



Planning &
Environment

**STATE SIGNIFICANT INFRASTRUCTURE
ASSESSMENT REPORT:
*Northern Beaches Hospital Concept
Proposal and Stage 1 (site works), corner
Wakehurst Parkway and Warringah Road,
Frenchs Forest (SSI 5982)***



Secretary's Environmental Assessment Report
Section 115ZA of the
Environmental Planning and Assessment Act 1979

June 2014

ABBREVIATIONS

Approval	Infrastructure Approval
CIV	Capital Investment Value
Council	Warringah Council
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning & Environment
EIS	Environmental Impact Statement
EPA	Environmental Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
LEP	Warringah Local Environmental Plan 2011
Minister	Minister for Planning
OEH	Office of Environment and Heritage
PIR	Preferred Infrastructure Report
Proponent	NSW Health Infrastructure
RMS	Roads and Maritime Services
RtS	Response to Submissions
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSI	State Significant Infrastructure
The department	Department of Planning & Environment

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EXECUTIVE SUMMARY

This is a report on an assessment of a State significant infrastructure application (SSI 5982) lodged by Health Infrastructure (the proponent) seeking approval for a concept proposal for the Northern Beaches Hospital and first stage site clearance and preparatory works, at the corner of Warringah Road and Wakehurst Parkway, Frenchs Forest.

The project is State significant infrastructure as it is development by a public authority with a capital investment value (CIV) in excess of \$30 million on land identified as being within the Northern Beaches Hospital Precinct on the State Significant Infrastructure Sites Map, under clause 2 of Schedule 4 of State Environmental Planning Policy (State and Regional Development) 2011.

The site is located at the corner of Warringah Road and Wakehurst Parkway and bound by Frenchs Forest Road West to the north and The Forest High School the west, within the Warringah Local Government Area (LGA). This site was selected by the NSW Government in 2006 as the preferred site for the Northern Beaches Hospital following an extensive analysis of possible sites on the Northern Beaches, having regard to factors such as site accessibility and travel times, operational efficiencies and environmental issues.

The project seeks conceptual approval for the Northern Beaches Hospital (NBH), which will consist of approximately 70,000 sqm of gross floor area over six to ten storeys and accommodate over 400 beds, providing acute and sub-acute facilities, emergency medicine and imaging, as well as retail floor space and car parking. Approval is also sought for the first stage of the project, which includes vegetation removal, site preparatory works and services diversion required for the future construction of the hospital. The architectural design and construction works associated with the new NBH will be considered in a future Stage 2 State significant infrastructure application yet to be lodged with the Department of Planning & Environment (the department).

The indicative CIV of the total project is approximately \$467 million and the proposal would generate approximately 1,000 full time equivalent operational jobs.

In accordance with section 115Z of the EP&A Act and clause 194 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), the Secretary made the application and accompanying information publicly available for at least 30 days between 30 October 2013 and 28 November 2013, and relevant public authorities and surrounding landowners were notified. The department received seven submissions from public authorities and 368 submissions from the general public and community groups. The key issues raised in submissions related to traffic and transport impacts, biodiversity impacts, loss of existing healthcare services, amenity impacts and built form and urban design.

The proponent responded to the key issues raised within a Preferred Infrastructure Report (PIR) submitted to the department, which also provided further details on additional biodiversity offsets and details regarding the inclusion of service diversion works into the first stage early works package. The proponent's PIR was made publicly available and referred to council and relevant agencies. Submissions on the PIR were received from council and four agencies, with no further public submissions received at the time this report was finalised.

The department has assessed the merits of the project and considers the key issues to be: site suitability; traffic and transport; site clearance and biodiversity management; built form and urban design and environmental and residential amenity. These issues have been assessed in detail and the department is satisfied that any impacts can be adequately mitigated and managed to achieve acceptable levels of environmental performance. The department has recommended a range of conditions to ensure this occurs.

Importantly, the department's assessment of the project concludes:

- an appropriate level of roadworks planning is being undertaken by Roads and Maritime Services to ensure that necessary network improvements are delivered to facilitate the efficient operation of the future hospital and address network capacity issues;
- biodiversity impacts will be appropriately managed and offset in a comprehensive offset package proposed by the proponent and endorsed by the Office of Environment and Heritage;
- subject to appropriate design principles, the site's size and characteristics can cater for the proposed bulk and scale of the future hospital without causing any unreasonable amenity impacts on adjoining properties; and
- any potential impacts on the adjacent Forest High School would be suitably managed through the implementation of a detailed construction management plan, prepared in consultation with the school and subject to recommended conditions.

Further, the proposal would offer significant public benefits in terms of the provision of health care and employment and is consistent with key government strategic plans and policies, including NSW 2021, the State Infrastructure Strategy 2012-2032 and the draft Metropolitan Strategy for Sydney 2031.

The department therefore considers the project to be in the public interest and that the application should be approved, subject to conditions.

1. BACKGROUND

1.1 The Project

This report is an assessment of a State significant infrastructure project, lodged by NSW Health Infrastructure (the proponent), seeking staged approval for a concept proposal for the NBH and concurrent first stage site clearance and preparatory works. Conceptual approval is sought for a new hospital building ranging in height of approximately six to ten storeys, including a rooftop helipad, and comprising approximately 70,000 sqm of gross floor area with provision for approximately 423 patient beds. The project site is shown in **Figure 1**.



Figure 1: Project Site (Source: www.nearmap.com)

1.2 Site Description and Surrounding Development

The project site is located at the intersection of Wakehurst Parkway and Warringah Road, Frenchs Forest. The site sits approximately 12 kilometres north of the Sydney central business district, in the Warringah Local Government Area (LGA). The site is bound by Frenchs Forest Road West to the north, Warringah Road to the south, Wakehurst Parkway to the east and The Forest High School to the west (see **Figure 2**).

The site has an area of approximately 6.5 ha, which includes a 1.4 ha site formally known as Blinking Light Reserve. The site is predominantly undeveloped native bushland, the majority of which contains Duffys Forest Ecological Community (DFEC). The site was however previously occupied with residential dwellings and a community health facility along Bantry Bay Road, which have since been demolished. Topographically, the site is located on a regional east-west ridgeline, falling away to the northeast towards Narrabeen Lakes and to

the southeast towards Manly Dam. Locally, the site has an easterly fall of approximately 12 m, falling towards the Wakehurst Parkway.



Figure 2: Site Location (Source: www.nearmap.com)

The site is surrounded by a number of different land uses, including bushland, roads and a light industrial business park area to the east. The Forest High School adjoins the site immediately to the west and a small local business/retail precinct lies opposite the site across Warringah Road. North of the site across Frenchs Forest Road West is low density residential development, characterised by one to two storey dwellings.

2. PROPOSED PROJECT

2.1 Project Description

The NBH project is a staged infrastructure application that sets out a concept proposal for a new hospital building up to ten storeys in height and approximately 70,000 sqm of floor area. The staged infrastructure application also seeks concurrent Stage 1 approval for site clearance and preparatory works.

Table 1 provides a summary of the proposal's key components and features (including details of services diversion works introduced within the proponents PIR).

Table 1: Key Project Components

<i>Development Summary</i>	The staged SSI application for the site is seeking approval for: <ul style="list-style-type: none"> a concept proposal for the NBH; and first stage site clearance and preparatory works for the new hospital building.
<i>NBH Concept Proposal</i>	<ul style="list-style-type: none"> conceptual approval for the development of a new hospital comprising the following indicative design references: <ul style="list-style-type: none"> minimum 6 m setback from all boundaries; building mass of six to ten storeys, plus rooftop helipad; two storey massing to Frenchs Forest Road West and three storey massing to Warringah Road; approximate gross floor area of 70,000 sqm; and primary vehicular access from Frenchs Forest Road West and secondary (left in, left out only) from Warringah Road. Level 5 hospital facility accommodating approximately 423 beds and providing a range of services including, but not limited to: <ul style="list-style-type: none"> emergency; critical care; operating theatres; acute in-patient and sub-acute services; maternity and neonatal; paediatrics and adolescents; mental health and drug and alcohol; primary health care; and clinical and other support and associated administration.
<i>Stage 1 Site Clearance and Preparatory Works</i>	<ul style="list-style-type: none"> service diversion works, comprising; <ul style="list-style-type: none"> diversion of existing high pressure natural gas main; diversion of existing 33 kV transmission line; diversion of existing 11 kV transmission line; decommissioning and diversion of existing section of 415 V power line; decommissioning of existing street lighting associated with decommissioned section of 415 V line; decommissioning sections of existing water/sewer supplies; and diversion of existing telecommunications services. establishment of site office and temporary connection to services; closure of Bantry Bay Road to public and establishment of construction traffic management controls; removal of existing temporary fencing and installation of construction fencing; general clearance of site vegetation including tree stumps, excluding

	<p>the area of vegetation broadly consistent with the former Blinking Light Reserve at the eastern end of the site;</p> <ul style="list-style-type: none"> • thinning of the former Blinking Light Reserve understorey; • chipping of cleared vegetation for use on site for ground stabilisation/erosion control in the period prior to Stage 2; • offsite disposal of surplus cleared vegetation to green waste recycling facility or other beneficial reuse; • removal and disposal of existing foundations, concrete pads, etc. associated with former buildings; • site stabilisation in preparation for proposed Stage 2 works; • pedestrian access path adjacent to the western boundary between Warringah Road and Frenchs Forest Road West; and • site management following site clearance and preparatory works prior to proposed Stage 2 works.
<i>Value (CIV)/Jobs</i>	<ul style="list-style-type: none"> • Capital investment value of approximately \$467 million; and • Creation of approximately 1,000 full time equivalent operational jobs.
<i>Site Description</i>	<ul style="list-style-type: none"> • Lots 1–11, DP 26087; • Lots 11–15, DP 792918; and • Lot 1, DP 119383.

A future Stage 2 State significant infrastructure application is proposed to be lodged for the main construction of the NBH, generally comprising:

- bulk excavation works;
- construction of the new hospital;
- utility and services amplification works;
- associated car parking; and
- external site works, including landscaping.

No approval under the subject SSI application is sought for Stage 2 construction works associated with the NBH and ancillary infrastructure.

2.2 Project Need and Justification

The proposed NBH is located within the North Subregion of the greater Sydney metropolitan area, made up of Hornsby, Ku-ring-gai, Manly, Pittwater and Warringah Local Government Areas. The subregion has a targeted population growth of 81,000 and employment growth of 39,000 jobs to 2031. The proposed NBH development will provide an important contribution towards these targets, both directly and indirectly through the provision of approximately 1,000 jobs, the establishment of magnet infrastructure and helping to attract and promote the locality as a future health precinct.

The proposed NBH development in Frenchs Forest combines both public and private healthcare that will provide improved access and healthcare choices and employment opportunities for the region's growing population. In addition, the proposed new hospital allows for NSW Health to redesign community health services on the Northern Beaches in line with broader community needs. This involves establishing a new community health centre at Mona Vale in the north and new community health centre at Brookvale in the south, and enhanced child and family specialist services at Dalwood in Seaforth.

3. STATUTORY AND STRATEGIC CONTEXT

3.1 State Significant Infrastructure

On 16 October 2012, the then Minister for Planning and Infrastructure made an order under section 115U(4) of the EP&A Act to amend State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) to provide that development on land in the Northern Beaches Hospital Precinct, carried out on or on behalf of a public authority, that has a capital investment value greater than \$30 million is State significant infrastructure.

The proposal is State significant infrastructure because it is development by a public authority that has a capital investment value of more than \$30 million on land identified as being within the Northern Beaches Hospital Precinct on the State Significant Infrastructure Sites Map, under clause 2 of Schedule 4 of the SRD SEPP. Therefore the Minister for Planning is the approval authority.

