Architects is attached as <b>Appendix A</b>.</li> <li>▪ A drawing has been prepared by Morris Bray Architects to demonstrate the integration between this Project Application and the Wahroonga Estate Concept Plan. The written submission from Morris Bray also confirms the agreement with the Australasian Conference Association (land owner) to utilise the area of the temporary car park for 12 months from the start of construction of the multi-deck car park. Once the structure is complete, the site will be made available to the ACA for development as per the Concept Plan approval.</li> </ul> <p>The following points are noted:</p> <ul style="list-style-type: none"> <li>▪ The architectural and landscape drawings submitted with the original Environmental Assessment were prepared based on detailed site surveys, including a comprehensive understanding and recognition of the existing levels. Some detail has been removed from the final drawings lodged with the Project Application to avoid confusion and enable clear definition of the proposed works. However, the design development for CC documentation will add further levels and construction level details appropriate for this next phase of work.</li> <li>▪ The design of the bio-retention basins includes provision for suitable lawn swales and riparian content to be shown in greater detail within the CC documentation. The open space provides suitable capacity to incorporate the landscape required to ensure suitable performance and access to provide maintenance. In terms of aesthetic and safety considerations, these areas are understood to provide a positive visual impact.</li> <li>▪ Site Image worked closely with Treescan in the preparation of the landscape design, taking into account trees to be retained and removed. Tree retention has been maximised in the design and where removal is required, it has been balanced with new tree planting to create appropriate setting and relationship to adjacent areas. It is understood that a further level of detail may be required in the CC phase.</li> </ul>

Issue	Response
	<ul style="list-style-type: none"> <li>▪ The stormwater management issues are addressed in the Drainage section of this table.</li> </ul> <p>Further to the above, the Draft Statement of Commitments has been revised to include:</p> <ul style="list-style-type: none"> <li>▪ Highlighting and prioritising alternative modes of transport over private vehicles in the Guide ("How to Find Us") shown in the proposed Workplace Travel Plan.</li> <li>▪ Showing walking/cycling distances from nearby rail stations (including Warrawee and Normanhurst stations) in the Guide ("How to Find Us") shown in the proposed Workplace Travel Plan.</li> </ul>
Biodiversity	<p>The status of the Biodiversity Management Plan has been addressed in the section responding to the issues raised by NSW Planning. The proposed retention and removal of trees is addressed in the Amenity section of this table.</p> <p>Site Image has confirmed that remnant native and other significant trees have been retained wherever possible. A large number of significant scale trees are retained in the area adjoining the main lawn, which is considered to be part of the Village Green. Approximately 20 trees have been retained, providing a significant visual presence and enclosure of the space and separation from Fox Valley Way.</p> <p>Site Image, in conjunction with Treescan, undertook a diligent assessment of the value of trees, including quality/longevity, visual significance, screening value and historic significance, and it was concluded that a number of the existing trees are of poor quality. Further, the Village Green is to be used a highly active open space, requiring modification of the space to suit its function and relationship to the adjoining buildings and roadways.</p>
ESD	<p>A supplementary report prepared by Umow Lai addressing the ESD related matters raised by Council is attached as <b>Appendix E</b>.</p>
Services	<p>Each of the key issues raised by Council has been responded to by the project team consultants, including Morris Bray Architects, Warren Smith &amp; Partners, C&amp;M Consulting Engineers and Urbis, and as outlined below:</p> <p><u>Location of Services</u></p> <p>Morris Bray Architects, Umow Lai and Warren Smith &amp; Partners have each reviewed Council's comments with regard to the appropriate location of services. Correspondence from Morris Bray is attached as <b>Appendix D</b>, Umow Lai as <b>Appendix E</b> and Warren Smith &amp; Partners as <b>Appendix C</b>.</p> <p>Overall, the correspondence concludes that different options for services and plantroom facilities were investigated during the design and planning process. The final design provides a balanced approach, taking into account:</p> <ul style="list-style-type: none"> <li>▪ Integration of existing buildings and services with new building services.</li> <li>▪ Height requirements (eg riser space).</li> <li>▪ Natural ventilation, including air intake.</li> <li>▪ Safety and statutory requirements (eg smoke hazard management system and heat rejection plant/cooling towers).</li> <li>▪ Accessibility (eg NSW Fire Brigade).</li> <li>▪ Environmental impacts associated with earthworks.</li> <li>▪ Cost effectiveness.</li> </ul> <p><u>Stormwater Management</u></p> <p>The compliance of the proposal with the stormwater management controls is addressed in the 'Drainage' section of this table.</p> <p><u>Utility/Service Authority Requirements</u></p> <p>A written submission has been received from Sydney Water and the relevant issues raised are addressed in <b>Section 3.8</b> of this report. Further, ongoing consultation with Energy Australia has been undertaken by Connect, the Level 3 Designer.</p> <p>The site is currently served by pad-mount substations in various locations and this philosophy has been continued for this project. Siting was primarily based on suitability for connection to a site electrical ring main and future HV central energy system. The use of back-of-house areas will minimise potential visual impact.</p>

