

Environmental Impact Statement

Bulli Hospital Aged Care Centre for Excellence



Located at 22 Hospital Road, Bulli
Lot 1 DP 175787 and Part Lot 1 DP 165903

Prepared for Johnstaff Pty Ltd
(on behalf of Health Infrastructure and IRT)
by TCG Planning

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1 Executive Summary

NSW Health Infrastructure, in association with IRT, proposes an extension of the existing facilities for Bulli Public Hospital with supporting community based (not for profit) residential aged care facility (IRT) and henceforth referred to as 'Bulli Aged Care Centre for Excellence' or 'BACCE'.

A Request for Secretary's Environmental Assessment Requirements (SEARS) for the site was submitted to the Department of Planning and Environment in July 2016. This Environmental Impact Statement (EIS) is submitted for consideration following the receipt of the SEARS (Ref.SSD7751) dated 28 July 2016, issued under the provisions of SEPP (State and Regional Development) 2011 and Schedule 2 of the Environmental Planning & Assessment (EPA) Regulation 2000 as discussed in **Section 2** of this EIS. The integrated hospital and Residential Aged Care Facility (RACF) comprises State Significant Development in accordance with Schedule 1, Clause 14 of State Environmental Planning Policy (State and Regional Development) 2011, as the hospital component has a capital investment value (CIV) of more than \$30 million. Although not listed in Schedule 3, the seniors housing (RACF) is an integral and inseparable component of the development, which necessitates consideration in one combined application. This EIS has been prepared for Johnstaff Pty Ltd (Project Manager for NSW Health Infrastructure) and provides an assessment of the project based on the outcomes of a number of detailed sub consultant investigations.

Site Context

The proposed development is to be located at No.22 Hospital Road in the northern Wollongong suburb of Bulli, specifically identified as Pt Lot 1 DP 165903 and part of Lot 1 DP 175787. The subject site, which consists of one allotment and part of another adjoining allotment, has an irregular shape and has a total site area of 1.155 hectares (based on the Survey Plan prepared by Bee and Lethbridge, refer **Appendix 3**). The subject site and surrounding context are described in detail in **Section 3** of this Environmental Impact Statement. The subject site is within the ownership of NSW Health Administration Corporation.

Proposed Development

NSW Health proposes to establish the BACCE, which will comprise the extension of the existing facilities for Bulli Hospital by providing an aged care inpatient unit and urgent care centre, with supporting community (not for profit) residential aged care facility, as detailed in **Section 4** of this Environmental Impact Statement. It will serve as a "Centre for Excellence", as it will incorporate the best practises of modern medicine for the Illawarra region, providing much needed treatment services for aged inpatients and urgent care. The BACCE will provide services and improved facilities that promote a healthier and more interactive life style for our aging population and will be a major employer for the Illawarra.

The key components of the proposed development (refer to **Section 4** of this Statement) are noted as follows:

- Sixty (60) suite residential aged care facility (within IRT Residential Aged Care Facility);
- Sixty (60) bed public aged care in-patient unit (IPU), including secure bed compound;
- Outpatients clinic, including X-ray;
- Urgent Care Centre (4 bays for minor illness and injuries) to be available to all age groups;
- Ancillary main entry/front of house support facilities including reception area, kitchen and loading dock;
- At grade car-parking for 46 vehicles;
- Clinical and non-clinical support services;

- Outpatients and allied health services; and
- A mortuary.

On completion, the proposed development will provide for the sustainable redevelopment of this currently underutilised site and, in association with the existing adjacent Bulli Hospital facilities, will provide a unique healthcare facility resulting in ongoing benefits to the Illawarra region.

Alternatives

The alternatives to the proposed development which have been considered by the applicant are discussed within **Section 5** of this Environmental Impact Statement comprise, together with justification for the development.

Statutory Framework

Sections 6 and 7 of this EIS detail the National, State and regional statutory framework which relates to the proposal and includes consideration of the manner in which the state significant proposal meets the requirements of State Environmental Planning Policy (State and Regional Development) 2011; State Environmental Planning Policy No. 55 (Remediation of Land); State Environmental Planning Policy (Infrastructure) 2007; State Environmental Planning Policy (Housing for Seniors of People with a Disability) 2004; and the Illawarra/Shoalhaven Regional Strategy. This section also assesses the proposal in relation to the Metropolitan Plan for Sydney 2036.

Section 8 of this EIS details the local planning framework which relates to the proposal and includes consideration of the manner in which the proposal meets the requirements of Wollongong Local Environmental Plan (WLEP) 2009. The subject land lies within the R2 Low Density Residential zone pursuant to WLEP 2009. The uses which are proposed on the site are defined as a 'hospital' and 'seniors housing' in the form of 'residential care facilities'.

Environmental Assessment

The impact on the environment and the amenity of surrounding residents has been considered extensively in the preparation of the supporting documentation for this proposal, with the potential risks and the outcomes of the investigation contained in **Section 9** of this Environmental Impact Statement and summarised below:

Geotechnical Assessment

A 'Report on Geotechnical Investigation' was prepared by Douglas Partners Pty Ltd in August 2003 (**Appendix 17**), with a further review undertaken in May 2016 to determine whether the recommendations of the 2003 report remained current (**Appendix 18**). Douglas Partners note that *excavation to depths of up to 7 m will be required for the hospital and maximum excavation depths of 2 m required for the RACF*. Excavation for the building is less than 7 metres, with the only element below 7 metres deep to be the building piers. Their investigations have identified that a number of geotechnical issues will constrain development of the subject site, including uncontrolled historical filling of up to 6m in depth, which will impact on site stability. Douglas Partners confirm that in order to achieve a site suitable for development, a range of site preparation works are recommended, *"with extensive earthworks required to remediate the northern carpark site"*. Below depths of approximately 4.5m they anticipate that alternative methods of excavation will be required due to the potential presence of weathered rock. Accordingly, they note that *"percussion methods would be required for excavating footings where high strength sandstone is encountered"*. Further, they anticipate that additional

assessment may be required as the planning and design of the development proceeds and conclude that *"whilst it is considered that development of the site for the proposed development is geotechnical feasible, construction will be a challenge due to the variable ground conditions."*

Site Contamination Assessment

A 'Preliminary Site Investigation' With Limited Sampling was conducted by Douglas Partners in November 2015 (**Appendix 19**) which found that potential for contamination exists at the site, primarily through the filling of the site to allow for its development as a car park and through demolition of previous structures. Furthermore, hazardous building materials may have been used in the construction of the buildings currently located on the site (one proposed for demolition) and hence there is a low to moderate potential for contamination to exist in localised areas on the site.

Accordingly, a 'Report on Detailed Asbestos Investigation' was prepared by Douglas Partners in June 2016 (**Appendix 20**) which confirmed that *".....the site has the presence of asbestos contamination that would preclude the proposed development in its current condition"*. However Douglas Partners also note that *"it is considered likely that the site can be made suitable"* to accommodate the proposed development, provided a Remediation Action Plan is prepared and implemented to identify and outline suitable strategies for remediating the site.

A 'Report on Remediation Action Plan' (RAP) was subsequently prepared by Douglas Partners in September 2016 (**Appendix 21**) to outline the methods and procedures to remediate contaminated soils at the site. The RAP confirms the need for a Validation Report to be prepared by a suitably qualified environmental consultant, which should be submitted to the consent authority at the completion of the remediation works program. The Validation Report should also confirm that the site has been remediated to a suitable standard for the proposed development. A Construction Environmental Management Plan is also contained in the RAP to address practices to be employed during site remediation works.

Surface and Groundwater Quality Review

Taylor Thomson Whitting (TTW) confirm within the 'Water and Soils Report' (**Appendix 22**) that *"as the site has a varying depth fill with minor excavation proposed, impact on the ground water is likely to be minimal and localised across the development site."* The Integrated Water Management Plan prepared by Donnelley Simpson Cleary (**Appendix 28**) confirms that a range of water sensitive urban design measures will be incorporated into the development to reduce water consumption and to minimise the effects of rainwater discharge from the land. This includes an onsite detention system (OSD), water quality treatment devices and water efficient fixtures and fittings. Donnelley Simpson Cleary conclude that the use of water quality treatment devices, together with water reduction measures, will assist in meeting water quality objectives. A 'Stormwater Concept Plan' prepared by TTW, which provides further information regarding stormwater capture and treatment, is contained as **Appendix 7**.

Flood Risk Assessment

Directly north of the site exists a water course, referred to as Wharton's Creek. Council's online mapping and the Section 149(5) Certificates confirm that the site is partly located within each of the identified Low, Medium, and High Flood Risk precincts. Jones Nicholson Consulting Engineers were engaged to provide a detailed 'Flood Assessment' of the proposed BACCE development site (**Appendix 10**). This report confirms that *"the subject site is predominately flood free with a small area of flood risk along the Northern boundary which is clearly below the*

developable area of the subject site. The water levels calculated 29.44m (Middle section of site) - 27.50m (North Eastern section of site) are generally consistent with the flood levels provided in councils flood level information advice. The proposed development does not impact the flood water levels on the site or the surrounding properties."

Bushfire Risk Assessment:

The site is recorded as bushfire prone on Council's online mapping and the Section 149(5) Certificates. However, the 'Bushfire Assessment' prepared by Travers Bushfire and Ecology (**Appendix 14**) confirms, via site inspection, that the land identified as being bushfire prone to the north of the subject site is managed. This land is developed for residential purposes and comprises canopy trees only, with a mown understorey and gardens. Accordingly, Travers Bushfire and Ecology conclude that the site is not bushfire prone land and therefore does not require compliance with the Planning for Bushfire Protection 2006, Guidelines.

Flora and Fauna Assessment

The Flora and Fauna Assessment prepared by Travers Bushfire and Ecology (**Appendix 13**) concludes that the proposed development is unlikely to have significant impact upon threatened species, endangered populations or endangered ecological communities. The recommendations of the assessment propose mitigation measures to minimise adverse ecological impacts.

Aboriginal Cultural Heritage Due Diligence Assessment

An 'Aboriginal Cultural Heritage Due Diligence Assessment' was prepared by Biosis in September 2016 (**Appendix 15**) which confirms that there were no Aboriginal sites identified within the study area. Further, this assessment notes that "the study area showed evidence of heavy disturbance, with the western half having been levelled and a car park constructed on top. The eastern half of the study area also showed signs of having been extensively levelled. The survey also identified that before levelling the study area would have been located on a slope of approximately 10 degrees making it an unsuitable for occupation. Based on evidence from the past archaeological reports, the local environment landform, and the heavily disturbed nature of the study area, it is concluded that there is low potential for Aboriginal heritage sites to be present within the study area".

Traffic, Parking and Access Assessment

The 'Traffic Impact Assessment' prepared by TTW (**Appendix 23**) estimates that the BACCE will generate an additional 68 trips during the morning peak and an additional 74 trips during the afternoon peak. Following a SIDRA intersection analysis, which incorporates traffic growth over a 10 year period to 2026, TTW conclude that post development the Princes Highway/Hospital Road intersection "will continue to operate at the same level of service C as in the pre development scenario".

With respect to the provision of parking the Traffic Impact Assessment notes that the development proposes 46 spaces which, following removal of 81 spaces to accommodate the BACCE, represents a shortfall in parking of at least 94 spaces to meet the requirements of Wollongong Development Control Plan (DCP) 2009. However, TTW consider that the proposed parking supply is sufficient, subject to more effective utilization of existing parking spaces at the Hospital site and the use of on street parking which is operating at 36% capacity. During peak hour they confirm that on street parking availability would provide capacity for a further 87 vehicles and conclude that "this represents a significant number of the shortfall in spaces that could be utilised by the proposed development site".

Impacts Associated with Construction

It is recognized within this EIS that the construction of the proposed BACCE has the potential to impact on surrounding residences, primarily due to construction traffic, excavation works and potential noise impacts. Accordingly a 'Preliminary Construction Management Plan' (**Appendix 24**) has been prepared by Johnstaff (September 2016) to address potential construction impacts and to provide mitigation strategies to minimise disturbance to adjacent residents. The preparation of a Construction Management Plan is also recommended to provide further detail on mitigation strategies once construction methodology and the staging of work has been finalised.

Acoustic and Vibration Impacts

An 'Acoustic Assessment' prepared by Acoustic Logic (**Appendix 16**) has assessed the likely noise impacts of the proposed development on the site and surrounding area. This Assessment confirms that compliance with EPA noise emission controls can be achieved through adoption of the recommendations set out in the Assessment. A construction noise and vibration management plan will be prepared to manage construction activities, to ensure noise does not impact on the adjacent residences.

Built Form Outcomes

The overall proposed maximum height of the development is 16.5 metres, which exceeds the permissible 9m height limit under Wollongong local Environmental Plan (WLEP) 2009. A Clause 4.6 Exceptions to Development Standards Report has been prepared (**Appendix 5**) and confirms that the proposed building height is appropriate having regard to site characteristics and streetscape integration. Further the proposed building height will not hinder the attainment of the objectives contained in Clause 4.3 of WLEP 2009. The assessment of building siting and height also confirms that the buildings are appropriately placed to ensure that visual privacy is maintained to residential dwellings adjacent to the site and particularly to the north and west.

Environmental and Residential Amenity Impacts

With respect to view impacts the photomontages prepared by Billard Leece Partnership (**Appendix 4**) indicate that the topography of the site and surrounds assists to encompass the buildings and development as a whole, reducing the prominence of the buildings from a number of vantage points. Further, the overshadowing diagrams prepared by Billard Leece Partnership (**Appendix 4**) confirm that the impact of overshadowing as a result of the proposed development will be minor, due to the separation provided to adjoining buildings.

Servicing and Building Design

Investigations with respect to servicing (**Appendix 25**) confirm that the site can be adequately serviced by a drinking water main available for connection on the southern side of Hospital Road and a wastewater main traversing the property. Further, the development will aim to achieve the equivalent of a 4 Star Green Star rating, as referenced in the ESD Report prepared by Steensen Varming in **Appendix 27**. The BCA Assessment Report, prepared by Steve Watson & Partners (**Appendix 29**) and the Accessibility Review undertaken by the McKenzie Group (**Appendix 30**) confirm that the building is capable of complying with the required standards, subject to resolution of the identified areas of non-compliance and compliance with the recommendations of the reports, as designs advance.

Section 10 provides an Environmental Risk Assessment (ERA) to identify the key significant environmental impacts associated with the construction and operation of the proposal and identifies how those impacts are to be mitigated or managed. Specifically, this section contains a risk matrix which identifies measures to avoid,

minimise, mitigate, rehabilitate/remediate, monitor and/or offset the potential impacts of the project. These measures include further testing and monitoring in relation to site stability and fill material; remediation of the site in accordance with the Remediation Action Plan; the implementation of acoustic treatment to minimise impacts of the proposed development on nearby residences at the construction stage; the implementation of management strategies to address a parking shortfall; and the retention and regeneration of native vegetation in the northern rear section of the site.

Section 11 considers whether there is justification for the development proceeding from an environmental, economic and social perspective. The assessment of each of these elements has concluded that, subject to the implementation of a number of mitigation measures, particularly to address site stability, construction impacts and parking availability, the proposal would not result in significant adverse impacts on the physical or built environment. The proposed concept will deliver significant local and regional economic benefits through the provision of infrastructure to assist the operation of NSW Health in the Illawarra Region. The proposal is an integral part of the development and operation of the Bulli Hospital and the resulting Bulli Aged Care Centre of Excellence and will significantly improve the quality of healthcare for the region's aging population.

Conclusion

This EIS has assessed the proposed development against its potential environmental, social and economic impacts. The assessment concludes that with the implementation of a number of mitigation measures, principally to address site stability, site remediation, construction impacts and availability/management of parking, on balance the proposal will result in acceptable environmental impacts and the site is therefore suitable for the proposed development.

Specifically, remediation of the site will be required in accordance with the Remediation Action Plan prepared by Douglas Partners and a Validation Report will be required at the completion of remediation works to confirm that the development area has been remediated to a suitable standard. Further, due to the challenging site conditions resulting from the presence of uncontrolled fill, further investigations and ongoing monitoring by a qualified geotechnical engineer will be required as construction proceeds. Construction impacts will also require careful management in accordance with a detailed Construction Management Plan. In addition, upon operation of the BACCE there will be a need for the Local Health District to ensure more efficient utilisation of parking within the existing hospital site and on-street to ensure that the shortfall in parking on the BACCE site can be accommodated, without ongoing unacceptable impacts on residents in the locality.

The proposed development has also been shown to be of potential economic and social benefit to the Illawarra Region. It will provide opportunities for employment and will have the ability to attract future specialist medical activities to the area. The social benefits are evident in the capital investment value, the provision of employment and in the provision of a service that is needed in the community and wider Illawarra region. Based on the manageable levels of environmental risk, and the economic and employment benefits to the Illawarra region, this EIS concludes that the proposed BACCE development should be supported.

2 Introduction

This section describes the background to the proposal, the nature of the proposed development, the major project application and the purpose and structure of this Environmental Impact Statement.

2.1 Purpose of the Environmental Impact Statement

This EIS has been prepared by TCG Planning for Johnstaff Ptd Ltd (on behalf of Health Infrastructure and IRT). It presents the findings of an environmental evaluation which has been undertaken to establish potential impacts associated with the proposed development of the subject site at 22 Hospital Road, Bulli, for the Bulli Aged Care Centre for Excellence.

The EIS process is the mechanism by which development proposals are appraised in terms of environmental and socio-economic criteria, in addition to technical considerations. The EIS process defines the context of the proposed development and examines those issues considered to be relevant. This assessment considers the potential environmental effects of the proposal during occupation and use and proposes mitigation measures to prevent, reduce and offset adverse impacts on the environment. The aims of this EIS are to:

- Identify all constraints affecting future development on the subject site;
- Assess the capability of the subject site to support the proposed development; and
- Demonstrate the economic, social and environmental attributes of the proposed development and consider the feasibility of the proposal based.

This EIS has been prepared in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulation 2000*, together with the Secretary's Requirements which were issued on 28 July 2016 by the Department of Planning and Environment.

2.2 Background

NSW Health Infrastructure, in partnership with IRT, proposes to develop a fully integrated facility which will encompass primary, inpatient and aged care services, within an Aged Care Centre for Excellence. This innovative partnership will allow for sharing of services between public and community (not for profit) partners, whilst retaining a separate identify for each.

The project will transform Bulli Hospital to a facility which incorporates primary health care, inpatient, outpatient and community aged care services. The existing hospital currently provides a combination of inpatient, outpatient and community health services. The general service delivery of the Hospital will remain the same, however will provide for additional capacity and increased efficiency in service delivery.

The project will allow for networking of such services throughout the Illawarra region, whilst providing improved services for residents of the northern Wollongong suburbs and surrounds. Health Infrastructure (Illawarra Shoalhaven Local Health District) and IRT confirm within their 'Model of Care' that the BACCE will allow for the transformation of Bulli Hospital to a facility providing:

- *Urgent Primary Health Care services – ensuring timely access to medical care for low acuity emergencies, reducing wait times and improving patient outcomes*
- *Excellence in aged care residential, inpatient and outpatient services;*

- *Expanded collaborative relationships for provision of specialist geriatric services in the region, including partnerships with general practitioners, the South Eastern Primary Health Network, local Aboriginal community controlled health services, local government, private aged care providers*
- *Opportunities for the development of international best practice models relating to aged care services, and*
- *System efficiencies relating to service capacity and cost reductions."*

The BACCE is to be developed on a currently underutilised site used for car parking overflow from Bulli Hospital, located directly opposite the subject site in Bulli, northern Wollongong. Johnstaff Pty Ltd has commissioned a group of specialist consultants to assist with the preparation of this EIS in accordance with the SEARs issued on 28 July 2016. Health Infrastructure seeks approval for the proposed development which will enable the site to be developed within an anticipated timeframe of 3 years.

2.3 Overview of Development

The proposed development comprises the removal of the existing open bitumen car park and tree removal on the site. The site also currently contains a single storey building constructed of brick and timber with metal roof which is proposed for demolition. The construction works will comprise a residential aged care facility and extension of facilities for Bulli Hospital, encompassing an aged care inpatient unit and urgent care centre. It is intended that the services within this facility and Bulli Hospital will be linked as an integrated facility.

The proposed development will contain the following facilities:

- Sixty (60) suite residential aged care facility (within IRT Residential Aged Care Facility);
- Sixty (60) bed public aged care in-patient unit (IPU), including secure bed compound;
- Outpatients clinic, including X-ray;
- Urgent Care Centre (4 bays for minor illness and injuries) to be available to all age groups;
- Ancillary main entry/front of house support facilities including reception area, kitchen and loading dock;
- At grade car-parking for 46 vehicles;
- Clinical and non-clinical support services;
- Outpatients and allied health services; and
- A mortuary.

A Proposed Site Plan and Sections of the proposed development (**Appendix 4**) illustrate the project. Further details in relation to the proposal are provided in **Section 3** of this Statement.

2.4 Cost of Development

Details of the cost of carrying out the proposed development are provided in the Capital Investment Value Statement prepared by Altus Page Kirkland provided in **Appendix 2** to this Statement. As the development (excluding the IRT portion of the shared areas) is estimated at being greater than \$30M (ie: **\$38,154,900M**), the proposed development falls within the State Significant Development category provided by State Environmental Planning Policy (State and Regional Development) 2011.

The remaining portion of the development which falls within the community (not for profit) sector component of works (IRT), being the residential care facility proposed is estimated by Altus Group Consulting Pty Ltd to have an estimated End Total Cost of **\$16,603,086**.

The overall capital investment value of the project in its entirety is therefore calculated to be in the vicinity of **\$46,166,315**.

2.5 Project Programme

The programme for the Bulli Aged Care Centre of Excellence is included in Table 1, which has been extracted from the Preliminary Construction Management Plan prepared by Health Infrastructure and Johnstaff in September 2016 and which is provided as **Appendix 24** to this Statement:

Table 1: Project Programme

Milestone	Target Completion Date
Design Development	December 2016
Construction Documentation	June 2017
Tender Evaluate and Award	March 2017
Construction Administration	October 2018
Commissioning and Handover	October 2018
Post Completion Period	October 2019

Source: Extract from Preliminary Construction Management Plan, Health Infrastructure & Johnstaff, 2016

2.6 Assessment Process

An application was made by TCG Planning, on behalf of Health Infrastructure and IRT, to the Department of Planning and Environment in July 2016 seeking the SEARs for the Bulli Aged Care Centre of Excellence in accordance with Clause 3 of Schedule 2 of the *EP&A Regulation* and Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). Preliminary documentation was lodged with the Department at that time to support the request, on the basis that the proposal falls within the criteria identified in Schedule 1 of SEPP (State and Regional Development) 2011.

The integrated hospital and seniors development comprises State Significant Development in accordance with Schedule 1, Clause 14 of SEPP (State and Regional Development) 2011, as the hospital component has a capital investment value of more than \$30 million. Although not listed in Schedule 3, the residential aged care housing is an integral and inseparable component of the development, which necessitates consideration in one combined application. This is consistent with the provisions of clause 8(2) of SEPP (State and Regional Development) which confirms that if a "single proposed development the subject of one development application comprises development that is only partly State significant development.....the remainder of the development is also declared to be State significant development...."

On 28 July 2016, Karen Harragon, Director Social and Other Infrastructure Assessments (as delegate for the Secretary) issued the SEARs for the preparation of an EIS for the BACCE (Application Ref. No. SSD 7751). A copy of the comments received from relevant public authorities were also provided, confirming the scope of the EIS for the proposed BACCE. This EIS is submitted in accordance with the SEARS.

2.7 Secretary's Environmental Assessment Requirements

The SEARS were issued by the Department of Planning and Environment (Social and Other Infrastructure Assessments) on 28 July 2016 (Application Ref. No. SSD 7751) to enable the EIS to commence, following consultation with relevant government authorities, being:

- Transport for NSW (Land Use Planning and Development, Freight Strategy and Planning)
- Roads and Maritime Services (Land Use Planning, Southern Region);
- NSW Office of Environment and Heritage (Illawarra, Southern Region);
- NSW Environment Protection Authority (Illawarra);
- Wollongong City Council.

A copy of the SEARS and comments from government agencies and Wollongong City Council are contained in **Appendix 1**. The key project specific issues identified by the Secretary for consideration and the relevant section within the EIS are noted in **Table 2**.

Table 2: Summary of SEARs and Reference within the EIS

Secretary's Requirements	EA Reference
General Requirements	
Provide a report from a qualified quantity surveyor containing a detailed calculation of the capital investment value (CIV) of the proposal and an estimate of the construction and operational jobs.	Section 2.4 and Appendix 1
Key Assessment Requirements	
1. Statutory and Strategic Context ▪ Address the statutory provisions contained in all relevant environmental planning instruments. ▪ Permissibility: Detail the nature and extent of any prohibitions that apply to the development. ▪ Development Standards: Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.	Section 7 and Section 8
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the <i>NSW State Priorities</i> ; <i>Illawarra-Shoalhaven Regional Plan 2015</i> ; <i>Illawarra Regional Transport Plan 2014</i> ; and <i>Healthy Urban Development Checklist</i> , <i>NSW Health</i> .	Section 7 and Section 8
3. Built Form and Urban Design ▪ Address the height, density, bulk and scale, setbacks of the proposal. ▪ Address design quality, with specific consideration of the overall site layout, connectivity, interface with the public domain, streetscape, open spaces, landscaping, internal streets, pathways, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design Principles. ▪ Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	Section 9.2.11 and Appendix 5

Secretary's Requirements	EA Reference
4. Environmental Amenity Detail amenity impacts including solar access, visual privacy, view loss, overshadowing and wind impacts.	Section 9.2.12 and Appendix 4
5. Transport and Accessibility Include a transport and accessibility assessment which addresses impact of vehicle movements; public transport availability; pedestrian and bicycle movements; road safety issues; CPTED and accessibility principles; sustainable travel choices; car and bicycle parking (including the potential loss of more than 70 parking spaces); end of trip facilities; service vehicle access; delivery and loading arrangements; and traffic and transport impacts during construction (including the preparation of a draft Construction Traffic Management Plan).	Section 9.2.8, Section 9.2.9 and Appendix 23
6. Ecologically Sustainable Development (ESD) - Detail how ESD principles will be incorporated in the design and ongoing operation phases of the development. - Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice. - Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.	Section 9.2.14 and Appendix 27
7. Noise and Vibration Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation, including mitigation measures.	Section 9.2.10 and Appendix 16
8. Contamination Demonstrate that the site is suitable for the proposed use in accordance with Managing Land Contamination: Planning Guidelines-SEPP 55 Remediation of Land (DUAP).	Section 7.3.4, Section 9.2.2 and Appendices 19, 20 & 21
9. Utilities - Prepare an Infrastructure Management Plan detailing information on the existing capacity and any augmentation requirements of the development. - Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	Section 9.2.16 and Appendix 28
10. Contributions Address Council's Section 94A Contribution Plan and/or details of any Voluntary Planning Agreement.	Section 8.2.1
11. Drainage Detail drainage associated with the proposal, including stormwater and drainage infrastructure.	Section 9.2.3 and Appendices 7 & 9
12. Flooding Assess any flood risk on site and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.	Section 9.2.4 and Appendix 10
13. Waste Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measure to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements.	Section 9.2.17 and Appendix 26
14. Bushfire Address bushfire hazard, including the requirements for Special Fire Protection Purpose Development as detailed in Planning for Bush Fire Protection 2006 Guidelines.	Section 7.2.5, and Section 9.2.5 and Appendix 14

[illegible]

Secretary's Requirements	EA Reference
100 year flood levels and the probable maximum flood, or an equivalent extreme event. Model the effect of the proposed development (including fill) on the flood behaviour.	
Specific Additional Requirements – NSW Environment Protection Authority	
1. General Planning Matters Provide details on the location of the proposed development in its local and regional environmental context. Describe mitigation and management options including consideration of any cumulative impacts associated with the project.	Section 3 and Section 9
2. EPA Regulatory Matters Detail any radiation apparatus to be installed which is required to be registered with the EPA upon completion of the facility.	Section 7.2.7
3. Air Quality Identify and describe all processes and sources (including odour and dust) that could result in air emissions including any proposed mitigation, monitoring and management measures. Prepare a Hazardous Substance Management Plan following an audit of hazardous substances that may be present.	Section 9.2.9 and Appendices 21 & 24
4. Noise and Vibration Undertake an assessment of the predicted noise impacts associated with the project in accordance with the EPA's Interim Construction Noise Guidelines and Industrial Noise Policy, including consideration of noise impact of vehicle movements.	Section 9.2.10 and Appendix 16
5. Water Quality Describe any likely impacts to both surface water and groundwater from the proposed works and clearly outline any proposed mitigation, monitoring and management measures. Prior to, during and following construction, appropriate stormwater and erosion/sedimentation management systems are implemented to prevent water pollution from the site.	Section 9.2.3 and Appendices 7 & 9
6. Waste Detail the handling, processing and storage of all materials used at the premises.	Section 9.2.17 and Appendix 26
7. Waste Management Plan - All contaminated solid and associated waste materials must be managed in accordance with the Protection of the Environment Operations Act 1997 and associated regulations and characterised in accordance with the EPA's Waste Classification Guidelines. - The storage, disposal and transport of asbestos waste must be undertaken in accordance with the Protection of the Environment Operations (Waste) Regulation 2005. EPA also recommends that NSW Health Infrastructure consult with NSW Health and Work Cover in regards to this matter.	Section 9.2.17 and Appendix 26
8. Contaminated Land Undertake a detailed site investigation for asbestos to determine the suitability of the site for the proposed development or to allow for the preparation of a Remediation Action Plan (RAP).	Section 7.3.4, Section 9.2.2 and Appendices 19, 20 & 21
Specific Additional Requirements – Wollongong City Council	
1. Planning - Nominate the chosen Environmental Planning Instrument for the assessment of the application in its entirety. - All proposed works should be included within the same development application, including any works on the adjoining hospital site. - An exemption to 9m WLEP 2009 height limit should consider Land and Environment	Section 8.1.2, Section 4, Section 7.3.8 and Appendices 14, 23 & 25

Secretary's Requirements	EA Reference
Court decision in relation to Clause 4.6 of Four2Five Pty Ltd V Ashfield Council [2015] NSWLEC 90. - The operation of each component of the development should be clearly described. The type of seniors housing proposed should be nominated in accordance with the definitions provided within Chapter 2 of SEPP (Housing for Seniors or People with a Disability) 2004. - Details of the connection of the development with the existing hospital site on the southern side of Hospital Road should be provided. - Clarification/verification be sought from the NSW Rural Fire Service as to the recommendations of the Bushfire Assessment prepared by Travers Ecology. - The subject site is affected by an easement for pipeline 6.095 wide along the western property boundary. Consultation with the authority benefited is recommended.	Appendix 5 Section 2.4 and Section 4 Section 9.2.8 and Appendix 23 Section 2.8 Section 2.8
2. Traffic - A Traffic Impact Assessment should be prepared in consultation with Roads and Maritime Services. - Car parking, bicycle parking and motorcycle parking should be provided in accordance with WDCP 2009, including both uses and the existing hospital. - Detail waste collection and servicing details. - The proposed internal layout should demonstrate forward manoeuvring for a 12.5 metre service vehicle as required by WDCP 2009.	Section 9.2.8 and Appendix 23
3. Landscape - Prepare a Landscape Plan, including details of separation of pedestrian and vehicular movements, footpaths, crossing points, existing trees, noxious weeds, retaining walls and underground services. - Prepare an Arborist Report.	Appendices 6 & 11
4. Environment: - The request not to prepare a Flora and Fauna Report is considered reasonable however information on the potential impacts on flora and fauna should be considered. - Prepare an acoustic report detailing the impact of the proposed development on surrounding residents during construction and during ongoing operation phase.	Section 6.1.2, Section 9.2.6 and Appendices 11, 12 & 13
5. Stormwater & Flooding - Prepare a Flood Study which addresses the extent of each flood risk precinct on the site and flooding control, a plan delineating flood risk precincts based on site specific flood level information and detailed ground survey levels. - Development should comply with the Whartons, Collins, and Farrahars Creeks, Bellambi Gully and Bellambi Gully and Bellambi Lake Floodplain prescriptive control matrix, which is appended to the adopted Floodplain Risk Management Study and Plan (dated March 2011). - Where the proposal will result in a net increase in impervious surface area on the site of more than 100m², on-site stormwater detention (OSD) should be provided WDCP 2009. - An easement to drain water inter-allotment drainage system will be required to drain the development the watercourse. - A survey shall be submitted with the development proposal to show the property boundary and watercourse channel in relation to the stormwater disposal pipe/outlet and easement to drain water.	Section 9.2.3, Section 9.2.4 and Appendices 3, 7, 9, 10

Secretary's Requirements	EA Reference
6. Geotechnical & Site Contamination - An earthworks plan and supervision by a geotechnical consultant will be required to ensure the site is suitably prepared for the proposed development. - The proponent should consider the appointment of an EPA accredited Site Auditor to oversee the required remediation works.	Section 9.2.1 and Appendices 17, 18, 21.
Specific Additional Requirements- NSW Roads & Maritime Services	
- A Traffic Impact Study (TIS) is required including intersection modelling using SIDRA for the junction of Hospital Road with Princes Highway and identification of suitable infrastructure required to ameliorate any traffic or safety impacts and safety impacts. - Consider the environmental impact of any roadworks within the road reserve that are required to manage the impacts of the development.	Section 9.2.8, Section 9.2.9 and Appendix 23

2.8 Consultation

The preparation of the EIS has involved consultation with a number of government and non-government organisations and interest groups. The consultation was undertaken to identify the views and concerns of interested/affected parties with respect to the likely environmental, infrastructure and amenity impacts of the proposed development. In addition, consultation as required by the SEARs was also included.