3.2 Permissibility and Zoning

The site is zoned R2 Low Density Residential, RE1 Public Recreation and SP2 Infrastructure (Classified Road) under the Warringah Local Environmental Plan 2011 (Warringah LEP) (see **Figure 3**). Under the R2 zoning, 'hospitals' are a use that are permissible with development consent. Under the RE1 and SP2 zones, 'hospitals' are not a permissible land use.

Notwithstanding, section 115ZF(2) of the EP&A Act provides that Part 3 of the EP&A Act and environmental planning instruments (EPIs) do not apply to State significant infrastructure. Therefore the application can be approved subject to an environmental assessment under section 115ZA of the EP&A Act.

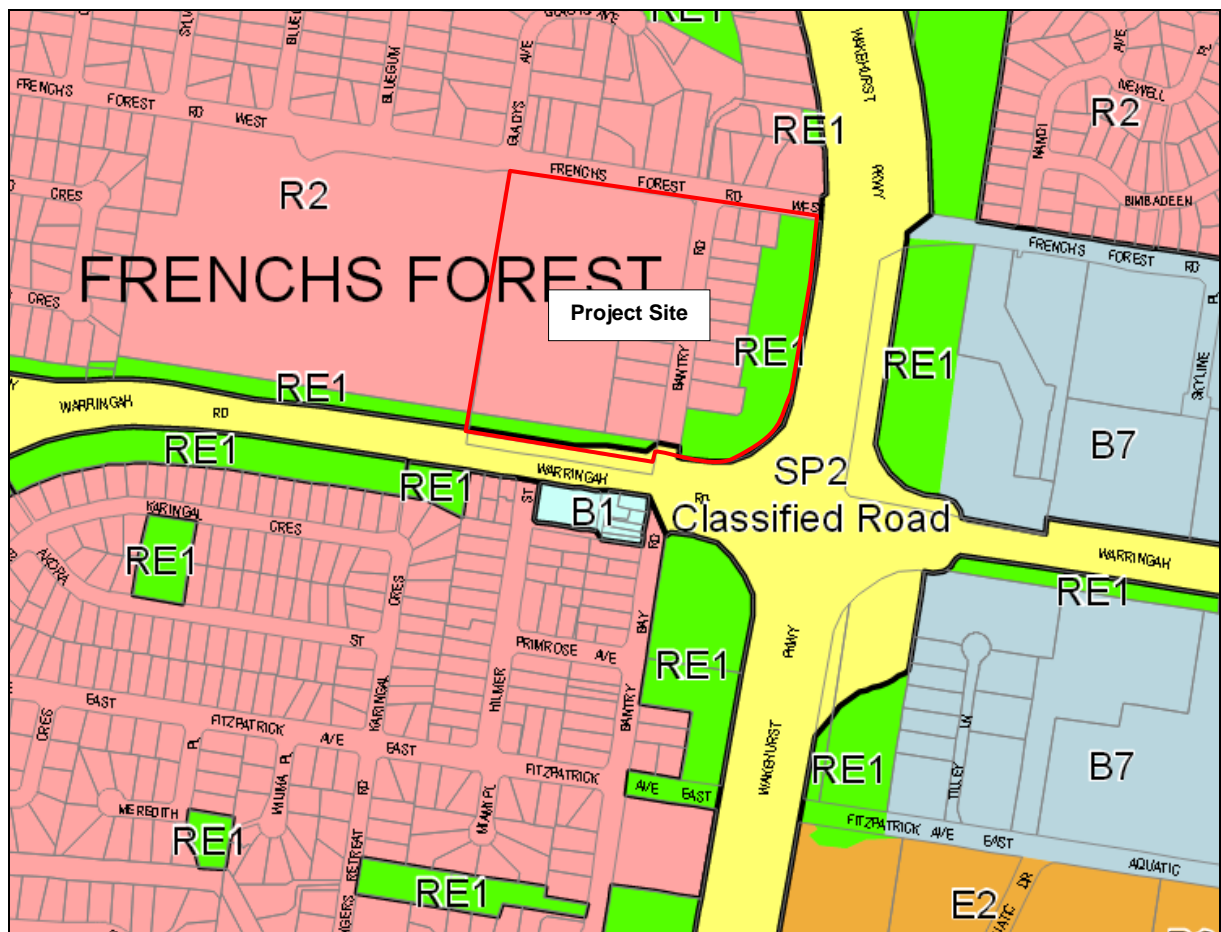


Figure 3: Warringah LEP Zoning Map

3.3 Environmental Planning Instruments

Whilst EPI's do not strictly apply to SSI, the department has considered the proposal against relevant EPIs (including SEPPs). This consideration is provided in Appendix B. The proposal is generally consistent with the relevant requirements of the EPIs

3.4 Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the EP&A Act, as set out in Section 5 of the Act. The proposal is consistent with the objects of the EP&A Act as the proposal would promote the orderly and economic use and development of vacant land for public health and community purposes. The proposal would protect the land for public purposes and promote the social and economic welfare of the community through the provision of improved health services.

3.5 Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes.

The department has considered the development in relation to the ESD principles. The Precautionary and Inter-generational Equity Principles have been applied in the decision making process via a thorough and rigorous assessment of the environmental impacts of the project. The project is considered to be consistent with ESD principles as described in Section 9.2 of the proponent's EIS, which has been prepared in accordance with the requirements of Schedule 2 of the Regulation.

The project is located on a highly vegetated site and proposes the removal of approximately five hectares of DFEC. This would equate to an approximate two per cent loss of the remaining DFEC within NSW. The proponent has proposed a comprehensive biodiversity offsets package which includes the protection of an existing nearby site containing approximately 2.3 hectares of DFEC (equating to approximately one per cent of the remaining DFEC).

Additionally, the proposed concept design for the future hospital construction work proposes retention of an area of vegetation along the eastern end of the site that would be managed as part of the hospital's future operation.

In addition, the project promotes improved valuation, pricing and incentive mechanisms by considering the pricing of environmental resources, through the proposed implementation of sustainability initiatives, including resource consumption during construction and operation through on site water harvesting and reuse, and energy efficient heating and cooling mechanisms.

3.6 Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the EP&A Regulation cited in this report, the requirements for exhibition (Part 10, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

3.7 Statement of Compliance

The EIS is compliant with the Secretary's Environmental Assessment Requirements and is sufficient to enable an adequate consideration and assessment of the proposal for determination purposes.

3.8 Environment Protection and Biodiversity Conservation Act

Under the assessment and approval provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), actions that are likely to have a significant

impact on a matter of national environmental significance are subject to an assessment and approval process. An action includes a project, development, undertaking, activity, or series of activities.

The site does not contain any vegetation communities that are listed as critically endangered and endangered ecological communities under the EPBC Act, though contains a fauna species, the Grey-headed Flying-fox, which is also listed as vulnerable under the *Threatened Species Conservation Act 1995* (TSC) and the EPBC Act.

In giving consideration to the EPBC Act and the project's impact, the proponent's biodiversity offset strategy report advises that the subject site does not contain suitable breeding or roosting resources, and that, considering the species extensive foraging range, it was considered that the proposed project would not have a significant impact and therefore a referral to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities is not required.

3.9 Strategic Context

NSW 2021

NSW 2021 is the NSW Government's key strategic planning document, providing a 10 year plan to guide policy and budget decisions to assist with the rebuilding of NSW. Key strategies of the plan relevant to the NBH involve returning the quality of services provided within the state and to renovate infrastructure. In achieving these strategies, the NSW Government has identified a number of goals to help restore the confidence in the public health system.

The proposed NBH development would assist in achieving these goals through the provision of increased healthcare services investment; construction of a new hospital and development of a cluster of medical related services for the Northern Beaches region.

The State Infrastructure Strategy 2012-2032

The State Infrastructure strategy includes independently prepared advice by Infrastructure NSW to the NSW Government on recommended infrastructure investment and reform. The Strategy details that the NSW health system faces growing demands from an increasing and aging population, lifestyle diseases and new care technologies, which will require increased investment in healthcare and beds, including specialised medical facilities and repurposing community health centres.

In this respect, a principal recommendation of the strategy is that construction of the Northern Beaches Hospital should commence between 2012 and 2017 and should be delivered as a healthcare precinct that provides for the integrated provision of both public and private healthcare services. It also notes that in greater Sydney, healthcare is a major employer.

The strategy also details that over the next 10 years, an additional 200 acute beds and a minimum of 75 sub-acute beds will be required each year to meet the forecast demand of the changing population.

The provision of over 400 new beds at the NBH will provide much needed services as projected by Infrastructure NSW. Furthermore, the proposed consolidation of public and private healthcare services at the NBH would lead to improved healthcare services through shared infrastructure and workforces, minimising unnecessary duplication of services and expenditure.

Draft Metropolitan Strategy for Sydney to 2031

The draft Metropolitan Strategy for Sydney to 2031 provides the most current and comprehensive plan to manage the growth and development of the Sydney metropolitan region. A key objective of which is the delivery of health infrastructure services and

employment opportunities to help build a more liveable city and support key projects and actions identified in the State Infrastructure Strategy 2012-2032.

The proposed development site for the NBH is identified within a proposed specialised precinct at Frenchs Forest as a priority for the Sydney's metropolitan region. The development of the new NBH will assist in the development of a growing cluster of health-related uses and associated research/business park opportunities for job growth stimulation.

The draft Strategy also clearly depicts the strategic direction for the North Subregion, identifying the Frenchs Forest Health Potential Specialised Precinct in Figure 1: Vision for Sydney 2031 of the Strategy. This clearly identifies the NSW Government's commitment to the project, and the forward strategic planning for the establishment of the precinct.

Northern Sydney Local Health District

The NBH is identified within the North Sydney Local Health District's Strategic Plan 2012-2016 and Clinical Services Plan 2012-2016 as playing a key role in facilitating the establishment of more efficient distribution of health services across the local area health district. Further, the proposed hospital will play a key role in helping to align acute facilities and the clinical network to ensure greater stability of key services such as intensive care, emergency, surgical sub-specialties, maternity and paediatrics.

Having regard to the above, the project is considered to be consistent with and/or supports local/state/regional strategies as follows:

- it is consistent with the key policy commitments and priorities of NSW 2021, the State's 10 year plan, to increase investment in infrastructure and rebuild hospitals and health infrastructure, which will support improved healthcare;
- it will provide direct investment in the region of approximately \$467 million, supporting the creation of approximately 1,000 new operational jobs; and
- Warringah Council is currently preparing a structure plan for the greater Frenchs Forest area, containing the State significant infrastructure site for the Northern Beaches Hospital Precinct and NBH site, which will investigate the future direction for Frenchs Forest.

4. EXHIBITION CONSULTATION AND SUBMISSIONS

4.1 Pre-lodgement Consultation

The department notes that prior to the lodgement of the EIS for the project, the proponent undertook extensive consultation with both the community and other government bodies. The proponent has actively engaged with the community and been involved with community visioning workshops undertaken in late 2012, with representatives of the department and Roads and Maritime Services (RMS) also involved, wherein key issues regarding the proposed hospital and wider Northern Beaches Hospital Precinct were discussed.

Aboriginal stakeholder consultation was also undertaken with a number of interested groups, with representatives from some stakeholder groups participating in field survey activities undertaken in late 2012.

Inter-agency meetings were held from mid-2012 with representatives from Health Infrastructure, the department, RMS, Infrastructure NSW, Transport for NSW (TfNSW) and Shore Regional Organisation of Councils (SHOROC) attending, to facilitate a coordinated approach to planning issues related to the project. Further consultation was also undertaken with these agencies, as well as Warringah Council (council), the NSW Rural Fire Service (RFS), the Environmental Protection Authority (EPA) and Education and Communities (E&C), including The Forest High School, in 2013 during the preparation of the EIS.