Issue	Response
	<p>Detailed design matters for utilities and services are appropriately resolved at CC stage.</p> <p><u>Fire Centre and Oxygen Tanks</u></p> <p>The location of the Fire Centre was established in consultation with the NSW Fire Brigade. The proposed location is the most optimal position from a safety perspective, taking into account immediate access from the public road network and capacity to provide a lay-by area (both for the Fire Centre and Oxygen Tank delivery) without affecting the flow of ambulances to and from the Accident and Emergency department. The proposed location is considered to be appropriate from a site planning and visual perspective. The 'core' hospital area has only limited space to accommodate the support infrastructure and the proposed location is considered to be the most suitable, taking into account the servicing requirements and potential visual impacts. The tanks will be screened by landscape and boundary planting so their impact on Fox Valley Road will be minimal.</p> <p>Further detailed consideration was also given to the location for the oxygen tanks during the design phase of the project. Oxygen is an essential service and cannot be located in the APZ setbacks. The proposed location co-locates the new Oxygen Vessel with the existing backup Oxygen Vessel and meets all requirements for fire separation and deliveries. The location is screened from the street and is accessed by the rear service roads. The sighting of the vessel and oxygen delivery is highly regulated, due to the risk of fire and explosion during filling. Oxygen vessels cannot be located inside buildings under statutory requirement due to safety/risks.</p> <p><u>SEPP 33</u></p> <p>The SEPP 33 report prepared by AECOM and submitted with the EA addresses the relevant requirements, as outlined in the report.</p>
Amenity	<p>The issues raised by Council with regard to amenity have been addressed by Morris Bray Architects and Site Image Landscape Architects as outlined below:</p> <p><u>On-site Amenity and Growth</u></p> <p>The extent, number and varying types of accessible amenity spaces provide a high level of amenity for the range of user groups of the hospital grounds. The proposed open spaces significantly expand the existing amenity provision, with new or significantly increased or improved areas including (but not limited to):</p> <ul style="list-style-type: none"> <li>▪ The Village Green;</li> <li>▪ Broad terraces adjoining the Village Green</li> <li>▪ Reflective garden courtyard adjoining the Chapel adjacent the Village Green</li> <li>▪ Broad civic plaza space extending from the Concourse, north of the new main entry</li> <li>▪ Large landscaped seating area below the new north entry;</li> <li>▪ Open space near the Community Church Centre, with walkways linking into bushland walkway network</li> <li>▪ Landscaped courtyards to the west of the new CSB</li> <li>▪ Improved amenity / heritage garden adjacent the new location for Bethel House, adjacent Jacaranda Lodge</li> <li>▪ Jacaranda Lodge landscape courtyard spaces</li> <li>▪ Series of pocket-park type lawn, seating, playground, exercise areas across the north of the site adjacent the edge of the existing bushland</li> <li>▪ Upgrade of the swimming pool area with additional seating, barbeque and exercise equipment as part of a circuit across the northern part of the site</li> </ul> <p><u>Northern Landscaped Area</u></p> <p>There are a number of significant amenity landscape spaces to the north to take advantage of views into the adjacent bushland. The Concourse plaza area provides a large civic area with substantial formal and informal seating that will enjoy elevated views into the bushland. The plaza space has numerous large canopy trees, contributing to the outlook and extending the presence of the bushland canopy. Extensive lawns provide informal opportunity for passive recreation for users of the Community Building and hospital users. Further west there are at least three areas nominated for seating/exercise equipment/passive recreation located in close proximity with the edge of the bushland.</p>

Issue	Response
	<p><u>Leisure Facilities and Landscape Gardens</u></p> <p>Recreation amenity across the western part of the site includes the swimming pool area and surrounds which are proposed to be upgraded. There are also significant open landscaped areas to the north and south of the Education Centre.</p> <p><u>Children's Playground</u></p> <p>There is strong reasoning for the location of the playground, taking into account activation and natural surveillance. Playground areas now generally require solar shading through shade cloths to protect children from the sun. The playground will be subject to significant design development from the notional scheme indicated on the concept documents and the final detailed design will incorporate the high design values and principles of the hospital to produce a high quality outcome.</p> <p><u>Views and Visual Amenity</u></p> <p>The Environmental Assessment report clearly identified the visual impacts to and from the site. It is noted that the lower levels of the CSB and Shannon building will accommodate support services, while the ward levels are located above the highest level of the car park structure to enable bushland views.</p>
Parking	<p>The following comments are made in response to the issues raised with regard to car parking:</p> <ul style="list-style-type: none"> <li>▪ The proposed car parking arrangements are considered to be satisfactory, taking into account: <ul style="list-style-type: none"> <li>▪ The proposed additions to the Clinical Services Building (CSB) will be built in stages and it is not practical to provide basement car parking. The size and layout of the proposed additions will not facilitate an efficient car parking layout and multiple levels would be required, requiring extensive earthworks and resulting in an economically unfeasible outcome.</li> <li>▪ The car park proposed for the Shannon building is located partially underground and is considered to be appropriate, taking into account its unobtrusive location and minimal visual impacts.</li> <li>▪ All aboveground car parking structures are located away from public streets and have been sited and designed to avoid any significant visual impacts. The lower levels of the CSB and Shannon building will accommodate support services, while the ward levels are located above the highest level of the car park structure to enable bushland views.</li> </ul> </li> <li>▪ The detailed drawings to be submitted with the CC will demonstrate compliance with the accessibility provisions, including number of spaces and siting/design.</li> <li>▪ The needs of different groups with regard to on-site car parking are considered to be well documented in the Transport and Accessibility Study prepared by Transport and Traffic Planning Associates.</li> <li>▪ The permanent on-grade car parking areas include significant tree planting to enable shading for long term parkers. The semi-continuous landscape planting areas reduce the need for permeable paving in adjacent parking areas, taking into account the provision of aeration and water to tree roots.</li> </ul>
Traffic and movement	<p>Transport and Traffic Planning Associates has provided the following response to each of the issues identified by Council:</p> <p><u>Pedestrian – Cyclist Network</u></p> <p>The pedestrian – cyclist network are well defined in the Sustainable Transport Initiatives document including the connectivity with the overall Estate and the external networks.</p> <p><u>Bicycle Lane on Fox Valley Road</u></p> <p>The road reservation is not sufficient to provide an 'on road' facility and as such, provision for bicycles would more likely be with a shared footway. However such a facility should not and cannot be a requirement on the Hospital development.</p> <p><u>Bicycle Facilities</u></p> <p>Showers and lockers are available for cyclists within the existing hospital and this provision will be expanded. Bicycle storage facilities will be located with shelter and where casual surveillance occurs.</p> <p><u>Public Transport Infrastructure Upgrade</u></p>