Initial consultations for SEARs:

The NSW Government in partnership with IRT are jointly funding the project, with Bulli Hospital (NSW Health). As part of the preparation of the documentation submitted to the Department of Planning and Environment, Health Infrastructure advised the following consultations had occurred since the project's inception:

- Donnelly Simpson Cleary made enquiries with Jemena regarding the connection of gas with the view to lodging an application.
- Donnelly Simpson Cleary discussed the project with a water services coordinator and are in the process of lodging an application for a feasibility study with Sydney Water.
- Arup lodged an application with Endeavour Energy for a new kiosk substation.
- Arup registered the project with NBN Company and have discussed the project with Telstra.

SEARs

With respect to an application for State significant development, the Department of Planning and Environment must consult relevant public authorities and have regard to the need for the requirements to assess any key issues raised by those public authorities. Comments were sought by the Department from relevant government departments and authorities, which formed part of the documentation provided in association with the SEARs. This information is summarised in Section 2.7 of this EIS document. The SEARs provide that specific consultation is required with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners, and specifically advise consultation must occur with:

- Wollongong City Council;
- Roads and Maritime Services;
- Transport for NSW.

Wollongong City Council also recommend (in their comments on the draft SEARs) that consultation occur with the NSW Rural Fire Service and the relevant authority for the easement for pipeline 6.095m wide along the

western property boundary. The proposed stormwater drainage has been reviewed by Council's Civil Engineer.

Consultation Process

Consultation has continued throughout the preparation of the EIS and in particular consultation has taken place with the following agencies, groups and organisations:

- Department of Planning and Environment;
- Wollongong City Council – refer to meeting outline provided below;
- NSW Health – Illawarra Shoalhaven Local Health District;
- Roads and Maritime Services by TTW in developing the Traffic Impact Assessment.
- Transport NSW by TTW in developing the Traffic Impact Assessment;
- Wollongong City Council by TTW in developing the Traffic Impact Assessment;
- Sydney Water Corporation by Donnelly Simpson Cleary in developing the hydraulic design;
- Ausgrid by Arup in developing the electrical design.

The consultation process has been instrumental in determining issues surrounding the proposed development and in shaping the design of the subject site.

Meeting with Wollongong City Council

On Tuesday 27th September 2016, a meeting was held with Wollongong City Council (WCC) in relation to the BACCE Project. The attendees at the meeting were:

Representing Wollongong City Council – Jessica Saunders (Planner);

Representing the Applicant: Angus Dawson (NSW Health Infrastructure), Andrew Hahn (IRT) and Ting Wang (Johnstaff).

John Wood (Manager - WCC) coordinated the meeting, but was unfortunately not available on the day.

During the meeting, the project team provided WCC an overview of the current status of the project and a brief summary of the design and what was planned to be submitted in the SSD application. Johnstaff advise that WCC raised no major concerns with the proposed development.

Advertising

Various articles and news releases have been published in the Illawarra Mercury, circulating across the Illawarra Shoalhaven Region and beyond since the Project's inception. A number of news releases have been published by IRT and also by local Members of Parliament and the Parliamentary Secretary for the Illawarra (Gareth Ward MP).

Local social media website 'Northern Illawarra' and Billard Leece Partnership (architects for the project) recently advertised an article in the Illawarra Mercury detailing *"the release of the design for the hospital's \$33.8 million transformation"* by Parliamentary Secretary for the Illawarra Gareth Ward.

Public Information Session

A series of Public Information sessions were held in October 2016. Two sessions were held:

- Thursday 6th October 2016 – 5:30pm – 7:30pm.
- Saturday 8th October 2016 – 10:00am – 12:00 midday.

The sessions were run by members of the Project Team: Health Infrastructure, IRT, ISLHD and Johnstaff. The public attendance was around 20-30 people to each session and they were run as informal information sessions to provide the public an opportunity to ask questions and be informed about the project.

The sessions were advertised as follows:

- Letterbox drop to local residents.
- Newspaper advertisement (in the Illawarra Mercury on Saturday 24 Sep, Saturday 1 Oct and Wednesday 5 Oct – see **Figure 1** for copy of advertisement).
- Letters to local MPs.

The key issues raised are as follows:

- Construction timelines and disruption to local traffic;
- Trees;
- Parking – off street and onsite;
- Plans for the vacated Bulli Hospital site; and
- Bulli Urgent Care Centre.

**BULLI AGED CARE CENTRE OF EXCELLENCE
COMMUNITY INFORMATION SESSIONS**

NSW Health Infrastructure invites members of the public to community information sessions regarding the proposed Bulli Aged Care Centre of Excellence development.

The facility is proposed to be constructed on an existing NSW Government site bounded on Hospital Road opposite the existing Bulli Hospital. The site is located around 10 kilometres from Wollongong city centre.

The project team is currently preparing an Environmental Impact Statement (EIS) and would like to invite you to an information session to answer any questions you may have about the project. Public information sessions will be held at the Bulli Senior Citizens' Centre on:

- Thursday 6 October 2016, from 5:30pm to 7:30pm, and
- Saturday 8 October 2016, from 10.00am to 12.00pm.

The Bulli Senior Citizens' Centre is located at 8 Hospital Road, Bulli.

Enquiries: HI-Info@health.nsw.gov.au



Figure 1: Copy of advertisement for Community Information Sessions placed in the Illawarra Mercury on Saturday 24 September, Saturday 1 and Wednesday 5 October (Source: Johnstaff Projects)

3 Site Context

Section 3 contains an outline of the subject site, its character and other land uses within the locality. Specifically, this section contains a description of the physical characteristics of the subject site, any land constraints that apply to the site and a description of the existing development immediately surrounding the subject site and within the locality.

3.1 Site Location and Context

The subject site is located in Bulli, one of the northern suburbs of Wollongong, within the Illawarra-Shoalhaven Region, south of the Greater Sydney Metropolitan Area. The suburb is well-located with access to major transport networks, including the Princes Highway linking the northern to southern suburbs of Wollongong, and is also sited in proximity to Bulli Pass providing access to the F6 Freeway, leading directly to Sydney in the north. Wollongong Development Control Plan 2009 provides a detailed Character Statement for the Suburb of Bulli, with a description of the Existing Character and the Future Desired Character of the Suburb as follows:

3.15 Bulli

Existing Character

The historic township of Bulli lies between the Illawarra Escarpment and the ocean, where the coastal plain widens to the south of Thirroul.

Bulli contains a mix of housing styles and building form, including older low density detached dwelling houses as well as medium density housing in the form of villas and townhouses. The detached dwelling houses are predominantly single storey in height and are generally of a weatherboard, fibro and brick construction. Within the coastal precincts of Bulli, some new two storey dwellings are starting to replace the older dwelling stock.

Bulli is also characterised by a large number of heritage items including the Bulli railway station and station masters residence, Bulli Colliery and associated railway bridge embankments, miner's cottages, Denmark Hotel and stables, Bulli Hotel, Bulli post office as well as a number of other significant circa 1920's and 1930's bungalows etc.

Rural residential development also occurs within the landscape clearings adjacent to the Princes Highway, Bulli Pass and the foot hills of the escarpment.

The Bulli showground and racing complex is a regional recreational and sporting facility. Other important open space areas include Slacky Flat Park, Bulli Park and Sandon Point Reserve and beach.

The Bulli retail and business centre is situated on the Princes Highway approximately 1 kilometre south of the Princes Highway and Lawrence Hargrave Drive intersection. The Bulli centre is a traditional retail strip centre strip concentrated along the Princes Highway between the Bulli Railway Station to the north and the intersection of the Princes Highway and Park Road to the south and is a small traditional retail shopping strip which mainly serves the daily convenience needs of the surrounding local population.

Desired Future Character

Bulli should retain its relatively low density residential suburban character with some limited multi-dwelling housing opportunities within a short walking distance (ie 400 – 600 metres) to Bulli railway station. Any multi-dwelling housing should generally be restricted to two storeys in height. Therefore, villas, integrated developments and townhouses are considered the most appropriate forms of multi-dwelling housing.

Dwellings within the eastern coastal part of Bulli should be designed to minimise the scale and bulk of the development through well-articulated building forms. New contemporary or "lightweight" dwellings with a distinctive coastal character are encouraged for the eastern (coastal) part of Bulli. Dwellings should feature sloping flat, curved or gently to moderately pitched roof forms only and to help maximise view sharing opportunities for rear neighbouring dwellings.

Balconies should be lightly framed in stainless steel and / or timber finishes, rather than of brick or masonry construction. For the western part of Bulli, dwellings with pitched, gable or hipped rooflines are preferred. New development or alterations and additions to an existing building must also be sympathetic in terms of its siting, scale, height and external appearance to any adjoining item.

The Bulli retail and business centre will continue to provide for the convenience needs of the surrounding population. A full line supermarket may be warranted, where it can be demonstrated that the primary trade area for the supermarket is limited to the surrounding residential catchment of Bulli. Higher order retailing and other higher order business services will continue to be provided by Corrimal town centre and Wollongong City Centre. Major developments on the old Bulli brickworks site and Sandon Point future stages will mean an increase in the future retail demand. The Bulli village centre should cater for this growth organically.

3.2 Subject Site

The subject site for the proposed Bulli Aged Care Centre of Excellence is located on the northern side of Hospital Road, Bulli to the west of the Princes Highway in the northern suburbs of Wollongong and on the foothills of the Illawarra Escarpment. The subject site at 22 Hospital Road includes two separate allotments which are formally described as Pt Lot 1 DP 165903 and Lot 1 DP 175787, totalling 12,000m² (or 1.2 hectares), as shown in **Figure 2**. Both allotments are currently owned by the Health Administration Corporation.

Pt Lot 1 DP 165903, being the western lot, currently contains an open asphalt car park (refer **Figures 8 and 9**), utilised by staff and patrons of the existing Bulli Hospital complex, which is directly opposite the site on the southern side of Hospital Road.

Lot 1 DP 175787, being the adjoining eastern allotment, is grassed and currently contains two separate buildings (**Figures 5-7**). A single storey brick and timber building in the south-western corner of the lot, near Hospital Road, identified as a 'hall' is currently used for storage of hospital and ambulance-related equipment in association with the Bulli Hospital. This building will be demolished and this portion of the land will be subject to amalgamation with Part Lot 1 DP 165903 to form the subject site, as shown on the Site Plan in **Figure 3**. Also located on this eastern allotment in the north-eastern corner, is a single storey brick building with a metal roof. That building is currently utilised as an ambulance station and does not form part of this application. This building will be retained on the existing lot.

The site slopes significantly to the east and to the north, with a number of retaining walls located in the western portion of the site adjacent to the existing hall and on the eastern boundary of the subject site adjacent to the ambulance station. A detailed Survey Plan is provided in **Appendix 3** to this Assessment.

A separate vehicle access is currently provided to the hall (off Hospital Road) on the eastern boundary of the subject site. The main vehicular entrance to the main portion of the site which is the subject of this report is

currently via an entry only adjacent to the western boundary of the site with exit from the site towards the centre of the site (eastern portion).

The subject site at Bulli was selected because it was within the ownership of the Health Administration Corporation and was relatively underutilised, being used for car parking for the existing Bulli Hospital. The services currently provided at Bulli required expanding and the demand for an integrated aged care facility in the Wollongong Region is high. The site satisfied the client's operational requirements as well as being able to accommodate the environmental footprint of the development. The key benefits of the site as the preferred location are:

- Proximity to the current and future aging population;
- Access to major transport networks, including the Princes Highway linking the northern to southern suburbs of Wollongong, and Bulli Pass providing access to the F6 Freeway leading directly to Sydney in the north;
- The development consolidates much needed new health facilities with residential care for the ageing population, recognising IRT as a significant seniors housing provider within the Illawarra region;
- Low amenity impacts including noise, air quality and visual impacts on neighbours;
- Low environmental impacts associated with the proposed development with regard to the extent of site disturbance and impact on environmental site features;
- The site is capable of being serviced by existing infrastructure, with augmentation to accommodate the proposed development; and
- The proposed development, in terms of location, siting and design is considered to meet the requirements with regard to economic, environmental and social matters.



Figure 2: Aerial view of subject site in the context of surrounding development (Source: Wollongong City Council online mapping), June 2016



Figure 3: Existing Site Plan with development site outlined in red (Source: Extract of Site Plan prepared by Billard Leece Partnership, dwg. no. AA.01.0001)



Figure 4: Hospital Road looking west. The subject site is located at the right of the photograph. Trees to be removed and brick building at centre of photograph.



Figure 5: View north from Hospital Road to subject site and building proposed for demolition on Lot 1 DP 175787



Figure 6: View east from western lot (Part Lot 1 DP 165903) to building proposed for demolition



Figure 7: Existing ambulance station proposed for future excision from Lot 1 DP 175787



Figure 8: View of Subject Site looking west across Part Lot 1 DP 165903 towards Illawarra Escarpment



Figure 9: View of Subject Site looking north east across Part Lot 1 DP 165903 towards the ocean



Figure 10: Bulli Hospital located on the southern side of Hospital Road directly opposite the subject site



Figure 11: Additional view of Bulli Hospital located on the southern side of Hospital Road directly opposite the subject site



Figure 12: Development in the vicinity of the subject site, to the west, along Hospital Road



Figure 13: Development in the vicinity of the subject site directly to the west on Hospital Road



Figure 14: View of nearby dwellings directly opposite the site on southern side of Hospital Road



Figure 15: View of dwelling house directly adjoining the site to the east on Hospital Road

3.3 Site Constraints

The subject site is zoned R2 Low Density Residential pursuant to WLEP. Section 149(2) and (5) Certificates issued by Council for Pt Lot 1 DP 165903 (Certificate No. 201504958) and Lot 1 DP 175787 (Certificate No. 201504959) indicate the following constraints on the land as provided in **Table 3**:

Table 3: Listing of Site Constraints (from Section 149(2) and (5) Certificates and Online Mapping)

Constraint	Affection
Heritage	The land is not in a conservation area and does not contain an item of environmental heritage. However, an Aboriginal Cultural Heritage Due Diligence Assessments has been conducted and is attached at Appendix 15 .
Mine Subsidence	The land is not proclaimed to be within a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.
Road Widening and Road Realignment	Council has no record that the land is affected by any Road Widening or Road Realignment.
Coastal Protection	The land is not affected by section 38 or 39 of the Coastal Protection Act 1979 so far as Council has been notified by the Department of Services, Technology and Administration.
Bushfire Prone Information	The Section 149(2) Certificates confirm the land is recorded in Council's records as bushfire prone land. Travers Ecology, were engaged to prepare a Bushfire Assessment (Appendix 14) of the subject site, and concluded that the site is not affected by bushfire prone land and therefore does not require compliance with the Planning for Bushfire Protection 2006 Guidelines or a S100B certificate under the Rural Fires Act.
Land Stability	The Section 149(2) Certificates confirm the land is recorded in Council's records as located in an area where landslip and/or subsidence have occurred, or land stability is suspected. A Geotechnical Investigation Report (and Structural Report) prepared by Douglas Partners Pty Ltd (August 2003) and subsequent Additional Geotechnical Advice letters have been provided by Douglas Partners to specifically address geotechnical issues (Appendices 17 & 18).
Flooding	Council's mapping and the Section 149(2) Certificates confirm that the site is partly located within each of the Low, Medium, and High Flood Risk precincts. A detailed Flood Assessment Report has been prepared by Jones Nicholson Consulting Engineers and is included as Appendix 10 .
Riparian Corridor	The land is shown on Council's online mapping as being immediately adjacent to a riparian corridor. The riparian land forms part of a natural water course to the north, which is identified as an Objective 3 corridor. A Survey Plan prepared by Bee and Lethbridge, which is contained in Appendix 3 , shows that the watercourse is sited on the adjacent properties to the north.
Contamination	Douglas Partners Pty Ltd prepared a preliminary site investigation and contamination report (Appendix 19) finding potential for contamination exists at the site primarily through the filling of the site through its development as a car park and demolition of previous structures. The presence of asbestos was confirmed in analysis of the filling and there is potential for further asbestos associated with the filling and demolition. To determine the extent and degree of asbestos contamination impact, a Detailed Asbestos Investigation Report has been prepared (Appendix 20). A Remediation Action Plan has also been prepared and is attached as Appendix 21 .
Natural Resource Sensitivity	The land is shown on Council's online mapping as being affected by an area of Natural Resource Sensitivity which extends along the northern boundary of the site. While the

Constraint	Affectation
	development does not encroach into this area a Flora and Fauna has been prepared by Travers Bushfire and Ecology and provided in Appendix 13 . An Arborist Report, prepared by Moore Trees recommends a number of tree protection zones and setbacks, which has been considered in the development of the site masterplan (Appendix 11).
Critical Habitat	The land does not include or comprise critical habitat.
Acid Sulphate Soils	The Section 149(2) Certificate for Lot 1 DP 175787 indicates that Class 5 Acid Sulphate Soils have been mapped on the site. According to Wollongong Council's online mapping, the portion of Lot 1 DP 175787 that contains Class 5 Acid Sulphate Soils, is not part of the allotment included within the boundaries of the subject site, therefore, the related provisions do not apply.

3.4 Surrounding Development

The subject site is located within a generally low density residential and medical locality. Development to the north and west of the site is generally in the form of low density single one and two storey dwelling houses. A watercourse is also located to the north of the subject land.

Directly opposite the site, on the southern side of Hospital Road, is the existing Bulli District Hospital complex (**Figures 10 and 11**). A pedestrian access path is currently provided linking the subject site to the Bulli Hospital. Bulli Hospital provides a combination of inpatient, outpatient and community health services, specialising in multidisciplinary geriatric care. The existing Hospital currently includes X-ray services (Palmer House), surgical ward (Roper), medical ward (Sid Aitkens), medical imaging, breast screening services, conference and education centre, workshops and storerooms and ancillary administration facilities, as well as the former nurses' quarters and associated swimming pool and a number of associated single dwelling houses. The hospital no longer provides any surgical services on site and has an Urgent Primary Care Centre that operates between 7am-10pm every day for minor injuries and illnesses.

Figures 12 - 15 provide views of surrounding development in proximity to the site on Hospital Road, Bulli, including single to two storey residential developments on adjoining sites to the east and west. **Figure 16** is an aerial view of the Bulli Hospital complex outlining the key features of the existing Hospital, with part of the subject site (labelled as 'Hospital Car Park' and 'Recreational Hall') visible to the north.

On a broader scale, according to the Illawarra-Shoalhaven Regional Plan 2015, the site is located approximately 12 kilometres north of Metro Wollongong (Wollongong City Centre). It is also located approximately 30 kilometres north of the Major Regional Centre of Shellharbour, as well as approximately 20 kilometres and 24 kilometres respectively to the north of the Major Urban Centres of Warrawong and Dapto. With regards to the Greater Sydney Metropolitan region, the site is located approximately 40 kilometres from the Major Regional Centres of Sutherland to the north and Campbelltown to the north-west and approximately 70 kilometres from the Sydney CBD.

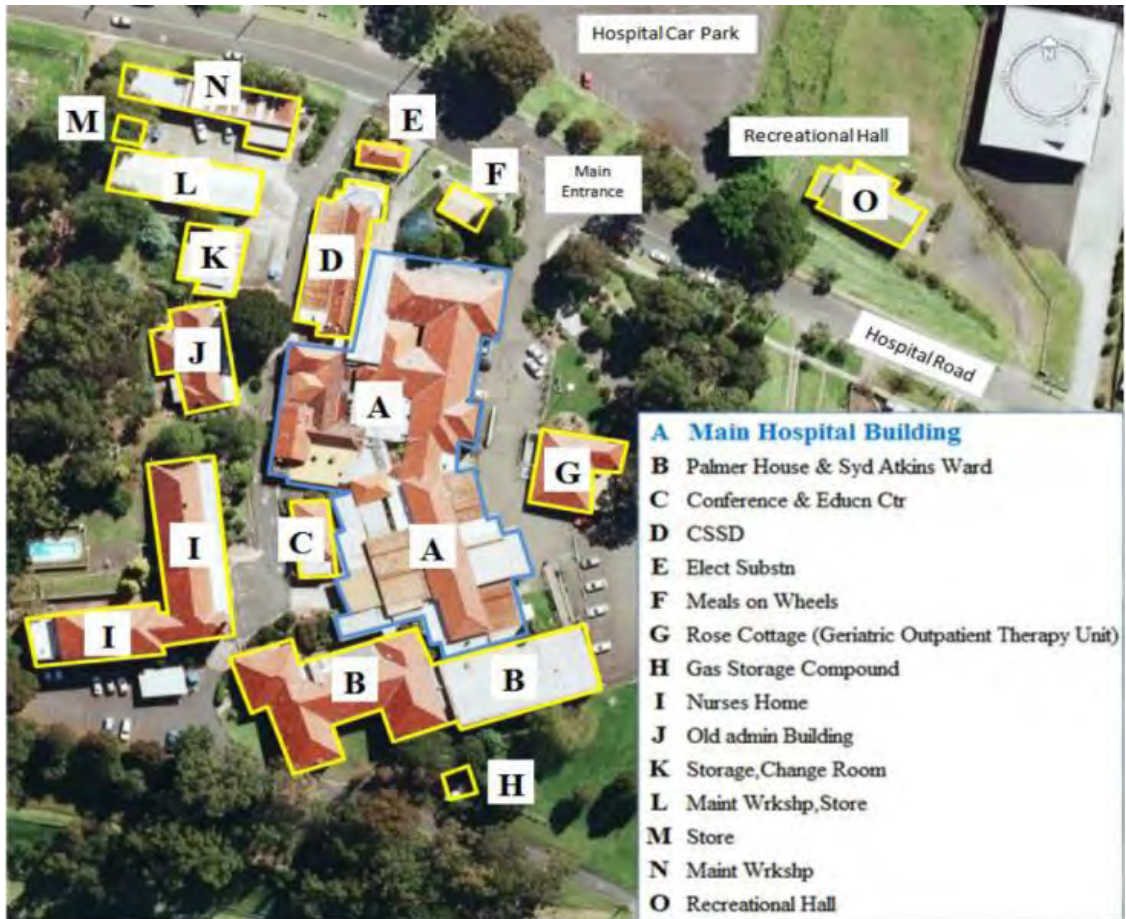


Figure 16: Aerial view of existing Bulli Hospital site (Source: Johnstaff)

4 Project Description

4.1 Overview: Scope and Delivery of Services

This section provides an overview of the Scope and Delivery of Services for the BACCE proposal. The following information has been extracted from the BACCE 'Final Business Case' prepared by Johnstaff Pty Ltd, dated October 2016 V2).

The Aged Care Centre of Excellence represents a new era in the delivery of aged care services through establishment of an innovative partnership between ISLHD and IRT that is committed to providing service excellence to the community. The model is underpinned by the integration and sharing of services between the public and private partners (while retaining an identity for each) which seeks to maximise service quality, increase collaboration between providers across the care continuum, and optimise service efficiency.

The concept model for the Aged Care Centre of Excellence is illustrated in **Figure 17**.

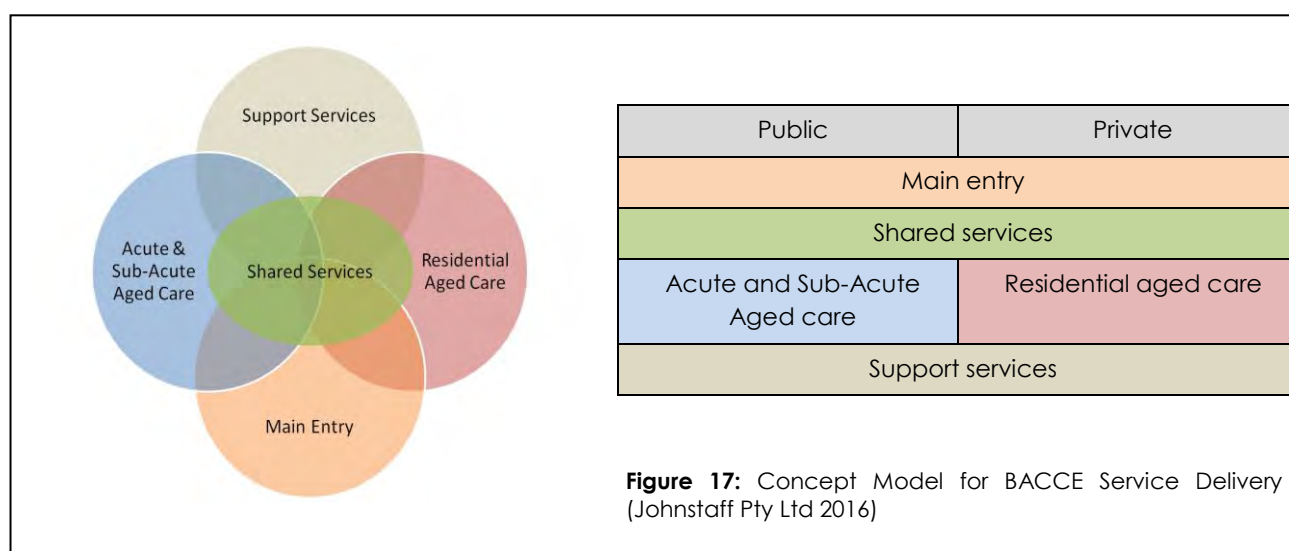


Table 4 summarises the proposed scope of services to be provided within the BACCE

Table 4: Proposed Scope of Services

Service	Scope
Main Entry, Front of House and 'Village Centre'	The Main Entry and Front of House services will deliver a strong public identity for the Bulli ACCE. The main entry will provide a focal point for the community and will support both health and residential aged care services.
Residential Aged Care	60 residential care suites will be delivered, with aged care bed licenses transferred from existing IRT facilities.
Inpatient Services	60 aged care beds will be delivered (growth of 4 beds compared with current capacity). These beds will support both acute and sub-acute care.
Urgent Care Service	A 4 bay Urgent Care Centre will be provided with collocated specialist consult/treatment rooms. The Bulli ACCE will enable access to medical services for low acuity emergencies and facilitate a 'third door' approach to care for presentations from aged care facilities, reducing wait times and improving outcomes.