4.2 Exhibition

In accordance with section 115Z of the EP&A Act and clause 194 of the EP&A Regulation, the application and accompanying information were made publicly available for at least 30 days following the date of first publication. The application was publically exhibited:

- on the department's website from 30 October 2013 to 28 November 2013 (30 days); and
- at the department's Information Centre and council's offices from 30 October 2013 to 28 November 2013 (30 days).

During the exhibition period, the department received seven submissions from public authorities, including council, the EPA, the Office of Environment and Heritage (OEH), TfNSW, the RFS, E&C and Sydney Water. Additionally, the department received 368 public submissions, including 12 submissions from community groups.

The key issues raised in submissions related to traffic and transport impacts (site access, road upgrades and traffic management), loss/downgrading of existing hospital services in Mona Vale and Manly, built form and urban design, biodiversity impacts and amenity impacts. A summary of the issues raised in submissions is provided in Section 4.2 and 4.3 below.

4.3 Public Authority Submissions

A summary of submissions received from public authorities is provided below:

Warringah Council

Council did not object to the proposal, however provided a number of comments on the EIS for the department's consideration. A summary of council's comments and recommendations are provided as follows:

- due to the significance of the project, council would like to see design excellence built into all aspects of the future hospital design;
- concerns are raised regarding Frenchs Forest Road West proposed as the primary access and Warringah Road proposed only as a secondary access point;
- little information is provided in relation to future public transport;
- the concept of setting back the building from Frenchs Forest Road West and concentrating the building bulk and mass to the centre of the site is supported;

- the concept proposal should recognise the adjacent low density residential development and any future application should be accompanied by a comprehensive view analysis and visual impact study to ensure the visual and acoustic privacy of surrounding properties is maintained;
- construction traffic will be required to avoid Frenchs Forest Road West and other local streets and council recommends truck access movements be via the main road network and that major deliveries occur outside the main peak period;
- traffic management should take into account the pick-up and set down requirements for The Forest High School;
- mitigation measures provided in the Biodiversity Specialist Report should be outlined in an operational management plan, outlining timing and implementation of these mechanisms;
- the Biobanking assessment credit calculations have not accounted for the modification to the DFEC within Blinking Light Reserve and additional credits not provided by Biobanking agreement No.55 should be found and retired to offset the impacts of the project;
- council raises no objections to the content and findings of the Phase 1 Contamination Assessment Report;
- further clarification is sought in relation to soil and water management proposed;
- further clarity and more in-depth investigation is required of where site clearance works waste is planned to be recycled and disposed of; and
- council requests potential noise impacts on surrounding residential properties associated with helicopter flight paths should be assessed and submitted with any future application.

Transport for NSW / Roads and Maritime Services

TfNSW did not raise any objections to the proposal, noting that both TfNSW and RMS are committed to working with the proponent to develop appropriate traffic and transport outcomes for the hospital. Notwithstanding, in reviewing the EIS, TfNSW provided the following comments:

- further consideration of the proposed access arrangements, parking provisions, loading and servicing facilities and the site clearance works should be addressed during subsequent planning stages; and
- 'in-principle' support is given for the proposed access arrangements, however, a detailed construction traffic management plan should be prepared and submitted to the department/council prior to the commencement of any site clearance and vegetation management works on site.

Office of Environment and Heritage

The OEH raised some concerns with the proposal, particularly in relation to the adequacy of the proponent's biodiversity offset strategy approach for the project, and provided the following comments:

- the Biobanking assessment report adequately assesses the biodiversity value at the site;
- biodiversity credits identified on the Biobanking Public Register or Expression of Interest Register on the OEH website are not the only credits available and it would be expected that a reasonable effort would be made to locate and secure an offset site elsewhere;
- the biodiversity offset credits proposed within the biodiversity offset strategy and Biobank agreement No.55 do not adequately cover the credits required for the clearing of the hospital site and do not satisfactorily meet the Tier 3 variation criteria of the NSW Interim Offsets Policy;
- OEH concurs with the recommendations of the Aboriginal Heritage Impact Assessment report; and

- OEH noted that the site's location on top of a ridgeline meant that a detailed hydrological and hydraulic assessment would not be necessary.

Environmental Protection Authority

The EPA identified the following issues relating to the proposal which required further consideration:

- the need for further detailed site investigations of site contamination is recommended as is consideration of engaging an accredited site auditor;
- the EPA is unclear about the fate of Bantry Bay Road or whether the assessment has considered contamination associated with the road;
- all wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines and measures be implemented to reduce offsite transfer of waste or spill from site activities;
- the proponent must minimise site clearance works dust emissions on site and prevent dust emissions from the site;
- earthmoving or vegetation clearance works should not be undertaken until appropriate erosion and sediment control measures are in place, and should be inspected daily to ensure effectiveness;
- the project is likely to cause significant noise and vibration impacts and the proponent should undertake a comprehensive impact assessment of construction activities; and
- the proponent should comply with the Interim Construction Noise Guideline and schedule intra-day respite periods for construction activities identified as being particularly annoying and intrusive to surrounding residents and noise sensitive receivers (The Forest High School).

The EPA also provided comments regarding the future Stage 2 construction works and hospital operations, including: the necessary detail to enable potential noise and vibration impacts, operational wastes and use and storage of medical radiation materials to be appropriately assessed; and that the future design of the hospital give consideration to the integration of energy and water efficiency and conservation design initiatives to minimise the use of energy and water throughout the hospital campus.

NSW Rural Fire Service

NSW Rural Fire Service (RFS) raised no objections to the proposal, though advised that without detailed plans, no detailed assessment can be carried out at this stage. Notwithstanding, it commented that the DFEC proposed to be retained along the eastern end of the site should be managed to the standard of an asset protection zone and that any development be setback in accordance with the Planning for Bushfire Protection Guidelines 2006.

Education and Communities

E&C raised no objections to the proposal, but provided the following comments:

- given the likely scale of the future hospital, design parameters should be conditioned under any approval given for this application and not left to Stage 2;
- requested the traffic report be updated to take into account potential construction and operational traffic impacts on The Forest High School and identify appropriate mitigation measures;
- noise mitigation measures have not been identified for The Forest High School and are required due to likely construction noise criteria being exceeded; and
- requested that the proposed Construction Management Plan include the requirement for consultation with The Forest High School.

Sydney Water

Sydney Water raised no objections to the proposal.

4.4 Public Submissions

The department received a total of 368 submissions from the public during exhibition, including 354 public submissions and 12 from the following organisations/groups:

- HEAL (Health Environment Access Locality) Northern Beaches (objects);
- Capital Investment Pty Limited (supports);
- Garigal Landcare (objects);
- Pittwater Natural Heritage Association (objects);
- The Forest High School (comments);
- The Forest High School P&C (comments);
- The Forest High School Council (comments);
- City Plan Group (supports);
- National Parks Association of NSW Inc. (objects);
- Northern Beaches Roadkill Prevention Committee (objects);
- Northern Beaches Greens (objects); and
- Friends of Narrabeen Lagoon Catchment (objects).

Of the 368 public submissions received, 343 (93 per cent) objected to the proposal, 11 (3 per cent) supported the proposal and 14 (4 per cent) did not object but raised concerns. The department also note that of total 368 submissions received, 191 (52 per cent) were made up of two pro-forma letters, with the remainder comprising individual submissions. A summary of the key issues raised in all public submissions received are listed in **Table 2**.

Table 2: Summary of Issues Raised in Public Submissions

<i>Issue</i>	<i>Issue summary</i>	<i>Proportion of submissions</i>
<i>Traffic Impacts</i>	Impacts of the NBH on existing congested traffic conditions. Road upgrades needed but no details or funding to create adequate transport infrastructure have been provided.	306 (83%)
<i>Endangered Ecological Impacts</i>	The development of the NBH will result in the destruction of DFEC and other endangered flora and fauna and their habitats and the inadequacy of proposed biodiversity offsets. Wildlife corridor impacts.	290 (79%)
<i>Duplication of services in lieu of upgrading existing services</i>	NBH's location duplicates Royal North Shore Hospital services, in lieu of upgrading (not downgrading) existing and more suitable services provided at Mona Vale Hospital and Manly Hospital.	266 (72%)
<i>Local Amenity Impacts</i>	The NBH will result in overshadowing, loss of vegetation, air and noise pollution from increased traffic and hospital operation, local on-street parking impacts, and light pollution.	252 (68.5%)
<i>Private Hospital Operator and Beds</i>	Operation of the NBH by a private operator, service implications and the excessive number of private hospital beds in comparison to the number of public hospital beds, of which more public beds are needed.	215 (58.5%)
<i>Inadequate Public Transport and On-Site Parking</i>	Insufficient existing or proposed public transport services to support NBH and need to ensure adequate on-site car parking is provided.	133 (36%)
<i>Hospital Access</i>	Existing traffic congestion will impact on safe and efficient hospital access. Flooding on Wakehurst Parkway will also restrict access to the hospital.	128 (35%)
<i>Need and Location Justification</i>	Justification of the need for the NBH and its inappropriate proposed location at Frenchs Forest.	121 (33%)
<i>Inappropriate 10</i>	The proposed 10 storey built form and proposed design is	30 (8%)

Issue	Issue summary	Proportion of submissions
<i>Storey Built Form</i>	inappropriate and out of character with the surrounding low density suburb.	
<i>EIS Quality</i>	Lack of information provided within EIS regarding proposed hospital operation, supporting road work upgrades and details regarding future rezoning.	11 (3%)
<i>Inadequate Consultation</i>	Consultation with community has been poor and insufficient time has been provided to adequately review EIS documentation.	9 (2.5%)
<i>Impacts on The Forest High School</i>	Impacts on The Forest High School, including noise, vibration and student safety.	6 (1.5%)

The department has given consideration to the comments provided in public submissions and is satisfied the proponent's Preferred Infrastructure Report (PIR) and additional information has satisfactorily addressed the matters raised in submissions. Detailed consideration of the project's key issues is provided in section 5 of this report.

4.5 Preferred Infrastructure Report

On 14 March 2014, the proponent submitted its PIR that provides a response to the key issues raised in submissions, outlines details regarding proposed additional biodiversity offsets (discussed in section 5.3 of this report) and also provided details regarding the incorporation of additional site preparatory works for services as part of the concurrent first stage works. The PIR also included details regarding ongoing discussions with RMS regarding the supporting road works.

The PIR was made publicly available on the department's website and was also referred to council, EPA, OEH, TfNSW, RMS and E&C for further review. No public submissions on the proponent's PIR were received at the time of writing this report. Five submissions were received from public authorities. A summary of their comments is provided below.

Warringah Council

Council advised that the responses provided within the proponent's PIR satisfactorily addressed its concerns raised during the exhibition of the EIS.

Transport for NSW / Roads and Maritime Services

In its review of the proponent's PIR, TfNSW recognised that traffic congestion within the surrounding Frenchs Forest precinct was a key issue, advising that it was committed to working with the proponent through the Interface Reference Group to develop appropriate traffic and transport outcomes for the surrounding precinct.

TfNSW also acknowledged that parking provisions for the proposed future hospital and preparation of a construction traffic management plan would be addressed during the subsequent detailed design stage of the hospital development.