Issue	Response
	<p>Public transport upgrades will be developed and identified as part of the design development process responding to consent conditions and in consultation with the bus company.</p> <p><u>Temporary Carpark</u></p> <p>The temporary car park will accommodate spaces displaced during construction and for construction workers. The car park will be removed prior to Estate development in this area.</p> <p><u>Promotion of Alternative Transport Modes</u></p> <p>Commitments are made with regard to alternative transport and will be fully and appropriately complied with during the operational phase of the development.</p> <p><u>Traffic Implications</u></p> <p>The projected traffic generation is derived from the detailed population movement schedule and not from floor area (similar to the car parking provision).</p> <p>A combined assessment with the whole-of-estate development is provided in the Wahroonga Estate Traffic Report, dated 10 September 2010, which identifies the road upgrade needs and forms part of the Concept Plan approval.</p> <p><u>New Access on Fox Valley Road</u></p> <p>No new vehicle access is proposed to Fox Valley Road. The existing access points are not considered to present any difficulty or need for restriction.</p> <p><u>Population Schedule Error</u></p> <p>There is a 'scale' designation error on the graph, however the population/ movement numbers are derived from the detailed schedule.</p>
Streetscape	<p>Morris Bray Architects and Site Image Landscape Architects have responded to the issues raised by Council. A summary of each of the relevant issues is outlined below:</p> <p><u>Pedestrian Activity - Fox Valley Road</u></p> <p>The main entry to the hospital will be retained, however, the signalised traffic lights will be upgraded, including a new left-out lane to Fox Valley Road. Cars currently parked on the hospital side of Fox Valley Road will be removed so the entry will be free and visually unencumbered.</p> <p>Entry gates or the like may form part of a future application for signage. The entry will be clearly signed to ensure easy direction, with additional directional and way finding signage throughout the hospital.</p> <p><u>Visual Connections - Fox Valley Road</u></p> <p>The relocation of Bethel House to the Village Green area was discussed during the early design phase. However, this option was rejected based on the importance of this area as an important historic landscape element. The original context of the long lawns that extended away from the original site entry have been echoed with a shareway and pedestrian path to give a similar visual correlation of a lawn flanked by a narrow access road. The possible locating of Bethel House in this precinct is in conflict with the above landscape objectives.</p> <p>Public access will be available to Bethel House via the footpath network from the arrival podium, the Cancer Centre garden and footpath between Stage 1B of the CSB and Jacaranda Lodge. This is considered to be appropriate, taking into account the important relationship between each of these elements.</p> <p><u>Relocation of Services</u></p> <p>This issue has previously been addressed in the 'Services' section of this table.</p>
Design	<p>Morris Bray Architects has considered and responded to each of the design matters raised by Council as outlined in their correspondence attached as <b>Appendix D</b> and as outlined below:</p> <p><u>Building Elevations</u></p> <p>The loggia element was devised to create a unifying element between the diverse collection of architectural styles that have been developed over the site's history. This loggia will form a continuous base incorporating the San Clinic, Concourse, the existing and new CSB buildings and ultimately the Shannon wing.</p> <p>The proposed extension also includes the primary façade of the hospital which is open</p>

Issue	Response
	<p>and transparent to the concourse. It will engage with the surrounding landscape and embody biophilic design principles of the natural world. The concourse will also create a sense of arrival and express the mission of the hospital and the five principals of caring, uniting, educating, sharing and healing.</p> <p>The extension of the CSB has been articulated with surface treatment of fenestration and solar shading elements to provide an interesting level of detail that will not create a monolithic building outcome. The façade treatments have been designed in collaboration with the ESD consultant and will break up the façade by introducing shadowing and interest in the elevation. The 3D model submitted to the Department of Planning on 1 November 2010 demonstrates this in more detail.</p> <p>The Shannon Wing reflects contemporary hospital design with a long thin building form maximizing the exposure to natural light to the benefit of the patient rooms. The façade treatment is vertical in its nature and the surface treatment is articulated to create a rhythm and pattern of an otherwise repetitive room layout.</p> <p>The Education Centre has maintained the same language of the main hospital with the use of a vertical pattern expressed in an articulated plan layout accommodating the range of functions in the centre.</p> <p><u>Height and Facades of Education Centre</u></p> <p>The façade details of the Education Centre have been reviewed and amended architectural drawings are provided as outlined in <b>Section 4</b> of this report.</p> <p><u>Innovative Design Techniques</u></p> <p>The existing CSB layout is an important consideration and needs to be continued from an operational point of view. Elements around the perimeter that require natural light will take priority. The façade adjacent to the Radiation Oncology bunkers has been designed to enable internal gardens and natural light to penetrate deeper into this area and where an engagement with nature will play an important role for patients.</p> <p>The Concourse provides strong links to the Village Green and the new Forecourt and Arrival Podium with the landscaped space beyond.</p> <p>The ward wings of the CSB and Shannon Wing provide natural light to all patient rooms. Balconies and operable windows for natural ventilation have not been incorporated due to infection control.</p> <p><u>Internal Design</u></p> <p>Hospital layouts are required to meet the standards of AS 1428 Part 1 and Part 2, the NSW Health Facility Guidelines and the BCA. NSW Health Facility Guidelines also set standards for slip resistant floor materials and other standards for infection control.</p> <p>Slip resistant floor materials, lift specification, door schedule, tactile ground surface indicators, lighting levels, décor, signage, hearing augmentation facilities, furniture/counter fitout and the like will be resolved at the detailed documentation stage and prior to the issuing the CC.</p> <p><u>Planning for Bushfire Protection, Flora and Fauna and Earthworks</u></p> <p>The pre-lodgement design phase included a consolidated and comprehensive evaluation of bushfire protection, biodiversity and earthworks. A principal guiding objective was to avoid any impacts on the surrounding bush land and the existing flora and fauna, while achieving required APZ setbacks for bushfire control.</p> <p><u>APZ Requirements</u></p> <p>The Clinical Services Building expansion has been designed to be wholly within the APZ setback identified on the drawings.</p> <p>Drawings 031 to 034 show the planning of Stage 1B with a notch in the planning between Grid Lines C1 and C2 and CH. There is a free standing structure that visually completes the corner, however, it is not attached to the Class 9 building and does not encroach the APZ requirements as seen on Drawing 035.</p> <p><u>Crime Prevention through Environmental Design</u></p> <p>Safer-by-design principles have been incorporated into the overall design. Clear sightlines are provided to and from the main entry to the hospital, achieving natural surveillance of the entry and adjoining internal and external areas, including the arrival podium and associated car parking.</p> <p>The Concourse is predominantly of glass and contains active uses which facilitate a high level of surveillance over the village green and pedestrian circulation areas.</p>