Service	Scope
Outpatient Services	A range of outpatient services will be provided including medical, nursing and allied health consultations.
Allied Health Services	Allied health services will be provided for inpatients and outpatients (future opportunities for extension of services to support on-site residential aged care services will be explored by ISLHD and IRT). Allied Health disciplines will include: physiotherapy, occupational therapy, dietetics, social work, speech therapy, podiatry, psychology, and diversional therapy.
Medical Imaging Services	A General X-Ray imaging service will be provided and will be collocated with Urgent Care.
Pharmacy Service	A networked pharmacy service will be provided at Bulli to support inpatient and outpatient services.
Non-Clinical Support Services	A range of non-clinical support services will be provided to ensure appropriate support for the clinical and residential aged care services. Where appropriate a shared and integrated approach to these services will be implemented by ISLHD and IRT.

Source: (Extract from BACCE 'Final Business Case' prepared by Johnstaff Pty Ltd, dated October 2016 V2)

4.2 Project Detail

The development proposes the removal of an existing open bitumen car park and construction of a residential aged care facility and extension of facilities for Bulli Hospital, encompassing an aged care inpatient unit and urgent care centre, as shown in **Figure 18**. The services within this proposed facility and adjacent Bulli District Hospital will be linked as an integrated facility.

The Project comprises the following components as listed in **Table 4**.

- Demolition of an existing single storey building constructed of brick and timber with metal roof located on the eastern portion of the subject site (currently used for storage by the existing Bulli Hospital and identified as being surplus to the needs of Health Infrastructure);
- Removal of ten (10) trees on the site;
- Removal of an existing open bitumen car park on the subject site;
- Construction of a residential aged care facility comprising an aged care inpatient unit and urgent care centre, linking with the existing services currently provided in the adjacent Bulli District Hospital to provide an integrated facility.

The proposed development will contain the following facilities:

- Sixty (60) suite residential aged care facility (within IRT Residential Aged Care Facility);
- Sixty (60) bed public aged care in-patient unit (IPU), including secure bed compound;
- Outpatients clinic, including X-ray;
- Urgent Care Centre (4 bays for minor illness and injuries) to be available to all age groups;
- Ancillary main entry/front of house support facilities including reception area, kitchen and loading dock;
- At grade car-parking for 46 vehicles;
- Clinical and non-clinical support services;
- Outpatients and allied health services; and
- A mortuary.

Car parking and Access:

There are currently three vehicle access driveways to the site from Hospital Road. Two of these crossovers are proposed to be utilised as part of the development proposal. The western entrance (existing central crossover currently used as an egress point for the existing western allotment) will be utilised only for the residential care facility component of the development. The eastern entrance will be used as the primary entrance for the main component of the proposed development. The proposed development incorporates onsite parking in the form of at-grade parking and a drop-off/emergency vehicle area at the building entrance. The proposal includes parking spaces for a total of 46 vehicles.

Gross Floor Area:

The proposed development will have a total gross floor area (GFA) of 9020.95m². There is currently no maximum permissible FSR for the subject site, however it is noted that residential zoned land adjoining the subject site has a maximum permissible FSR of 0.5:1 under WLEP 2009.

Building Height:

The proposed construction comprises a four (4) storey medical facility which will be up to approximately 16.5 metres in height. The subject site has a maximum permissible building height of 9m under WLEP 2009. A Clause 4.6 Exceptions to Development Standards report pursuant to Wollongong Local Environmental Plan 2009 is provided as **Appendix 5** to this EIS.

Employment:

In total, the BACCE will employ 13 new staff for the RACF and will utilise existing hospital staff comprising 14 medical practitioners and 82 ancillary staff at peak times. Approximately 30 workers will be employed during the construction phase.

Hours of operation:

The facility will operate 24 hours per day, 7 days per week for in-patient units. Access to the site by the general public will be between the hours of 7am and 10pm, 7 days per week.

Table 5 provides a summary of the main components of the proposed BACCE with respect to the Residential Aged Care Facility and the Hospital and ancillary components.

Table 5: Proposed Development Components

Level	Total Gross Floor Area (m ²)
Ground Floor	1731.43
First Floor	1742.22
Second Floor	3226.05
Third Floor	2321.25
TOTAL	9020.95

Source: Architectural Plans prepared by Billard Leece Partnership

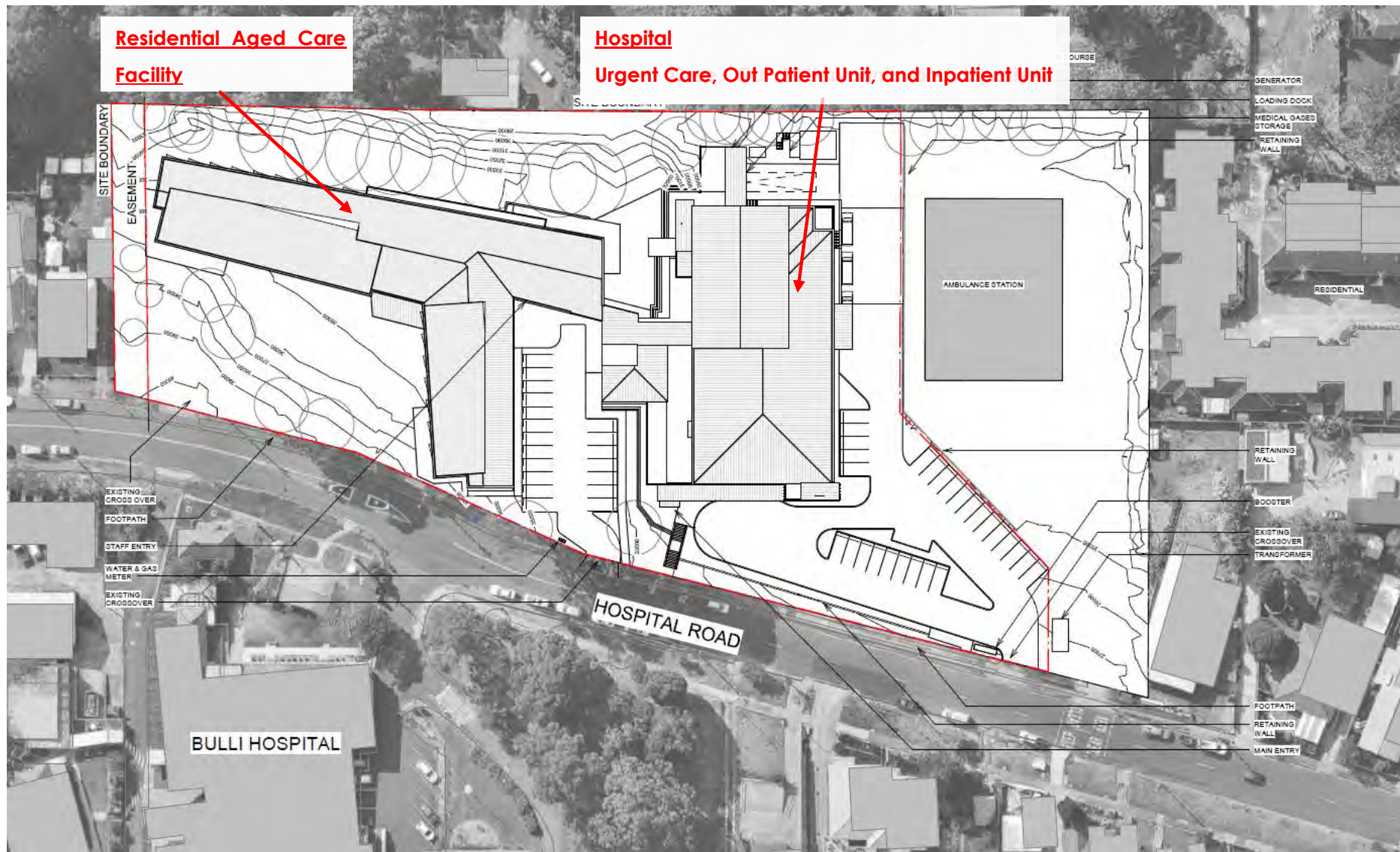


Figure 18: Site Plan and Key Components of Proposed Bulli Aged Care Centre for Excellence (Annotated Extract from Site Plan Dwg AA01.0301 Rev 2 drawn by Billard Leece Partnership P/L Architects and Urban Planners, dated 4/7/2016).

5 Project Need and Alternatives

Section 5 contains a discussion of the need for the project and consideration of alternatives to satisfy the requirements of the Secretary.

5.1 Need for the Proposed Development

5.1.1 Increasing Demand for Services Driven by a Growing and Ageing Population

Life expectancy continues to increase in Australia. According to the Australian Bureau of Statistics (ABS) in 2014 life expectancy at birth for males reached 80.3 years of age (up from 78.1 years of age in 2004) and 84.4 years of age for females (up from 83.0 years of age in 2004). In 2015 there were 3.5 million Australians aged 65 years and over, representing nearly one in seven people (or 15.1% of the total population). Population projections by the ABS for the period 2012 to 2101 indicate that this proportion of the population is expected to increase to 22% in 2061 and 25% in 2101. In 2012 there were 420,300 people aged 85 years and over in Australia making up 2% of the population. This group is projected to grow rapidly in the future to 5% by 2061 and 6% by 2101. Reflecting the ageing population, death from diseases such as heart disease, dementia (including Alzheimer's disease), stroke, lung cancer and chronic lower respiratory disease have increased in Australia over the past ten years. In 2014 these diseases accounted for over one-third of all deaths.

Significant population growth and ageing, of a similar trajectory to that described above, is forecast for the Illawarra Shoalhaven Local Health District (ISLHD). The ISLHD extends approximately 250km along the coastal strip from Helensburgh in the north and to North Durras in the south and encompasses four local government areas (Wollongong, Shellharbour, Kiama, and Shoalhaven), illustrated in **Figure 19**.

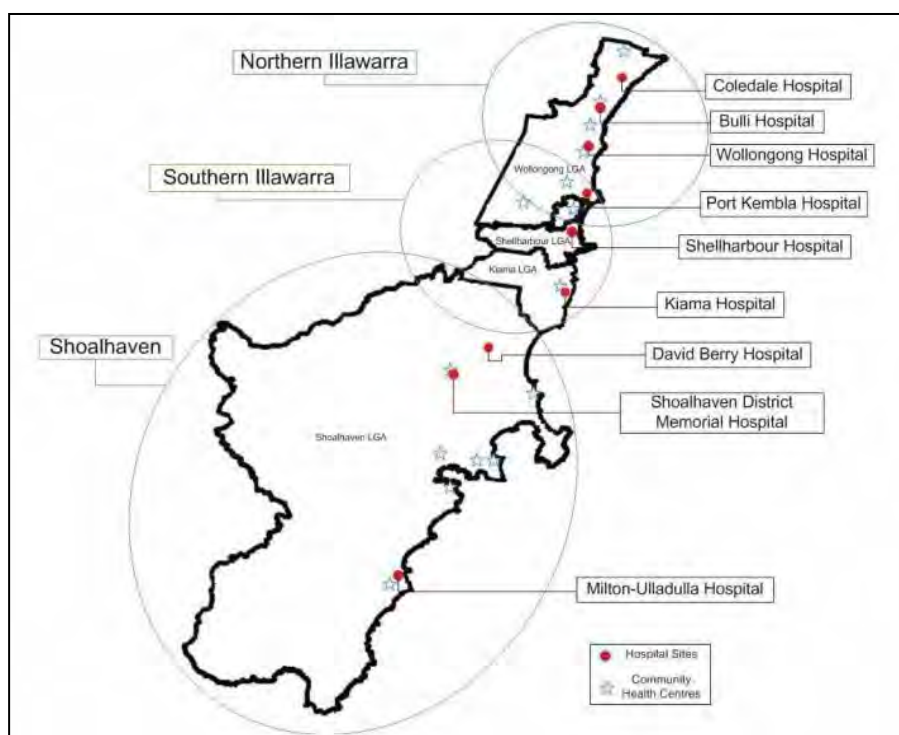


Figure 19: Map of district hospitals and community health centres comprising the Illawarra Shoalhaven Local Health District (Source: NSW Health Illawarra Shoalhaven Local Health District 'Year in Review 2012-2013')

Table 6 provides a population snapshot of the Local Health District catchment population for persons aged 65 years and over by LGA based on NSW government area population projections for 2013.

Table 6: Population Statistics for the Local Health District Catchment, aged 65+ years

Population	2016	2021	2031	Change 2016- 2021	Change (%) 2016-2021
Wollongong LGA Total	210,350	218,250	232,450	7,900	4%
Wollongong LGA 65 years +	36,750	41,050	50,550	4,300	12%
Shellharbour LGA Total	70,650	75,350	84,250	4,700	7%
Shellharbour LGA 65 years +	11,600	13,900	19,250	2,300	20%
Shoalhaven LGA Total	99,800	103,000	108,150	3,200	3%
Shoalhaven LGA 65 years +	25,600	28,950	36,000	3,350	13%
Kiama LGA Total	22,000	23,150	25,450	1,150	5%
Kiama LGA 65 years +	4,950	5,950	6,900	1,000	20%
Total Population ISLHD	402,800	419,750	450,300	16,950	4%
Total Population ISLHD 65years +	78,900	89,850	112,700	10,950	14%

Source: New South Wales Local Government Area Population Projections: 2013 Preliminary Revision referenced in BACCE Final Business Case prepared by Johnstaff Pty Ltd, 2016.

Significant growth in the population aged over 65 years will increase the demand for Aged Care services, particularly in the Southern Illawarra and the Shoalhaven where there will be a 14% growth in this age group in the next ten years, compared to 4% growth in the overall population.

5.1.2 Increasing Demand for Services

The growth in population aged over 65 years will place increasing demand on acute aged care services, sub-acute aged care services and geriatric outpatient services. Specifically, the BACCE 'Final Business Case' prepared by Johnstaff in October 2016 anticipates the following:

- A projected increase in acute geriatric separations of 31% between 2011/12 and 2022.
- A significant increase in the demand for maintenance care by 2027, with demand increasing from 6.9 beds currently, to 32.2 beds in 2027.
- In the Illawarra region the projected demand for aged care beds is predicted to increase from 377 in 2021 to 742 in 2031.

The Business Case notes that "although the delivery of 60 residential care suites on the Bulli ACCE site will not provide growth in aged care beds for the region given the licenses for the 60 beds will be transferred from existing IRT facilities, it will ensure the continued supply of residential aged care beds for the community given a number of existing IRT facilities are at the end of their useful life. The delivery of residential care beds at Bulli will provide a potential platform for growth in the future in line with demand."

5.1.3 Aged Care Service Delivery

The BACCE will promote sustainability of aged care service delivery within the Illawarra by:

- minimising travel for essential health care services for the aged population in the Northern Illawarra;

- delivering a critical mass of clinical expertise to support the delivery of excellence in aged care across the Illawarra Shoalhaven Local Health District;
- providing an inspiring and dynamic environment for staff with enhanced opportunities for education, training and research that will enable optimise recruitment and retention of a skilled staff mix across all disciplines; and
- promoting continued supply of residential aged care beds in the region and a potential platform for future growth. ('Final Business Case' prepared by Johnstaff Pty Ltd, 2016).

5.2 Project Justification

5.2.1 Development Options

The Illawarra Shoalhaven Local Health District (ISLHD), prior to its endorsement of the current strategic masterplan for the site, considered three (3) options for the BACCE, as summarised in **Table 7**.

Table 7: Options Analysis BACCE - ISLHD

Option	Description
Option 1 Base Case	Maintain the existing facility to keep safe and operational with no increase in capacity or change to the current service configuration. The current activity levels will be continued into the future.
Option 2 Refurbishment Expansion	Refurbishment and expansion of existing Bulli Hospital facilities delivering 60 aged care beds, urgent primary care service, aged care outpatient services, associated support services and a privately funded collocated 60 high care residential aged care facility.
Option 3 New Build	New build facility delivering 60 aged care beds, urgent primary care service, aged care outpatient services, associated support services and a privately funded collocated and integrated 60 suite residential care facility.

Source: BACCE Final Business Case prepared by Johnstaff Pty Ltd, 2016.

5.2.2 Justification for Preferred Alternative

The BACCE represents a new era in the delivery of aged care services through establishment of an innovative partnership between ISLHD and IRT that is committed to providing service excellence to the community. The BACCE Final Business Case (Johnstaff, 2016) indicates that the BACCE will:

- Maximise the ability to deliver safe, high quality health and aged care services.
- Enable the delivery of contemporary models of care and operational service models.
- Leverage greater capital value for both public and private service partners.
- Decrease Capital Cost for the facility due to shared spaces.
- Optimise the opportunity for operational efficiencies.
- Optimise opportunities for research, education, training and innovation.
- Deliver new, modern and welcoming facilities for the community with a strong public identity.
- Deliver new, modern and welcoming facilities for the community.
- Provide a safe, healing and reassuring environment for patients, residents and their families.
- Enhance the care experience for patients and residents.

- Ensure older residents experience supportive care as they move between community, residential and hospital based services by providing a facility that promotes collaboration between service providers.
- Enhance access to services in the Northern Illawarra through growth in inpatient bed numbers.
- Assist in improving the health of the local community.
- Provide a reference centre for aged care expertise across the broader Illawarra region.
- Promote evidence based design for aged care services including people living with dementia.
- Provide an inspiring and dynamic environment for staff with opportunities to strengthen their skills and knowledge through collaboration between health and residential care staff.
- Enhance opportunities for aged care research and innovation.
- Promote education and training of current and future health and residential care workforce.

6 Federal Legislative Framework

The following section provides the federal planning and legislative framework for the proposed development. The purpose of this section is to outline the approval process and identify the applicable federal Acts, and Regulations and any other legislative requirements that relate to the proposed development.

6.1 Federal Legislation

The following section provides an overview of the relevance of listed federal legislation with regards to the proposed development.

6.1.1 Environment Protection and Biodiversity Conservation Act 1999

According to the Australian Government Department of Environment and Energy's website (www.environment.gov.au), "the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance."

The EPBC Act requires the approval of the Minister for the Commonwealth Department of the Environment for actions that may have a significant impact on matters of National Environmental Significance (NES). Approval from the Commonwealth Minister is in addition to any approvals under NSW legislation. The EPBC Act also provides for the identification, conservation and protection of places of national heritage significance and provides for the management of Commonwealth heritage places and establishes the Australian Heritage Council.

The EPBC Act lists thirteen (13) matters of NES which must be addressed when assessing the impacts of a proposal. The subject site is not located on Commonwealth land, nor would Commonwealth land likely be affected by the proposed development, therefore *Division 2—Protection of the environment from proposals involving the Commonwealth* does not apply to the subject proposal on the subject site. A search of the EPBC Protected Matters Search Tool on the Commonwealth Department of Environment and Energy's website has been undertaken in respect of the proposal (refer to the EPBC Act Protected Matters Report provided in **Appendix 12** of this Statement). A summary of how the proposal may impact on the matters of NES is provided in **Table 8**:

Table 8: Implications of BACCE Development on Matters of NES and Protection of the Environment

Division 1—Requirements Relating to Matters of National Environmental Significance	
Matter of NES	Comments
Subdivision A—World Heritage	There are no world heritage properties proximate to the proposed development, or that would potentially be affected by the proposed development.
Subdivision AA—National Heritage	There are no national heritage properties in the vicinity of the proposed project, or that would potentially be affected by the proposal.

Division 1—Requirements Relating to Matters of National Environmental Significance	
Matter of NES	Comments
Subdivision B—Wetlands of International Importance	There are no RAMSAR Wetlands located in the immediate vicinity of the subject site therefore the proposed development would not impact on wetlands of international importance
Subdivision C—Commonwealth Listed Threatened Species and Communities	The proposed development is not expected to impact upon any known threatened species.
Subdivision D—Commonwealth Listed Migratory Species	The proposal is not expected to have an impact on any listed migratory species.
Subdivision E—Protection of the environment from Nuclear Actions	The proposed development would not involve nuclear action as defined under EPBC Act 1999.
Subdivision F—Commonwealth Marine Environment (Areas)	There are no Commonwealth marine areas proximate to the proposed development, or that would potentially be affected by the proposed development.
Subdivision FA—Great Barrier Reef Marine Park	The proposed development is not located on or near the Great Barrier Reef Marine Park.
Subdivision FB—Protection of water resources from coal seam gas development and large coal mining development	The proposed development is not for the purposes of coal seam gas development or a large coal mining development.
Subdivision G—Additional matters of national environmental significance	The proposed development of the subject site is not located in a Territory or a place acquired by the Commonwealth for public purposes (within the meaning of section 52 of the Constitution); or in a Commonwealth marine area; is not for the purpose of trade or commerce; will not be undertaken by a constitutional corporation; and Is not subject to a regulation to give effect to Australia's obligations under an agreement with one or more other countries, therefore there are no implications for the proposal in this Subdivision.
Subdivision H—Actions that are taken to be covered by this Division	As above
Subdivision HA—Limitation on liability for actions of third parties	N/A
Subdivision I—Evidentiary certificates	The Minister has not issued a written certificate under the provisions of this Subdivision: (a) stating that a specified person has contravened, or is contravening, a specified civil penalty provision set out in this Division; and (b) setting out particulars of that contravention.

The Department of Environment and Energy's website provides the following definition for 'significant impact':

"A significant impact is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. You should consider all of these factors when determining whether an action is likely to have a significant impact on the environment."

Based on the information provided in **Table 8**, it is considered that the proposed development would not have a significant impact on matters of NES or on Commonwealth Land, the requirements of the EPBC Act are not triggered and approval from the Commonwealth Minister for the Department of the Environment is not required. This is confirmed by the outcomes of the 'Flora and Fauna Assessment' prepared by Travers Bushfire and Ecology dated 19 October 2016 (refer **Appendix 13**) which concludes that *"It is considered that the proposal is not likely to have a significant impact on threatened or migratory fauna species listed as matters of national environmental significance under the EPBC Act. As such, a referral to the Commonwealth Department of Environment (DOE) is not required."*

6.1.2 Commonwealth Government's Aged Care Reform Plan: Living Longer, Living Stronger (2012)

This reform plan aims to build a better, fairer and more nationally consistent aged care system and to provide a flexible system that provides older Australians with easier access to a greater range of services. The BACCE addresses the key principles and initiatives of the 'Living Longer, Living Stronger' Aged Care Reform Plan in the following ways (Johnstaff Pty Ltd):

- *Establishment of a fully integrated, networked and flexible aged care model across the Illawarra Shoalhaven Local Health District*
- *Improvements in service efficiency and patient health outcomes*
- *Provision of a seamless patient journey for aged care services*
- *Significant investment in regional health services*
- *Easier access for Northern Illawarra residents to a full range of aged care services (a 'one stop shop').*

7 State and Regional Statutory Planning Framework

The following section provides the state and regional planning and legislative framework for the proposed development. The purpose of this section is to outline the approval process and identify the applicable state planning policies, regional plans and other legislative requirements that relate to the proposed development.

7.1 Introduction

The Bulli Aged Care Centre of Excellence is aligned with the strategic directions of the Australian Government, NSW Government, NSW Ministry of Health, and Illawarra Shoalhaven Local Health District, and specifically supports the key principles underpinning the following strategic plans:

- Commonwealth Government's Aged Care Reform Plan: Living Longer, Living Stronger (April 2012) (refer to previous Section 6 of this Statement);
- NSW Government's NSW 2021: A Plan to Make NSW Number One (refer to Section 7.4.2);
- Illawarra-Shoalhaven Regional Plan 2015 (refer to Section 7.5.1);
- Illawarra Regional Transport Plan 2014 (refer to Section 7.5.2);
- Illawarra Regional Strategy (refer to Section 7.5.3).

The following state policies and guidelines have also been specifically identified in the SEARS as containing relevant planning provisions, goals and strategic planning objectives that must be addressed in this EIS:

- NSW State Priorities (refer to Section 7.4.1);
- NSW Long Term Transport Master Plan 2012 (refer to Section 7.4.3);
- NSW Healthy Urban Development Checklist (refer to Section 7.4.4).

In addition, various legislative plans, policies and strategies considered of relevance to the proposed development are also considered in this Section.

7.2 State Legislation

7.2.1 Environmental Planning & Assessment Act 1979 - Clause 5 Objectives

The EP & A Act and accompanying Regulation provide the framework for environmental planning in NSW and include provisions to ensure that proposals which have the potential to impact the environment are subject to detailed assessment, and to provide opportunity for public involvement. The objectives of this Act as contained in Clause 5 are:

- (a) to encourage:
- (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,
 - (ii) the promotion and co-ordination of the orderly and economic use and development of land,
 - (iii) the protection, provision and co-ordination of communication and utility services,
 - (iv) the provision of land for public purposes,
 - (v) the provision and co-ordination of community services and facilities, and

- (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- (vii) *ecologically sustainable development, and*
- (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposed development is consistent with the nominated objectives of the Act and is considered capable of fulfilling the statutory requirements. It is considered that the proposed development would not result in any negative impact in this regard and that the proposed development is in line with the State's planning requirements. This EIS confirms that the proposed development can be undertaken in a manner which will not adversely impact on natural resources but will promote the economic use of the land in a manner which will provide an improved level of facilities for residents of the Illawarra.

7.2.2 Environmental Planning and Assessment Act 1979 - State Significant Development

Part 4 of the EPA Act, specifically Division 4.1 State Significant Development provides the legislative framework for state significant development (noting that Part 3A of the EPA Act was repealed on 1 October 2011 and is no longer applicable). Section 89C (2) of the EPA Act enables a State Environmental Planning Policy to declare any development, or any class or description of development, to be State Significant Development. Under Section 89D of the Act, the Minister is the consent authority for State significant development, although Section 23 enables the Minister to delegate the consent authority function to the Planning Assessment Commission, the Secretary or to any other public authority.

Relevance to proposed development:

In this instance, the provisions of SEPP (State and Regional Development) 2011 apply to the proposal (refer to further discussion in this Section). It also provides that the EPA Regulations, 2000 may contain additional provisions or matters relating to State significant development, including the following:

- (a) *the environmental impact statements to accompany development applications in respect of State significant development,*
- (b) *the requirements for the preparation of those environmental impact statements, including consultation requirements with respect to government agencies and other affected persons,*

The SEARs for the BACCE project were issued on 28 July 2016. The SEARs stated that the development application (DA) and EIS for the development must be lodged within two years, or further consultation with the Secretary in relation to the preparation of the EIS is required. It is noted that lodgement of this EIS document in association with the DA is within this 2 year timeframe.

Under the EPA Act 1979, a development may be classified as 'Integrated development' where the development (not being State significant development or complying development) that, in order for it to be carried out, requires development consent and one or more approvals under various specific legislation. The

proposal is considered state significant development, therefore the development cannot be classified as 'Integrated development'. In addition, refer to the provisions of the Water Management Act 2000 and the Rural Fires Act 1997 as discussed in this Section.

7.2.3 Environmental Planning and Assessment Act 1979 & Water Management Act 2000

The Water Management Act 2000 replaced the provisions of the Rivers and Foreshores Improvement Act 1948 coming into effect from February 2008. The Water Management Act provides for the protection of river and lakeside land in NSW and aims to provide for the sustainable management of the water sources throughout NSW. The Water Management Act (specifically Part 3 of Chapter 3, Sections 89, 90 and 91) provides for the granting of various licenses and approvals, including for the use of water and water supply works. Generally speaking the following approvals may be required under the Water Management Act:

- a water access licence – which entitles the holder to a share of available water in a river or aquifer (groundwater body);
- water use approval – which authorises use of water on land for a particular purpose at a particular location; or
- water management works approval – which authorise construction and use of water supply works such as bores, pumps, dams and channels.

Relevance to proposed development:

The proposal would ordinarily be considered as 'Integrated Development' in accordance with Section 91 of the Environmental Planning and Assessment Act 1979 as:

- *The site is located within 40 metres of a watercourse being development that requires a water use approval, water management work approval or activity approval (Controlled Activity Approval) under Part 3 of Chapter 3 of the Water Management Act 2000.*
- *The development would require a bushfire safety authority (BSA) from the NSW Rural Fire Service under section 100B of the Rural Fires Act 1997, as it comprises development of land for a special fire protection purpose.*

However, Section 91 of the EPA Act 1979 confirms that State Significant Development is not defined as integrated and hence a controlled activity approval is not required. In addition, under Section 91E, certain activities are considered exempt from requiring an approval. Specifically, a public authority does not need to obtain a controlled activity approval for any controlled activities that it carries out in, on or under waterfront land. The Water Management Act defines a public authority as:

- *A minister of the Crown;*
- *A government department or administrative office;*
- *A statutory body representing the Crown;*
- *A statutory state owned corporation (or any of its subsidiaries) within the meaning of the State Owned Corporation Act 1989;*
- *A council or county council within the meaning of the Local Government Act 1993.*

Health Infrastructure is considered a public authority under the definition, and therefore a controlled activity approval is not required.

7.2.4 Environmental Planning and Assessment Act 1979 & Rural Fires Act 1997

Under the Rural Fires Act 1997 Section 100B requires authorisation in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes.

Relevance to proposed development:

The subject site contains bushfire prone land, according to the Section 149 certificate for the subject site. The proposed facility incorporates residential accommodation in the form of residential care facility as defined under the SEPP (Seniors Living) and therefore ordinarily requires approval under the Rural Fires Act 1997 as it relates to a special fire protection purposes. It is noted that the Bushfire Assessment prepared by Travers Bushfire Ecology provides that consultation with the Rural Fire Service needs to occur in relation to this approval under the Rural Fires Act 1997, despite the fact that the proposal is 'state significant development' and is therefore not considered 'integrated development'. This will be undertaken by the Department of Planning and Environment as the consent authority for the proposal as state significant development.

7.2.5 Environmental Planning and Assessment Regulation 2000

Schedule 2 of the EPA Regulation 2000 provides the requirements for the content of an EIS.

Relevance to proposed development:

The provisions of the Regulation, specifically clauses 6 and 7 relating to the form and content of an EIS are relevant to this document and have been used as the basis for preparing this EIS.