Office of Environment and Heritage

No further objections were raised by OEH in its review of the proponent's PIR. The following comments were provided:

- agrees with the number of credits required to offset the loss of DFEC;
- the purchase and retirement of ecosystem credits identified will meet the requirements under Tier 3 of OEH's *Interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects*;

- requested the department include appropriate conditions to ensure the biodiversity offset strategy is delivered in a timely manner (preferably before vegetation clearance works commence);
- requests that the recommendations of the proponent's Aboriginal heritage impacts assessment be included as appropriate conditions; and
- noted the proponent's response to flooding matters and advised that it had no further comments on this issue.

Environmental Protection Authority

In its review of the PIR, the EPA provided the following comments and recommendations:

- the EPA provided a number of recommendations relating to the control and management of dust emissions, erosion and sediment, construction noise and vibration;
- the PIR notes 'regular' rather than 'daily' maintenance inspections of erosion and sediment controls, which is inconsistent with Landcom's *Managing Urban Stormwater: Soils and Construction, 4th Edition*;
- the proponent's PIR satisfactorily addresses the EPA concerns regarding the assessment of the early works construction noise and vibration impacts;
- the EPA notes and supports the ongoing consultation with The Forest High School and proposed range of mitigation measures to be implemented during construction;
- the EPA provided recommendations relating to works required to be undertaken outside of standard construction hours; and
- EPA advised that it did not support on-site wood chipping, though supported the proponent's proposed restricted construction hours associated with chainsaw use and wood chipping, further recommending consideration be given to the implementation of additional intra-day respite periods to reduce exposure to high noise impact activities.

Education and Communities

E&C's review of the proponent's PIR identified a number of matters it wished to be addressed, including:

- the department consider conditions on built form, such as setback and heights, to provide a level of certainty in built form and protect The Forest High School from excessive built form;
- conditions should be imposed requiring construction noise monitoring to be undertaken by a qualified acoustic engineer and in consultation with the school;
- conditions should be imposed requiring detailed noise and air quality assessments be undertaken for Stage 2 and that appropriate mitigation measures are also identified;
- recommend that The Forest High School be included as a stakeholder for consultation during the preparation of management plans; and
- conditions should be imposed relating to the control and management of air borne dust and pollen pollutants from the hospital site following vegetation clearance.

The department is satisfied that the PIR and additional information submitted satisfactorily addresses the issues raised in submissions. Key issues raised have been further considered in section 5 of this report.

5. ASSESSMENT

In consideration of the proponent's EIS, PIR and issues raised in agency and public submissions, the department considers the key assessment issues associated with the proposal to include:

- site suitability;
- traffic and transport;
- site clearance and biodiversity management works;
- built form and urban design;
- environmental and residential amenity; and
- other matters.

5.1 Site Suitability

The suitability of the site for a new hospital was a key issue raised in submissions. In particular, many submissions stated that the locality's existing transport infrastructure is incapable of accommodating hospital operations on the subject site and that the existing Mona Vale Hospital facilities should be upgraded as a preferred alternative.

This section addresses the strategic suitability of the site for the proposal. Other site specific issues such as traffic, biodiversity, environment and amenity are addressed in detail in sections 5.2 to 5.6.

The NSW Government confirmed the selection of the Frenchs Forest site for the new Northern Beaches Hospital in 2006 following extensive analysis undertaken on a range of sites across the Northern Beaches. The analysis included a range of qualitative considerations which were considered and ranked as part of a process involving representation from the communities of Manly, Warringah and Pittwater, along with representation from the Northern Sydney Local Health District (Northern Sydney Central Cost Area Health Service, as it was then), NSW Health, NSW Treasury and the department. The qualitative considerations included travel time to emergency departments within the catchment, traffic access and public transport connectivity, environmental and heritage issues and deliverability, as well as operational efficiency and effectiveness. A detailed economic appraisal was also undertaken along with a robust risk assessment to enable the preferred site to be confirmed. The Mona Vale Hospital site was also considered as part of the analysis.

Further to the strategic planning justification and benefits of the development of a new hospital facility at Frenchs Forest as outlined in section 2.2 of this report, the proponent advises that generally, Frenchs Forest is considered to be well placed at the centre of the Northern Beaches health service catchment, adjacent to major transport routes, including Warringah Road, Wakehurst Parking and Forest Way.

Operationally, Mona Vale and Manly Hospitals are some of the smallest hospitals in the Sydney metropolitan region by throughput. This is a key factor which restricts their ability to provide the range of services required by the Northern Sydney Local Health District on a cost-effective basis. In addition, the existing hospitals are poorly located with respect to the catchment they serve and the healthcare services offered are currently fragmented, with some specialist services unavailable at these locations. This requires patients and staff to travel between sites, as well as to Royal North Shore Hospital.

From a medical health service delivery viewpoint, Health Infrastructure has detailed that the existing Mona Vale and Manly Hospitals are unable to be cost effectively upgraded to provide contemporary models of healthcare. In this respect, Health Infrastructure considers that a new single, centrally located hospital would ensure the provision of an increased range of healthcare services of a higher standard are provided. This would also minimise the need for specialist services to be sought outside of the catchment. Further, the provision of such a

facility would assist in reducing the service demands currently placed on Royal North Shore Hospital.

While not part of the subject SSI application, Health Infrastructure is also proposing to redevelop Mona Vale Hospital to provide complementary services. In this regard, a State significant development application (SSD 6160) has been lodged for the development of a new Northern Community Health Centre, which is proposed to provide a broad range of healthcare services, such as rehabilitation, community and mental health care services, child and family services community nursing and aged care services. This will lead to an increase in the range and quality of health services provided within the NSLHD.

On the basis of the above, the department considers that the proposed location of the new hospital in Frenchs Forest is satisfactorily justified, noting that the facility will provide significant public benefits towards health service improvements and infrastructure investment for the Northern Beaches community.

5.2 Traffic and Transport

Concept Proposal

Network Capacity

Consultation for the NBH identified traffic congestion and existing network conditions as a key concern, with up to 83 per cent of public submissions objecting to the proposal due to associated traffic impacts. In addition, concerns were raised regarding the need to provide sufficient on-site car parking and difficulties in travelling to the site due to existing traffic congestion.

The proponent acknowledges that the NBH development will place additional pressure on an already congested road network. The proponent's traffic and transport assessment notes that small gaps in southbound and northbound traffic exist that would provide some midblock capacity between signalised intersections within the surrounding road network. However, it also details that existing intersections surrounding the subject site are operating at the maximum limits of their designed capacity, thereby countering any small gains afforded by the existing midblock capacity.

Expected impacts on the existing road network were projected by the proponent using estimated on-site car parking requirements, 2011 journey to work census data, existing mode splits from Mona Vale and Manly Hospitals and expected mode split for the future hospital. It was predicted that in the opening year of 2018, the hospital would generate approximately 900 outbound trips per hour in the PM peak period, coinciding with the peak parking demand generated by staff shift changeovers and patient and visitor movements. As noted previously, capacity exists within the midblock of the surrounding road network to absorb a portion of the additional traffic generated, however, there are significant constraints with the surrounding major intersection network to absorb the additional traffic during the AM and PM peak periods.

The proponent advises that the existing and future traffic and transportation needs for the surrounding road network are being investigated and developed by the RMS. In this respect, RMS has committed to undertaking road upgrade works to facilitate efficient access to and from the new hospital, including the accommodation of the new signalised main hospital entrance.

RMS has recently lodged a request with the department seeking Secretary's Environmental Assessment Requirements (SEARs) for a State significant infrastructure concept proposal for site connectivity and network enhancement road works. The SSI application seeks to support the activation of the Northern Beaches Hospital Precinct through road network and

intersection upgrades to provide access connections to the proposed NBH and allow for improved public transport improvements through the network.

Conceptual approval will be sought for road widening and upgrades to the surrounding road network to increase its capacity and operational efficiency. Approval will also be sought for first stage works that primarily consist of access connection works surrounding the hospital site. Specifically, RMS's SEARs request details that first stage works would involve the following road upgrades:

- road widening along Frenchs Forest Road West;
- new signalised intersections on Frenchs Forest Road West for hospital site access and at Frenchs Forest Road East, Patanga Road and Allambie Road;
- new dedicated bus lanes along Frenchs Forest Road West and East at the approaches and departures to the intersection with Wakehurst Parkway;
- road widening along Allambie Road and Warringah Road;
- road widening and intersection upgrades along sections of Forest Way;
- road widening and intersection upgrades along Naree Road and Frenchs Forest Road West; and
- reconfiguration of access between Forest Way and Naree Road.

These works are planned to be delivered to coincide with the planned opening of the hospital in 2018.

In addition to the first stage works, RMS's concept proposal also applies to further stages of work, comprising wider network enhancement road works including:

- potential road widening and upgrades along Warringah Road, Wakehurst Parkway and Allambie Road;
- improved intersection arrangements and potential for grade separated intersections at Forest Way/Warringah Road and Wakehurst Parkway/Warringah Road; and
- investigations into the benefits of connecting Aquatic Drive to Wakehurst Parkway.

Further SSI applications will be lodged for these wider network enhancement works. RMS's envisaged road works under the concept proposal are depicted in **Figure 4**.

In considering the projected impact of the proposed NBH on the existing road network, the department notes that the proposed road works and network improvements outlined above and identified within RMS's SEARs request, comprise a significant package of network improvements. These improvements will facilitate the operation of the NBH and accommodate additional inbound and outbound trips during the AM and PM peak periods. Further, the proposed augmentations along Frenchs Forest Road West and East will provide opportunities for improved public transport access through the network that will similarly benefit the future operations of the hospital as well as the wider area.

In this regard, the department is satisfied that an appropriate level of roadworks planning is being undertaken by RMS to ensure that necessary network improvements are delivered to facilitate the opening of the NBH in 2018 and that further enhancements are undertaken to the regional road network to cater for the on-going operation of the hospital.

In order to confirm that the proposed road works will cater for future traffic generation from the hospital, it is recommended that a condition be imposed on any approval requiring the Stage 2 SSI application for the NBH be accompanied by a detailed traffic impact assessment, which has specific regard to the timing of RMS's road and intersection upgrades.



Figure 4: Indicative Proposed Road and Network Upgrades (Source: RMS SSI 14_6434 SEARs request)

Car Parking

Following a review of RMS's *Guide to Traffic Generating Development*, parking generation rates and an examination of other similar hospital facilities, the proponent acknowledged large differences between parking provided at existing hospitals in comparison to RMS's guidelines. To calculate the peak car parking demand for the future hospital, the proponent therefore considered the characteristics of the future hospital itself, reviewing the details of the minimum design and service requirements of the hospital, typical patient and visitor movements, and estimated 1,000 full time employees and their shift characteristics.

The department considers that the methodology used by the proponent to calculate the car parking demand for the hospital is satisfactory, noting that a total of between 800 – 900 spaces would be required to service the hospital, with a typical average parking demand of approximately 670 spaces.

Acknowledging the concerns regarding adequacy of on-site car parking raised during exhibition, the department notes that the proposed 800 – 900 car parking spaces is indicative only at this stage, and that the specific car parking demand generated by the proposal would be determined and addressed in the Stage 2 SSI application for the detailed design and construction of the NBH. The proponent's traffic assessment also concludes that the peak demand period lasts from approximately 1:00 pm to 4:00 pm, with parking demand projected at lower rates outside of this period. It is also noted that neither council nor TfNSW raised concerns regarding the proposed car parking for the hospital or the calculation methodology.

The department is satisfied that based on the indicative operational characteristic of the NBH, the envisaged minimum on-site car parking provisions will be sufficient to accommodate the future demand generated. However, appropriate conditions of approval are also recommended requiring the submission of a detailed traffic assessment, wherein details and the design of the proposed on-site car parking will be further considered to ensure an appropriate level of parking provision.