Issue	Response
	<p>The multi-deck car park and the adjoining at-grade car parks will continue to be controlled by boom gates, providing improved security for vehicles parked on site, particularly for extended periods.</p> <p><u>Resolution of Design</u></p> <p>Bunkers are optimally located away from public areas as they comprise 1.2 metre thick concrete walls and roof to contain their radioactive nature. Bunkers are located at Level 2 and will be partly buried as the ground level along the long southern edge is at Level 3. The roof level of the bunker is flat and at approximately sill level of Level 3.</p> <p>An internal space between the bunker edge and Level 3 façade has been created to bring natural light into Level 2 and Level 3 so the bunkers sit well within the composition of the building and the flat roof expression is in keeping with the flat roofed nature of the other buildings.</p> <p><u>Underground Car Parking</u></p> <p>The perceived scale of the car park is reduced by the location of the arrival podium on Level 2 with the car park projecting two levels above the arrival podium and the other two levels below arrival podium level.</p> <p>A clear identification of access and where to park is important when arriving at the hospital for strangers. The pedestrian access from the car park to the hospital needs to be clear and unambiguous. This has been achieved with the arrival podium and forecourt acting as an orientation space.</p> <p>Basement parking would be expensive, environmentally more expensive to operate and the clarity of orientation would not be as clear. The final proposal is a balanced consideration of all issues.</p>
Heritage	<p>Correspondence from Graham Brooks &amp; Associates addressing the heritage related matters is attached as <b>Appendix F</b>. Each of the responses is summarised below:</p> <ul style="list-style-type: none"> <li>▪ The archival folders were prepared in accordance with the Heritage Branch Guidelines. Two copies were submitted to the Department of Planning to enable one copy to be forwarded to Ku-ring-gai Council and one copy to be held by the Department of Planning for public exhibition of the Project Application.</li> <li>▪ The DGRs do not require an archaeological survey or an archaeological management plan. However, should any relics be uncovered during the site works, the archaeological provisions of the NSW Heritage Act apply and an excavation permit must be sought from the NSW Heritage Council. The Draft Statement of Commitments includes an appropriate Statement highlighting this requirement.</li> <li>▪ The Draft Statement of Commitments confirm that the media and locations for the site interpretation will be resolved at CC stage, which is considered appropriate.</li> </ul>
Drainage	<p>Correspondence from C&amp;M Consulting Engineers addressing the drainage related matters is attached as <b>Appendix G</b>. Each of the responses is summarised below:</p> <ol style="list-style-type: none"> <li>1. The Civil Engineering Report indicates that the piped stormwater drainage system will be designed for a 1 in 20 year ARI event. To ensure compliance with DCP 47, the piped stormwater drainage network will be designed to capture and convey storm runoff from a 1 in 50 year ARI event.</li> <li>2. OSD is being provided to limit storm flows to pre-development flows, controlling storm flows in downstream drainage systems (including Coups Creek). Additional controls that will be implemented include: <ul style="list-style-type: none"> <li>▪ Flow control to limit peak discharges and runoff volumes to existing for storm events up to a 1 in 2 year ARI. This will provide greater control of peak storm flows for more frequent storm events and enable compliance with the Biodiversity Management Plan (BMP).</li> <li>▪ Rainwater retention and reuse of harvested rainwater on site to reduce frequency and volume of stormwater runoff.</li> </ul> </li> <li>3. The Stormwater Management Plan indicates several potential end uses for harvested rainwater. However, it is noted that the hospital is concerned regarding infection control and as such, it may not be appropriate for toilet flushing. This is subject to further investigation during the detailed design, however, the project commits to using on average, approximately 7,500L of harvested rainwater per day to achieve an effective water balance and compliance with the BMP.</li> </ol>

Issue	Response
	<ol style="list-style-type: none"> <li>4. The existing outlet structures will be upgraded to be consistent with current “best practice”. The existing “stilling” basins will be converted into small bio-retention basins (or rain gardens) to allow stormwater to infiltrate into the sub-surface.</li> <li>5. Stockpile locations for re-use of topsoil removed during earthworks will be addressed at CC stage.</li> </ol>
Bushfire	<p>Correspondence from Australian Bushfire Protection Planners addressing the drainage related matters is attached as <b>Appendix H</b>. Each of the responses is summarised below:</p> <p><u>Evacuation</u></p> <ul style="list-style-type: none"> <li>▪ The Rural Fires Regulation 2002 has been replaced by the Rural Fires Regulation 2008 and is therefore not relevant.</li> <li>▪ The comment regarding the requirement for a reference to AS4083 – 1997 – Planning for Emergencies – health care facilities is noted.</li> <li>▪ The bushfire planning and development of bushfire protection measures were determined based on providing maximum protection to the hospital precinct from bushfires which may occur in the Lane Cove National Park and the vegetation within the Coups Creek/Lane Cove River corridors. The aim is to provide a safe environment in which patients, staff and visitors can remain without having the need to evacuate/relocate due to bushfire risk. The protection measures include maximum width Asset Protection Zones (APZ) to ‘core hospital’ uses and construction of buildings to a level which will address the potential levels of radiant heat and ember attack. The maximum width of APZ setbacks will reduce the radiant heat loading on the exterior of the ‘core’ buildings to less than 10kW/m<sup>2</sup> with the building being designed and constructed to comply with BAL 12.5 [12.5 kW/m<sup>2</sup>]. Ember attack is also addressed in provision of complying construction standards. The impact of bushfire smoke will be addressed in the provision of smoke filters on the fresh-air intakes to the air-conditioning system. These precautionary measures provide a safe environment from which there will not be the need to relocate patients, staff or visitors due to bushfire risk.</li> <li>▪ The Construction Certificate (CC) will document compliance with the fire safety provisions of the BCA for both structure fires and bushfires.</li> </ul> <p><u>Access and Egress for Emergency Vehicles:</u></p> <ul style="list-style-type: none"> <li>▪ Emergency vehicle access to the car parks will be addressed in the detailed design phase for CC documentation. The temporary carpark is adjacent to the ‘narrow’ section of the Coups Creek corridor and at lower risk than the western edge of the Hospital Precinct. The layout of the temporary carpark and its access from the main entry road/roundabout provides satisfactory protection against this level of risk and as such, it is not necessary to provide a secondary access/egress point to Fox Valley Road.</li> <li>▪ The requirement that all access ways should be well sign posted, with directions to Fox Valley Road and specified evacuation points is noted and agreed.</li> <li>▪ The perimeter road is north of the proposed multi-storey car park building and at-grade car park. It is located within the APZ and within 2 x 30 metre lengths of canvas hose line or within the 30 metre long ‘live’ reel hose length from attending fire appliances. As such, it will not be necessary for fire appliances to leave the road pavement to access the APZ or the bushland interface as this can be done from the safety of the perimeter road.</li> </ul> <p><u>Construction Standards:</u></p> <ul style="list-style-type: none"> <li>▪ The Bushfire Protection Assessment Report prepared by ABPP states:  <i>The core hospital component of the Stage 1A, 1B; Stages 2 &amp; 3 Hospital development consists of buildings which are located more than 100 metres from the unmanaged vegetation within the Coups Creek riparian zone/E2 Environmental Protection Zone.</i>  <i>This separation width reduces the radiant heat rating on the exposed elevations of these buildings to less than 10kW/m<sup>2</sup> – therefore complying with the maximum levels of radiant heat permitted for a ‘Special Fire Purpose Development’.</i>  As the buildings will be fully air-conditioned, with automatic closing doors and windows which will be closed at all times, there is no requirement to provide </li> </ul>