7.2.6 Threatened Species Conservation Act 1995

Part of the site is identified on the Natural Resource Sensitivity - Biodiversity Map associated with Wollongong Local Environmental Plan 2009 and therefore flora and fauna investigations are required.

Relevance to proposed development:

A 'Flora and Fauna Assessment' (**Appendix 13**) was prepared by Travers Bushfire and Ecology, which is discussed in detail in **Section 9.2.6** of this Statement. This report concludes that *"the vegetation present within the subject site is not attributable to any locally occurring endangered ecological community and that the proposed development is not likely to be constrained by matters pertaining to section 5 of the EP&A Act. A Species Impact Statement is not required for the proposal. It is considered that the proposal is not likely to have a significant impact on threatened or migratory fauna species listed as matters of national environmental significance under the EPBC Act. As such, a referral to the Commonwealth Department of Environment (DOE) is not required."* Mitigation measures to minimise adverse ecological impacts are identified.

7.2.7 Protection of the Environment Operations Act 1997

The Protection of the Environment Operation Act 1997 (POEO Act) prohibits any person from causing pollution of waters, or air and provides penalties for air, water and noise pollution offences. Section 48 of the POEO Act requires a person to obtain an Environment Protection License (EPL) from the Department of Environment and Heritage before carrying out any of the premises based activities described in Schedule 1 of the Act. The proposed Bulli Aged Centre for Excellence is not a scheduled activity.

Relevance to proposed development:

The general provisions of the POEO Act in relation to pollution of the environment will apply throughout the proposed operations on the site, including the need to consider general requirements during the proposed operations in relation to the control of environmental issues such as noise, dust, emissions and any run-off which may be discharged from the site. In relation to potential for radiation, as identified in the SEARs, the X-Ray equipment proposed for use on the subject site is being transferred from the adjacent existing Bulli Hospital site, therefore the licence should remain valid.

7.2.8 Contaminated Land Management Act 1997

The general object of the *Contaminated Land Management Act, 1997* is to establish a process for investigating and (where appropriate) remediating land that is significantly contaminated and requires remediation. Under the Act (and also under the provisions of State Environmental Planning Policy No. 55 – Remediation of Land) it is necessary to establish if the proposed use is able to be developed on land which has been declared or found to be contaminated.

Relevance to proposed development:

The 149(5) certificate issued for the subject site notes that Council has not been advised that the land is contaminated. However, given the known history of fill on the subject site, a Preliminary Site Investigation (Phase 1) was undertaken by Douglas Partners in the early phases of the project's inception. The results of that investigation lead to a detailed Asbestos Investigation undertaken by Douglas Partners to satisfy the provisions of SEPP 55 – Remediation of Land. A summary of both documents is provided in **Section 9.2.2** and provided in **Appendix 19 and Appendix 20** of this Statement.

7.2.9 Roads Act 1993

The *Roads Act 1993* provides for a number of issues including the establishment of procedures for opening and closing public roads, acquisition of land for roadways in addition to regulating the carrying out of various activities on public roads including roadwork and road widening operations.

Relevance to proposed development:

No closure of public roads would be required in order to gain access to the subject site. However, the Preliminary Construction Management Plan prepared by Johnstaff (**Appendix 24**) confirms that that during construction there will be a need to direct pedestrians and cyclists onto the road carriageway. A Traffic and Pedestrian Traffic Management Plan will be prepared prior to the commencement of works in adherence with any relevant requirements of the Roads Act and relevant authority.

7.3 State Environmental Planning Policies**7.3.1 State Environmental Planning Policy (State and Regional Development) 2011**

State Environmental Planning Policy (State and Regional Development) 2011 declares a hospital to be state significant development if, pursuant to Schedule 1 Clause 14, it is development that has a capital investment value of more than \$30 million. Therefore, under the EPA Act, the subject development is State Significant Development, and the Minister for Planning is the consent authority. The relevant clause states:

14 Hospitals, medical centres and health research facilities

Development that has a capital investment value of more than \$30 million for any of the following purposes:

- (a) hospitals,
- (b) medical centres,
- (c) health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute).

The total end cost of the combined project will be approximately **\$54,757,986M**. The 'hospital or 'public' component of the development is estimated at \$38,154,900M (excluding shared areas) and the residential care facility, being the private sector component of works are estimated to have a total end cost of approximately \$16,603,086 as detailed in the CIV Statement prepared by Altus Page Kirkland (**Appendix 2**).

As the 'hospital or 'public' component (NSW Health Infrastructure) of the development is estimated at being greater than \$30M (ie: **\$38,154,900M**), the proposed development falls within the State Significant Development category provided by State Environmental Planning Policy (State and Regional Development) 2011.

There is no reference in the SEPP to 'Seniors housing' being captured as state significant development. However, this forms part of the overall development of the project and the building will be constructed and will operate as one combined healthcare facility. It is not possible to completely separate the components of the building for the purpose of valuation or construction as there is a significant portion of the building that is shared (e.g. front entry and front of house, waiting areas, storage areas, loading dock, back of house, lifts, services etc). On this basis, and having regard to the hospital component of the development exceeding \$30m, it is considered that the total development is a State Significant project, captured by Clause 14 of Schedule 1 and as confirmed by the Department of Planning and Environment's release of the SEARs in July 2016 (Application Ref. No.SSD 7751).

This is consistent with the provisions of clause 8(2) of SEPP (State and Regional Development) which confirms that if a "single proposed development the subject of one development application comprises development that is only partly State significant development.....the remainder of the development is also declared to be State significant development...."

7.3.2 State Environmental Planning Policy (Infrastructure) 2007

Clause 104 and Schedule 3 (RMS Referral):

State Environmental Planning Policy (Infrastructure) 2007 aims to ensure the effective delivery of infrastructure across the State and that appropriate agencies are made aware of and are given an opportunity to make representations in respect of certain development, including traffic generating developments.

Clause 104 of the State Environmental Planning Policy [Infrastructure] 2007 [ISEPP] requires that development applications for certain traffic generating development, as set out in Schedule 3 of the policy, be referred to

the Roads and Maritime Services [RMS] and that any submission from the RMS be considered prior to the determination of the application.

The proposed development comprises a 'hospital'. For referral to the RMS, a hospital must comprise '200 or more beds', when the site has access to any road, or '100 or more beds', when the site has access to a classified road or to road that connects to a classified road (if access within 90m of connection, measured along alignment of connecting road). The proposed development comprises 120 beds in total. The nearest classified road is the Princes Highway, which intersects Hospital Road at a point in excess of 175m to the east of the subject site. Therefore referral to the RMS is not required.

However, although the proposal does not meet the criteria for hospitals outlined in Schedule 3 of the SEPP in terms of number of beds and access to a classified road, as anticipated, the Department of Planning and Environment still referred the proposal to the Roads and Maritime Service for comment prior to issuing the SEARs.

Division 10 (Approval Requirements Health Services Facility):

The land is situated within the R2 Low Density Residential zone pursuant to the Wollongong Local Environmental Plan 2009 (WLEP 2009), as shown on the extract zoning map in **Figure 20** of this EIS.

Under Division 10 (Health Services Facilities) of State Environmental Planning Policy (Infrastructure) 2007, a 'health services facility' (which is the 'group term' within which the public component of the proposed development falls) is defined as:

" a facility used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes the following:

- (a) day surgeries and medical centres,*
- (b) community health service facilities,*
- (c) health consulting rooms,*
- (d) facilities for the transport of patients, including helipads and ambulance facilities,*
- (e) hospitals."*

Under this Division, a 'health services facility' may be permitted with or without development consent where carried out by or on behalf of a public authority but only within certain prescribed zones. The prescribed zone list does not include the R2 Low Density Residential Zone, and therefore the provisions of WLEP 2009 or SEPP (Housing for Seniors or People with a Disability) 2004 must be relied upon for permissibility.

7.3.3 State Environmental Planning Policy No.55 – Remediation of Land

The objective of SEPP 55 is to provide for a state-wide planning approach to the remediation of contaminated land. Clause 7 of SEPP 55 outlines the considerations for the consent authority in determining development applications on land that is potentially contaminated. Clause 7 of SEPP 55 requires the following:

- (1) A consent authority must not consent to the carrying out of any development on land unless:*
 - (a) it has considered whether the land is contaminated, and*
 - (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out,*
- and*

- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.
- (2) Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the 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.

This Policy applies to the subject land. Douglas Partners Pty Ltd prepared a preliminary site investigation and contamination report finding potential for contamination exists at the site primarily through the filling of the site for its development as a car park and demolition of previous structures. The presence of asbestos was confirmed in analysis of the filling and Douglas Partners note that "the potential for further asbestos associated with anthropogenic material in the filling". Douglas Partners recommend that "to determine the extent and degree of asbestos contamination impact a detailed site investigation for asbestos would be required to determine the suitability of the site for the proposed development or to allow for the preparation of a Remediation Action Plan". Douglas Partners conclude that subject to the results of this further testing "it is considered likely that the site can be made suitable for its proposed aged care facility development". A 'Preliminary Site Investigation with Limited Sampling' was therefore conducted by Douglas Partners (**Appendix 19**) and a Remediation Action Plan prepared (**Appendix 21**).

7.3.4 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

State Environmental Planning Policy No.33 – Hazardous and Offensive Development requires the consent authority to consider whether a proposal is a potentially hazardous or a potentially offensive industry or a hazardous storage establishment. In doing so, the consent authority must give careful consideration to the specific characteristics and circumstances of the development, its location and the way in which the proposed activity is to be carried out.

Relevance to proposed development:

The SEPP provides requirements with respect to hazardous industries, offensive industries, hazardous storage establishments and offensive storage establishments. The proposed development will not involve the undertaking of industrial processes, however will involve the storage of goods associated with the operations of a hospital and hence the provisions of this SEPP relating to potentially hazardous or offensive storage facilities have been considered.

Clause 3 defines "potentially hazardous industry" and "potentially offensive industry" as being:

"potentially hazardous industry" means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

- (a) to human health, life or property, or
- (b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.

"potentially offensive industry" means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

Clause 4 includes other relevant definitions:

"hazardous industry" means a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would pose a significant risk in relation to the locality:

- (a) to human health, life or property, or
- (b) to the biophysical environment.

"hazardous storage establishment" means any establishment where goods, materials or products are stored which, when in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the establishment from existing or likely future development on the other land in the locality), would pose a significant risk in relation to the locality:

- (a) to human health, life or property, or
- (b) to the biophysical environment.

"offensive industry" means a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality.

"offensive storage establishment" means any establishment where goods, materials or products are stored which, when in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the establishment from existing or likely future development on other land in the locality), would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality.

"the Act" means the Environmental Planning and Assessment Act 1979 .

The proposed hospital facilities will require the storage of a range of goods and products for medical purposes. However, it is noted that the storage of goods associated with medical uses will be strictly controlled to address health and safety requirements and would are not likely to constitute storage of a type or quantity which would

emit a polluting discharge or pose a significant risk in the locality. There will be clinical waste, however quantities are not expected to dramatically increase from current clinical waste levels at the existing Bulli Hospital, as the only additional scope is 4 new IPU beds. Further, there is no radioactive waste associated with the proposed x-ray machines to be located on the site. On this basis it is considered that the proposed use is not defined as a potentially hazardous or offensive storage facility.

7.3.5 State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 ('Seniors Living SEPP') aims to encourage the provision of housing (including residential care facilities) that will increase the supply and diversity of residences to meet the needs of seniors or people with a disability. It also seeks to make efficient use of existing infrastructure and services and ensure that seniors housing is of good design.

Clause 4 Land to which policy applies, specifically subclause (1) of the SEPP provides that:

This Policy applies to land within New South Wales that is land zoned primarily for urban purposes or land that adjoins land zoned primarily for urban purposes, but only if:

- (a) development for the purpose of any of the following is permitted on the land:*
 - (i) dwelling-houses,*
 - (ii) residential flat buildings,*
 - (iii) hospitals,*
 - (iv) development of a kind identified in respect of land zoned as special uses, including (but not limited to) churches, convents, educational establishments, schools and seminaries, or*
- (b) the land is being used for the purposes of an existing registered club.*

It is noted that under this clause, if the site contains 'environmentally sensitive land' identified in Schedule 2 of the SEPP, then the provisions do not apply, as follows:

Land identified in another environmental planning instrument by any of the following descriptions or by like descriptions or by descriptions that incorporate any of the following words or expressions:

- (a) coastal protection,*
- (b) conservation (but not land identified as a heritage conservation area in another environmental planning instrument),*
- (c) critical habitat,*
- (d) environment protection,*
- (e) open space,*
- (f) escarpment,*
- (g) floodway,*
- (h) high flooding hazard,*
- (i) natural hazard,*
- (j) (Repealed)*
- (k) scenic (but not land that is so identified if:*
 - (i) the land is within a residential zone in which development of two storeys or more in height is permitted, or*
 - (ii) an adjacent residential zone, also identified as scenic, permits development of two storeys or more in height),*
- (l) water catchment,*
- (m) natural wetland.*

Land shown cross-hatched on the bush fire evacuation risk map.

The Residential Care Facility which forms part of the proposed development is located on land which is zoned R2 Low Density Residential pursuant to WLEP 2009 and is not identified as 'environmentally sensitive land' pursuant to the WLEP 2009. Specifically, the Flood Assessment prepared by Jones Nicholson (**Appendix 10**) confirms that "the subject site is predominately flood free with a small area of flood risk along the Northern boundary which is clearly below the developable area of the subject site". Within the R2 Low Density Residential Zone, dwelling-houses and hospitals are permitted with development consent, therefore, the proposed residential aged care facility is also permitted under clause 4.1 subject to the provisions of the SEPP.

The IRT seniors living component meets the definition of 'residential care facility' which is defined as :

"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."

The key provisions of the SEPP are addressed for the residential care facility component of the proposed BACCE development in the following manner:

Chapter 3 Development for Seniors Housing

Part 1 General

The following clauses are relevant to the proposal in Part 1 of this Chapter 3:

- Clause 18 Restrictions on occupation of seniors housing allowed under this Chapter - This clause places requires residential care accommodation to be used only by seniors, people with a disability or staff/support persons. It is intended that the proposed residential care facility will comply with these requirements.
- Clause 21 Subdivision – This clause provides that the land on which the proposed residential care facility is to be located may be subdivided with the consent of the consent authority. The proposed development will include the consolidation of the current allotments at land but does not include re-subdivision of the site.
- Clause 22 Fire sprinkler systems in residential care facilities for seniors – This clause provides that development for the purpose of the installation of a fire sprinkler system in a residential care facility for seniors may be carried out with development consent. This requirement can be conditioned should development consent be granted, with details to be provided prior to the operation of the facility.

Part 1A Site compatibility certificates

This clause does not apply to the subject proposal.

Part 2 Site Related Requirements

The following clauses are relevant to the proposal in Part 2 of this Chapter 3:

- Clause 26 'Location to Access and Facilities' – This clause requires that written evidence be provided that certain access requirements can be met for future residents of the proposed development to the following services:
 - "(a) shops, bank service providers and other retail and commercial services that residents may reasonably require, and*
 - (b) community services and recreation facilities, and*
 - (c) the practice of a general medical practitioner."*

The Model of Care prepared by IRT and Health Infrastructure (**Appendix 32**) confirms the following in relation to resident's access to health care:

- Provision "of a clinical advice line which is an aged care single access point for RACFS offering clinical advice and support to staff. The service operates seven days a week and is staffed by acute aged care CNC's during the day and Wollongong Hospital Registered Nurses after hours. The service is supported by next working day rapid access to ambulatory care geriatric clinic appointment with specialist aged care medical staff for comprehensive geriatric assessment in the rapid access clinic appointments. Two guaranteed clinic appointment slots available at Bulli and Wollongong Hospital geriatric clinics each morning. (Total 4 rapid access clinic places available daily)".
- "Additional two places available at Bulli Hospital on Mondays to allow for possible increased demand over the weekend (total 6 rapid access clinic places).
- Direct admissions, if deemed necessary by the geriatrician, can occur from either outpatient clinics to inpatient wards at Wollongong, Shellharbour or Bulli Hospitals. (ED Bypass).
- Geriatric Outreach service which is an adjunct to the Residential Aged Care Clinical Advice Line. Specialised aged care team that outreaches to RACF to provide comprehensive geriatric assessment and management within the RACF. Complemented by Specialist consultation within the RACF via ehealth".

IRT has confirmed access arrangements to the residential care facility in relation to the SEPP requirements will be provided, however the method for this particular facility will be determined once the development is closer to establishment, in order to confirm the needs of the resident community within the facility. IRT have advised the facilities will be provided with a local bus service, the method of which will be assessed by IRT in accordance with their normal procedures in determining the needs of the resident community on establishment. Adequate services will be provided for residents to have access to shops, bank service providers and other retail and commercial services, community and recreational services that residents may reasonably require.

- Clause 27 'Bushfire Prone Land': The Bushfire Assessment prepared by Travers Bushfire and Ecology (**Appendix 14**) confirms that the site is not identified as bushfire prone land.
- Clause 28 'Water and Sewer': The site can be adequately serviced by water and sewerage infrastructure as demonstrated in Section 9.2.16 of this EIS and based on the information contained within correspondence provided by Sydney Water dated 26 July 2016 (**Appendix 25**). This advice confirms that the site can be adequately serviced by the following:
 - The drinking water main available for connection is the 375mm CICL main located on the Southern side of Hospital Road.
 - The wastewater main available for connection is the 225mm main traversing the property constructed under WO 47230.

Part 3 Design Requirements

The following clauses are relevant to the proposal in Part 3 of this Chapter 3:

Division 1 General

- Clause 30 'Site Analysis': under the provisions of this clause, a consent authority must not consent to the proposed development unless it is satisfied that the applicant has taken into account a site analysis

prepared by the applicant in accordance with the clause. Site Analysis Plans (Sheets 1-4) have been prepared by Billard Reece Partnership in accordance with these requirements and are provided in **Appendix 4**.

- Clause 32 'Design of residential development': under the provisions of this clause a consent authority must not consent to the proposed residential care facility unless the consent authority is satisfied that the proposed development demonstrates that adequate regard has been given to the principles set out in Division 2. (see below).

Division 2 Design Principles

The proposed Residential Care component of the BACCE development has been designed having regard to the design principles set out in Clauses 33-39 of the SEPP as demonstrated elsewhere in this EIS as referenced below:

- Clause 33 'Neighbourhood Amenity and Streetscape': refer Section 9.2.12.
- Clause 34 'Visual and Acoustic Privacy': refer Section 9.2.10, 9.2.12 and **Appendix 16**.
- Clause 35 'Solar access and design for climate': refer Section 9.2.14 and **Appendix 27**.
- Clause 36 'Stormwater': refer Section 9.2.3 and **Appendices 7, 8 & 9**.
- Clause 37 'Crime Prevention': refer Section 9.2.11.
- Clause 38 'Accessibility': refer Section 9.2.11 and **Appendix 30**.
- Clause 39 'Waste Management': refer Section 9.2.17 and **Appendix 26**.

Part 4 Development Standards to be Complied With

- Clause 40 Development standards – minimum sizes and building heights: Under this clause, a consent authority must not consent to the proposed residential care facility unless it complies with the standards specified in this clause as follows:

(2) Site size - The size of the site must be at least 1,000 square metres.

(3) Site frontage - The site frontage must be at least 20 metres wide measured at the building line.

(4) Height in zones where residential flat buildings are not permitted.

If the development is proposed in a residential zone where residential flat buildings are not permitted:

(a) the height of all buildings in the proposed development must be 8 metres or less, and

(b) a building that is adjacent to a boundary of the site (being the site, not only of that particular development, but also of any other associated development to which this Policy applies) must be not more than 2 storeys in height, and

The subject site is over 1000m² and has a frontage of more than 20 metres across the full depth of the site. Therefore the minimum site size and frontage requirements have been met. As residential flat buildings are permissible in the R2 Low Density Residential zone of WLEP 2009 the height limits as contained in subclauses (4)(a), (b) and (c) do not apply.

Part 7 Development standards that cannot be used as grounds to refuse consent

Division 2 Residential care facilities

- Clause 48 Standards that cannot be used to refuse development consent for residential care facilities – this clause provides that a consent authority must not refuse consent to a development application made

pursuant to this Chapter for the carrying out of development for the purpose of a residential care facility on any of the following grounds:

- (a) **building height:** if all proposed buildings are 8 metres or less in height (and regardless of any other standard specified by another environmental planning instrument limiting development to 2 storeys), or
- (b) **density and scale:** if the density and scale of the buildings when expressed as a floor space ratio is 1:1 or less,
- (c) **landscaped area:** if a minimum of 25 square metres of landscaped area per residential care facility bed is provided,
- (d) **parking for residents and visitors:** if at least the following is provided:
 - (i) 1 parking space for each 10 beds in the residential care facility (or 1 parking space for each 15 beds if the facility provides care only for persons with dementia), and
 - (ii) 1 parking space for each 2 persons to be employed in connection with the development and on duty at any one time, and
 - (iii) 1 parking space suitable for an ambulance.

Note. The provisions of this clause do not impose any limitations on the grounds on which a consent authority may grant development consent.

The proposed building exceeds the specified height provisions, however meets the required level of parking and landscaping for the RACF. The requirements of clause 48 are not mandatory, but rather are standards by which the development cannot be refused. Hence, the development may be considered have regard to the circumstances of the case and the development may be approved, irrespective of any non-compliances with clause 48, if determined appropriate.

Chapter 3 Development for Seniors Housing

Clause 55 Residential care facilities for seniors required to have fire sprinkler systems – residential care facility for seniors must include a fire sprinkler system according to this clause. The proposed residential care facility and hospital can include a fire sprinkler system as detailed in the BCA Report prepared by Steve Watson and Partners provided in **Appendix 29**.

The BCA Report and Accessibility Report (**Appendices 29 & 30**) further address the detailed aspects of the SEPP requirements.

7.4 Other State Policies, Plans and Guidelines

7.4.1 NSW State Priorities

The document NSW State Priorities has been specifically identified in the Secretary's Requirements which provide that the relevant planning provisions, goals and strategic planning objectives must be addressed in this EIS. NSW Premier Mike Baird has 30 priorities for NSW that include creating jobs, building infrastructure, delivering high-quality health and education, tackling child abuse and domestic violence, and reducing the rates of homelessness and childhood obesity. The Premier has committed to 12 of the 30 key priorities. Of specific note, is the Premier's commitment to halving the assessment times for State Significant Developments through "...a more predictable, efficient and transparent system....". Six (6) of the twelve (12) identified Key Priorities potentially relevant to the Proposal are as follows:

- **Creating jobs** – the proposal will create employment for existing businesses in the construction industry, as well as result in the creation of new employment opportunities for medical staff at the new facility.

- **Improving service levels in hospitals** – the proposed facility will provide new modern emergency facilities which are needed in the Illawarra-Shoalhaven Region, and will specifically assist in meeting the key priority of reducing waiting times for patients in emergency rooms and will support the Premier's 'Whole of Hospital' and 'Integrated Care Programs'.
- **Driving public sector diversity** – the proposed development, being largely funded by government, will provide opportunity for diversity in the workforce with opportunities available to address where practicable, the Premier's priority to increase the number of women and Aboriginal and Torres Strait Islander people in senior leadership roles.
- **Keeping our environment clean** – as the subject site is currently used for overflow car parking for the existing Bulli Hospital, is largely underutilised and can be generally readily accessed by the general public, creating potential for the dumping of unwanted waste and goods on the site illegally. This has potential impacts on water quality in the nearby water course to the rear of the site. The redevelopment of the site will reduce the incidence of littering and combat illegal rubbish dumping and meet the Premier's priorities for keeping our environment clean.
- **Faster housing approvals** – the proposal includes seniors housing in the form of a residential care facility in line with the Seniors Housing SEPP, thereby increasing the amount of available housing, particularly for the ageing population, which is a priority for the Government.
- **Improving government services** – the proposal will deliver additional health services which are in demand, which will support the Government's priority for working to make NSW services easier, faster and more convenient.

7.4.2 NSW 2021: A Plan to Make NSW Number One

'NSW 2021: A Plan to Make NSW Number One' replaces the previous 'State Plan' and is a ten year plan to guide the State's policy and budget and decision-making. The Plan sets out goals to deliver on community priorities. While directed at the priorities for public sector delivery including a hospital and medical care services, the BACCE development will also provide residential accommodation for high care patients in the private sector. The development will assist in addressing the key overarching strategies and related goals pertaining to the economy, the provision of quality services, the renovation of infrastructure and the strengthening of communities.

7.4.3 NSW Long Term Transport Master Plan 2012

The document 'NSW Long Term Transport Master Plan' has been specifically identified in the Secretary's Requirements which provide that the relevant planning provisions, goals and strategic planning objectives must be addressed in this EIS. The Masterplan sits within the overarching plan NSW 2021, in association with metropolitan and regional planning strategy documents and the State Infrastructure Strategy. The Masterplan provides an integrated transport framework focussing on the customer and identifies the challenges for transport planning and funding priorities for NSW over the next 20 years.

Relevant Planning Provisions

The Illawarra is identified in the Masterplan as providing mining as a primary employment sector, with faster public transport connections proposed to and through Sydney for Wollongong as a regional centre. The Plan identifies effective integrated land use planning and transport needs for the community by focussing on major transport links for urban centres identified by the Department of Planning and Infrastructure's identified centres

hierarchy and the road networks required to support these centres. Many of the discussions focus around metropolitan Sydney, with references to regional connections which may affect the Illawarra-Shoalhaven Region. Wollongong is recognised as a major regional centre with major increases in population proposed by 2021 (population as at 2011 is identified in the Masterplan as around 274,000), creating greater need for improved transport links as demand increases. The specific challenges being faced by Wollongong and surrounding Illawarra suburbs of relevance to the proposal include physical limitations provided by the Illawarra Escarpment and the Pacific Ocean, with limited east-west transport links and poorly integrated bus network. Support for local employment growth is needed.

The Princes Highway (A1) is recognised as a major arterial road link within the transport planning hierarchy. The long term initiatives for the Illawarra are:

- Proposed upgrades to the Princes Highway;
- Mt Ousley Road improvement;
- Investigate strategic bus corridors;
- Picton Road upgrades.

The Masterplan recognises the need to meet the needs of an ageing regional population as demand for public and community transport increases. The Masterplan specifically states that increasing pressure will be placed on access to transport, particularly to provide *“convenient and safe access to health and other services for this growing group in our community. Much of this demand will need to be met by the community transport sector...”*.

The proposal represents an integrated approach to providing services and facilities in one location in order to:

- Reduce the transfers from residential aged care facilities to emergency departments or acute services via direct transfer / admission to Bulli Hospital where there is a critical mass of expertise.
- Reduce travel times by enhancing local services in Bulli and thereby minimising travel for essential health care services for the aged population in the Northern Illawarra.

The site is located close to the major road link of the Princes Highway at Bulli and Wollongong Northern Distributor which provides easy access to road, bus and rail networks. The development will provide a community bus service for the residential aged care facility, providing access to local infrastructure and services for future residents of the development.

7.4.4 NSW Healthy Urban Development Checklist

The document prepared by NSW Health titled Healthy Urban Development Checklist has been specifically identified in the Secretary's Requirements which provide that the relevant planning provisions, goals and strategic planning objectives must be addressed in this EIS. The Healthy Urban Development Checklist is a standardised tool used to assess the health effects of a proposal and identify how the proposal can be improved to achieve better health outcomes.

Relevant Planning Provisions

A response to the Checklist is provided as follows:

- Incidental physical activity will be encouraged on the site in the form of walking paths and usable quality outdoor spaces are provided.
- The proposed integrated facility will support human health, provide dwelling diversity for the ageing population with adaptable faculties with access to services and infrastructure.
- Access is easily available to major public transport links for visitors to the proposed development, with a bus service to be provided for future residents within the residential aged care facility to ensure active community involvement and access to public infrastructure. Access to telephone and internet (NBN connections) will be available to the site.
- The proposal intends to ensure a local connection and involvement with the local Bulli community, providing access to resources and facilities by expanding the existing Bulli Hospital services. The upgrade of facilities will be welcomed by the community in need of supporting the ageing population of the Illawarra.
- The proposal responds to the needs of an ageing population and will support the current facilities provided by the existing Bulli Hospital, providing an integrated and modernised one stop shop for emergency needs and access to facilities. The proposal will provide additional services and facilities required to support the lacking infrastructure currently provided at Bulli Hospital, and is an efficient utilisation of the land.

7.4.5 A Plan for Growing Sydney

A Plan for Growing Sydney, released in December 2014, is the NSW Government's plan for the future of the Sydney Metropolitan Area over the next 20 years. The Plan provides key directions and actions to guide Sydney's productivity, environmental management, and liveability – including the delivery of housing, employment, infrastructure and open space. The Plan recognises the need to enhance linkages to Regional NSW, with the Wollongong CBD having regional connections from Campbelltown-Macarthur, Liverpool and south to Bowral/Moss Vale, however, the Wollongong Local Government Area is not specifically identified as a sub-region of Sydney under this Metropolitan Plan. The subject proposal is not inconsistent with the provisions of the Strategy.

7.5 Regional Plans and Strategies

7.5.1 Illawarra-Shoalhaven Regional Plan 2015

The Regional Plan will guide strategic planning over a 20 year period and applies to the Local Government Areas of Kiama, Shellharbour, Shoalhaven and Wollongong, including the subject site. The Plan provides the strategic policy, planning and decision-making framework for growth and development over the next 20 years to 2036. According to the Regional Plan, by 2036, the population of the Illawarra-Shoalhaven is forecast to grow to 463,150, an increase of 60,400 from 2016. The Plan specifically recognises that population growth will be moderate in all age groups, apart from the 65 years and over group, with natural population growth as well as the migration of young families and retirees looking for a change in lifestyle. The Vision for the Plan includes access to high-quality health facilities in order to provide a region with communities that are strong, healthy and well-connected.