Site Access

Master planning undertaken by the proponent for the proposal indicated that for operational efficiency, multiple access points from separate roads should be provided, with ambulance and emergency vehicles separated from public and staff vehicle and pedestrian movements.

The proponent proposes two vehicle access points to the hospital site from Frenchs Forest Road West and another from Warringah Road. Conceptually, the site access arrangements for the NBH are proposed to comprise:

- new signalised main hospital entrance on Frenchs Forest Road West at the intersection with Gladys Avenue;
- secondary Frenchs Forest Road West access point a minimum 65 m east of the proposed main hospital entrance; and
- southern entrance from Warringah Road, comprising left-in and left-out access only for general traffic and special right-turn provisions for ambulance vehicles (see **Figure 5**).

Concerns were raised by council regarding the proposed primary access being located on Frenchs Forest Road West and that Warringah Road was proposed as a secondary access. Council's preferred option was that the proposed entry to the site be located on Warringah Road at the existing signalised intersection with Hilmer Street.

However, TfNSW and the RMS provided in-principle support for the proposed access arrangements, noting further refinement of the proposed site access would continue to be developed with the proponent through the interagency Interface Reference Group, which comprises representatives of the proponent, RMS, TfNSW and the department. The IRG was

established to facilitate discussions regarding the NBH development and the transport infrastructure in and around the hospital site.

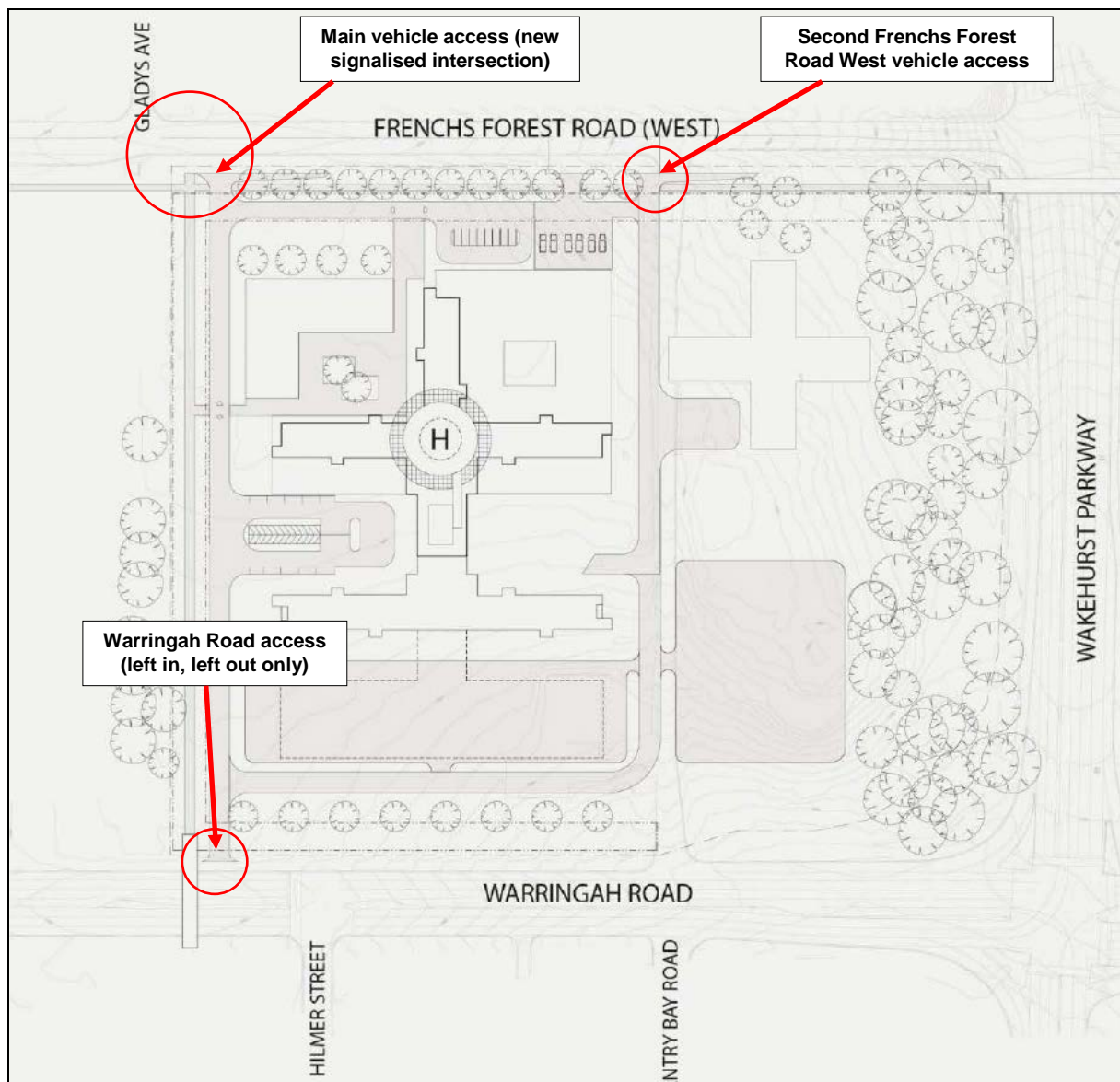


Figure 5: Indicative Proposed Site Vehicle Access Arrangements (Note: Indicative Site Layout)

As detailed above, the proposed road and network upgrades outlined within RMS's SEARs request will complement the proponent's proposed access arrangements to the site, minimising existing network impacts.

The proposed location of the main site access at the intersection of Frenchs Forest Road West and Gladys Avenue would also improve traffic conditions for users of Gladys Avenue, while the principle of locating the secondary Frenchs Forest Road West access point a minimum 65 m east of the main site access point will allow for deceleration requirements and ensure that site access safety is maximised for motorist travelling to and from the site. The proposed provision of alternative access points on either side of the hospital site will assist in distributing hospital traffic within the road network.

The department considers the proposed site access arrangements to be satisfactory, acknowledging that the SSI application for the detailed design and construction of the NBH will provide additional detail.

Stage 1 Construction Traffic

Consideration has also been given to the construction traffic impacts of the proposed Stage 1 site clearance and preparatory works. The proponent's EIS and traffic impact assessment notes the stage 1 works would involve the clearance of approximately 40,000 sqm of land, with trees and vegetation chipped on site. The proposed on-site wood chipping process will provide mulch for soil erosion and future landscaping purposes, which will minimise the bulk of material that is required to be physically moved to and from the site by truck. This in turn will have a positive effect in significantly minimising associated construction traffic impacts on the local road network. In addition, the proposed services diversion works may require the temporary closure of the surrounding local roads to enable services connections.

The proponent's preliminary construction management plan identifies that construction traffic vehicles travelling to and from the site would be restricted to arterial and sub-arterial roads, with the use of suburban local roads avoided as practicably as possible. The proponent also notes that it is anticipated that less than 10 construction vehicle movements are predicted per day. In addition, a construction management plan is proposed to be prepared prior to the commencement of works, which will also outline management measures to address the potential requirement for temporary road closures associated with services diversion works.

The proponent acknowledges that construction activities will potentially impact on the operations of the adjoining Forest High School. It notes that consultation is continuing with the school to ensure that future construction activities are scheduled in a manner that minimises potential impacts on the school. The construction management plan would be required to be prepared in consultation with the school prior to the commencement of Stage 1 site works, and factor in activities like school bus movements and sensitive periods such as the beginning and end of the school day to reduce potential conflicts.

Construction parking demand generated by the Stage 1 works would be limited to project management staff, plant operators and environmental management staff. The proponent notes that the initial construction parking demand can be satisfactorily accommodated within the existing Bantry Bay road reserve, which will be retained until Stage 2. In addition, the project management team for the NBH presently has a project office and on-site parking in Aquatic Drive, a short distance from the subject site.

Following the commencement of site clearance works, an area of cleared land could be utilised for parking purposes for the remainder of the Stage 1 works, ensuring that all parking demand generated by the project is appropriately contained on site.

Furthermore, to ensure construction traffic impacts on the existing road network associated with Stage 1 works are minimised, the proponent proposes the following management measures:

- scheduling of deliveries outside of weekday peak periods (i.e. 11.00 am to 2:00 pm), including provision for on-site truck layovers for loading/unloading;
- scheduling construction traffic and plant and construction material deliveries outside of the weekday peak periods;
- scheduling certain Stage 1 works outside standard construction hours to minimise impacts on the local road network;
- construction program scheduled to favour intense periods during school holiday periods, as well as consideration of alternative start and finish times for work shifts; and
- encouraging car pooling or public transport for workers.

Whilst the department is supportive of the proposed construction traffic management measures, a condition is recommended requiring that prior to the commencement of on-site works associated with Stage 1, a final traffic management plan, including details of construction traffic management, be prepared in consultation with the RMS, council and The Forest High School and submitted to the department for endorsement.

Subject to conditions, the department is satisfied that potential impacts associated with construction traffic can be appropriately managed and mitigated.

5.3 Site Preparation and Biodiversity Management

Biodiversity Conditions

The site is largely vegetated, except for some cleared areas either side of Bantry Bay Road where buildings were formerly located (see **Figure 1**). The proponent's biodiversity assessment has identified that the site is comprised of Duffys Forest Ecological Community (DFEC) and is located in a Priority 1 vegetation corridor for the vegetation community. The DFEC located on the site is considered to be largely in a moderate to good condition.

DFEC is an Endangered Ecological Community (EEC) listed on Schedule 1 of the NSW *Threatened Species Conservation Act 1995* (TSC Act). DFEC is not identified as threatened species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). DFEC has an extensively fragmented distribution, occurring primarily within Warringah and Ku-ring-gai LGAs. Approximately 240 ha of DFEC remains. The part of the site to the east of Bantry Bay Road, excluding the recently demolished dwelling lots (see **Figure 6**), formed part of the Blinking Light Reserve, which is a significant component of the Priority 1 vegetation corridor (see **Figure 7**). The vegetation corridor is significant as it maintains habitat connectivity between bushland in Oxford Falls and Manly Dam.