Issue	Response
	<p>additional protection against burning ember impact on the structure, however, smoke filters shall be fitted to any new air-conditioning system.</p> <p>The advice remains the same for AS3959 – 2009 as buildings are to be designed and built to comply with the Type A construction as defined by the BCA and will not be exposed to ignitions by burning embers.</p> <p>The advice in relation to the smoke filters remains.</p> <ul style="list-style-type: none"> <li>▪ The CSB building does not extend into the Asset Protection Zone. The new podium structure will be constructed to the following standard as recommended in the Bushfire Protection Assessment Report prepared by ABPP:  <b><i>Ancillary, Non-Core Hospital Buildings [e.g. Carparking buildings / Service Buildings]</i></b>  <i>Non combustible construction with defendable space provided.</i></li> </ul> <p>This level of construction exceeds BAL – Low.</p> <ul style="list-style-type: none"> <li>▪ The car park will be constructed from non-combustible materials of sufficient size and density to withstand expected levels of radiant heat.</li> </ul> <p><u>Building Footprints:</u></p> <ul style="list-style-type: none"> <li>▪ This section of the Council response deals with design matters rather than specific bushfire protection requirements. The recommendation to provide an alternate fire access by modifying the proposed recreational trail will not be supported by the NSW Rural Fire Service as a perimeter road/car park is the minimum requirement for this type of development.</li> <li>▪ An increase in the construction standards to the Clinical Services Building beyond that which is proposed is not required as the bushfire risk to this building is low due to the 100 metre wide separation to unmanaged vegetation in the Coups Creek corridor.</li> </ul> <p><u>Landscaping:</u></p> <ul style="list-style-type: none"> <li>▪ New planting will be suitable in terms of bushfire management and safety requirements and in accordance with APZ requirements.</li> <li>▪ The Bushfire Management Plan identifies the protocols for the management of the APZs.</li> </ul> <p><u>Fire Management Plan:</u></p> <ul style="list-style-type: none"> <li>▪ The Fire Management Plan has been completed and included in the Biodiversity Management Plan.</li> </ul> <p><u>Oxygen Tanks:</u></p> <ul style="list-style-type: none"> <li>▪ Not relevant to bushfire.</li> </ul> <p><u>Static Water Supply:</u></p> <ul style="list-style-type: none"> <li>▪ The Static Water Supply Tank diagram included in the ABPP report identifies that there are 5 x 120,000 litre storage tanks specifically for structural and bushfire fighting with 1 x 120,000 litre tank specifically for bushfire fighting operations. All five tanks are interconnected so that a total of 600,000 litres of water are available for bushfire operations.</li> <li>▪ In addition, the ABPP report includes a plan that shows two additional 120,000 litre storage tanks specifically for potable water supply.</li> </ul>
Staging	<p>The staging issues raised by Council, including the integration of the hospital proposal within the development approved by way of the Wahroonga Estate Concept Plan and the proposed temporary car park, have been addressed in <b>Section 3.2</b>. A drawing prepared by Morris Bray Architects is also provided as <b>Figure 4</b>, graphically illustrating the integration of the plans.</p>
Flora and Fauna	<p>Correspondence from Cumberland Ecology is attached as <b>Appendix I</b>. A summary of their response is provided below:</p> <ul style="list-style-type: none"> <li>▪ A qualified Arborist will assess potential damage to existing native trees and prescribe ameliorative measures as necessary to retain and protect significant trees.</li> <li>▪ The majority of APZs are already in existence and considered adequate for bushfire protection. Some minor adjustments were made to the APZ, however this will not result in removal of native trees in this particular area. The conservation value within</li> </ul>

Issue	Response
	the E2 zone will not be significantly impacted as a result of this minor adjustment.
Noise and Vibration	The issues raised by Council with regard to noise have been addressed in the response to the issues raised by the Department of Planning The re-worded conditions have been included within the revised Draft Statement of Commitments in <b>Section 5</b> .

### 3.9 Public Submissions

Three submissions were received from the public, each of which is responded to below:

- General support for expansion of Sydney Adventist Hospital – the submission is acknowledged.
- Opposition to intensification of paid car parking – the inclusion of paid car parking is a common occurrence in both public and private hospitals. It enables turnover of car parking and encourages alternative forms of transport (ie public transport, cycling and walking). It also funds the maintenance and management of these facilities, funds which would otherwise need to be diverted from the delivery of quality health care.
- Issues relating to the Wahroonga Estate Concept Plan approval - a submission was received that relates to a residential property located to the east of the bushland on the opposite side of Fox Valley Road. The issues raised in the submission have no relevance to the proposed alterations and additions to the hospital and are not relevant to the assessment of the Project Application.

## 4 Modifications to Part 3A Application

This section lists the updated drawings and additional visual material submitted with the Preferred Project Report to clarify and/or modify the original material submitted with the Environmental Assessment:

### Overall Masterplan

- A/EA-009 Overall Land Use Plan (New Drawing)
- A/EA-100 Pedestrian Movement analysis (New Drawing)

### Concourse

- A/EA-010 Concourse FI Plan Level 1 (Existing RL & New RL added)
- A/EA-011 Concourse FI Plan Level 2 (Existing RL & New RL added)
- A/EA-012 Concourse FI Plan Level 3 (Existing RL & New RL added)
- A/EA-013 Concourse FI Plan Level 4 (Existing RL & New RL added)
- A/EA-014 Concourse FI Plan Level 5 (Existing RL & New RL added)
- A/EA-015 Concourse FI Plan Level 6 (Existing RL & New RL added)
- A/EA-016 Concourse Sections & Elevations-Sheet 1 (Floor Levels Revised, Roof/Eaves RL added, Existing Clifford Floor Levels adjusted base on latest survey)
- A/EA-017 Concourse Sections & Elevations-Sheet 2 (Floor Levels Revised, Roof/Eaves RL added, Existing Clifford Floor Levels adjusted base on latest survey)
- A/EA-018 Concourse Sections & Elevations-Sheet 3 (Floor Levels Revised, Roof/Eaves RL added, Existing Clifford Floor Levels adjusted base on latest survey)

### CSB Expansion

- A/EA-030 CSB Expansion FI Plan Level 1 (Existing RL & New RL added)
- A/EA-031 CSB Expansion FI Plan Level 2 (Existing RL & New RL added)
- A/EA-032 CSB Expansion FI Plan Level 3 (Existing RL & New RL added)
- A/EA-033 CSB Expansion FI Plan Level 4 (Existing RL & New RL added)
- A/EA-034 CSB Expansion FI Plan Level 5 (Existing RL & New RL added)
- A/EA-035 CSB Expansion FI Plan Level 6 (Existing RL & New RL added)
- A/EA-036 CSB Expansion FI Plan Level 7-10 (Existing RL & New RL added)
- A/EA-037 CSB Expansion FI Plan Level 11 (Existing RL & New RL added)
- A/EA-038 CSB North Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-039 CSB West Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-040 CSB South Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-041 CSB East Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-042 CSB Section 5 (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-043 CSB Section 6 (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-044 CSB Section 7 (Floor Levels Revised, Roof/Eaves RL added)