The BACCE proposal will assist in addressing the following key planning provisions and related goals contained within the Regional Plan:

- The Plan identifies the health, disability and aged care sector as being a priority growth sector for economic growth in the Region. The Plan provides that the 2015-16 NSW Government Budget committed over \$350 million to 20 infrastructure projects in the Illawarra-Shoalhaven region, including a commitment of \$19.3 million for the Bulli Hospital Aged Care Centre of Excellence.
- The Plan identifies the suburb of Bulli as a growth centre within the Illawarra-Shoalhaven Region. The proposed development will provide residential care facility thereby providing much needed residential accommodation for the elderly needing care.
- The Plan provides that good transport connections are essential to move people to and from centres and connection with health care services. The site is located close to major transport links in the Princes Highway and Bulli railway station, as well as being located on a bus corridor route, providing easy access to the site.
- The Plan aims to minimise potential impacts on biodiversity and ensure a consistent approach to managing the environmental values within the urban footprint, as well as to build the Illawarra-Shoalhaven's resilience to natural hazards and climate change. The proposed development has endeavoured to minimise any potential impacts on biodiversity and riparian corridors and has addressed potential bushfire, geotechnical and flood hazards which may affect the site.

7.5.2 Illawarra Regional Transport Plan 2014

The Illawarra Regional Transport Plan recognises and endorses the specific actions for the Illawarra (Wollongong) identified in the NSW Long Term Transport Master Plan (as discussed above) which sets the broad strategic direction for transport in NSW. This Regional Plan provides more detailed direction from the Master Plan and focussing on region-specific issues. The key transport challenges recognised by the Illawarra Regional Transport Plan include an ageing population, high levels of private car use, and balancing freight and passenger transport needs. Of specific relevance to the proposed development, the Plan provides the following:

"The proportion of people aged 65 years and over in the Illawarra region has increased from 15 percent to 18 percent between 2001 and 2011 and this trend is expected to continue. This will have an increasing impact on the types of transport services that need to be provided in the region, as well as access to health and aged care services.

Health care and social assistance is the largest employment sector at 15 percent of the region's employment. Other significant employment sectors are retail (12 percent), education (11 percent) and manufacturing (10 percent). The number of people working in health care and social assistance has risen since 2001, while manufacturing has declined, both in real and percentage terms."

The Regional Plan provides for road upgrades, improved pedestrian facilities and options and encouraging east-west and north-south linkages across the Region. The proposed development is not inconsistent with this Regional Plan and will provide for social transport opportunities between the Bulli integrated hospital and associated residential care facility and the local businesses, services and infrastructure particularly in the local centres of Bulli and Woonona. The location of the site is in close proximity to major transport links in the form of

passenger transport (Princes Highway and the Northern Distributor) linking the major centre of Wollongong (location of the major regional Wollongong Hospital and Wollongong Private Hospital) to the site.

7.5.3 Illawarra Regional Strategy

The Illawarra Regional Strategy 2006-2031 applies to the Wollongong, Shellharbour and Kiama Local Government Areas as a guide to allowing "economic growth, generate local job and housing opportunities and attracting fresh investment". The population at the time of publication was 280,000 which was forecast to increase by 47,600 and providing an additional 30,000 new jobs by 2031. The primary purpose of the Regional Strategy is to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the Region's population over the next 25 years.

Numerous challenges were identified, including the need to attract economic opportunities while protecting the unique coastal environment. An analysis of the age structure of the current population and the expected structure in 2031 clearly indicates an ageing population, whereby the population aged over 60 years old will significantly increase from proportion of current levels. One of the challenges facing in the region in regard to population and housing is to deliver appropriate housing with quality urban design. Housing forecasts include providing 14,800 medium density terraces and villas, including housing for the aged.

The Strategy also recognises the importance of ensuring suitable serviced employment land is provide to provide future economic and labour force requirements including further diversification of the economy. Approximately 270 hectares of employment lands need to be secured and protected to accommodate the required 30,000 jobs for the region. The Strategy recognises that Wollongong LGA has a significant amount of employment land; a large portion of this land may not be suitable for development due to various constraints. Employment growth is encouraged not only by protecting key employment lands from inappropriate development, but also by providing new employment land in appropriate locations. Councils are called to encourage the clustering of synergistic land uses and fast tracking approvals including medical and health development.

The health care sector including hospitals, medical centres, clinics and aged care facilities is considered a major employment generator for the region and is expected to grow to the meet the regions changing needs. Therefore, provision of employment lands for the health sector is vital for the region.

One of the visions of the Strategy is to encourage development and growth which minimises impact on the region's natural and cultural assets including the escarpment, the land and rural land resources. The Strategy is to support the maintenance and enhancement of the region's biodiversity. Whilst the site does contain vegetation, detailed ground truthing undertaken by Travers Bushfire and Ecology Consultants (refer to Flora and Fauna Assessment provided in **Appendix 13**) has confirmed that there is limited naturally occurring vegetation on the site and the land does not contain endangered ecological communities. Revegetation works within the site will assist in meeting the desired outcomes of the Regional Strategy.

The Strategy also addresses natural hazards, including flooding. As the site is identified as a Low, Medium and High Flood Risk Precinct, consideration of flood impacts has been provided by Jones Nicholson Consulting Engineering (**Appendix 10**). The Flood Assessment concludes that "*the subject site is predominately flood free*

with a small area of flood risk along the Northern boundary which is clearly below the developable area of the subject siteThe proposed development does not impact the flood water levels on the site or the surrounding properties".

Waste, energy and water management are also addressed in the strategy where it is encouraged that efficient use, conservation and security of available water and energy is undertaken. A Sustainability Assessment supports this proposal and is attached at **Appendix 27**.

The Bulli Aged Care Centre for Excellence will supply additional health and living opportunities particularly for the ageing population of the Illawarra region and beyond and is well located to serve a broad increasing population base.

8 Local Planning Framework

The following section provides the local planning and legislative framework for the proposed development. The purpose of this section is to outline the approval process and identify the applicable local planning controls that relate to the proposed development. This includes relevant local environmental plans and development control plans including Wollongong Local Environmental Plan 2009.

8.1 Wollongong Local Environmental Plan 2009

8.1.1 WLEP 2009 Objectives

The subject site is located within the Wollongong local government area (LGA) and the principle environmental planning instrument applying to the site is Wollongong Local Environmental Plan 2009 (WLEP 2009). The aims of the plan are as follows:

- (2) *This Plan aims to make local environmental planning provisions for land in Wollongong in accordance with the relevant standard environmental planning instrument under section 33A of the Act.*
- (3) *The particular aims of this Plan are as follows:*
 - (a) *to provide a framework for land use management,*
 - (b) *to encourage economic and business development to increase employment opportunities,*
 - (c) *to encourage a range of housing choices consistent with the capacity of the land,*
 - (d) *to improve the quality of life and the social well-being and amenity of residents, business operators, workers and visitors,*
 - (e) *to conserve and enhance remnant terrestrial, aquatic and riparian habitats, native vegetation and fauna species,*
 - (f) *to conserve and enhance heritage,*
 - (g) *to ensure that development is consistent with the constraints of the land and can be appropriately serviced by infrastructure,*
 - (h) *to ensure that significant landscapes are conserved, including the Illawarra Escarpment, Lake Illawarra, the drinking water catchment and the coastline.*

The proposal will provide for expanded employment and medical opportunities in a location with a high degree of accessibility to residents of the Wollongong LGA and beyond, in compliance with objective (b). Through the incorporation of a residential care facility for seniors the development will provide an increase in the provision of housing choice for senior residents requiring higher levels of care. The provision of the expanded facilities for Bulli Hospital will benefit the Illawarra Region and provide for the social well-being of residents, thereby addressing Objective (d).

The specialist sub-consultant investigations which have been undertaken have concluded that the development will not significantly impact on native vegetation and fauna species (Objective e), Aboriginal heritage (Objective f) and that the constraints of the land can be managed to accommodate the proposed development or that the development has been modified to address the constraints (Objective g). Further, the site can be adequately serviced by infrastructure which can accommodate the proposed development, in compliance with Objective (g). The subject development is located on a site which is located close to major

access roads, is not located near the northern beaches coastline or located in the Illawarra Escarpment Area and will therefore not impact on significant landscapes, in compliance with Objective (h).

8.1.2 Site Zoning and Permissible Uses

The site is zoned R2 Low Density Residential pursuant to Wollongong Local Environmental Plan 2009, as shown in Figure 20.

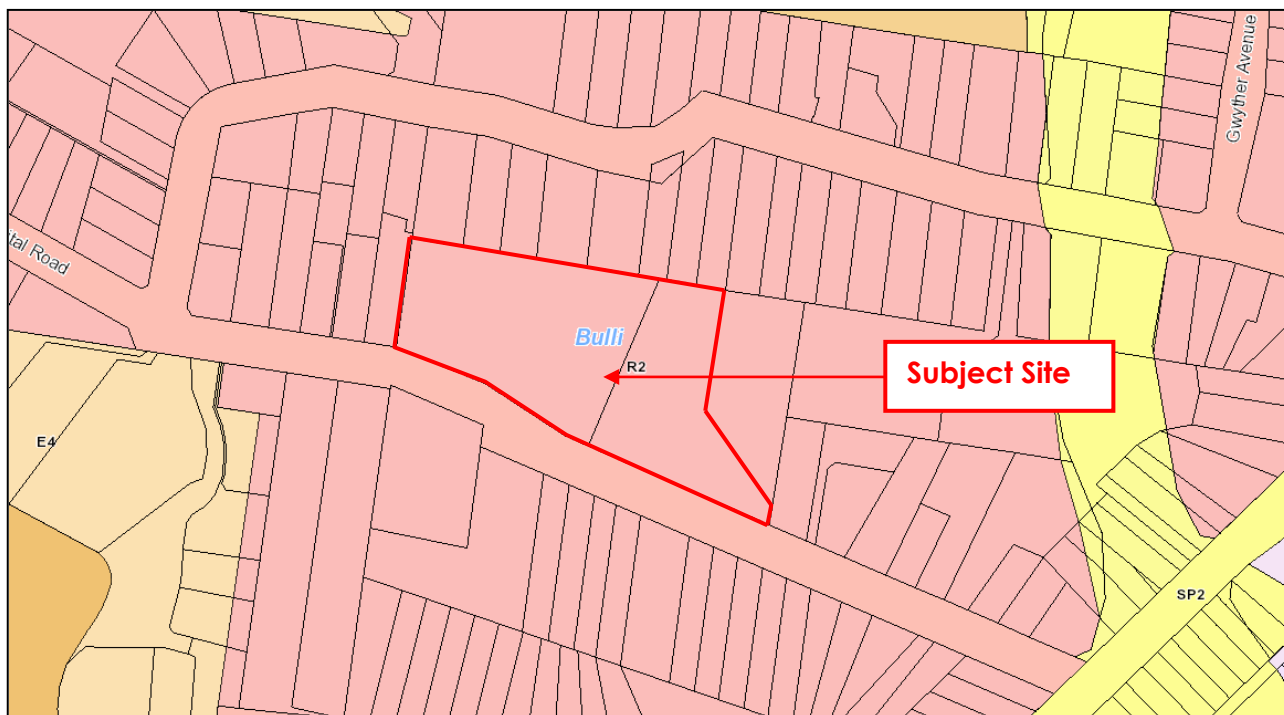


Figure 20: Extract from Wollongong LEP 2009 indicating subject site within Zone R2 Low Density Residential
(Source: Wollongong City Council online mapping, 2016)

The objectives of the zone are:

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

The proposed development will provide land uses which will provide additional health facilities and services to residents and will also provide residential facilities for the elderly.

The following land uses are **permissible with development consent** in the R2 zone:

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Boat launching ramps; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Exhibition homes; Exhibition villages; Group homes; Health consulting rooms; Home-based child care; Hospitals; Hostels; Information and education facilities; Jetties; Multi dwelling housing; Neighbourhood shops; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Signage; Veterinary hospitals.

The proposed BACCE development will satisfy the first objective of the R2 Low Density Residential zone by providing seniors housing in the form of residential aged care facilities specifically targeting the higher level of care for the aging population of the Illawarra and Shoalhaven Region, including the northern suburbs. The development will satisfy the second objective of the R2 Low Density Residential zone by providing a range of facilities which will cater for the day to day medical needs of the residents in the residential care facilities, as well as for emergency situations, as well as providing for the social, health and community needs of residents in the area.

The proposed development contains a number of land uses as defined by Wollongong LEP 2009, which are permissible in the R2 Low Density Residential Zone, as follows:

- Hospital;
- Seniors housing (group term incorporating 'Residential care facilities').

The definitions for each of these relevant uses as contained within the Dictionary of WLEP 2009 are as follows:

hospital means a building or place used for the purpose of providing professional health care services (such as preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, or counseling services provided by health care professionals) to people admitted as in-patients (whether or not out-patients are also cared for or treated there), and includes ancillary facilities for (or that consist of) any of the following:

- (a) day surgery, day procedures or health consulting rooms,
- (b) accommodation for nurses or other health care workers,
- (c) accommodation for persons receiving health care or for their visitors,
- (d) shops, kiosks, restaurants or cafes or take-away food and drink premises,
- (e) patient transport facilities, including helipads, ambulance facilities and car parking,
- (f) educational purposes or any other health-related use,
- (g) research purposes (whether or not carried out by hospital staff or health care workers or for commercial purposes),
- (h) chapels,
- (i) hospices,
- (j) mortuaries.

Note. Hospitals are a type of health services facility—see the definition of that term in this Dictionary.

seniors housing means a building or place that is:

- (a) a residential care facility, or
- (b) a hostel within the meaning of clause 12 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004, or
- (c) a group of self-contained dwellings, or
- (d) a combination of any of the buildings or places referred to in paragraphs (a)–(c),
- (a) and that is, or is intended to be, used permanently for:
- (e) seniors or people who have a disability, or
- (f) people who live in the same household with seniors or people who have a disability, or

- (g) staff employed to assist in the administration of the building or place or in the provision of services to persons living in the building or place, but does not include a hospital.

Note. Seniors housing is a type of residential accommodation—see the definition of that term in this Dictionary.

residential care facility means 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, but does not include a dwelling, hostel, hospital or psychiatric facility.

Note. Residential care facilities are a type of seniors housing—see the definition of that term in this Dictionary.

The proposed development contains a number of activities that are permitted with consent within the R2 Low Density Residential zone which are as follows:

- The community (not for profit) and public aged care beds and ancillary services are permissible with development consent under the definition of 'hospital';
- The ambulatory care services, urgent care services and mortuary are permissible under the definition of 'hospital';
- The front-of-house services (eg: reception area, kitchen, hairdresser) are ancillary to the 'hospital'. proposed for general use by residents, employees and visitors;
- The residential care facilities are permissible under the 'Group Term' definition of 'Seniors Housing'.

In addition, 'seniors living' and 'residential care facilities' are also permissible under the Seniors Living SEPP, as discussed previously in this Statement. The proposal therefore considers the provisions of both documents relevant to the proposed development.

8.1.3 Other Relevant Clauses – WLEP 2009

This section discusses the clauses contained within the Wollongong Local Environmental Plan 2009 which are considered relevant to the subject proposal or which require consideration.

Clause 2.7 Demolition requires development consent

Clause 2.7 permits demolition but only with development consent. The development application also seeks approval for the demolition of an existing single storey brick and timber building with metal roof located on the subject site, which is currently used for excess storage by Bulli Hospital.

Clause 4.3 Height of Buildings

This clause stipulates a maximum building height of 9 metres as applying to the subject land. The proposal contains a range of building design and heights, to provide a complex with a varying built form up to a maximum overall building height of 16.5 metres, measured from existing ground level to the north-eastern edge of the plant room on the hospital building (refer to Architectural Plans provided in **Appendix 2**). Whilst the proposed development will have a building height which exceed the permissible 9.0m specified in WLEP 2009, the buildings on the site have adequate separation from adjacent residential uses to minimise the impacts of overshadowing, overlooking and noise. A detailed Clause 4.6 Exceptions to Development Standards Variation Statement is provided to justify non-compliance with the required control (refer to **Appendix 5**).

Clause 4.4 Floor Space Ratio

Clause 4.4: Floor Space Ratio states that the maximum floor space ratio (FSR) for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map. There is currently no maximum permissible floor space ratio (FSR) for the subject site. The proposed development provides a total GFA of 9020.95m² (as calculated by Billard Leece Partnership), in accordance with the definition of Gross Floor Area pursuant to Wollongong LEP 2009).

Clause 5.6 Architectural Roof Features

The objectives of this clause are noted as follows:

- (a) to provide a built skyline that does not adversely impact on the natural landscape, view corridors or surrounding land, and*
- (b) to specify what part of a building may exceed the height limits.*

This clause states:

- (2) Development that includes an architectural roof feature that exceeds, or causes a building to exceed, the height limits set by clause 4.3 may be carried out, but only with development consent.*
- (3) Development consent must not be granted to any such development unless the consent authority is satisfied that:*
 - (a) the architectural roof feature:*
 - (i) comprises a decorative element on the uppermost portion of a building, and*
 - (ii) is not an advertising structure, and*
 - (iii) does not include floor space area and is not reasonably capable of modification to include floor space area, and*
 - (iv) will cause minimal overshadowing, and*
 - (b) any building identification signage or equipment for servicing the building (such as plant, lift motor rooms, fire stairs and the like) contained in or supported by the roof feature is fully integrated into the design of the roof feature."*

The proposed development contains an architectural feature on the south eastern corner element of the proposed building, therefore this clause applies. The proposed architectural roof feature provides a visual feature extending from the front facade of the building, which will allow for the placement of a name board for the facility, without placement of advertising. This feature, whilst providing cover for the fire stairs, will not include floor space as fire stairs are excluded from the GFA definition, being 'common' vertical circulation. Further, the fire stairs are well integrated within the design of the roof feature. The placement of this feature in the south eastern corner of the site also provides separation from adjacent residential properties to minimise overshadowing impacts (refer to **Appendix 31** of this Statement for an Architectural Statement prepared by Billard Leece Partnership in relation to this clause).

Clause 5.9: Preservation of trees or vegetation

The objectives of this clause are noted as follows:

- "to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation."*

Clause 5.9(3) requires development consent for the removal of ten (10) trees. The provisions of this clause have been discussed as part of the Arborist Report and the Flora and Fauna Assessment lodged in association with this application (refer to **Appendix 11 and 13**). Refer also to the Landscape SSD Submission prepared by Arcadia Landscape Architecture in **Appendix 6**.

Clause 5.10 Heritage Conservation

Heritage items and heritage conservation areas are listed and described in Schedule 5 of WLEP 2009. The objectives of clause 5.10, which relates to heritage conservation, are noted as follows:

(1) The objectives of this clause are as follows:

- (a) to conserve the environmental heritage of Wollongong,*
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) to conserve archaeological sites,*
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance*

Clause 5.10(2) specifies the consent requirements for land containing a heritage item. In this regard Council's property information records indicate that the subject site does not contain any heritage listed buildings, nor is it situated within a heritage conservation zone. The following items of environmental heritage are identified as being potentially 'within the vicinity of' the subject site in **Table 9**.

Table 9: List of Heritage Items in the Vicinity of the Subject Site

Heritage Item Description	Property Address	Item Number and Significance
House	312 Princes Highway, Bulli Lot 5, DP 6793	6448
Former guest house	300–302 Princes Highway, Bulli Lot 2, DP 1138010	6187
Former ambulance station	322 Princes Highway, Bulli Lot 1, DP 981540	6449
Former shire council chambers	328 Princes Highway, Bulli Lot A, DP 421249	6184
Bulli police station and court house	329–331 Princes Highway, Woonona Lot 1, DP 199573	5926
Houses	87–101 Farrell Road, Bulli Lots 9–16, DP 6454	6182

The closest listed item to the subject site is located more than 100 metres to the east, on the corner of Princes Highway and Hospital Road (Item No.6448) as illustrated in **Figure 21**. The Bulli Heritage Conservation Area is located to the north east of the site on the Princes Highway, which is described as in Schedule 5 of the WLEP 2009 as "commercial centre and railway, Princes Highway, Railway Street, Station Street, Park Road, Stokes Lane, Quilkey Place", as well as the Old Bulli and is marked with a red outline and red diagonal hatch on the Heritage Map (refer to **Figure 21**). The 'Old Bulli Heritage Conservation Area' is also listed in Schedule 5 of WLEP and shown on the Heritage Map marked with red outline and red diagonal hatch, however, it is noted that the boundaries between these two are difficult to determine on the Heritage Map. Also located to the west of the subject site is the Illawarra Escarpment Landscape Area which is marked with a green outline and green vertical hatch.

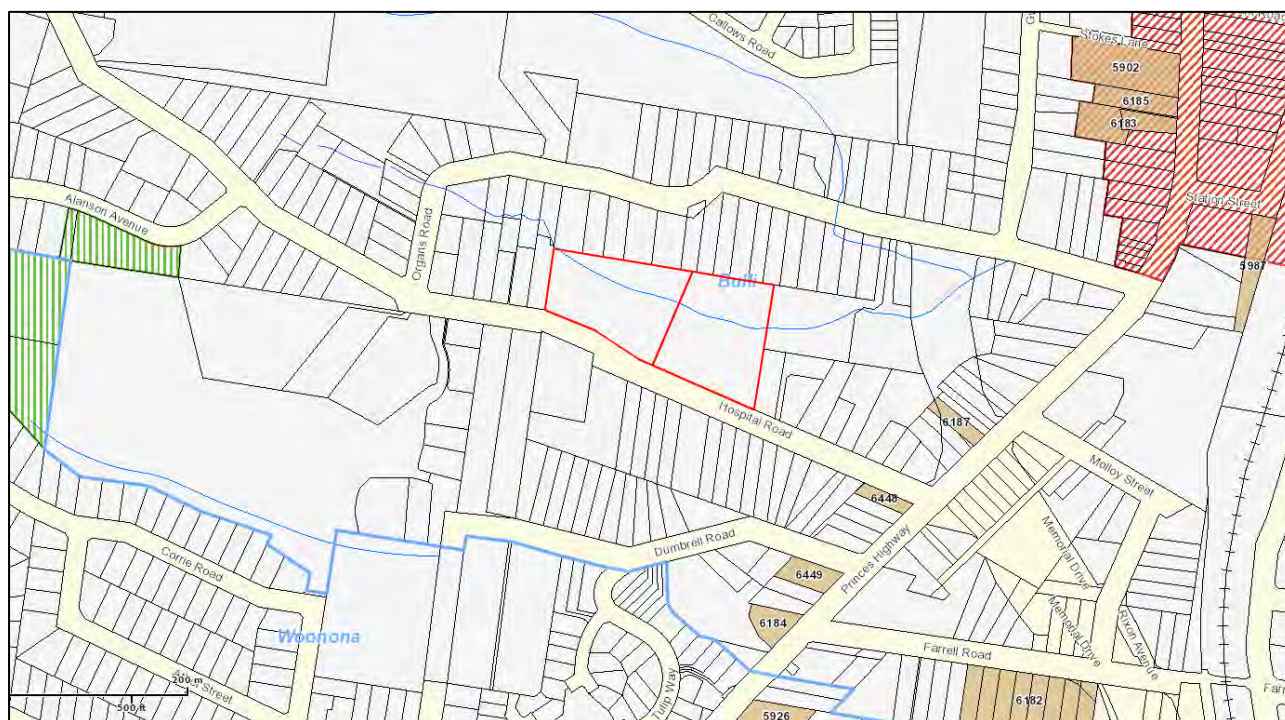


Figure 21: Extract from Heritage Map pursuant to WLEP 2009

(Source: Wollongong City Council online mapping, July 2016)

The SEARs requested that both a Non-indigenous Heritage Assessment and an Aboriginal Heritage Assessment be prepared as part of this State Significant Application. Subclause (8) 'Aboriginal places of heritage significance' requires that:

"The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

- (a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and*
- (b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent."*

An 'Aboriginal Cultural Heritage Due Diligence Assessment' prepared by Bioisis (**Appendix 15**) confirms that "No previously unrecorded Aboriginal sites or objects were located during the site survey and the area was assessed as having low potential for sites to occur due to heavily disturbed nature of the study area, the lack of recorded sites within the study area, and the slope landform of the study area". Accordingly the provisions of clause 5.10(2) are satisfied.

Clause 7.1 Public Utility Infrastructure

The objective of this clause is "to ensure that sufficient infrastructure is available to service development".

The site can be serviced by all required utility services subject to augmentation of services as detailed in the 'Electrical and Communications Infrastructure Management Plan' prepared by ARUP and the Services Strategy

(Hydraulic and Fire) prepared by Donnelley Simpson Cleary provided in **Appendix 25** of this Assessment. Further, correspondence from Sydney Water, dated 26 July 2016 confirms the availability of access to reticulated water and sewer services. The proposal is therefore consistent with the requirements of this provision.

8.1.4 Part 7 Local Provisions – General

Clause 7.2 Natural Resource Sensitivity

This clause applies to land that is identified as “Natural resource sensitivity—biodiversity” on the Natural Resource Sensitivity—Biodiversity Map. Under the provisions of this clause development consent must not be granted for development the following matters are addressed:

- (3) *Development consent must not be granted for development on land to which this clause applies unless the consent authority has considered the impact of the development on:*
 - (a) *native terrestrial flora and fauna and its habitat, and*
 - (b) *native aquatic flora and fauna and its habitat, and*
 - (c) *the ecological role of the land, waterways, riparian land or wetland, and*
 - (d) *threatened species, communities, populations and their habitats.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and:*
 - (a) *the development is designed, sited and managed to avoid potential adverse environmental impact, or*
 - (b) *if a potential adverse environmental impact cannot be avoided, the development:*
 - (i) *is designed and sited so as to have minimum adverse environmental impact, and*
 - (ii) *incorporates effective measures so as to have minimal adverse environmental impact, and*
 - (iii) *mitigates any residual adverse environmental impact through the restoration of any existing disturbed or modified area on the site.*

As provided previously in this Statement, Council's records indicate that the site contains land identified as Natural Resource Sensitivity – Biodiversity. The mapping indicates this to be located along the northern boundary of the land. A Flora and Fauna Report is therefore generally required to confirm the presence of any threatened species. However, as the development does not seek to encroach into this area, dispensation from this requirement was sought as part of the Request for SEARs prepared by TCG Planning.

The response to the Draft SEARs provided by Wollongong City Council confirms that a detailed flora and fauna assessment would not be required in this instance, although noting the draft SEARs provides that fauna and flora be addressed as part of the EIS. The final SEARs as issued however provide that an assessment be undertaken.

A Flora and Fauna Assessment has therefore been prepared by Travers Bushfire and Ecology Consultants (**Appendix 13**). An Arborist Report, prepared by Moore Trees also recommends a number of substantial tree protection zones and setbacks, which have been considered in the preparation of the EIS (**Appendix 11**).

Clause 7.3 Flood Planning Area

The objectives of this clause are noted as follows:

- (a) to maintain the existing flood regime and flow conveyance capacity,
- (b) to enable evacuation from land to which this clause applies,
- (c) to avoid significant adverse impacts on flood behaviour,
- (d) to avoid significant effects on the environment that would cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses,
- (e) to limit uses to those compatible with flow conveyance function and flood hazard.

The Flood Assessment prepared by Jones Nicholson (**Appendix 10**) confirms that "the subject site is predominately flood free with a small area of flood risk along the Northern boundary which is clearly below the developable area of the subject siteThe proposed development does not impact the flood water levels on the site or the surrounding properties". The requirements of clause 7.3 are therefore met.

Clause 7.5 Acid Sulphate Soils

The objective of this clause is "to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage." A portion of Lot 1 DP 175787 Section 149(2) Certificate) has been mapped as containing Class 5 Acid Sulphate soils. According to Wollongong Council's online mapping (refer to an extract provided in **Figure 22**), the portion of Lot 1 DP 175787 that contains Class 5 Acid Sulphate Soils, is not part of the allotment included within the boundaries of the developable area.



Figure 22: Extract from Acid Sulfate Soils Map pursuant to WLEP 2009 showing proximity of subject site to Class 5 ASS land, identifiable by yellow shading to the east of the subject site. (Source: Wollongong City Council online maps)

Clause 7.6 Earthworks

Clause 7.6 provides the approval requirements associated with earthworks. The objective of this clause is "to ensure that earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land." Clause 7.6(2) specifies that

development consent will be required for the earthworks, as they do not comprise exempt development or are of a minor nature. Hence, the proposed earthworks form part of the current application. The proposed development will involve excavation works associated with accessways, building construction and ancillary works. Retaining walls are proposed up to 3.5 metres in height.

8.2 Other Local Plans and Policies

8.2.1 Wollongong Section 94A Development Contributions Plan (2013)

Section 94A of the Environmental Planning and Assessment Act 1979 (NSW) (EPAA), provides for a fixed development consent levy. Clause 1 of section 94A states that as a condition of development consent a consent authority may impose *"a requirement that the applicant pay a levy of the percentage, authorised by a contributions plan, of the proposed cost of carrying out the development."*

The purpose of the section 94A levy under Wollongong Section 94A Development Contributions Plan is to assist Council in providing and maintaining high quality, diverse public facilities to meet the needs and expectations of the residential community of Wollongong City. As stated in the EP&A Act the monetary contribution is *"to be applied towards the provision, extension or augmentation of public amenities or public services (or towards recouping the cost of their provision, extension or augmentation)," [s94 (a) (3)]*. This levy applies to all land within the Wollongong City Council local government area (excluding Stages 1 & 2 of the West Dapto Urban Release).

Section 94A Development Contributions Plan 2015 applies to all land within the Wollongong Local Government Area and requires a monetary levy of 1% of the construction value (for development over \$200,000). Section 13 of this Plan provides that Council may allow for the following exemptions (partial or full) for some types of development, including:

- An application by the NSW Government for public infrastructure, such as but not limited to hospitals, police stations, fire stations; education facilities and public transport infrastructure.
- An application for a residential care facility.

As such, an exemption from the levying of contributions for the proposed development is requested.