Figure 6: Former Blinking Light Reserve

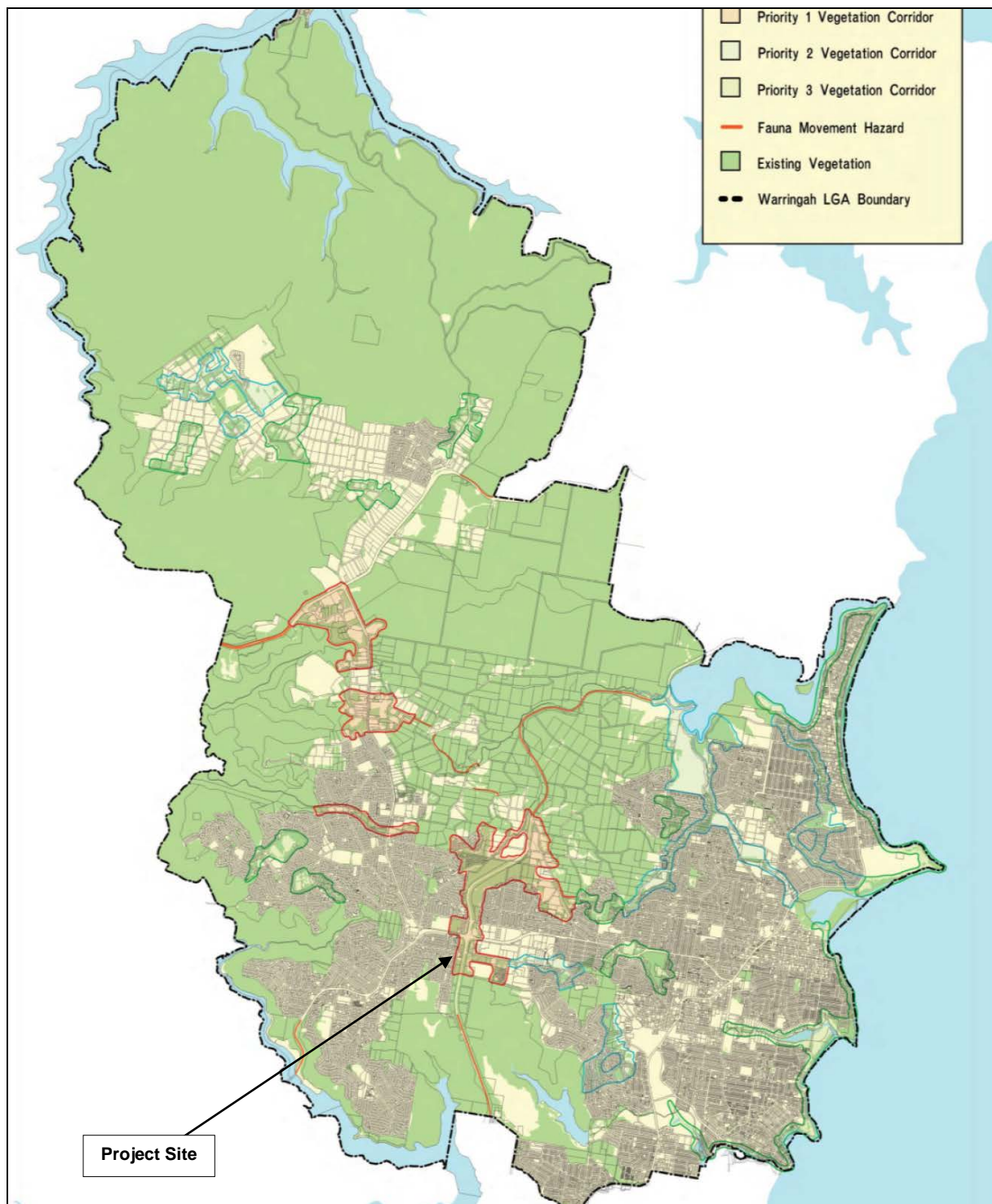


Figure 7: Warringah LGA vegetation corridors

The biodiversity assessment of the site also identified that a large number of threatened fauna species were recorded within a 10 kilometre radius of the site. The only species to have been recorded on the site during surveys was the Powerful Owl (which is listed as a vulnerable species under the TSC Act) and the Grey-headed Flying-fox (which is listed as a vulnerable species under the TSC Act and the EPBC Act). The site contains suitable roosting trees and foraging habitat for the Powerful Owl and adjoins a known nest site located on the adjacent school site. The site was also identified as suitable habitat for the Southern Brown Bandicoot and Eastern Pygmy Possum threatened species as well as being habitat for a Long-nosed Bandicoot population.

Biodiversity Impacts

The concept proposal as described in the EIS for the NBH includes clearance of the site, being the removal of approximately 4.9 hectares of DFEC. The proponent is seeking approval to carry out the site clearance works across the site except along the eastern edge of the site (former Blinking Light Reserve) where only the understorey is proposed to be cleared as part of the Stage 1 works. The proponent revised the proposal in the PIR to incorporate service diversion works as part of the proposal, which involves the removal of an additional 0.1 hectares of DFEC in the road reserve along the eastern boundary (see **Figure 8**). Therefore, the proposal would result in the removal of approximately five hectares of DFEC (equivalent to two percent of the remaining 240 ha of DFEC).

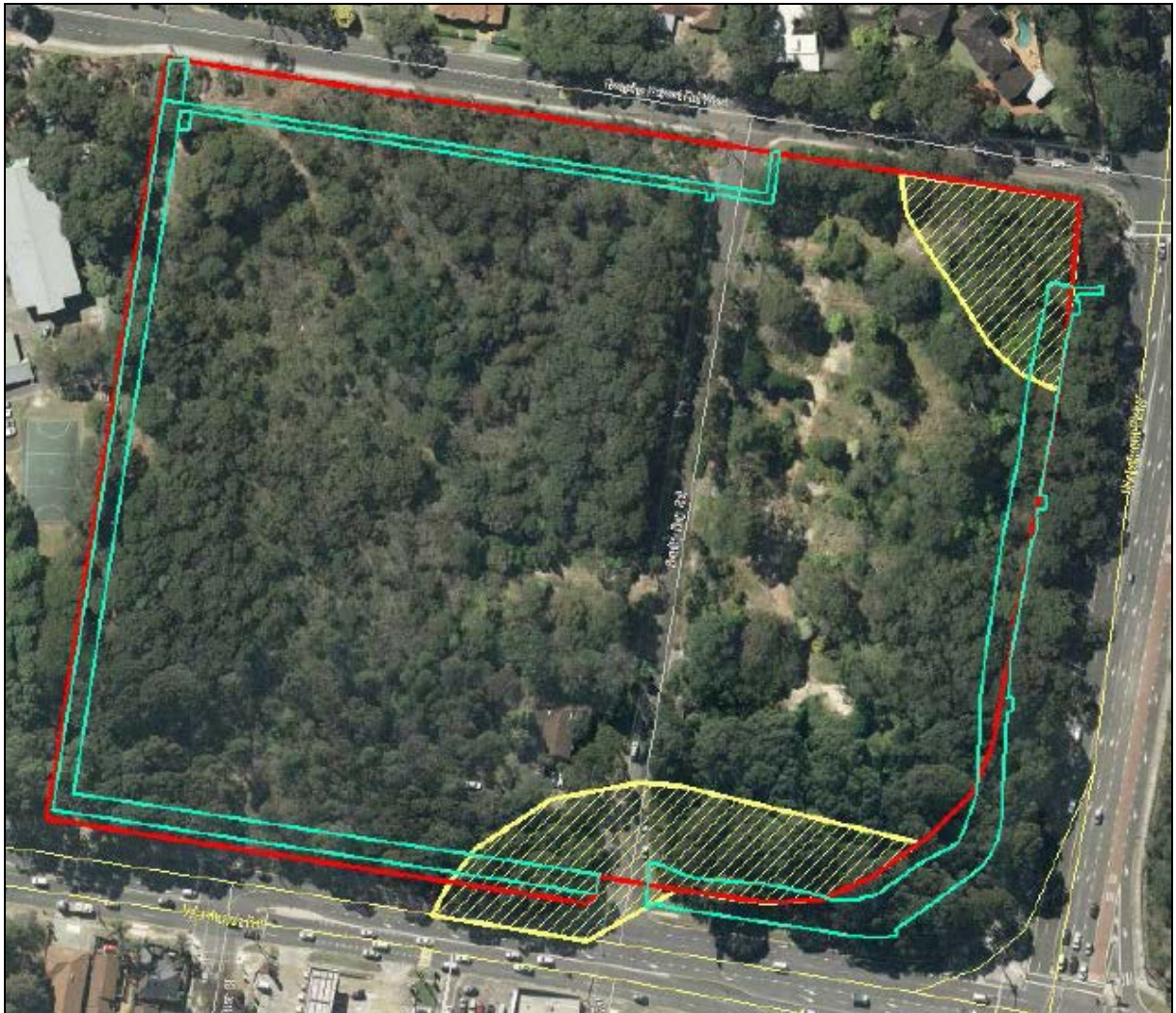


Figure 8: Proposed service diversion works zones (outlined in blue) and APZs (hashed in yellow)

The proponent contends that the proposal has considered avoiding and minimising the impacts wherever practicable, noting that the site has been identified as a suitable site for the NBH, which would provide significant social benefits, and that there are limited options to minimise biodiversity impacts on the site without unnecessarily restricting site development. The proponent considers that the proposal would not sever the vegetation corridor between Oxford Falls and Manly Dam and would only reduce the width of the corridor as vegetation within the road reserve along the eastern boundary and vegetation on the eastern side of Wakehurst Parkway would maintain connectivity. The width of the retained vegetation on the eastern side of Wakehurst Parkway ranges between 80 and 180 metres.

The biodiversity assessment recommended:

- retaining DFEC where possible;
- securing suitable offset areas and Biobanking credits to offset biodiversity impacts;
- soil translocation of DFEC topsoil to a suitable mitigation site;
- minimising the risk of introduction and spread of invasive species and disease;
- translocation of the existing Long-nosed Bandicoot population;
- maintenance and improvement of the existing wildlife corridor adjacent to the hospital site; and
- securing suitable habitat areas for the Eastern Pygmy Possum consistent with habitat to be cleared in the hospital site.

Biodiversity Offsets

The proponent has assessed the biodiversity impacts and value of the site using the Biobanking Assessment Methodology (BBAM), which is OEH's preferred method. The site has a value of 323 ecosystem credits (DFEC) and 121 species credits (Powerful Owl). The biodiversity offset strategy in the EIS proposed the retirement of credits at the Biobank site at Bundaleer Street, Belrose (Lot 2826 DP729336), known as the Belrose Garigal site (Biobanking agreement No. 55 – 77 ecosystem credits and 46 species credits) as it includes similar biodiversity values to the DFEC. The proponent considered the Belrose Garigal site met the offsetting requirements of the NSW OEH Interim Offsets Policy for Major Projects, which allows similar vegetation type communities to be used for offsetting major projects.

In its submission on the EIS, OEH advised that the biodiversity value at the site had been adequately assessed, however, raised issues with the adequacy of the proponent's biodiversity offset strategy. Council, community groups and the public also raised similar issues with the proposed biodiversity offset strategy. In particular, the biodiversity credits identified on the Biobanking Public Register or Expression of Interest Register on the OEH website are not the only credits available and it would be expected that a reasonable effort would be made by the proponent to locate and secure a DFEC offset site. Furthermore, the biodiversity offset credits proposed within the biodiversity offset strategy (Biobanking agreement No. 55) do not satisfactorily meet the criteria of the Interim Offsets Policy for Major Projects in terms of quantity or vegetation type. Council also identified in its submission that there were potential DFEC sites within the Warringah LGA that could be explored as offset sites as well as sites where credits for the Powerful Owl could be established.

The PIR revised the biodiversity impacts and with the additional works, increased the biodiversity value of the site to 343 ecosystem credits and 121 species credits. The proponent has subsequently advised that a calculation error occurred and that the biodiversity impacts would be equivalent to 334 ecosystem credits.

The proponent has investigated the potential offset sites containing DFEC that were identified by council and the only site suitable as an offset is the Aquatic Drive site (Lot 2782 DP46992) owned by HAC, which has been incorporated into the revised biodiversity offset strategy. The remaining sites were not suitable as:

- the Dundundra Falls Reserve (which adjoins the Ku-ring-gai Chase National Park) was already managed for biodiversity conservation and therefore could not be considered as a viable offset; and
- it is unknown whether the landowners of the other sites located on Aquatic Drive intend on conserving the biodiversity of these sites and negotiations would result in unreasonable delays for the project and would not provide a certain outcome. Therefore, the proponent has not pursued these sites but notes that RMS may wish to pursue these sites as possible offsets for potential impacts on DFEC from the adjoining road works.

The PIR provided a revised biodiversity offset strategy to address the biodiversity impacts, including impacts from the service diversion works, which provides a total of 377 ecosystem credits and 46 species credits comprising:

- retirement of all credits available in Biobanking agreement 55 – Belrose Garigal site, Warringah LGA (77 ecosystem credits and 46 species credits);
- establishing and retiring all credits at the Health Administration Corporation (HAC) Aquatic Drive site (Lot 2782 DP46992) which contains 2.3 ha of DFEC (16 ecosystem credits); and
- retirement of a portion of the credits available in Biobanking agreement 38 – Cadwells Road site, Hills Shire LGA (purchase 284 ecosystem credits).