Clifford Refurbishment

- A/EA-050 Clifford Refurbishment Floor Plan Level 4 (Existing RL & New RL added)
- A/EA-051 Clifford Refurbishment Floor Plan Level 5 (Existing RL & New RL added)

Multi-Deck Carpark

- A/EA-070 Carpark Floor Plan Level 0 (Existing RL & New RL added)
- A/EA-071 Carpark Floor Plan Level 1 (Existing RL & New RL added)
- A/EA-072 Carpark Floor Plan Level 2 (Existing RL & New RL added)
- A/EA-073 Carpark Floor Plan Level 3 (Existing RL & New RL added)
- A/EA-074 Carpark Floor Plan Level 4 (Existing RL & New RL added)
- A/EA-075 Carpark Floor Plan Level 5 (Existing RL & New RL added)
- A/EA-076 Carpark Elevations North & South (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-077 Carpark Elevations East & West (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-078 Carpark Sections 1 (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-079 Carpark Sections 2 (Floor Levels Revised, Roof/Eaves RL added)

Shannon

- A/EA-090 Shannon Floor Plan Level 0 (Existing RL & New RL added)
- A/EA-091 Shannon Floor Plan Level 1 (Existing RL & New RL added)
- A/EA-092 Shannon Floor Plan Level 2 (Existing RL & New RL added)
- A/EA-093 Shannon Floor Plan Level 3 (Existing RL & New RL added)
- A/EA-094 Shannon Floor Plan Level 4 (Existing RL & New RL added)
- A/EA-095 Shannon Floor Plan Level 5 (Existing RL & New RL added)
- A/EA-096 Shannon Floor Plan Level 6 (Existing RL & New RL added)
- A/EA-097 Shannon Floor Plan Level 7-11 (Existing RL & New RL added)
- A/EA-098 Shannon Floor Plan Level 12 (Existing RL & New RL added)
- A/EA-099 Shannon North Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-100 Shannon East and West Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-101 Shannon South Elevation (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-102 Shannon Section Sheet 1 (Floor Levels Revised, Roof/Eaves RL added)
- A/EA-103 Shannon Section Sheet 2 (Floor Levels Revised, Roof/Eaves RL added)

Education Centre

- A/EA-110 Education Centre Floor Plan Level -1 (Proposed RLs reviewed, Boundary lines added, Fire Egress from Plant room added, Projection of raked seating in Lecture Theatres above added)
- A/EA-111 Education Centre Floor Plan Level 0 (Proposed RLs reviewed, Boundary lines added, Proposed Landscaping added, Deletion of Deck extension to the South)



- A/EA-112 Education Centre Floor Plan Level 1 (Proposed RLs reviewed, Boundary lines added, Proposed Landscaping added)
- A/EA-113 Education Centre Floor Plan Level 2 (Proposed RLs reviewed, Boundary lines added, Proposed Landscaping added)
- A/EA-114 Elevations (Projection lines of Store & Plant Rooms at -1 Level added, Proposed RLs reviewed, Proposed Landscaping added, Proposed parking RLs and associated Retaining walls added, Profile of Comenarra Parkway added.)
- A/EA-115 Sections (Section EDUC/04 added, Projection lines of Store & Plant Rooms at -1 Level added, Proposed cut to land added, Proposed RLs reviewed)

Materials and Elevational Treatment

- A/EA-211 Materials Board
- A/EA-212 Façade study

## 5 Revised Statements of Commitments

The following outlines the revised Statement of Commitments proposed by the Sydney Adventist Hospital (SAH).

The updated Statement of Commitments includes original recommendations provided in the specialist consultant reports submitted with the Environmental Assessment, as well as additional recommendations arising from the responses to the key issues raised by the stakeholders and/or the public during the public exhibition of the Project Application.

### 5.1 Landscaping

The SAH commits to:

- Implementing the recommendations in the Visual Impact Analysis prepared by Urbis and dated June 2010 and including:
  - Retaining existing vegetation and individual valuable trees on site where possible and practical, to soften the visual prominence of development from edges of site and retain the existing visual character.
  - Off-setting any clearing with replanting, as considered appropriate.
  - Retaining trees that contribute to the vegetated ridge line as experienced from views identified in the Visual Impact Analysis report.
- Preparing further detailed design landscape drawings prior to release of Construction Certificates for individual stages, generally in accordance with the Landscape Drawings prepared by Site Image and dated 12 July 2010 and the accompanying Landscape Design Statement prepared by Site Image and dated 27 June 2010.

### 5.2 Ecologically Sustainable Design

The SAH commits to:

- Achieving a minimum 4 Star Green Star Rating (or equivalent rating) for each building by using an appropriate combination of the initiatives outlined in the ESD Concept Design Report, prepared by Umow Lai and dated 12 July 2010, and/or any additional initiatives appropriate and relevant at the time of the detailed design for each stage. Details shall be provided with the construction certificate for each stage.
- Updating and implementing the Façade Concept Design (Stage 1A) Report for each future stage including the second stage of the CSB extension, the Concourse, Education Centre and the new Shannon Wing. Details shall be provided with the construction certificate for each of the future stages.
- Incorporating initiatives to reduce potable cold water demand within each stage of the project (as relevant), including:
  - On-site potable cold water storage tanks to reduce peak demand supply from the water main. Water tanks will provide a minimum three hours storage to provide a continuous supply of potable cold water during maintenance procedures or water main failure.
  - On-site rainwater harvesting through run-off from all new major roof areas being directed to a recycling/non potable water storage tank.
  - Water saving conservation devices, including:
    - 3/4.5 Litre WC cisterns

- 0.8 L/sec automatic urinal flushing
- Low flow tapware and appliances

### 5.3 Bushfire Protection

The SAH commits to complying with the requirements of the Bushfire Protection Assessment, prepared by Australian Bushfire Protection Planners and dated 7 July 2010, including:

- Installation of static water supply tanks to provide a potable water supply to the Hospital and a fire fighting water supply for structural fires and bushfire events.
- Installation of a hydrant supply for structural fire fighting in accordance with AS 2419.2-2004.
- Provision of a separate hydrant ring main to the perimeter of the precinct for bushfire fighting operations.
- Progressive updates of the Estate Fire Management Plan to address the provision of Asset Protection Zones and fuel management of residual vegetation. A copy of the updated Estate Fire Management Plan shall be provided to the Hornsby District Office of the NSW Rural Fire Services and the NSW Fire Brigade.
- Establishing a sub-committee from the members of the Emergency Liaison Committee to oversee the implementations of the recommendations of the Estate Fire Management Plan with the Chairperson of the sub-committee responsible for liaison with the Hornsby Ku-ring-gai Bushfire Management Committee and attendance at Bushfire Management Committee meetings.
- Construction of Class 7 buildings (Car Park/Offices, etc) to withstand 29kW/m<sup>2</sup> radiant heat loadings on the exterior of the building.