8.3 Wollongong Development Control Plan 2009

8.3.1 Introduction

Wollongong Development Control Plan 2009 (WDCP 2009) contains Council's standards for development within the Wollongong local government area and applies to land to which Wollongong Local Environmental Plan 2009 is applicable to the proposed development. However, pursuant to clause 11(a) of the State Environmental Planning Policy (State and Regional Development) 2011, Development Control Plans do not apply to State Significant Development. This clause states;

"Development control plans (whether made before or after the commencement of this Policy) do not apply to:

- (a) State significant development, or*
- (b) development for which a relevant council is the consent authority under section 89D (2) of the Act."*

Therefore the provisions of Wollongong DCP 2009 do not apply to the proposal.

However, it is noted that Wollongong City Council's submission on the Draft SEARs raised a number of matters of interest to Council which referred specifically to certain DCP provisions relating to Car Parking Access Servicing Loading Facilities (Chapter E3), Floodplain Management (Chapter E13) and Stormwater Management (Chapter E14). Section 8 of this EIS contains a discussion of relevant matters pertaining to carparking, access, loading, flood management and stormwater management, to address the issues raised by Council. In addition, other matters which would ordinarily be considered in accordance with the provisions of WDCP 2009 have also been considered in Section 8 of this EIS, including, but not limited to:

- Neighbourhood Character
- Built Form
- Access for People with a Disability
- Aboriginal Heritage
- Heritage Conservation
- Bush Fire Management
- CPTED
- Landscaping
- Threatened Species
- Earthworks
- Contaminated Land Management

9 Assessment of Environmental Impacts

This section contains an assessment of the potential impacts of the project, such as any cumulative impacts, having regard to the outcomes of the specialist sub-consultant investigations and the identified site constraints and building design. Where appropriate, suitable mitigation measures are proposed to address these impacts.

9.1 Identification of Key Issues

Table 10 contains a summary of identified environmental risk analysis to identify potential environmental impacts associated with the activity.

Table 10: Summary of Key Issues

Issue	EIS Reference	Appendix
Compliance with Statutory Requirements	Sections 6-8	-
Land Stability and Geotechnical Constraints	Section 9.2.1	Appendices 17 and 18
Site Contamination	Section 9.2.2	Appendices 19, 20 & 21
Surface and Groundwater	Section 9.2.3	Appendices 22 & 28
Water Sensitive Urban Design	Section 9.2.3	Appendix 28
Acid Sulphate Soils	Section 8.1.4	Appendix 22
Flooding	Section 9.2.4	Appendix 10
Bushfire	Section 9.2.5	Appendix 14
Natural Resource Sensitivity and Biodiversity	Section 9.2.6	Appendices 11 & 13
Non Indigenous and Aboriginal Heritage	Section 9.2.7 and 8.1.3	Appendix 15
Transport, Carparking and Access	Section 9.2.8	Appendix 23
Construction Impacts	Section 9.2.9	Appendix 24
Acoustic and Vibration	Section 9.2.10	-
Built Form and Urban Design	Section 9.2.11	-
Visual Impact	Section 9.2.12	Appendix 4
Acoustic Impact	Section 9.2.12	Appendix 16
Overshadowing	Section 9.2.12	Appendix 4
Wind Impacts	Section 9.2.12	-
BCA Compliance and Accessibility	Section 9.2.13	-
Ecologically Sustainable Development Outcomes	Section 9.2.14	Appendix 27
Servicing	Section 9.12.15	Appendix 25
Waste Management	Section 9.2.16	Appendix 26
Public Infrastructure - Contributions	Section 8.2.1	-
Social and Economic Impact	Section 11	-

9.2 Assessment of Potential Impacts of the Project

9.2.1 Geotechnical Constraints Analysis

The Section 149(2) Certificates confirm the land is recorded in Council's records as being located in an area where landslip and/or subsidence have occurred, or land stability is suspected. A Report on Geotechnical Investigation was prepared by Douglas Partners Pty Ltd in August 2003 (**Appendix 17**) which included drilling of twelve (12) test bores and the installation of a standpipe piezometer in one bore to monitor groundwater levels.

A number of geotechnical issues were identified as constraining development of the subject site relating in particular, to the impact of the uncontrolled historical filling on site stability of up to 6m in depth, with the fill materials comprising a mix of clays, gravels and coal wash. With respect to the stability assessment, Douglas Partners note the following:

"The dry, well drained conditions within the bulk of the existing hospital site (when compared to the northern carpark area) indicates generally stable conditions, assessed as having no greater than a low to moderate risk of instability when assessed in accordance with the methods of the AGS Sub-Committee of Landslide Risk Management (March 2000), relevant abstracts of which are included in Appendix D. Investigation have also indicated that the uncontrolled filling platform that is used as a carpark area on the northern side of Hospital Road would be considered to have a moderate to high risk of damage to property occurring should development be undertaken on the platform in its present condition. The presence of tilted trees suggests soil creep in the slopes immediately west of the existing hospital site....."

The site lies within an area mapped for stability by H N Bowman in 1973 (Ref 4) which indicated that it is located in an area classified as 'stable land – no landslip problems' and is near to the boundary of land classified as 'stable land with some minor areas of slope instability'. The findings of the current assessment therefore are in general agreement with the previous broadscale mapping. (p.6)

Available deposited mine plans held by the Department of Mineral Resources (Ref 5) indicate that underground coal mine workings of the Austinmer Central Colliery extend to the northeast of the site with no working shown affecting the site." (p.7)

The site classification assessment undertaken by Douglas Partners confirms that:

"Based on the subsurface profiles encountered at the test locations (which comprised uncontrolled filling overlying clays of variable strength and rocks of the Illawarra Coal Measures) together with the slight to moderate topography, the existing hospital site, together with the northern carpark would be classified as Class P (problem site) when assessed in accordance with the requirements of AS2870-1996 Residential Slabs and Footings. The P classification necessitates that all footing design must be undertaken by a professional engineer in accordance with sound engineering principles. Notwithstanding the P classification, the underlying stiff colluvial and residual clay soils would be equivalent to Class H reactivity conditions." (p.7)

Having regard to this stability assessment and site classification Douglas Partners confirm that in order to achieve a site suitable for development, a range of site preparation works are recommended, "with extensive

earthworks required to remediate the northern carpark site". They also note that excavation down to depths of approximately 6m "will encounter a wide range of materials ranging from filling and colluvial/residual soils to weathered rock with some localised high strength band". Below depths of approximately 4.5m they anticipate that alternative methods of excavation will be required due to the potential presence of weathered rock. Accordingly, they note that "percussion methods would be required for excavating footings where high strength sandstone is encountered". Douglas Partners advise that:

"The operation of excavation and percussion plant may need to be regulated due to the potential for plant with heavy hammers to cause ground vibrations sufficient to damage nearby buildings. Previous experience has indicated that ground vibration levels above 10mm per second (peak particle velocity) can cause structural damage and accordingly, it is suggested that it may be necessary to limit vibration to a maximum of about 4mm per second when working close to adjoining buildings or site boundaries. Monitoring vibration levels would also be desirable in order to regulate set-backs necessary to ensure that vibration levels do not reach those likely to cause building damage."

Further, with respect to the impact of excavations on the water table Douglas Partners advise:

Whilst the water table is not likely to impact on earthworks to be undertaken within the existing hospital site (subject to design levels), seepage inflows must be anticipated should removal of the existing filling on the northern carpark site be proposed. Accordingly, a basal drainage system must be allowed for to ensure drainage and stability to the future fill platform. (p.8)

In May 2016 Douglas Partners undertook a review of the preliminary sketches for the BACCE Douglas Partners to determine whether the recommendations of the 2003 report remained current (refer **Appendix 18**). Following this review they confirmed that surface conditions were virtually unchanged from those observed at the time of the August 2003 report. Douglas Partners therefore advised that the comments given in the 2003 report are still applicable, noting that "excavation to depths of up to 7 m will be required to achieve a ground floor level at RL 27.5 for the four-storey (eastern) structure. Maximum excavation depths of around 2 m are anticipated in the western section of the site to achieve a ground level of RL 36.0. Maximum excavation depths of around 2m are anticipated in the western section of the site to achieve a ground level of RL 36.0." The following specific comments are provided in relation to site preparation works in response to their review of the preliminary plans:

- *The results of the 2003 investigation indicated the presence of an uncontrolled filling platform that was considered to have a moderate to high risk of damage to property occurring should development be undertaken on the platform in its present condition. Section 5.4 of the DP August 2003 report included removal of all existing filling and treatment of weak natural subgrade followed by filling under controlled conditions. However, the proposed layout of the western section, which include suspended slab construction founded on a deep footing system and a building footprint located outside the zone of influence of the batter (ie located a distance at least twice the height of the batter), will mitigate the need for such works within the building footprint.*
- *Within pavement areas, the existing filling should be excavated to at least 1 m below proposed subgrade level, test rolled and additional filling (which could include moisture-conditioned excavated fill materials) placed and compacted in layers to achieve a minimum density ratio of 98% relative to Standard compaction in the lower 0.5 m and 100% standard in the upper 0.5 m. These works are aimed at providing a reasonably uniform subgrade for pavement construction.*

- Where slab-on-ground construction is proposed for the eastern structure, all filling is to be removed and weak natural subgrade treated followed by filling under controlled conditions in accordance with Section 5.4 of the DP August 2003. Alternatively, a reduced earthworks methodology (as indicated above) could be considered in conjunction with suspended slab construction.
- Due to the generally "wet-of-optimum" conditions encountered, allowance will need to be made for some over-excavation (beyond the initial 1 m) and replacement with a bridging layer of ripped rock, or equivalent together with the installation of subsurface drainage.
- Section 5.6 of the DP August 2003 report provides guidance on batter slopes. In summary, the report suggests maximum temporary side slopes of 2:1 (horizontal: vertical) in existing uncontrolled filling and 1:1 (H:V) in the stiff clays and extremely low to very low strength rock. Permanent batters should be no greater than 2.5:1 (H:V) in controlled filling and stiff clay and should be topsoiled and vegetated as soon as possible after construction to minimise soil erosion.
- It is understood that comment is required on the geotechnical appropriateness of constructing steeper temporary batters. In this regard, steeper slopes must only be considered at those locations where there is sufficient distance for slumped material (if the batter was to fail) to accumulate without causing damage to downslope structures. Notwithstanding this, an increase risk of slumping (particularly during and following inclement weather) must be acknowledged and accepted. Furthermore, additional vigilance will be required during construction to monitor the slopes to ensure personnel safety.
- Steeper batters (no steeper than 1:1 in uncontrolled filling and 0.75:1 in stiff clays and extremely low to very low strength rock) could be feasible but limited to the eastern end of the existing fill platform (where there is a buffer to the neighbouring ambulance station). As a precaution to personnel safety, daily inspections of the batters must be undertaken by the site manager to assess changes in the batter profile and/or propagation of tension cracks that would be indicative of slope movement.
- Temporary batters along the Hospital Road frontage must be formed no steeper than 1:1 and supported in the long term by engineer-designed retaining structures.
- All excavations must also be regularly inspected by either an experienced geotechnical engineer or engineering geologist who can advise on remedial requirements if adverse or variable conditions are encountered.
- Due to the close proximity of residential development, steeper batters than those previously nominated are not considered geotechnically appropriate for the northern and western extents of the fill platform.
- Where there is insufficient space for temporary batters, either temporary shoring of the construction of soldier pile or contiguous pile retaining structures will be required. The design of shoring and retaining structures will also need to take account of any lateral loads due to inclined surfaces, nearby structures or access-ways
- Whilst detailed review of foundation options can be undertaken once footing loads become known, based on previous experience with similar developments, it is expected that a deep footing system founding on the underlying weathered bedrock will be required. Comments on deep foundations are given in Section 5.8.2 of the DP 2003 report. The main advantage of a footings-to-rock foundation system would be that settlements (both total and differential) would be minimal.

Douglas Partners conclude in their 'Geotechnical Comment' of 19 May 2014 that:

".....additional assessment may be required as the planning and design of the development proceeds. Whilst it is considered that development of the site for the proposed development is geotechnically feasible, construction will be a challenge due to the variable ground conditions."

The recommendations of this report will be adopted within the construction methodology and the site CMP.

9.2.2 Site Contamination Assessment

Whilst Council's S149 Certificate indicated that the land has not been subject any orders under the Contaminated Land Management Act 1997, a Phase 1 Preliminary Assessment was undertaken by Douglas Partners in November 2015 (**Appendix 19**), involving historical searches, review of Council files and EPA Contaminated Lands Register, site inspection, limited sampling and laboratory analysis. The Preliminary Site Investigation found potential for contamination exists at the site primarily through the filling of the site through its development as a car park and demolition of previous structures. Furthermore, hazardous building materials may have been used in the construction of the ambulance station. It is therefore considered that a low-moderate potential for contamination may exist, localised to the areas directly below and adjacent to the existing site structures associated with the degradation of hazardous building and fill materials.

The presence of asbestos was confirmed in analysis of the filling and Douglas Partners conclude that there is potential for further asbestos associated with the filling, noting that *"Based on the findings of this PSI, it is considered that the site has the potential for the presence of asbestos that would preclude the proposed development of the site in its current condition"* (p.17). Accordingly, this report recommends that a detailed site investigation be undertaken, together with a Remediation Action Plan (RAP) to determine strategies for remediating the site.

In response to this recommendation a Detailed Asbestos Investigation Report was prepared by Douglas Partners in June 2016 (**Appendix 20**) to determine the extent and degree of asbestos contamination impact. The Asbestos Investigation Report included the excavation/drilling of test pits and boreholes across the site, analysis of samples from each test location in the field and at a NATA accredited laboratory. Suspected asbestos containing materials were encountered at 10 of the 34 test pits and 1 of the 16 boreholes.

"Representative fragments of the ACM encountered in the abovementioned test locations were dispatched to the laboratory for asbestos identification and were confirmed to contain chrysotile, amosite and crocidolite asbestos. Given the exceedance of the SAC in these locations remediation/management of the ACM will be required. This remediation / management could comprise on site treatment, on site containment or off-site disposal and would need to be undertaken in accordance with a remediation action plan (RAP)."

Douglas Partners Pty Ltd concluded that *".....the site has the presence of asbestos contamination that would preclude the proposed development in its current condition"* however they also note that *"it is considered likely that the site can be made suitable"* to accommodate the proposed development provided a Remediation Action Plan is prepared and implemented to identify and outline suitable strategies for remediating the site.

A Remediation Action Plan (RAP) was subsequently prepared by Douglas Partners in September 2016 (**Appendix 21**) to outline the methods and procedures to remediate contaminated soils at the site. The remediation strategy contained in this RAP comprises on site management of contaminated soils which will generally comprise the following:

- *"Excavation of contaminated soils where required (i.e. to invert depth of proposed capping layer).*
- *Placement of excavated contaminated materials in designated capping areas (i.e. beneath invert depth for proposed capping layer).*
- *Capping of contaminated soils with a layer of site won non-asbestos contaminated soil to a depth of at least 1 m for landscaped / public open space areas and at least 0.5 m for all other areas such as hardstand (buildings and pavements). It is noted that the installation of sub surface utilities will need to take place above the capping layer.*
- *The capping of contaminated soils can either be done in situ or in a designated capping area. Capping in situ is generally preferable as it minimises the disturbance of asbestos contaminated soils. The excavation of asbestos contaminated soils and subsequent placement in a designated capping area will likely be required based on the scope of the proposed development.*
- *If asbestos contaminated soils are buried or covered with less than 3 m of fill that has been demonstrated to be free of contamination, additional management measures as well as memorial or notes to title will be required. Measures will include a geo-textile "marker" layer, an ongoing site management plan and vegetation cover in non-hardstand or building footprint areas."*

The RAP confirms the need for a Validation Report to be prepared by a suitably qualified environmental consultant. This report should be submitted to the consent authority at the completion of the remediation works program and shall confirm that the site has been remediated to a suitable standard for the proposed development. The RAP also details the suggested sequence of remediation and confirms recommendations for disposal, stockpiling, loading and transport of contaminated materials and management of imported fill. A Construction Environmental Management Plan is also contained in the RAP to address practices to be employed during site remediation works. A site auditor will be engaged to prepare a Site Audit Statement, if deemed necessary.

9.2.3 Impacts on Surface and Groundwater Quality

Building on the results of geotechnical investigations and reports undertaken by Douglas Partners in 2003, 2015 and 2016 (including the RAP), TTW have prepared a Water and Soils Report (**Appendix 22**) to address the Secretary's requirements relating to water and soils. The report summarises the key findings of Douglas Partners' previous work and confirms that *"the inferred geology is typically:*

- *Filling and topsoil – comprising coalwash, rubble, clayey gravel and silty clay (i.e. uncontrolled fill).*
- *Silty and Sandy Clays – comprising silty and sandy clays initially soft becoming firm to stiff below depths of around 2m.*
- *Weathered Rock – comprising Sandstone, siltstone and mudstone of varying ratios and carbonaceous in part. Typically encountered at 9-14m below ground level with one borehole encountering rock at 4.7m below ground level."*

With respect to groundwater the report confirms that *"A standpipe has been installed in the adjacent hospital site approximately 100m south of the boundary with the proposed site. Ground water in this borehole was*

encountered at depths of 2.6-3.0m below ground level over a period of 2 months (27th June – 27th August 2003). During the borehole drilling on the ACEE site seepage into the boreholes was observed at depth of approximately 1.6-6.7m below ground level. No stormwater from the proposed development will be discharged into the groundwater. As the site has a varying depth fill with minor excavation proposed, impact on the ground water is likely to be minimal and localised across the development site."

The Integrated Water Management Plan prepared by Donnelley Simpson Cleary (**Appendix 28**) further addresses the water cycle management measures which will be incorporated into the development to reduce water consumption and to minimise the effects of rainwater discharge from the land. This report confirms that the development will incorporate the following Water Sensitive Urban Design measures;

- Rainwater on site detention system (OSD);
- Water quality treatment devices;
- Water efficient fixtures and fittings; and

Further, "potable water for the new building will be supplied from the existing external Sydney Water main. To reduce contamination of the potable water supply, backflow prevention devices will be installed as per the requirements of AS3500".

With respect to water quality measures and compliance with Chapter E15: Water Sensitive Urban Design of WDCP 2009, Donnelley Simpson Cleary confirm that due to site constraints it is unlikely that Water Sensitive Urban Design Practices will be accommodated however "pollutant removal devices will be designed to remove gross pollutants, suspended solids, reduce nutrient runoff including nitrogen and phosphorous". In addition, to address water quality objectives the following will be implemented within the development:

Overland Flow: In the event that the piped stormwater system fails due to blockage or other obstructions, stormwater will be required to be conveyed as overland flow, designed to accept the 1% AEP stormwater flows. Any landscaping within the overland flow paths will be minimal so as to prevent obstructions or blockages.

Onsite Stormwater Detention (OSD): An OSD tank with a capacity of approximately 65m³, with conventional construction. As the design progresses options to reduce the OSD requirement will be explored. The pit and pipe system will be designed to cater for the 5% AEP storm event, with the overland flow path catering for larger events.

Erosion Control: During construction and while the site is disturbed, erosion prevention and sediment control measures will be provided in accordance with the Erosion and Sediment Control Plan prepared by TTW (**Appendix 9**).

Donnelley Simpson Cleary conclude that the use of water quality treatment devices, together with water reduction measures will assist in meeting water quality objectives. To minimise water usage within the site it is intended that a range of water efficient fixtures and fittings will be used including 4 WELS stars rated dual flush toilets, 4 WELS stars rated tapware; and 3 WELS stars rated showers.

9.2.4 Flood Risk Assessment

Council's mapping, Section 149(5) Certificates and flood level Information advice obtained from Council (dated 23/11/2015, Certificate No. 201501230 contained in **Appendix 10**) indicate that the subject site is classified as being on land within a 'Low/Medium/High Flood Risk Precinct', as identified by the *Combined Catchments of Whartons, Collins and Farrahars Creeks, Bellambi Gully and Bellambi Lake Floodplain Risk Management Study and Plan* (dated June 2014). Jones Nicholson Consulting Engineers were engaged to provide a detailed Flood Assessment of the proposed BACCE development site (**Appendix 10**).

The pre-development (existing) conditions of the site were modelled and a flood plan prepared to illustrate the extent of flooding on the subject site. The results were found to be: "generally consistent with the 1% AEP (100 yr ARI) flood level of 29.41m (Middle section of site - CH 140.0) - 27.75m (North Eastern section of site - CH 90.0) AHD given in the Flood Information Advice certificate from council."

The assessment confirms that Council's floodplain risk management policy requires the flood planning level (FPL) to be 0.5m above the surface level of the 1% AEP flood event. As such, the report concludes that: "a FPL 29.94m (middle section of site - CH 140.0) and 28.00m (North Eastern section of site - CH 90.0) AHD may be adopted". Therefore Jones Nicholson conclude:

"The subject site is predominately flood free with a small area of flood risk along the Northern boundary which is clearly below the developable area of the subject site. The water levels calculated 29.44m (Middle section of site) - 27.50m (North Eastern section of site) are generally consistent with the flood levels provided in councils flood level information advice. The proposed development does not impact the flood water levels on the site or the surrounding properties."

Climate Change Analysis: Jones Nicholson also confirm that they have adopted the same climate change scenario typically detailed in councils Flood Risk Management studies. Specifically, "the 100yr ARI rainfall intensities were increased by 20%. This 20% was applied to the WBNM rainfall hyetographs, the model re-run and the resulting peak flowrate used as input to the HECRAS model. The resulting climate change 100yr ARI flowrate at the bottom of the catchment increased from 8.652m³/s to 10.51m³/s (an increase of about 1.86 m³/s)."

Sea Level Analysis: The report confirms that "due to the location of the site approximately 1.5km from any body of water affected by tidal waters any sea level rise will not impact on the site or the waterway running adjacent to the site."

Rainfall Intensity Analysis: Jones Nicholson advise that "to analyse the impact on increasing rainfall intensities we have adopted an increase of 20% and re run a WBNM model to get new flow rates. The resulting flowrate at the bottom of the catchment increased from 8.652m³/s to 10.51m³/s (an increase of about 1.86 m³/s). We then used these new flow rates and input them into the HECRAS model to determine the impact on the water levels."

9.2.5 Bushfire Risk Assessment

Travers Bushfire and Ecology were engaged to provide a bushfire assessment to guide the masterplan development of the proposed BACCE (**Appendix 14**). The Bushfire Assessment concludes that: "The site is not affected by bushfire prone land and therefore does not require compliance with Planning for Bushfire Protection 2006. However, in accordance with best practice guidelines it is recommended that the entire site is

managed as an asset protection zone in accordance with RFS guidelines Standards for Asset Protection Zones (RFS, 2005), with landscaping to comply with Appendix 5 of PBP".

9.2.6 Biodiversity Assessment

The application seeks the removal of ten trees from the site which have been the subject of an Arborist Report prepared by Moore Trees in June 2016 (**Appendix 11**). The trees proposed to be removed are referred to in the accompanying Arborist report as Tree Nos. 1, 3, 5, 6, 7, 8, 9 and 28. Two additional trees are proposed to be removed that are not numbered within the Arborist report, as they are not 'prescribed trees' as defined within the DCP. In relation to Tree Nos. 1, 3, 5, 6, 7, 8, 9 and 28, the Arborist report states the following:

- Tree 1 (Sydney Blue Gum): has a large vertical cavity and fruiting body growing within it. This tree is structurally dangerous and as a result has a short SULE.
- Tree 3 (Grey Iron Bark): Mature tree in fair condition. SULE rating 3a (may live for another 5-15 years)
- Tree 5 (River Peppermint): Poor condition, SULE rating 4a: dead, dying or decaying.
- Trees 6-9 (Melealeuca): Mature, in fair health and condition, SULE rating 2a: may only live 15-40 years. However they could readily be replaced.
- Tree 28 (Camphor Laurel): Mature specimen, multi-stemmed and most likely regrowth from a previously removed tree. This species is listed as an 'exempt species' tree and do not require Council consent for removal.

A Flora and Fauna Assessment has also been prepared by Travers Bushfire and Ecology (**Appendix 13**) which includes a 7 part test of Significance in accordance with the requirements of Section 5A of the EPA Act 1979.

This assessment provides the following conclusions:

"The proposed development of the subject site at 22 Hospital Road, Bulli is unlikely to have significant impact upon threatened species, endangered populations or endangered ecological communities

The subject site is not considered to provide any special or unique ecological values or cause any significant adverse effect on such values. Some components of remnant natural vegetation (three remnant trees) may be removed as part of the proposal. However the removal of the habitat is not likely to increase bushland fragmentation or significantly impact on any function of local wildlife corridors.

Six specimens of one threatened flora species (Eucalyptus nicholii – Narrow-leaved Black Peppermint) were observed within the subject site as shown in Figure 1. This species is commonly planted throughout NSW as a curtilage, landscaping or street tree. The natural habitat of this species is confined to dry grassy woodland, on shallow soils of slopes and ridges. It is found primarily on infertile soils derived from granite or meta-sedimentary rock in the New England Tablelands of NSW, where it occurs from Nundle to north of Tenterfield, largely on private property. Therefore the specimens of this species are well outside their natural habitat and distribution area. They are most certainly planted. The potential removal of these E. nicholii specimens will not have any significant effect on naturally occurring populations of this species.

Whilst fauna survey has not been undertaken, it is considered that the habitat attributes within the subject site do not provide any significant or unique habitat of breeding importance for any threatened fauna species. Remnant and planted vegetation may provide low key foraging value only. There were no drainage lines, rock shelters or important Koala feed trees. Four (4) hollow-bearing trees occur within the

subject site as shown in Figure 1, however these potential hollows observed are small branch hollows (x2) that were less than 4cm diameter and another two trees containing small slits that were only suitable for microchiropteran bats. These hollows were not of sufficient size to be suitable for any threatened fauna species such as gliders or owls.

The vegetation present within the subject site is not attributable to any locally occurring endangered ecological community.

It is therefore concluded that the proposed development is not likely to be constrained by matters pertaining to section 5 of the EP&A Act. A Species Impact Statement is not required for the proposal.

It is considered that the proposal is not likely to have a significant impact on threatened or migratory fauna species listed as matters of national environmental significance under the EPBC Act. As such, a referral to the Commonwealth Department of Environment (DOE) is not required."

The Assessment makes the following recommendations:

- Sediment and erosion control measures should be provided to minimise impact to local drainage lines.
- Replacement landscaping should consider the use of endemic (locally occurring native) species including tree, shrub and ground covers to limit erosion and to encourage local fauna use.
- Hollows are to be inspected under supervision of a project ecologist prior to removal. Any resident fauna if any is to be managed or relocated as per the advice of the ecologist.

9.2.7 Aboriginal Cultural Heritage Due Diligence Assessment

An 'Aboriginal Cultural Heritage Due Diligence Assessment' was prepared by Biosis in September 2016 to address the Secretary's Requirements and requirements from the Office of Environment and Heritage and is contained in **Appendix 15**.

Biosis note that that "consultation with the Aboriginal community is not a formal requirement of the due diligence process, however it is recognised in NSW that Aboriginal people are the primary determinants of the significance of their cultural heritage". They confirm that if impacts to Aboriginal heritage sites or objects are found to be a possibility due to the proposed works then consultation should be undertaken.

The study include an extensive search of the AHIMS database which identified 19 Aboriginal archaeological sites and 1 Aboriginal place within a 5 x 5 kilometre search area, centred on the proposed study area. Following this ground survey and review of archaeological reports in the region, Biosis concluded that there were no Aboriginal sites identified within the study area. Further, "the study area showed evidence of heavy disturbance, with the western half having been levelled and a car park constructed on top. The eastern half of the study area also showed signs of having been extensively levelled. The survey also identified that before levelling the study area would have been located on a slope of approximately 10 degrees making it an unsuitable for occupation. Based on evidence from the past archaeological reports, the local environment landform, and the heavily disturbed nature of the study area, it is concluded that there is low potential for Aboriginal heritage sites to be present within the study area".

Accordingly Biosis conclude that "no further archaeological work is required in the study area due to the entire study area assessed as having low archaeological potential". Irrespective of this, the 'unexpected finds' protocol will implemented as work proceeds.

9.2.8 Traffic, Parking and Access Assessment

A 'Traffic Impact Assessment'(TIA) was prepared by TTW to address the requirements specified by the Department of Planning and Environment, Transport for NSW and the Roads and Maritime Services within the SEARs (**Appendix 23**). The TIA confirms that the site currently contains an at-grade parking area with 81 spaces currently used by staff, visitors and patients of Bulli Hospital. Hospital Road is a two-way road, which connects the Hospital and a small residential area to the main road network. Hospital Road connects via a signalised intersection to the Princes Highway, which is a state road to the east of the site.

Access and Modes of Travel:

A summary of the accessibility and modes of travel to the site is as follows:

- Currently there are three access driveways to the site from Hospital Road, with two associated with the on grade parking spaces and the third servicing the single storey building in the eastern portion of the site.
- No visitor parking is available within the bounds of Bulli Hospital.
- The development site currently contains 81 on grade parking spaces. These spaces are used by visitors to the Hospital.
- There are three areas of on grade staff parking within Bulli Hospital totaling 75 spaces. Boom gates secure these spaces from public access.
- In the vicinity of the site there are a total of 137 on street spaces available.
- The closest bus stops to the site are located on the Princes Highway 360 metres from the site or 5 minutes walk away.
- Bulli Train Station is located approximately 750 metres or 10 minutes walk away from the site.
- Footpaths approximately 1.2 metres in width are located along both sides of Hospital Road near to the site, which connect the site to the Princes Highway but are steeply sloping in sections.
- A pedestrian footpath connects the carpark to Bulli Hospital, with a pedestrian refuge island located on Hospital Road to assist in road crossings.
- Cycling facilities near to the site mostly facilitate travel in a north-south direction. The closest east-west link to the site is located approximately 800 metres to the south.
- There is currently no provision for bicycle parking or end of trip facilities at Bulli Hospital or the development site.
- The existing development site does not have any provision for loading as it contains mostly on grade car parking spaces.
- There are no drop off and pick up zones located at the current site.