The proponent also indicated in the PIR that:

- the acquisition of the Belrose Garigal site is nearly complete;
- discussions for acquisition of credits available from the Cadwells Road site are well advanced and credits will be acquired and retired prior to commencement of works; and
- the proponent is investigating establishing the HAC Aquatic Drive site as a Biobank site.

Department's Consideration of Biodiversity Impacts

In July 2013, the NSW Government developed seven principles to guide the assessment of biodiversity impacts and determination of acceptable offsets for State significant development and State significant infrastructure projects (NSW Offset Principles for Major Projects (State Significant Development and State Significant Infrastructure)). The seven principles are:

- 1) Before offsets are considered, impacts must first be avoided and unavoidable impacts minimised through mitigation measures. Only then should offsets be considered for the remaining impacts.
- 2) Offset requirements should be based on a reliable and transparent assessment of losses and gains.
- 3) Offsets must be targeted to the biodiversity values being lost or to higher conservation priorities.
- 4) Offsets must be additional to other legal requirements.
- 5) Offsets must be enduring, enforceable and auditable.
- 6) Supplementary measures can be used in lieu of offsets.
- 7) Offsets can be discounted where significant social and economic benefits accrue to NSW as a consequence of the proposal.

The vegetation located on the site is fragmented from other stands of vegetation due to the surrounding roads and is also disturbed due to the former dwellings that are located on the site. The department considers that the proposal would not have acceptable impacts given that the proposal only results in the loss of two per cent of DFEC across NSW. Furthermore, the conservation and improvement of biodiversity values of the DFEC at the Aquatic Drive site in perpetuity, which adjoins other sites containing DFEC and is located within the Priority 1 vegetation corridor, would result in regionally acceptable biodiversity impacts on the DFEC.

The department also considers that the proponent has provided satisfactory offsets in accordance with the Interim Offsets Policy for Major Projects and has generally addressed the NSW offset principles for major projects as:

- site clearance is justifiable as:
 - a) the clearing is for the purposes of a major piece of social infrastructure with significant net public benefits; and
 - b) if any substantial areas of DFEC were to be retained on the site it would result in significant development constraints as asset protection zones of a minimum 60 metres may be required for the future hospital buildings;
- 359 of the total 377 ecosystem credits forming part of the proposed biodiversity offset strategy meet the ecosystems credits permitted under the variation criteria in the Interim Offset Policy, which allows ecosystem credits to be sourced from the same

- vegetation formation in the Sydney Basin region instead of like-for-like within the same catchment management authority under the Biobanking and Offsets Scheme;
- whilst the 46 species credits do not meet the species credits lost on the site, the Interim Offset Policy allows species credits to be waived if all ecosystem credit requirements have been met. In this regard, all ecosystem credit requirements will be met for this proposal;
- the 10 ha Belrose Garigal site and 2.3 ha Aquatic Drive site as well as the portion of land equivalent to 284 credits on the Cadwells Road site would meet the 2:1 vegetation clearance to offset land ratio required under the Interim Offset Policy;
- the proponent has explored reasonable opportunities to provide offsets with the same biodiversity values and intends on conserving 2.3 ha of Duffys Forest on a site owned by the Health Administration Corporation on Aquatic Drive;
- whilst minimal credits can be produced by the Aquatic Drive site, the conservation of the site would provide valuable outcomes for retention of DFEC within the local government area and retention of part of the movement corridor in close proximity to the site that is also located within the Priority 1 vegetation corridor;
- the offsets proposed at the Belrose Garigal site (59 of the 77 ecosystem credits) and Cadwells Road site (284 credits) contain vegetation types within the same vegetation formation as DFEC and retiring these credits would ensure the conservation of these sites in perpetuity;
- the establishment of the Aquatic Drive site as a Biobank site would result in the conservation of the DFEC in perpetuity; and
- whilst the Belrose Garigal site could not be developed for commercial purposes due to the restrictive covenant, Biobanking agreement 55 establishes conservation measures to improve the biodiversity values of the site. This means the ecosystem and species credits created can be used to offset biodiversity impacts of the proposed NBH as the establishment of the Biobank site under the Biobanking and Offsets Scheme was not for the purposes of offsetting the Belrose tip development.

OEH and council considers the revised biodiversity offset strategy addresses matters raised in the submissions and meets the Interim Offsets Policy. OEH recommended that appropriate conditions be included to ensure the biodiversity offset strategy is delivered in a timely manner (preferably before vegetation clearance works commence).

The department has included in the recommended conditions of approval for the Stage 1 works a requirement that prior to any vegetation removal, the proposed offsets from Biobanking agreements 55 and 38 shall be purchased and within 12 months of approval the purchased credits from these agreements must be retired. Also, within 12 months of approval a Biobanking agreement must be created for the Aquatic Drive site and the credits created for this site must also be retired. The department notes that the retirement of all credits at the Belrose Garigal site, 77 ecosystem credits from five vegetation types and 46 species credits (Red-crowned Toadlet and Rosenberg's Goanna), would mean that the credits would no longer be available for any other future development, including the supporting road works to be undertaken by the RMS. The department has noted this in the recommended conditions of approval.

The public and various community groups also identified impacts on the wildlife movement corridor as an issue. Whilst the proposal would have an impact on the vegetation corridor, at this point in time the vegetation corridor would not be severed as clearance of the land on the eastern side of Wakehurst Parkway for the future Frenchs Forest Town Centre is still being investigated. This would mean the retention of a minimum 80 metre wide corridor that would provide better connectivity given the vegetation surrounding that site is more extensive when compared with the vegetation to the north and south of the subject site. In addition, the department considers the social benefits of providing the NBH and the broader environmental benefits provided through the offset measures outweigh the impacts on the vegetation corridor.

The department has also recommended that a vegetation retention plan for the vegetation buffer along the eastern boundary (former Blinking Light Reserve) be prepared prior to the commencement of works. The department has also required that all healthy hollow bearing trees be retained within the vegetated buffer and appropriately protected during Stage 1 works. The department also notes that in the PIR, the proponent has advised that if council identified appropriate recipient sites for soil seed bank translocation, the proponent would undertake soil translocation.

In relation to the Long-nosed Bandicoot, subsequent discussions with the proponent and OEH identified that relocation of the population on the site is not a mitigation action supported by OEH for relatively common occurring species. Accordingly, the recommended conditions of approval require the Construction Environmental Management Plan to specifically include measures to minimise impacts on the Long-nosed Bandicoot during site clearance works. The Construction Environmental Management Plan also requires the establishment of suitable habitat for the Eastern Pygmy Possum, if any of the species are discovered on site during clearance works.

Some community submissions also raised concerns that the Belrose Garigal site is not suitable as an offset site as it was previously granted to the community in return for waste activities at the Belrose tip. However, the department notes that the covenant placed on the site restricted development of the site for commercial purposes so that the site is preserved its natural state, undeveloped. The establishment of the Biobank site is consistent with the existing covenant and would have been factored into the establishment of the Biobanking agreement. The additional biodiversity conservation values established under the Biobanking Scheme created credits for the Biobank site that can be transferred to offset biodiversity impacts and are available on OEH's Biobanking public register.

On the basis of the above, the department accepts that the removal of the vegetation for the proposal and the consequent impacts on fauna is unavoidable given the increasing health requirements of the community and balances competing environmental, social and economic factors. The department considers that the biodiversity impacts of the NBH have been adequately offset subject to the recommended conditions of approval and the permanent conservation of 2.3 hectares of DFEC at the Aquatic Drive site and the improvement of the biodiversity values would provide an appropriate regional outcome for the DFEC. Furthermore, the hospital development would not have a significant impact on the habitat for either of the threatened species given the available habitat in the surrounding vegetation, which is located in the Priority 1 vegetation corridor.

5.4 Built Form and Urban Design

The proponent advises that a master planning process for the site was undertaken to inform the future design and scale of the hospital built form. Key planning principles developed during this process included:

- efficient access and way-finding, providing efficient, clear and unambiguous points of entry and direction;
- capacity to accommodate current and future changes in healthcare service delivery and technology;
- support for teaching and learning;
- optimisation of operation efficiencies and a whole-of-building approach to the delivery of health and support services; and
- fit within the urban context, particularly with regard to creating a sense of place and identity.

While a final design of the NBH has not been developed, the proponent detailed that the future hospital design would be required to have regard to, and be generally consistent with, the master planning principles and key features of its reference design, which is detailed in **Figures 9 and 10** and outlined as follows:

- a building envelope generally comprising:
 - minimum six metre setback from all side boundaries;
 - building mass of six to ten storeys (excluding plant);
 - massing of two storeys on approach and entrance fronting Frenchs Forest Road West and three storeys at the southern end of the site fronting Warringah Road; and
 - approximate gross floor area (GFA) of 70,000 sqm.
- primary access from Frenchs Forest Road West and secondary left in, left out only access from Warringah Road, with ambulances capable of using both entrances;
- helipad on top of the main hospital building to accommodate patient retrievals and transfers to higher order hospital facilities;
- partial retention of vegetation at the eastern end of the site adjacent to the existing road reserve; and
- a public walkway at the western end of the site adjacent to the school between Frenchs Forest Road West and Warringah Road.

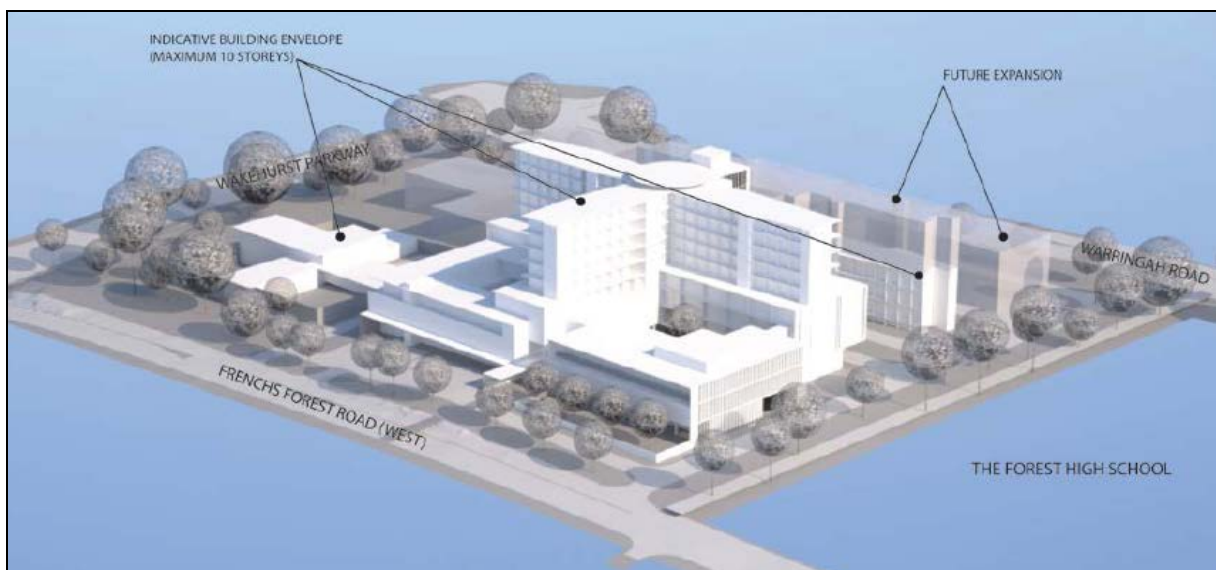


Figure 9: Indicative NBH Envelope and Site Layout Reference Design – north western view