### 5.4 Flora and Fauna

The SAH commits to:

- Complying with the Biodiversity Management Plan for the Wahroonga Estate.
- Locating the new oxygen tanks In Stage 1A so as to avoid removal of the existing Sydney Turpentine-Ironbark Forest trees.

### 5.5 Heritage

The SAH commits to:

- Providing details with the construction certificate for each stage of the project documenting the implementation of the Interpretation Strategy, including location of interpretative devices and appropriate media. This shall include heritage plaque(s), interpretive panels and interpretive text, relocation of 'Bethel' and its curtilage elements and the housing of the archival photographic recording as part of the Merritt Kellogg Collection.
- Supervising and recording in detail the clearance works associated with the proposed development by the nominated excavation director in accordance with Heritage Branch requirements.

### 5.6 Transport and Access

The SAH commits to:

- Preparing and submitting Traffic Control Plans for intersection upgrades and associated roadworks to the relevant roads authority for approval prior to issue of Construction Certificates for the associated upgrades/roadworks.

- Preparing and submitting detailed Construction Traffic Management Plans prior to issue of Construction Certificates for each stage.
- Providing a temporary car park that accommodates 258 cars for use until such time as sufficient permanent car parking is provided to meet demand associated with both operational and construction activities.
- Designing the car parking areas (including bays, ramps, aisles, etc) to comply with AS 2890.1 and AS 2890.6.
- Constructing the pedestrian and bicycle connections located within the Sydney Adventist Hospital site as identified in the Pedestrian and Bicycle Opportunities Plan, prepared by GTA Consultants.
- Providing bicycle storage facilities and end-of-trip facilities (ie lockers and showers) for use by staff, nurses and doctors.
- Amending the existing 'How to Find Us' guidelines attached to the Workplace Travel Plan by:
  - Highlighting and prioritising alternative modes of transport over private vehicles.
  - Showing walking/cycling distances from nearby rail stations (including Warrawee and Normanhurst stations).
- Implementing the Workplace Travel Plan over two years and evaluating progress/change by repeat survey and audit after three years and five years.

## 5.7 Stormwater Management

The SAH commits to implementing a stormwater management system that incorporates the following features described in the Stormwater Management Plan, prepared by C&M Consulting Engineers Pty Ltd and dated July 2010, and as listed below:

- A pipe network system to collect minor storm runoff from surface areas and minimise nuisance flooding.
- An on-site stormwater detention system to detain storm flows so they can be slowly released over time to ensure peak flows do not exceed that of the existing site and/or overload the existing drainage infrastructure.
- Bio-retention basins to provide significant water quality treatment to runoff from impervious areas and provide additional stormwater detention.
- Stormwater Quality Improvement Devices (SQIDs) including:
  - Hydrodynamic separation via Humeceptor Device(s) to provide water quality treatment to runoff from road and car park areas by removing sediment, oils and hydrocarbons.
  - EnviroPods installed in pits in car parking areas to capture gross pollutants at source;
- Rainwater harvesting and retention system to allow rainwater reuse, as well as providing improvement to the quality and volume of stormwater runoff from the site.
- Vegetated swales to convey storm flows while providing water quality treatment via filtration.
- Overland flow paths (such as roads and swales) to carry major storms through the site without causing damage to property from flooding.

## 5.8 Noise and Vibration

The SAH commits to:

- Preparing a specific noise and vibration management plan which covers all stages of construction and demolition works for the development must be developed by an appropriately qualified person, such as an acoustic engineer/consultant, and a copy submitted to the Principal Certifying Authority prior to the release of any construction certificate/s for the site. The noise and vibration management plan must incorporate all measures identified in Section 8 of the Heggies Construction Noise Impact Statement dated 14 July 2010 as well as compliance with the DECCW Interim Construction Noise Guidelines including setting specific hours of operation. A copy of the management plan is also to be kept on-site during all construction and demolition phases to provide guidance to the construction/demolition contractor relating to noise and vibration issues.
- Noise and vibration monitoring must be carried out by an appropriately qualified person, such as an acoustic engineer/consultant, throughout the demolition and construction works. Should the monitoring identify a major non-compliance with the noise management plan, recommended actions must be developed and provided to the project manager and construction/demolition contractor for their action. A copy of all noise and vibration monitoring results must be submitted to the construction/demolition contractor and project manager at weekly intervals for continuous monitoring.
- The Project Manager and/or Construction/demolition Contractor is to provide information to the Hospital and surrounding residents of the nature of the work to be carried out as well as the expected noise levels and duration of the proposed works at least 7 days prior to the work being carried out. Contact details must also be provided and a log of complaints should be kept to ensure the noise assessment monitoring and any relevant recommendations for control measures address the community's concerns.
- Specific noise control measures must be developed by an appropriately qualified person, such as an acoustic engineer/consultant, during the design stages to ensure that noise from all new noise generating mechanical equipment will meet the noise criteria when measured at the affected properties. This may include the installation of appropriate noise attenuators; acoustic louvres; barriers; enclosures; careful consideration of the orientation of air inlets/outlets and items of plant; and mechanical isolation. Details of the noise generating equipment to be installed and any required noise control measures must be submitted to the Principal Certifying Authority prior to release of the Construction Certificate.
- A compliance inspection including noise monitoring and assessment must be carried out by an appropriately qualified person, such as an acoustic engineer/consultant and a report demonstrating compliance with the NSW Government noise criteria must be submitted to the Principal Certifying Authority for all stages prior to release of the occupation certificates for each stage.
- The operation of the premises must comply with the noise criteria of the:
  - (a) NSW Department of Environment, Climate Change and Water's (DECCW) NSW Industrial Noise Policy to protect external receivers. Noise to internal receivers shall be controlled to levels consistent with hospital usage.
  - (b) NSW DECCW Environmental Criteria for Road Traffic Noise;
  - (c) NSW DECCW Environmental Noise Control Manual - Chapter 151 – Noise control guideline: Generators, Emergency
- Appropriate hours should be considered in any noise management plan for the site limiting the times that service vehicles/loading docks are used and visitor/patient vehicles are allowed onsite along with appropriate noise mitigation measures to protect the amenity of neighbouring residents
- Helicopter operations should be conducted with due regard to the Air Services Australia – Environmental Principles and Procedures for minimising the impact of Aircraft Noise (2002) and the

Flying Neighbourly Guide (USA) and any relevant NSW Government legislation with the exception that one private flight per annum is permitted.