Travel Mode Survey:

A travel mode survey was conducted by TTW of staff at the current Bulli Hospital from 14 to 19 September, 2016. This survey identified:

- The average length of stay was 9 hours and 15 minutes.
- The majority of staff (90%) travelled as a car driver. Of those driving, there were an average 1.1 people per vehicle.
- A total of 37% of those surveyed used a car for work trips during the day.

- Those driving private vehicles tended to park within the staff carpark inside the Hospital (88%). Staff who parked in on street spaces all indicated they utilised spaces along Hospital Road.

Existing and 10 Year Intersection Operation:

Traffic counts undertaken of the major approach intersection (the Princes Highway and Hospital Road) to the site which were completed on Monday 29 August and Thursday 1 September found that the AM Peak hour is 8:00am to 9:00am for both days. During the morning peak the level of service of the intersection was C (satisfactory). The PM Peak hour was 4:00pm to 5:00pm for the Monday and 4:15pm to 5:15pm on the Thursday, which also has a level of service of C (Satisfactory).

TTW then considered the expected traffic growth over a 10 year period to 2026, with a SIDRA analysis conducted at the intersection after 10 years of growth. The modeling conducted by TTW indicates that in 10 years the intersection is expected to perform at the same level of service C as in the existing situation.

Traffic Generation:

The RMS Guide to Traffic Generating Developments was used to determine trip generation rates for residential aged care facility (RACF), with the expected daily vehicle trips equal to 1 to 2 per dwelling and the peak hour trips equal to 0.1 to 0.2 per dwelling. As the RACF will contain 60 beds it is therefore expected to generate 120 daily vehicle trips and 12 peak hour vehicle trips in the worst case scenario.

With respect to the hospital extension NSW Health confirm the expected peak staff numbers as detailed in Table 11.

Table 11: Number of Staff Expected During Peak Times

Location	Number of Staff During Peak
Urgent Care	4
Allied Health and Outpatients	21
In Patient Unit	40
Front of House	8
Back of House	10
Residential Care Facility	13

Source: *Traffic Impact Assessment, Taylor Thomson and Whitting*

Conservatively, TTW therefore estimate that there will be an additional 82 staff at peak times, with a total of 68% of staff predicted to be arriving between 7:30 and 9:30am and a total of 76% between 3:30 and 5:30pm, based on the staff travel model survey conducted. This equates to an additional 50 staff vehicles in the AM peak and an additional 56 vehicles in the PM peak. Further, the hospital advises that there will be an estimated 2,165 outpatients annually during the period from 2015 to 2017, increasing to 2,215 outpatients annually for the period from 2018 to 2019. This equates to an average of 6 daily outpatients for both time periods, and conservatively it is assumed all of these patients will travel during the peak hour and by car, resulting in 6 additional vehicle patient trips for both the AM and PM. The estimated trip generation is shown in Table 22.

Table 12: Summary of Trip Generation

	Generated Vehicular Trips	
	AM Peak	PM Peak
RACF Staff and Outpatients	12	12
Hospital Extension Staff	50	56
Hospital Extension Outpatients	6	6
Total	68	74

Source: Traffic Impact Assessment, Taylor Thomson and Whitting

Accordingly, TTW estimate that there will be an additional 68 trips during the morning peak. Therefore in the AM peak 25 additional vehicles will turn right from the Princes Highway to Hospital Road and 43 vehicles will turn left from the Princes Highway onto Hospital Road. In the PM peak there will be an additional 74 trips during the afternoon peak. Therefore 37 additional vehicles will turn left from Hospital Road and 47 vehicles will turn right from Hospital Road. **Table 13** shows the expected intersection performance in the morning peak, whilst Table 14 shows the expected intersection performance during the afternoon peak using the projected 10 year growth.

Table 13: AM Peak Projected Intersection Performance

Intersection Leg (Direction)	Monday (8:00am-9:00am)				Thursday (4:15am-5:15am)			
	LoS	DoS	Ave (sec)	Delay	LoS	DoS	Ave (sec)	Delay
Hospital Road (North West)	C	0.158	29.7		C	0.263	31.2	
Princes Highway (South West)	C	0.831	41.7		C	0.784	34.4	
Memorial Drive (South East)	D	0.871	44.5		C	0.844	37.4	
Princes Highway (North East)	B	0.520	26.8		B	0.427	20.7	
Total	C	0.871	38.6		C	0.844	32.3	

Source: Traffic Impact Assessment, Taylor Thomson and Whitting

Table 14: PM Peak Projected Intersection Performance

Intersection Leg (Direction)	Monday (4:00pm-5:00pm)				Thursday (4:15pm-5:15pm)			
	LoS	DoS	Ave (sec)	Delay	LoS	DoS	Ave (sec)	Delay
Hospital Road (North West)	C	0.207	34.3		C	0.310	37.2	
Princes Highway (South West)	D	0.872	49.7		D	0.855	42.7	
Memorial Drive (South East)	D	0.869	44.5		C	0.840	37.2	
Princes Highway (North East)	C	0.623	32.1		B	0.576	26.4	
Total	C	0.872	42.0		C	0.855	35.9	

Source: Traffic Impact Assessment, Taylor Thomson and Whitting

TTW therefore conclude that "post development the intersection will continue to operate at the same level of service C as in the pre development scenario".

Carparking:

The following carparking rates apply to the development under WDCP 2009 and SEPP (Housing for Seniors or People with a Disability):

RACF:

- 1 car parking space per 10 beds.
- 1 car parking space per 2 employees.
- 1 ambulance space.

Hospital

- 1 car parking space per 2 employees.
- 1 car parking space per 2 beds.

TTW confirms that "given the residential aged care facility and inpatient unit will both have 60 beds and there will be a projected increase of 95 staff at peak times, there will be a total requirement of 84 spaces."

As the development site is within 400m of a bus stop (ie sited at 360m from a bus stop on the Princes Highway) and 800m of Bulli Train Station (ie at 710m), Section 7.4 of Chapter E3 of WDCP 2009 allows for a 30% reduction in car parking. **Table 15** therefore summarises the car parking requirements for the development.

Table 15: Summary of DCP Parking Requirements

	Number of Spaces Required
60 Beds in residential aged care facility	6
60 beds in the inpatient unit	30
95 staff at peak times	48
Total	84
After 30% Reduction for proximity to public transport	59

Source: Traffic Impact Assessment, Taylor Thomson and Whitting

Based on such figures TTW therefore note that "given that the proposed development requires the removal of 81 on grade visitor spaces, the development will need to provide 140 spaces to result in a net increase of 59 spaces and be in accordance with Wollongong City Council's DCP.....this is subject to Council's approval and the site may require 165 spaces for a net increase of 84 spaces".

With respect to this shortfall in parking TTW note that during the peak hour off street parking was operating at 68% capacity and on street parking at 36% capacity. A summary of vacant spaces is provided in Table 16.

Table 16: Summary of Peak Hour Parking Demand (Source: Preliminary Parking Assessment Report)

		Spaces Occupied	Spaces Vacant
Off Street	Visitor	68	13
	Staff	44	40
On Street		50	87
Total		162	140

Source: Traffic Impact Assessment, Taylor Thomson and Whitting

TTW therefore conclude:

"The development proposes 46 spaces, representing a shortfall in parking spaces of at least 97 to be in accordance with Wollongong City Council's DCP. However, the proposed parking supply is considered to be sufficient for the following reasons:

- The parking survey shows that there were a significant number of vacant staff parking spaces during the peak hour. By utilising the existing parking spaces at the Hospital site in a more effective way, the development could account for part of the shortfall.

- *During the peak hour on street parking within the vicinity of the Hospital was operating at 36% capacity, with 87 vacant on street spaces. This represents a significant number of the shortfall in spaces that could be utilised by the proposed development site.*
- *There is no immediate development in the vicinity of the site that would generate additional parking demand and therefore on street parking spaces will be available for use by the proposed development."*

Active Travel:

The Traffic Impact Assessment also provides the following advice with respect to active travel:

- *Pedestrian Facilities: There will be no effect on pedestrian facilities in the vicinity of the proposed development.*
- *Bicycle Facilities: The proposed development includes lockers within the staff room and bicycle racks located at the building frontage.*
- *Loading Facilities: The proposed development includes a loading dock at the rear of the eastern section of the site building. This will service both the RACF and the Hospital extension. These loading facilities are located adjacent to storage areas of the development. Chapter E3 of Wollongong City Councils DCP requires that a 12.5m service vehicle is able to manoeuvre within the development, including entering and exiting in a forward direction. The loading facility of the site contains an area to facilitate the manoeuvring of service vehicles separate to general vehicular traffic. A turning circle path check for the service vehicles is affixed in Appendix A of the Traffic Impact Assessment (**Appendix 23**).*
- *Drop Off and Pick Up Zones: The proposed development includes a public drop off and pick up facility accessed by the eastern entry into the site. This is proposed to be located directly in line with the main pedestrian access point of the building to ensure efficiency in drop offs.*
- *Ambulance Facilities: The proposed development includes a drop off facility purely for ambulance and patient transport use.*

9.2.9 Impacts Associated with Construction

A Preliminary Construction Management Plan (**Appendix 23**) has been prepared by Johnstaff (September 2016) to address potential, construction impacts and to provide mitigation strategies to minimise disturbance on the adjacent residents. The strategies contained in the CMP address the following matters:

- Hours of Operation (Construction Work)
- Disruption Notices
- Noise and Vibration
- Dust
- Odour Control
- Tree protection
- Stormwater Management
- Traffic Management
- Pedestrian Protection
- Waste Management and Recycling Principles
- Storage of Dangerous Goods and Hazardous Materials
- Hazardous Materials Management
- Service Disconnections

The Traffic Impact Assessment prepared by TTW (**Appendix 23**) also considers the arrangement for access to the site for construction traffic and confirms that vehicles are likely to access the site using the Princes Highway and Hospital Road.

In accordance with the recommendations of this report it is confirmed that a detailed Construction Traffic Management Plan (CTMP) will be prepared once a contractor has been engaged and construction methodology and the staging of work has been finalised. This CTMP will address the following:

- Access to and from the site for construction traffic, including all access and egress points.
- The size of construction vehicles to be used and swept paths will be provided where applicable.
- Truck routes within the local area that have been chosen to avoid residential streets and those where deliveries would exceed the load limits.
- Hours and expected times for deliveries.
- The expected number of deliveries, vehicle numbers and sizes.
- Pedestrian access to and around the site during construction works. This will include any barriers and signage required.
- The movement of cyclists around the site during construction works.
- Any required traffic control for the site deliveries.
- Traffic control plans where required.

Potential noise and vibration impacts associated with construction are discussed within **Section 9.2.10** and within the DA Acoustic Assessment prepared by Acoustic Logic (**Appendix 16**).

9.2.10 Acoustic Impacts

A 'DA Acoustic Assessment' prepared by Acoustic Logic (**Appendix 16**) has assessed the likely noise impacts of the proposed development on the site and surrounding area during operation, together with potential construction noise and vibration impacts. This assessment also addresses noise intrusion impacting upon the proposed development. The acoustic assessment for the proposed BACCE development specifically addresses the EPA Industrial Noise Policy, the EPA Interim Construction Guidelines and the document Assessing Vibration: A Technical Guideline 2006.

The Assessment identifies the following significant noise sources at the site:

- *Noise from Hospital Road, to the south of the site. Hospital Road carries medium traffic flows.*

The Assessment identifies that noise sensitive developments and receivers in the vicinity of the site consists of:

- *Residential dwellings adjoining the site to the north, east and west and*
- *Residential dwelling to the south, across Hospital Road and*
- *Bulli Hospital to the south, across Hospital Road.*

Noise Emission Assessment

Carpark and Loading Dock Noise:

The potential noise emission from vehicles on the subject site as a result of the proposal is based on a number of assumptions relating to carpark movements and loading dock movements as follows:

- *Carpark Movements:*
 - *Peak hour operation happens during day (7am-6pm) period only.*

- The site generates an assumed 70 vehicle movements during a peak period.
- The sound power level of a passenger car moving within the car park is 84dB(A).
- Loading Dock Movements:
 - Typical vehicle consists of a large rigid truck (sound power of 100dB(A) inclusive of 5dB(A) penalty).
 - No more than one truck movement into or out of the loading dock in any fifteen minute period.

Table 17 details the predicted noise emissions, noting that such emissions are achieved based on the implementation of the recommended noise controls.

Table 17: Predicted Noise Level from Carpark and Loading Dock Movements

Noise Receiver	Noise Source	Predicted Noise Level dB(A) _{Leq(15min)}	Comment
Residence to the East	Loading Dock noise	44	Yes-complies with daytime criteria
Residence to the North	Loading Dock noise	44	Yes-complies with daytime criteria
Residence to the South	Car park noise	37	Yes-complies with daytime criteria

Mechanical Plant and Equipment:

With respect to the operation of mechanical plant and equipment Acoustic Logic note that "while compliance with noise emission requirements will be achievable with appropriate acoustic treatment, it is highly likely that any roof top equipment which operates 24 hours per day (such as refrigeration plant) will require either enclosure in plant rooms or acoustic screens to provide a line of sight break between the equipment and any existing or future residences. Other external items (fans) would be expected to be capable of compliance through use of internal duct lining and/or in-duct attenuators."

Recommendations:

Acoustic Logic conclude that the "site is capable of complying with typically adopted noise emission goals" subject to the implementation of the following measures to address noise emissions.

- A 2.1m high lapped and capped timber, Colorbond or masonry fence is to be constructed along the eastern boundary of the site and the northern edge of the loading dock (to screen noise from the loading dock and truck movement).
- Loading dock not to be used before 7am or after 6pm.
- Trucks are not to be left idling when waiting in the loading dock.
- North facing doors/windows to the level 2 and 3 dining rooms to be closed if:
 - The dining room is used after 8pm.
 - If the dining room is used for live music performance or functions with amplified music.
- North facing balcony off Level 3 dining room to cease use at 10pm, and to be limited to no more than 20 residents.
- Detailed acoustic review of all external plant items should be undertaken following equipment selection and duct layout design (typically conducted at Construction Certificate Stage).

Construction Impacts:

The assessment provides that the loudest typical general construction works are likely to be excavation and piling works. The report identifies that the primary sources of vibration generation during construction are to be

excavation, earth retention works (piling) and soil compaction. The report concludes that given the distance between the site and the nearest residential dwelling, it is unlikely that construction vibration will exceed EPA guidelines if construction occurs in line with the report's recommendations. However, the following is recommended by Acoustic Logic to address construction noise impacts:

- *"On completion of the construction program, acoustic review of proposed construction activities and plant/methods should be undertaken to identify the extent and duration of potential exceedances of EPA construction noise management levels. While there is certainly risk of exceedances of EPA construction noise guidelines, given the limited extent of demolition and excavation, the degree of noise impact during construction would be less than typical development of similar size that also has a basement.*
- *Identify feasible acoustic controls or management techniques (for example, selection of plant, use of screens around static plant, notification of adjoining land users, respite periods) when exceedance of management noise levels may occur.*
- *For activities where acoustic controls and management techniques still cannot guarantee compliant noise levels, implement a notification process whereby nearby development is made aware of the time and duration of noise intensive construction processes.*
- *Implementation of a noise monitoring program during construction to provide feedback back to the Builder to ascertain whether construction noise goals are being exceeded and determine additional management strategies."*

With respect to construction vibration impacts Acoustic Logic note that *"excavation, earth retention works (piling) and soil compaction are the primary vibration generating activities. Given the distance between the site and the nearest residential, it is unlikely that construction vibration will exceed EPA guidelines if piling works are conducted using augured piling. In the event that sheet/vibratory piling or vibratory rollers are used (particularly on the east boundary of the site), there is a risk that residential amenity vibration criteria will be exceeded."*

Accordingly, if bulk excavation in rock, driven/vibrated piles or soil compaction works are proposed, Acoustic Logic recommend:

- *"Where practicable, excavation in rock should be done using rock saws as opposed to pneumatic hammers.*
- *For at least the initial stages of excavation, piling or compaction, vibration monitoring should be conducted to ensure excessive levels of vibration are not achieved.*
- *Any vibration monitoring system should allow for rapid feedback to the contractor (for example, SMS notification) in the event that excessive levels are reached."*

External Noise Intrusion Assessment

The report confirms that Hospital road is not an arterial road and as such, the site is not significantly impacted by pre-existing external noise sources. However, irrespective of this a review of external noise impacts on the propose development has been undertaken. This assessment confirms that internal noise levels will primarily be as a result of noise transfer through the windows and doors and roof, as these are relatively light building elements that offer less resistance to the transmission of sound. The Analysis indicates that external noise

impacts can be reduced to achieve suitable internal noise levels by material changes to these building elements.

The Assessment recommends glazing and acoustic sealing be provided on the buildings (doors and windows) in order to reduce noise transfer, but specifies that any external wall or roof element constructed of masonry will not require additional upgrading for acoustic purposes. It is recommended that final acoustic design of the building shell should be conducted once all window sizes and building shell materials are finalised.

In conclusion the Acoustic Assessment prepared by Acoustic Logic indicates the following:

- a) The site is not likely to generate significant noise, and the noise sources are in keeping with typical aged care development (plant noise, vehicle noise). Compliance with EPA noise emission controls can be achieved through adoption of the recommendations in the report.
- b) The site is not significantly impacted by external noise and no significant upgrade of the building shell is required to ensure a suitable level of acoustic amenity for occupants of the development.
- c) Given the proximity of the site to nearby residences, there is a risk of noise and vibration impact during the construction phase of the project (in particular, excavation, compaction and asphaltting). A detailed construction noise and vibration management plan should be prepared at construction certificate stage to determine whether there are any construction activities that will require noise management in order to reduce impacts on the adjacent residences.

9.2.11 Built Form Outcomes

Scale of the Development

The architects for the project, Billard Leece Partnership, confirm the challenges which the site poses in terms of the change in levels. They confirm that the site has a cross fall of 17m from a high point of approx. 40m on the West boundary to approx. 23m on the East boundary and generally 7m cross fall from the Southern boundary (Hospital Road) to the Northern boundary. *"The extreme cross fall of this site impose some difficulty in remaining below the 9m limit across the entire site, while providing a floor plate size that is suitable for the intended usage."*

With respect to the scale and density of development, it is noted that, whilst the overall height of the development will therefore exceed the maximum 9m overall height permitted on the subject site and on adjacent residential sites, this increased height is a factor of the physical constraints of the site and the intended function of the building. Whilst the height is exceeded, a reduced building footprint will assist in minimising impacts on vegetation and on nearby residential dwellings, particularly to the east and west of the site. A discussion of the potential impacts of such increased building heights, having regard to the siting of the buildings, is contained the Clause 4.6 Exceptions to Development Standards Report contained in **Appendix 5** of this EIS, whilst the potential impact on view corridors is discussed in the following sections of this EIS.

Building Function, Siting and Configuration and Privacy Impacts

The proposed development encompasses two buildings, linked by an internal access building extension with access across each level of the development. The building configuration and form has been developed to minimise the building footprint, address the gradient of the land and to provide appropriate level of separation

to boundaries, Hospital Road and the rear watercourse. Accordingly, the arrangement of the buildings on the site reflects the retention of the existing vegetation and riparian qualities to the rear of the site.

The buildings present the lower form of the development (two storey element) towards the main and extensive street frontage to Hospital Road. The building has been articulated via a central vertical nexus and the roof line has been staggered to reduce visual impact. This central stair is used as a decorative element by continuing the vertical steel elements form the floors below.

Building 1 (Hospital):

Building No.1 contains the hospital component of the development and all associated ancillary uses and services. The building has been designed to reflect the physical constraints of the site with respect to the fall of the land, which currently falls significantly to the east of the site where Building 1 is located. The building will present as a contemporary addition from a streetscape perspective, with the proposed roof segmented and stepped to reduce the height impact of the building. The building contains three operational levels, with a forth partial level contained in the north-western section of the building, for the containment of plant.

Building 1 is setback from Hospital Rd by 13.633m to the main public entry in the southwestern corner of the building and by 21.618m to the stair in the south eastern corner of the building. This significantly exceeds the setback of adjacent residences and will assist in minimising the visual impacts of the building when viewed from the public road. Within the front setback area landscaping and street tree planting will soften the appearance of the building, whilst a drop off zone will allow for direct public access to the building.

From the eastern boundary (where the site adjoins the ambulance station) a setback of 12.38m is provided to the facade of the building, with this increased setback allowing for the placement of one ambulance bay and three patient transport parking spaces parallel to the eastern facade of the building. To the rear (northern boundary), where the site adjoins the watercourse, setbacks of between 4m and 6m are provided to the ground level waste disposal, gas store and generator, with increased setbacks of 17.299m provided to the main rear facade of the building at the first and second floor and also to the third floor plant. Such setbacks will allow for separation of approximately 30m to northern residence (fronting Organs Rd) at the ground level and in excess of 40m separation to the upper levels. A vegetative buffer is also provided to the rear of the site on the northern side.

Building 2 (Residential Aged Care Facility):

The residential aged care component of the development is located within the second building form on the western portion of the site and is irregular in shape, in order to provide a large street setback to Hospital Road and to reduce the appearance of one long linear building form. This building is connected to Building 1 via a 'bridge' link at the first, second and third floor. Building 2 is low in structure in comparison to Building 1 and visibly has the appearance of a two storey building when viewed from Hospital Road and also from properties opposite and adjacent to the subject site to the north. The building form is due to the placement of this building at a higher position on the site, with the footprint of the building following the contours of the land. This building also contains a third level, with limited footprint, in the north-eastern corner of the building where the land slopes downwards to accommodate this partial level.

Building 2 is setback by a minimum of 1.472m from the Hospital Road frontage at the south-eastern corner of the building. Although less than the typical 6m setback of dwellings in this locality this reduced setback is

considered to be an acceptable design approach given the limited length of the frontage which is sited immediately adjacent to the front boundary of the site. Due to the buildings 'L' shaped configuration the majority of the building is provided with a setback from Hospital Rd of 32.004m.

To the rear of the site (north) the building is setback from the rear boundary by approximately 9.5 to 24.364m, again allowing significant separation to dwellings to the rear fronting Organs Rd. To the eastern boundary, where the development will adjoin a single storey detached dwelling, a minimum setback of approximately 6.095m is provided, with the building sited outside of the easement which extend parallel to this boundary. This setback is in excess of the 6m which would be required under Section 6.4 of Chapter B1: Residential Development of WDCP 2009, where a residential flat building of up to 4 storeys proposed on the site. Further, it is noted that Buildings 1 and 2 will also be located more than 30 metres from any residential building on the opposite side of Hospital Road.

On the basis of the setbacks which are provided and the vegetative buffer located to the rear of the site, it is considered that the buildings are appropriately placed to ensure that visual privacy to residential dwellings adjacent to the site and particularly to the north and west are maintained.

Materials and Colours:

The Elevations prepared by Billard Leece Partnership, Drawings DA20.001 (North Elevation), DA20.0101 (South Elevation), DA 20.0201 (East Elevation) and DA 20.0301 (West Elevation) provide a table of wall and roof finishes which confirm that the buildings will be constructed of the following:

Wall Finishes:

- Face Brickwork
- Timber cladding
- Natural concrete off form finish
- Ribbed metal wall cladding

Roof Finishes:

- Natural concrete off form finish
- Metal decking

The elevations demonstrate that the colours to be utilised will be off whites, grey and brown muted tones which are appropriate in this setting.

Safer by Design - CPTED Principles

'Crime Prevention Through Environmental Design' principles seek to promote the creation of safer places through environmental design in the planning, design and management of development. The safety and security of staff, visitors and residents to the site has been integrated into the planning and design of the new BACCE. The design responds to crime reduction and prevention issues through the use of the four principles for CPTED which include surveillance, access control, territorial reinforcement and space management. These principles are addressed as follows:

- **Surveillance** – The site adjoins an existing residential precinct, which will provide for passive surveillance of main access points. Security outside of working hours will provide continued surveillance of the site during the construction phase. The 24 hour operations of the hospital and the presence of short and long term residential tenants on the site will provide for ongoing passive surveillance. Effective use of

lighting will also be incorporated within the design of the site. Car parking areas will be well lit at night and are located adjacent to the complex providing convenient access and natural surveillance.

- **Access control** – All visitors to the site will be required to report to administration/reception on arrival. Security lighting will be provided in key locations and will be sufficient for good visibility at night.
- **Territorial reinforcement** - The site will include pedestrian and bicycle pathways accessing the site from surrounding streets – this network of access prevents the site being fenced off – and will place more emphasis on CCTV surveillance. Areas around large rainwater tanks etc will be fenced off to reduce areas of concealment.
- **Space management** – The development's design and internal layout have considered potential safety problems such as locations for entrapment. Landscaped areas will be designed to ensure that vegetation will not obstruct lines of sight and will be maintained to a good standard.

Servicing

A loading area will be sited to the rear of the hospital building with this bay to service both the RACF and the hospital. This loading bay will accommodate a 12.5m service vehicle, with sufficient adjacent manoeuvring area to allow a vehicle to enter and exit in a forward direction. A turning circle path for the service vehicles is contained in the Traffic Impact Assessment (**Appendix 23**). The loading area will not be visible from the public road due to its placement and will only directly adjoin the ambulance station to the east. A separation of approximately 30m is provided to residential dwellings to the north of the site, to minimise acoustic impacts, whilst vegetation along the watercourse will provide a visual buffer.

9.2.12 Environmental and Residential Amenity Impacts

View Impacts

The visual impact of the proposed development has been considered by Billard Leece Partnership through the preparation of photomontages from the public domain immediately adjacent to the site, as demonstrated in **Figure 23 to 25**.

Figure 23, which provide a view from hospital Road looking northwest towards the site, demonstrate that the building is anticipated to impact on views from the existing Bulli hospital buildings towards the north, due to the building's placement and scale. However, this given the 'non-residential' function of this affected building and its relationship to the BACCE, this impact is considered to be acceptable.



Figure 23: View of the BACCE, with the hospital in the foreground, looking north-west from Hospital Road

Figure 24 provides a view of the proposed BACCE taken from further to the south-east of the site, when looking north-west from Hospital Road. This view demonstrates that, whilst the building will impact views from residential properties further to the east of the site, this impact will be reduced as the building will be sited at a lower level than the adjacent road and the building will not protrude significantly above the line of the escarpment beyond from key viewing points.



Figure 24: View of the BACCE from further north-west on Hospital Road, showing the Ambulance Station in the foreground and the impact of views towards the escarpment.



Figure 25: View of the BACCE from Hospital Rd looking east towards the RACF.

It is also anticipated that there may be level of view loss from the residential dwelling(s) to the immediate west of the subject site, however it is noted that the immediately adjacent dwelling is orientated north/south and has only a limited number of small windows in the eastern elevation. Further, views from such windows towards the coastline are currently impeded by existing vegetation. The view from Hospital Road looking east towards the RACF (shown as **Figure 25**), provides a comparable view from properties to the west of the site and confirms that only the two storey sections of the building will be evident from this vantage point. Further, significant landscaped areas will be provided between the building and Hospital Road to soften the visual impact of the building. It is also noted that the visual impact of the proposed RACF will be reduced due to the slope of the land in the western portion of the site away from the adjacent residential development and away from Hospital Road as the main frontage.

The proposed building will also have a level of visibility from properties to the north of the site, due to the increased height of the building at the rear, where the level of the land is at its lowest. However, it is noted that the visual impact of the building will be reduced due to the existence of the watercourse and the vegetated banks which provide separation between the buildings and existing residences. Such separation ranges from 30 to 40m.

Further, it is anticipated the facility will be visible from select vantage points on the Princes Highway at Bulli and when travelling on the F6 Freeway in a northern direction. This is a result of the development on the site being located on the north-east facing slopes. However, the building will be sited within a developed catchment, interspersed with vegetation cover, which will assist in reducing its impact. The high quality design and finish of the development will also ensure that the building presents as an appropriate addition within its setting. It is therefore concluded that the topography of the site and surrounds assist to encompass the buildings and development as a whole, reducing the prominence of the buildings from a number of vantage points.

Overshadowing Impacts

Diagrams, prepared by Billard Leece Partnership (Drawing DA 04.001, DA 04.0101 and DA 04.0201), which demonstrate the potential impact of overshadowing as a result of the proposed development are contained in **Appendix 4** of this EIS. Such diagrams indicate the impacts of overshadowing at 9am, 12 midday and 3pm in the Winter Solstice (June 21), the Summer Solstice (Dec 21) and the Equinox (March and September 21).

The diagrams indicate that in the Summer Solstice shadows cast from the development are predominantly contained within the subject site, with no impact on adjacent residential properties. In the Equinox there will be a minor impact on overshadowing of the adjacent site which contains the ambulance station and also on Hospital Road. However, such impacts are considered to be minor. In the Winter Solstice there will be a minor impact on the driveway of the residential property to the west of the site at 9am, minor overshadowing of Hospital Road during all periods of the day and partial overshadowing of the ambulance station site during the afternoon period. Again, it is considered that the impact of such overshadowing is minor both in terms of the areas of shadows cast and the length of overshadowing. Such shadowing will not impact on the ability of all adjacent residential dwellings to obtain 3 hours of sunlight to living spaces and private open space on June 21 (Winter Solstice). On this basis the level of overshadowing is considered to be minor and acceptable.

Wind Impacts

The proposed development contains a building of 2-4 storeys in height, which is sited at a lower level than the adjacent road frontage and therefore significant wind impacts are unlikely. Accordingly, having regard to the building's placement and height it is not considered that the undertaking of a comprehensive wind assessment is warranted.

9.2.13 Accessibility and Building Compliance

Building Compliance:

A BCA Assessment Report has been prepared by Steve Watson & Partners in association with the proposal (**Appendix 29**). The report provides an assessment of the proposed design of the Bulli Aged Care Centre of Excellence against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations. The report identified any non-compliances that may have required either amendments to plans or an Alternative Solution to satisfy the Performance Requirements of the BCA.