- Complying with the requirements outlined in the Structural Engineering Report, prepared by SCP Consulting Pty Ltd and dated 16 June 2010, including:
  - All plant is to be base isolated on spring and damper mounts.
  - Floors shall be designed to ensure that they comply with the recommended acceleration and velocity limits, using the R factor method outlined in Annex A of AS 2670.2 and Appendix A of BS 6472.

## 5.9 Services

The SAH commits to:

- Submitting a Section 73 Application to Sydney Water to confirm adequacy of the Sydney Water mains to supply the new development, taking into account initiatives to reduce the potable cold water demand.
- Potable and non potable cold water service will be designed and constructed in accordance with AS 3500.1, National Plumbing and Drainage Part 1: Water Supply, New South Wales Code of Practice and Sydney Water requirements.
- Submitting a Section 73 Application to Sydney Water to confirm adequacy of the Sydney Water main to drain the new development.
- Designing and constructing the sewer drainage systems in accordance with AS 3500.2, National Plumbing and Drainage Part 2: Sanitary Plumbing and Sanitary Drainage, New South Wales Code of Practice and Sydney Water requirements. A number of waste water systems will require pre-treatment prior to discharge into Sydney Water's sewer drainage system.
- Continuing to liaise with Energy Australia in respect to the augmentation and extension of Energy Australia's network to meet the additional load of the proposed development. It is anticipated that additional substations will be placed in strategic locations throughout the development, connected by a high voltage underground ring main cable to provide a reliable supply.
- Continuing to liaise with Jemena regarding the provision of natural gas supply to the proposed additions by utilising the existing capacity in the local network.
- Liaising with the relevant telecommunications provider to extend the existing services as required to the new additions.

## 5.10 Demolition Works

The SAH commits to undertaking all demolition work in accordance with:

- Demolition Site Plan, prepared by Morris Bray Architects and dated 9 July 2010.
- Sydney Adventist Hospital Redevelopment Demolition Report, prepared by Morris Bray Architects and dated 5 July 2010 (Issue A).
- Sydney Adventist Hospital Redevelopment Waste Management Report prepared by Morris Bray Architects and dated 5 July 2010.

## 5.11 Excavation and Earthworks

The SAH commits to:

- Addressing the recommendations in each of the following geotechnical reports:

- Geotechnical Investigation for Proposed Stage 1 Phase 1 Expansion Works, prepared by Jeffrey & Katauskas Pty Ltd and dated 8 July 2010.
- Geotechnical Investigation and Report for San Hospital Wahroonga, prepared by Coffey Geotechnics and dated 30 April 2008.
- Addressing the recommendations in each of the following site contamination reports:
  - Stage 1 Environmental Site Assessment for Proposed Hospital Upgrade Development (Stage 1), prepared by Environmental Investigation Services and dated April 2009.
  - Contamination Assessment, prepared by Coffey Environments and dated 30 May 2008.
  - Any additional supplementary report prepared by Coffey Environments and submitted to the Department of Planning prior to determination of this Project Application.
- Undertaking further geotechnical and site contamination investigations, if required, following demolition of the Shannon Wing in Stage 3.
- Implementing the earthworks and sediment and erosion control measures outlined in the Civil Engineering Works, prepared by C&M Consulting Engineers and dated 15 July 2010.

## 5.12 Construction Management

The SAH commits to:

- Implementing the Construction Management Plan prepared by Morris Bray Architects and dated 7 November 2010.
- Implementing the Sydney Adventist Hospital Redevelopment Waste Management Report prepared by Morris Bray Architects and dated 5 July 2010.

## 5.13 Operational Management

The SAH commits to:

- Storing and handling dangerous goods in accordance with the SEPP 33 Review, prepared by AECOM and dated 14 July 2010.
- Extending the existing trade waste agreement to cover the discharge of trade wastes from the scanning areas in the upgraded sections.
- Extending the existing contract for biohazards waste collection on a staged basis to incorporate the expanded sections of the hospital.
- Implementing staff training regarding operational waste management procedures, including discharge procedure and signage provisions.

## 6 Summary and Conclusion

The proposed staged alterations and additions to the Sydney Adventist Hospital are considered to be appropriate and entirely suitable for the site for the following reasons:

- The proposed development is permitted with consent in the SP1 Special Activities (Health Services Facility) zone and complies with the relevant zone objectives listed in the Major Development SEPP.
- The proposed buildings comply with each of the controls listed in Part 25 of Schedule 3 of the Major Development SEPP, including the maximum height of buildings and floor space ratio.
- The proposal is entirely consistent with State, regional and local strategic planning policy, including:
  - Improved access to quality healthcare through the upgrade of and additions to an existing hospital.
  - Increased participation in education and training through the Faculty of Nursing building.
  - Increased employment within close proximity of residential areas.
- The potential environmental impacts are considered to be either positive or able to be mitigated through the adoption of appropriate measures to minimise their potential impact. An updated Statement of Commitments outlining each of these requirements is provided in **Section 5**.
- The proposed development will result in considerable social and economic benefits through the provision of expanded health services, substantial improvements to the internal amenity of the existing hospital and increased employment opportunities in health and allied services.
- The issues raised by the stakeholders and public have been satisfactorily addressed by way of this report and the additional supporting documentation.

Overall, the proposed development is considered to be in the public interest as it will result in a number of significant benefits for existing and future employees, the local community and the wider population.





# Appendix A      Construction Management Plan

# Appendix B      Updated Social Benefits Report

## Appendix C      Correspondence from Warren Smith & Partners

## Appendix D      Correspondence from Morris Bray Architects

# Appendix E      Supplementary Report from Umow Lai

## Appendix F      Correspondence from Graham Brooks & Associates

## Appendix G      Correspondence from C&M Consulting Engineers



## Appendix H      Correspondence from Australian Bushfire Protection Planners

# Appendix I      Correspondence from Cumberland Ecology





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