The report identifies that the 'business use' of the proposed development is identified, in accordance with the BCA terminology as 'Retail, Health Care (hospital) and Aged Care' and contains Class 6, 9a and 9c building occupancy (Type A Construction).

The Assessment identifies the following as the main issues that require amendments to the design:

1. *Smoke compartments within the Class 9C building exceeds the 500m² permitted by the BCA.*
2. *Separation of openings in different fire compartments.*
3. *The swing doors to the loading on ground floor swing against the direction of exit travel.*
4. *Horizontal exit doorways are required to swing both ways and the swing doors to the loading at the ground levels are required to swing against the direction of exit travel.*

The following are the main issues proposed to be addressed by the Fire Safety Engineer via an Alternative Solution:

1. *Exit Travel Distances as specified areas exceed the required 20m to a point of choice.*
2. *Distance between alternative exits as specified Class 9a patient carer areas have a distance to alternative exits which exceeds 45m.*
3. *Horizontal Exits, with one fire compartment required to have at least one exit which is not a horizontal exit.*
4. *Non-required stairs, ramps or escalators as the lobby connects four storeys.*

The report further states that:

The design is capable of complying with the requirements of the relevant sections of the Environmental Planning Assessment Act 1979, the Environmental Planning and Assessment Regulations 2000 and the Building Code of Australia 2016. Compliance is subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

Accordingly it is recommended that any issues designated within the report as "Compliance Readily Achievable" should be resolved prior to construction.

Accessibility:

An Accessibility Review has been undertaken by the McKenzie Group (**Appendix 30**). The report provides a summary of the compliance strategy of the proposed development, with respect the Disability Discrimination Act 1992, the BCA and nominated Australian Standards. Specifically, the report highlights the key principles of accessibility, as well as the technical requirements to ensure independent, equitable and dignified use of the BACCE premises by visitors, staff and patients. The compliance advice provided in the report relates firstly to mandatory legislative and statutory areas of compliance and, secondly, to recommendations that could enhance building functionality, accessibility and safety for occupants.

The report identifies that, *"in general, the design provides a high degree of accessibility"*. However, there are several items requiring further clarification, which will be finalised prior to construction.

9.2.14 Achievement of Ecologically Sustainable Development Principles

The ESD Report prepared by Steensen Varming (**Appendix 27**) responds to the Environmentally Sustainable Design Criteria set out in the Secretary's Environmental Assessment Requirements. The report outlines key opportunities for ESD and initiatives that have been considered for the development to improve occupant comfort through passive design strategies and the efficient use of energy and water. The report identified that the project is aiming to achieve a 4 Star Green Star equivalency rating and therefore must achieve 45 points. Based on a preliminary review of the current design, 46 points have been identified as achievable. Steenson Varming confirm that the following key design considerations will be considered for the BACCE:

Table 18: Key Design Considerations BACCE

Issue	Strategy
Passive Design Strategies	Minimising gains/losses through the building fabric. Natural ventilation (IRT RACF only); Maximising natural daylight in order to minimise levels of artificial lighting; Appropriate levels of glazing based on space type and priority for views and daylight. Minimising solar gain through solar control glazing and/or external shading in summer (IRT RACF only); Promotion of passive heating through permitting solar radiance to penetrate in winter; Minimising structural cold bridges, that can act as a single point of high heat gain/loss; Minimising unwanted air leakage and the avoidance of draughts; Internal blinds required in all non-transient spaces for glare control and privacy; and Use of landscaping to provide solar shading, and also bio-filtration of incoming outdoor air for natural ventilation.
Energy Conservation Strategies	Efficient lighting fittings, zoning, controls and site co-ordination for both internal and external lighting systems are to be designed; Energy efficient mechanical plant equipment will be specified to meet or exceed the requirements of Section J Part J5 Air-conditioning and Ventilation Systems; and BMS - A fully automated Building Monitoring and Control system to schedule and optimises plant to maximise efficiency.
Water Conservation Strategies	Sanitary Fixture Efficiency – These include low-flow fixtures such as taps, shower heads, toilets etc; Heat Rejection – No cooling towers have been proposed for mechanical plant heat rejection. The mechanical plant will consist of air-cooled chillers and air cooled split system condenser units; and Water Sensitive Urban Design (WSUD) integrates water cycle management with urban planning and design. The aim of WSUD is to manage the impacts of storm water run-off from the development to protect and improve waterway health by replicating the natural water cycle. As part of the WSUD, the development will storm water detention tank to manage storm water run-off.
Ongoing Operation	Metering and sub-metering will be provided to track and monitor energy and water consumption; BMS - A fully automated Building Monitoring and Control system to schedule and optimise plant to maximise efficiency and future building tuning if required.
Additional Sustainability Strategies	Waste - Adopt practices to minimise demolition and construction waste (including recycling of demolition and construction waste); Environmentally Preferable Materials - Selection of environmentally preferable materials is a key priority for the project, because building materials consume energy and natural resources during its manufacture and for their transportation to the construction site. Preference will be given to materials that contain high-recycled content and/or are highly recyclable; Emissions – The proposed design aims to ensure reduction of all forms of emissions, including watercourse pollution (storm water management), light pollution and ozone depletion (use of refrigerants that have low ozone depletion potential and low global warming potential); and Landscape – The design will consider planting of native flora. Vegetation can provide shade, visual interest, and reduction of heat island effects.

(Source: ESD Report prepared by Steensen Varming, September 2016)

9.2.15 Landscaping and Revegetation Outcomes

The Landscape SSD Submission prepared by Arcadia Landscape Architects has incorporated active and passive spaces and native regeneration areas throughout the site. The Report provides an overall masterplan and landscape concept plans for the proposed development, based on the Arborist Report prepared by Moore Trees, the Bushfire Assessment and Fauna and Flora Assessment prepared by Travers Bushfire and Ecology. The Masterplan and landscape concept plans detail various elements within the development addressing the public and private realms including the needs of the future aged care residents, circulation within and around the site, amenity, and stormwater/drainage and incorporated these into the design of the development.

The Landscaping Design Principles which have resulted from a detailed landscape appraisal of the subject site by Arcadia Landscape Architects (in association with relevant documents) are as follows:

- *Embracing the community extending the rainforest: The hospital will become a key community icon, the streetscape along hospital road will become a urban commons, providing break out turf spaces with integrated seating, allowing patients, staff and the wider community to utilise.*
- *Extending the rainforest: The adjacent Illawarra escarpment and forest will be dragged through the hospital providing areas of relief and retreat. The NSW temperate rainforest is home to Tree Ferns, Birds Nest Ferns and Stag horns which will be integrated into the hospitals recreational areas, lobbies and gardens.*
- *Sensitivity and harmony: The design will be sensitive and respectful to the existing landscape through the retention of significant vegetation and reflected in how softly the building touches the landscape. In conjunction - the design looks to utilise the surrounding landscape forms and materials throughout the design to create a design that fits seamlessly into its surroundings.*
- *Health and well-being: It is well documented that the quality of the environmental experience within health care makes tangible contributions to patients rate of recovery. By providing an intimate courtyard and garden space we can help contribute to patients health and well-being.*

9.2.16 Servicing Capacity

Consultation has occurred with Sydney Water to confirm the existing servicing capacity and any works which are required to ensure the provision of utilities to service the development. A Feasibility Letter was also obtained from Sydney Water on 23 July 2016 confirming the anticipated requirements in order to obtain a Section 73 Certificate (**Appendix 25**). This advice confirms the availability of water and sewer to service the proposed BACCE. Specifically, Sydney Water advise that "the drinking water main available for connection is the 375mm CICL main located on the Southern side of Hospital Road". Further, with respect to the availability of sewer the advice confirms "the wastewater main available for connection is the 225mm main traversing the property constructed under WO 47230".

The availability of power, telecommunication and gas services for the proposed development has been addressed within the 'Electrical and Communications Infrastructure Management Plan' prepared by ARUP dated 23 August 2016 and the 'Services Strategy' prepared by Donnelly Simpson Cleary dated 23 August 2016, also contained in **Appendix 25**, with the following advice provided:

Electrical Services:

A Dial Before You Dig (DBYD) investigation and site survey did not identify any underground electrical services within the site boundary. There are existing HV and LV supplies located at high-level along Hospital Road. There is an existing Endeavour Substation located adjacent to the existing Bulli Hospital. The only electrical service located on the site is an overhead LV supply from Hospital Road to a Brick and Timber Building located within the site which will be demolished. There are a number of existing power poles located along Hospital Road. It is not currently proposed that these will be removed or altered as part of the new development. However, this is subject to Endeavour Energy approval.

The preliminary maximum demand was calculated by ARUP at 750 kVA for the development based upon the current design GFA. Based on this preliminary demand calculation, an application was submitted to Endeavour Energy. Endeavour Energy provided a Supply Offer as follows:

- *Provide a supply of 1078 A/phase at 400 V (750 kVA)*

- *New pad-mount substation to be installed on the development property*
- *HV linkage point is the 11kV overhead mains along Hospital Road*
- *Substation shall be located at the front property boundary with unrestricted access*
- *LV connection point is the LV circuit breaker inside the new substation*
- *The application to Endeavour Energy will be updated and resubmitted if there are significant changes in the expected maximum demand as the design is progressed.*
- *A proposed Method of Supply will be developed and Endeavour Energy design approval gained once a Level 3 ASP is engaged.*

Telecoms Services:

The survey undertaken by Bee & Lethbridge Pty Ltd confirms the existence of Telstra communications along Hospital Road underneath the footpath at the front of the proposed site, allowing for connection of two separate telecommunications connections. Further, the facility will be connected to the NBN via fixed line technology.

Gas:

The Service Strategy prepared by Donnelley Simpson Cleary confirms that *"the hospital will be connected to the main supply located in Hospital Road. Gas will supply domestic hot water and mechanical heating plant via a gas meter located within the site."*

Fire Hydrants and Sprinklers:

Donnelley Simpson Cleary also confirm that *"Fire hydrants and sprinklers will be connected to the existing 375mm water supply within the Hospital road. Future services will supply fire hydrants, hose reels, sprinklers and wall wetting drenchers"*.

Accordingly, the preliminary investigations undertaken by consultants confirms the availability of services for the proposed BACCE, with more detailed investigations to be undertaken during the detailed design stage of the development and prior to works commencing.

9.2.17 Waste Management

The Waste Management Plan prepared by Health Infrastructure (Appendix 26) outlines strategies for the storage, handling and transportation of waste, to minimise waste generation and environmental impacts, and to protect public and employee health and safety. Such strategies include the following:

- *Generate monthly cost and volume of waste produced report.*
- *BDH Representative to attend ISLHD Waste Management Committee meetings.*
- *Annual review of Material Safety Data Sheet (MSDS) and with the introduction of new products.*
- *Establish appropriate signage of waste streams above or near bins.*
- *Undertake regular waste audits to ensure correct waste streams are utilised.*
- *Recycle all ink and toner cartridges used onsite.*
- *Staff education and training on waste conducted every 3 months.*
- *Conduct audit of spill kits every six months to reduce potential hazards.*
- *Establish cytotoxic kits in all cleaning areas.*
- *Maintain established battery collection and recycling system.*
- *Confidential paper disposal bins provided.*

- Audit undertaken of waste disposed of infectious rooms to reduce infectious waste, where appropriate.
- Review and install water tanks to reduce mains water use.
- Purchase of 20 new recycle bins for wards.
- New signs over recycle bins.
- Antiseptic hand-wash bottles collected for overseas use.
- Review of how and when to replace and dispose of recyclable bed screens.
- Review of how to dispose of florescent light tubes.
- Review and conduct independent audit of waste at hospital.
- Installation of shredders for disposal of confidential waste.

A detailed waste management plan will be provided by the contractor prior to construction.

9.3 Likely Impacts of Development

The following table outlines the issues identified in the foregoing sections of this Environmental Impact Statement and how they have been addressed:

Table 19: Summary of Environmental Assessment Outcomes

Key Issues	Summary of Environmental Assessment Outcomes
Context and Setting	<u>Relationship to local context:</u> The BACCE will comprise the extension of the existing facilities for Bulli Hospital by providing an aged care inpatient unit and urgent care centre, with supporting community (not for profit) residential aged care facility. It will serve as a "Centre for Excellence", as it will incorporate the best practises of modern medicine for the Illawarra region, providing much needed treatment services for aged inpatients and urgent care. <u>Potential impacts on adjacent properties:</u> There will be minor overshadowing impacts. There will be low level impacts on visual privacy. Acoustic impacts associated with construction (including excavation and traffic impacts) will need to be effectively managed and documented within a detailed CMP. On street parking associated with the operation of the BACCE will need to be effectively managed to encourage more effective utilisation of parking on the existing hospital site. The main vantage points of the site are short distance views from dwellings to the west, south-east and north. The impact from the west and south-east will be reduced due to the siting of Building 1 at a lower level than Hospital Road and due to the two storey form of Building 2 when viewed from the street. The visual impact when viewed from dwellings to the north will be reduced due to the significant separation distances provided and the siting of the vegetated buffer and watercourse.
Access, Transport & Traffic	TTW confirm that a SIDRA analysis conducted at the Princes Highway and Hospital Road intersection confirms that the intersection is expected to perform at the same level of service C as in the existing situation. There will be no effect on pedestrian facilities in the vicinity of the proposed development. A pedestrian footpath connects the carpark to Bulli Hospital, with a pedestrian refuge island located on Hospital Road to assist in road crossings. The proposed development includes lockers within the staff room and bicycle racks located at the building frontage. The proposed development includes a loading dock at the rear of the eastern section of the site building, which will allow or on site manoeuvring of a 12.5m service vehicle. The closest bus stops to the site are located on the Princes Highway 360 metres from the site or 5 minutes walk away. Bulli Train Station is located approximately 750 metres or 10 minutes walk away from the site. IRT have advised the facilities will be provided with a local bus service, the method of which will be assessed by IRT in accordance with their normal procedures in determining the needs of the resident community on establishment.

Key Issues	Summary of Environmental Assessment Outcomes
Parking Provision	The development proposes 46 spaces, representing a shortfall in parking spaces of at least 97 to be in accordance with Wollongong City Council's DCP. TTW conclude that more effective utilisation of the existing parking spaces at the Hospital site will be required to account for part of the shortfall, with the balance provided through the use of on street parking which, at the peak hour, is operating at approximately 36% capacity. The proposed development includes a public drop off and pick up facility accessed by the eastern entry into the site. The proposed development includes a drop off facility purely for ambulance and patient transport use.
Public Domain	The proposal will have no impact on amount, location, design, use and management of public space around the site.
Utilities	The site can be adequately serviced to Sydney Water and other agency requirements, subject to any necessary augmentation of services by the developer.
Heritage	There is no requirement for further investigation of Aboriginal or European heritage before the project commences, as the site does not contain built heritage items, Aboriginal sites, areas of particular cultural significance or areas of archaeological potential.
Other Land Resources	No impact
Geotechnical	Douglas Partners note that excavation to depths of up to 7 m will be required for the hospital and maximum excavation depths of 2 m required for the RACF. A number of geotechnical issues will constrain development of the subject site, including uncontrolled historical filling of up to 6m in depth, which will impact on site stability. In order to achieve a site suitable for development, a range of site preparation works are required to be implemented, including extensive earthworks to remediate the northern carpark site. Alternative methods of excavation will be required, including percussion methods where high strength sandstone is encountered. Additional geotechnical assessment will be undertaken as the planning and design of the development proceeds to address the variable ground conditions encountered. The operation of excavation and percussion plant will be regulated due to the potential for plant with heavy hammers to cause ground vibrations sufficient to damage nearby buildings. Monitoring of vibration levels will also occur in order to regulate set-backs necessary to ensure that vibration levels do not reach those likely to cause building damage. A detailed CMP will be required prior to the commencement of work.
Water Sensitive Urban Design	TTW note that the impact on the ground water is likely to be minimal and localised across the development site. A range of water sensitive urban design measures will be incorporated into the development to reduce water consumption and to minimise the effects of rainwater discharge from the land. This includes rainwater on site detention system (OSD), water quality treatment devices and water efficient fixtures and fittings.
Soils	Class 5 Acid Sulphate Soils have been mapped on the site, however the portion of land that contains Class 5 Acid Sulphate Soils, is not part of the allotment included within the boundaries of the developable area. There is no requirement for further investigation of Acid Sulphate Soils before the project commences.
Contamination	The Preliminary Site Investigation found potential for contamination exists at the site primarily through the filling of the site to accommodate the car park and demolition of previous structures. Furthermore, hazardous building materials may have been used in the construction of the ambulance station. Accordingly, the site shall be remediated in accordance with the submitted RAP and validated as required.
Air & Microclimate	No impact
Flora & Fauna	The proposed development is unlikely to have significant impact upon threatened species, endangered populations or endangered ecological communities.. Sediment and erosion control measures should be implemented to minimise impact to local drainage lines. Replacement landscaping should consider the use of endemic (locally occurring native) species including tree, shrub and ground covers to limit erosion and to encourage local fauna use. Hollows are to be inspected under supervision of a project ecologist prior to removal. Any resident fauna if any is to be managed or relocated as per the advice of the ecologist.
Waste	A detailed Waste Management Plan shall be prepared by the contractor prior to construction.
ESD	A range of sustainability initiatives may be incorporated within the project to provide overall resource efficiency including energy and water usage combined with a high level

Key Issues	Summary of Environmental Assessment Outcomes
	of internal comfort and maximised internal environment quality. In addition, renewable energy methodologies and suitable landscaping outcomes are to be implemented as appropriate.
Wind Impact	Preliminary local wind climate analysis is not considered necessary having regard to the height of the proposed building.
Noise	Acoustic Logic confirm that compliance with EPA noise emission controls can be achieved through adoption of the recommendations set out in the Assessment and with the preparation of a construction noise and vibration management plan during construction certificate stage to determine whether there are any construction activities that will require noise management in order to reduce impacts on the adjacent residences.
Bushfire Hazards	The site is not affected by bushfire prone land and therefore does not require compliance with Planning for Bushfire Protection 2006.
Technological Hazards	Refer to the RAP in relation to hazardous substances. There is no radioactive waste generated by the facility.
Safety, Security & Crime Prevention	'Safer by Design' principles to be implemented within the development to encourage passive surveillance and minimise entrapment opportunities.
Infrastructure Provision	Demands on regional assets and infrastructure are not anticipated, as the site will house a fully contained and integrated facility.
Social Impact in Locality	The proposal will provide an expanded range of health services available for the local and regional community and will be a positive contribution for the local community.
Economic Impact in Locality	Economic costs and benefits include: Employment generation for local area; Positive impact on surrounding businesses; Positive contribution for the local community; The proposal will provide economic growth for the local area.
Cumulative Impact	No cumulative impacts are envisaged as a result of the development.

10 Environmental Risk Assessment and Mitigation Measures

Section 10 provides an Environmental Risk Assessment (ERA) to identify the key significant environmental impacts associated with the construction and operation of the proposal and identifies how those impacts are to be mitigated or managed.

10.1 Environmental Risk Matrix

The **risks** have been categorised as negligible (1), low (2), moderate (3), high (4), and extreme (5). The **manageability** of the impact has been categorised as basic (1), simple (2), standard (3), complex (4), and difficult (5), dependent on the likely complexity and effectiveness of the management/mitigation strategy.

Significance of Impact	Manageability of Impact				
	5 Difficult	4 Complex	3 Standard	2 Simple	1 Basic
1-Negligible	Medium	Low/Medium	Low/Medium	Low	Low
2-Low	High/Medium	Medium	Low/Medium	Low/Medium	Low
3-Moderate	High/Medium	High/Medium	Medium	Low/Medium	Low/Medium
4-High	High	High/Medium	High/Medium	Medium	Low/Medium
5-Extreme	High	High	High/Medium	High/Medium	Medium

Table 20 presents the Environmental Risk Assessment for the key issues identified in the foregoing sections of this Environmental Impact Statement and how they have been addressed as part of this proposal.

Table 20: Environmental Risk Assessment

Risk Type	Potential Environmental Impact	Risk Factor	Proposed Mitigation Strategy and/or Comment	Manageability of Impact	Significance of Impact
Construction Impacts	- Potential construction management impacts including, construction traffic and excavation works. - Acoustic impacts associated with construction (including excavation and traffic impacts)	3	- Prepare a Preliminary Construction Management Plan which provides mitigation strategies to minimise disturbance to adjacent residents. - The CMP should include a Traffic and Pedestrian Management Plan which shall be prepared prior to commencement of the works to address access routes, vehicle size and swept paths, truck routes, delivery hours & numbers, pedestrian access, cyclist	3	Medium

Risk Type	Potential Environmental Impact	Risk Factor	Proposed Mitigation Strategy and/or Comment	Manageability of Impact	Significance of Impact
			movement, traffic control devices, traffic control plans. ▪ Achieve compliance with EPA noise emission controls through adoption of the recommendations set out in the Acoustic Logic Assessment. ▪ Prepare a construction noise and vibration management plan during construction certificate stage to determine whether there are any construction activities that will require noise management in order to reduce impacts on the adjacent residences.		
Hazards	▪ Presence of uncontrolled historical filling of up to 6m in depth. ▪ Construction issues relating to presence of high strength sandstone. ▪ Potential site contamination due to presence of fill to accommodate the car park and demolition of previous structures. ▪ Hazardous building materials may have been used in the construction of the ambulance station.	3	▪ Implementation of recommendations from Douglas Partners including extensive earthworks to remediate the site, ongoing monitoring by a geotechnical engineer and alternative methods of excavation below depths of approximately 4.5metres. ▪ Undertake additional geotechnical assessment as the planning and design of the development proceeds to address the variable ground conditions encountered. This shall include a geotechnical specification for earthworks as part of the final design. ▪ Regulate the operation of excavation and percussion plant due to the potential for plant with heavy hammers to cause ground vibrations sufficient to damage nearby buildings. Monitoring of vibration levels to occur in order to regulate set-backs necessary to ensure that vibration levels do not reach those likely to cause building damage. ▪ A detailed CMP shall be prepared prior to the commencement of work. ▪ A hazardous building materials survey shall be completed prior to the demolition of the building. ▪ The site should be remediated in accordance with the submitted RAP and a Validation Report prepared.	3	Medium
Biodiversity	Potential impacts on biodiversity due to siting of vegetation adjacent to watercourse.	2	▪ Sediment and erosion control measures shall be provided to minimise impact to local drainage lines. ▪ Replacement landscaping shall consider the use of endemic (locally occurring native) species including tree, shrub and ground covers. ▪ Hollows shall be inspected under supervision of a project ecologist prior to removal.	1	Low

Risk Type	Potential Environmental Impact	Risk Factor	Proposed Mitigation Strategy and/or Comment	Manageability of Impact	Significance of Impact
Aboriginal Heritage	Potential to encounter items of Aboriginal Heritage during demolition or construction works.	1	Should any Aboriginal objects be encountered during works associated with this proposal, works will cease in the vicinity and the find will not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations, which may include notification to OEH and Aboriginal stakeholders. If any suspected Aboriginal ancestral remains are discovered during any activity the proponent will immediately cease all work at that location; notify the NSW Police and OEH; and not recommence work at that location unless authorised.	1	Low

11 Justification for the Proposed Development

Section 11 contains addresses the reasons for carrying out the development and details the justification for the proposed development with regard to biophysical, economic and social considerations and taking into consideration the principles of ecological sustainable development.

11.1 Justification

As required by the Secretary's requirements and Schedule 2 of the EP&A Regulations, this chapter of the Environmental Impact Statement considers the justification for the proposed development with regard to biophysical, economic and social considerations and with reference to the principles of ecologically sustainable development (ESD).

The subject site is within the public ownership of NSW Health Administration Corporation and has been earmarked for future expansion of the existing Bulli Hospital directly opposite the site for many years. The site is currently used for excess car parking overflow for the Bulli Hospital employees and is under utilised. The proposed use is considered an appropriate use of the site for the following reasons:

- The proposed uses are permissible forms of development on the site.
- The existing Bulli Hospital requires major upgrading in order to ensure its continuation to serve the medical needs of the northern Illawarra and surrounding suburbs.
- The proposal will provide local and regional medical and health support for the Wollongong central hospital located within the Wollongong CBD.
- The proposal will provide for additional residential care facilities which are in demand in an ever increasing older population in the eastern suburbs of the south coast of NSW.

The provision of additional medical services in this location, particularly for the aged, will enhance and is complementary to the existing use of the Hospital site in its entirety, on Hospital Road. Further, the proposed development will provide a number of additional economic, social and environmental benefits including:

- The development has been identified as a key infrastructure project in the Illawarra.
- The development will provide much needed medical care for residents of the Illawarra.
- The expansion of the existing Bulli Hospital will enable upgrading of the existing facilities to occur in a timely manner.
- The committed government and private sector funding provided for the development will ensure a continuation of existing hospital service in the northern Wollongong suburbs.
- Access to the existing hospital facilities on the opposite side of Hospital Road will not be hindered.
- The riparian and flora/fauna corridor to the rear of the site will be retained and enhanced.
- The subject site has not been used for residential purposes for a number of years. The residential character can continue to be maintained on adjacent properties.

Detailed consideration of the environmental impacts of the proposal has been undertaken in the environmental impact assessment process. In assessing the impacts of the proposed development, consideration has been given to social, economic and environmental matters.

11.2 Biophysical Considerations

Potential biophysical impacts associated with the proposed development have been assessed within the EIS. The assessment of the biophysical environment has included individual assessment of soil and water management. The assessment of each of the elements has concluded that subject to the implementation of a number of mitigation measures and additional investigations the proposed development would not result in significant adverse impacts on the biophysical environment.

11.3 Economic Considerations

The proposal will result in positive economic benefits for the Bulli community, the wider Wollongong LGA and Illawarra region. The proposal will provide for an increased level of care and health facilities for the aging population across the Illawarra. Further the BACCE will deliver significant local and regional economic benefits through the provision of infrastructure to assist the already operating Bulli Hospital functions which will result in the operation of an integrated facility with minimal impact upon the natural environment.

11.4 Social Considerations

The assessment of the social impacts associated with the proposed development has included consideration of traffic and access, landscape and visual amenity, socio-economic impact, noise and air quality. Suitable measures identified and will be introduced to minimise and mitigate any social impacts arising as a result of the proposed development.

11.5 Ecologically Sustainable Development

The guiding principles of ESD and its relationship to the proposed development are outlined below.

Precautionary Principle

The Intergovernmental Agreement on the Environment (IGAE) provides a definition of the precautionary principles which requires that where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of precautionary principle, public and private decisions should be guided by:

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

The IGAE states that the precautionary principle is to be a guiding principle for informed policy making and programmed implementation by all levels of government in Australia. In this manner, it is to guide both the public and private sector in its decision making and assessment of different options, particularly when decisions are being made in the face of uncertainty. It requires avoidance of serious or irreversible damage to the environment wherever practicable.

The proposed development has been designed with regard to the precautionary principle. Through detailed environmental investigation of the site and surrounding area, knowledge of the characteristics of the locality and the processes and interactions of various components of the environment have been established. This knowledge has been used to determine the potential environmental impacts of the proposed development

and appropriate mitigation measures to ensure environmental management practices and safeguards are applied.

Inter-generational Equity

The principle of intergenerational equity defined by the IGAE is a concept that requires the present generation to ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The most significant aspect of this concept is that future generations should not inherit a degraded environment.

The proposal has been located in such a way as to minimise its footprint, avoid areas of ecological value and wherever environmental impacts cannot be prevented mitigate these impacts by implementing appropriate management measures. The proposed development will not result in the sterilisation of land or other resources. The proposed development involves the use of existing infrastructure to ensure that the use of additional resources is minimised. Upon implementation of environmental safeguards and site mitigation measures, the proposed development will result in the provision of valuable infrastructure without causing significant or irreversible environmental harm.

Conservation of biological diversity and ecological integrity

Sustainable consumption and production is about achieving more with less, focusing on the efficient use of resources. From a planning and development perspective this means promoting energy and resource efficiency in the design, construction and use of buildings and infrastructure. It requires consideration of materials, supply chains, construction techniques and the operation and use of facilities.

Natural resource protection and environmental enhancement seeks to ensure that development should protect and enhance the natural environment by avoiding and minimising adverse effects on biodiversity, landscape character and quality, as well as air, waste and soil quality, whilst maximising opportunities for enhancement. It is also necessary to consider the indirect impacts of development on natural resources relating to the use of energy and resources in the construction and use of developments.

The proposed development would take place within a currently underutilised and relatively 'vacant' site. Environmental impacts have been mitigated and any residual impacts that remain are unlikely to result in significant impacts.

Climate Change and Greenhouse Gases

Climate Change and energy involves minimising greenhouse gas emissions whilst adapting to the consequences of unavoidable climate change resulting from previous emissions. From a planning and development perspective this relates to energy generation, supply and usage, sustainable transport and movement, as well as the embodied energy of materials and construction techniques. Equally, it requires a planning approach which responds positively to flood risk, increasing temperatures, increased storm frequency and severity, at the same time ensuring an economically productive built environment that promotes human health and comfort.

The proposed development supports the use of existing infrastructure and in so doing will limit greenhouse gas emissions associated with its operation.

12 Conclusion

This EIS details the findings of a comprehensive assessment of the environmental impacts associated with the proposed 'Bulli Aged Care Centre for Excellence' (or 'BACCE' development), which is a \$54.75 million integrated health facility, providing primary health care, inpatient, outpatient and community aged care services. The primary purpose of the proposal is to construct a residential aged care facility and extension of medical facilities for Bulli Hospital, encompassing an aged care inpatient unit and urgent care centre. This EIS has been prepared for Johnstaff Pty Ltd (on behalf of Health Infrastructure and IRT) to accompany an application for a development proposal for the proposed hospital facility.

Subject to the implementation of the recommended mitigation strategies to ensure that levels of environmental risk remain manageable, it is considered that the subject site is suitable for the proposed development and that the proposed Bulli Aged Care Centre for Excellence should be supported.