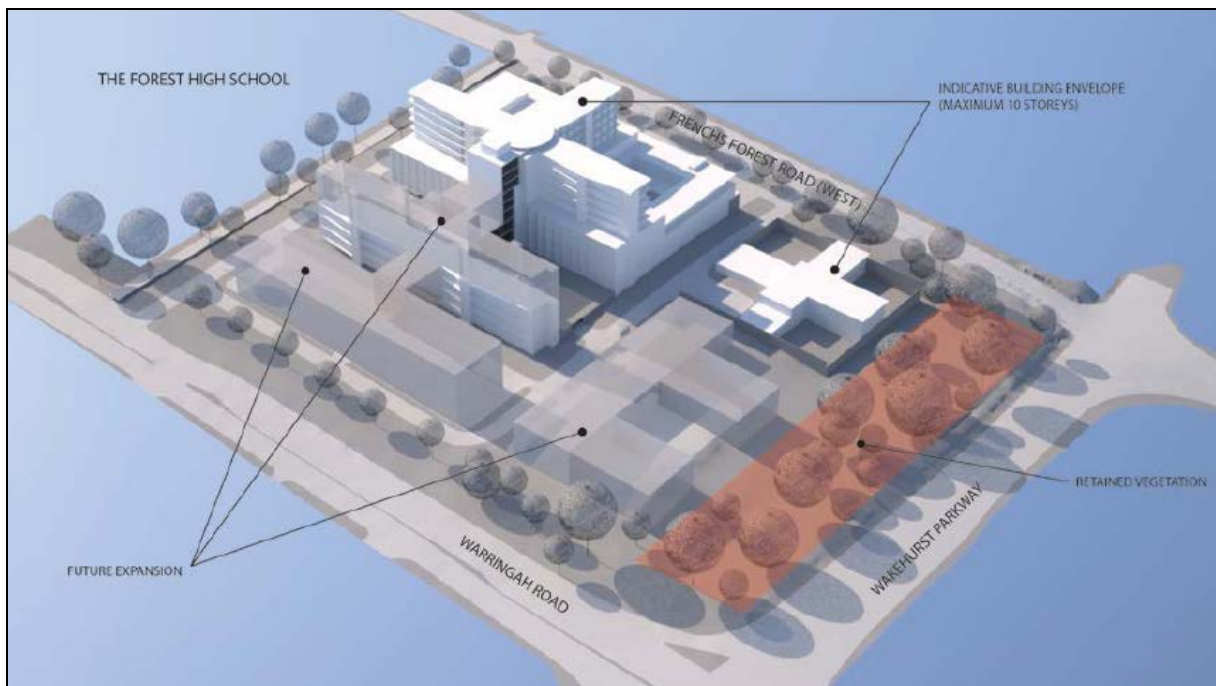


Figure 10: Indicative NBH Envelope and Site Layout Reference Design – south eastern view

During the exhibition of the EIS, a number of public submissions raised issues with the proposed ten storey built form and potential impacts on the local urban character and residential amenity. Comments were also received from council and E&C noting that consideration should be given to the characteristics of the existing built environment and that design parameters should be conditioned in any approval to provide a level of certainty on the future built form, particularly adjacent to The Forest High School.

The department notes that the site's majority R2 low density residential zoning and built form controls are not relevant with respect to the development of a hospital. Notwithstanding, it is important to ensure that development of this typology integrates with the existing urban context, while also ensuring that the functionality and operational efficiency of the future hospital is not unduly restricted.

In this regard, where adjoining built form is of a lower scale, it is more desirable to locate higher built form in a key location, such as a corner site, thereby limiting the impacts associated with potential bulk and scale to a minimum number of interfaces. Larger built form should also be designed to step down to the scale of adjoining development and create active and pedestrianised public domain spaces.

Although only an indicative representation of a possible built form on the site, the proponent's own reference design locates taller tower forms closer to the centre of the site, stepping down to a lower scale along the site's two primary frontages. The department also notes that the proponent's EIS details development at the site's northern frontage long Frenchs Forest Road West would be minimised to two storey built form massing and that taller built forms would be sited towards the centre of the site.

The department notes that industry standard provides hospital designs based around a central core, with wards expanding outwards, resulting in a taller built form at the centre of the building, which in turn maximises its efficiency and operation. In this respect, the department consider the proponent's reference design guidelines to be generally satisfactory. However, the site's large size and its frontage to an arterial road (Warringah Road) provide the opportunity to site larger building elements towards the Warringah Road frontage, reducing potential bulk and scale impacts on the existing lower scale residential and educational land uses adjoining to the north and west.

Accordingly, the department recommends that a condition of approval be imposed requiring design emphasis to be placed on locating taller tower forms of the NBH centrally within the site and associated larger built form mass along the site's Warringah Road frontage, whilst similarly giving consideration to the planning principles developed by the proponent.

The establishment of these zones of lower scale built form will be essential to providing an appropriate transition to taller tower forms and to ensure acceptable built form outcomes are achieved. It is also important that these built form guidelines are appropriately applied in locations immediately adjacent to The Forest High School, so as to minimise any potential bulk and scale impacts on the school. The department also notes that different options are currently being explored by the proponent with respect to the design and location of associated car parking for the NBH, including at-grade, underground and aboveground options. Car parking details are proposed to be provided in the future Stage 2 application for the hospital.

Furthermore, the proponent's reference designs include guidelines for the establishment of a public walkway within the setback along the site's common boundary with The Forest High School, between Frenchs Forest Road West and Warringah Road, and the retention of vegetation along the eastern side of the site (as discussed in section 5.3). The indicative 13.6 m width of the setback, within which the public walkway is proposed, is similar to the width of a typical local street and would afford the opportunity to establish an appropriate public domain space and provide appropriate setbacks to future built form in this location.

The proposed retention of vegetation along the site's eastern boundary adjacent to Wakehurst Parkway will retain the immediate green interface with Frenchs Forest to the east. The department acknowledges that while the retention of this vegetation would not necessarily screen higher elements of the future hospital, it will maintain elements of the site's existing vegetated character, which will in turn soften the eastern edge of the development.

In this respect, the department also recommends a condition requiring the submission of a site plan detailing proposed vegetation to be removed and retained, including details of vegetation proposed to be retained within the former Blinking Light Reserve area and western boundary setback to The Forest High School.

Subject to recommended conditions, the department considers that the proponent's planning principles and reference design provide appropriate guidelines to inform the future detailed design of the NBH. Further, the subject site's location at the intersection of two arterial roads also provides a suitable urban setting to accommodate the bulk and scale of development associated with a hospital.

The department also notes that the subsequent Stage 2 application will be subject to a thorough merit assessment to ensure that it has regard to the established planning principles and relevant conditions of approval, and provides a satisfactory built form outcome.

5.5 Environmental and Residential Amenity

Concept Proposal

The noise generating activities associated with the operation of the future hospital would include the operation of plant and machinery, the operation of the helipad and traffic associated with the operations of the hospital. The proponent would need to demonstrate in any future application for the hospital that the operation of the hospital would not result in any adverse noise impacts on the surrounding sensitive land uses (residences and school).

The EPA has indicated that the background noise monitoring that was undertaken for the acoustic assessment for the Stage 1 site clearance works would not be sufficient to establish the background noise levels for the sensitive residences for operational and construction stages. Additional background monitoring would be required to be undertaken at the sensitive residential receivers to determine appropriate project specific noise levels for the future hospital building. The proponent has acknowledged in the PIR that additional noise monitoring would be undertaken for the Stage 2 development as part of the acoustic assessment for the proposed building, which is also a key issue in the SEARs for Stage 2.

However, the department considers that the additional background noise monitoring would have to be undertaken prior to the commencement of the Stage 1 site clearance works to provide an accurate representation of the noise levels within the current site context. The department has recommended a condition to this effect.

Council also requested that the potential noise impacts associated with helicopter flight paths on surrounding residential properties be assessed and submitted with any future application. The department agrees with this position, though it is noted that the proponent's EIS provides a preliminary assessment of potential noise impacts associated with the proposed helicopter landing site. The EIS identifies that noise events associated with the loudest typical helicopter expected and flying within potential flight paths in the obstacle free sectors applicable to the development site (see **Figure 11**) would generate noise levels of up to 105 dB(A) on arrival and up to 140 dB(A) during departure, at the helicopter landing site on top of the building.

The proponent has further advised that the use of the helicopter landing site would be typically limited to patient retrievals (i.e. picking up patients and transferring them to a higher order hospital facility) meaning that the helicopter landing site would be utilised approximately five to six times per year and on an as needs basis, limiting the exposure to potential noise levels identified.

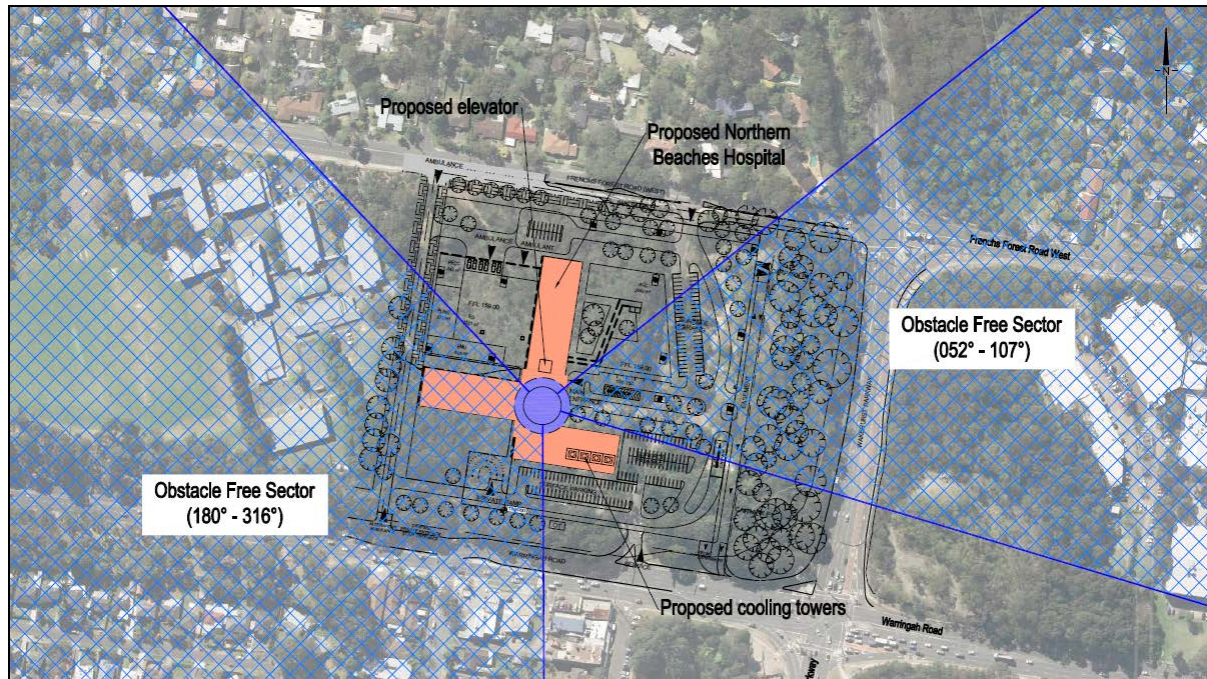


Figure 11: NBH Obstacle Free Sectors

Referring to Air Services Australia's *Environmental Principles and Procedures for Minimising the Impact of Aircraft Noise*, the department notes that compliance with a noise exposure level of 95 dB(A) is recommended. In this respect, the department notes that while the helipad operations may exceed this noise exposure level, this would be at the helipad on the site itself. Beyond the site, noise levels below the recommended aircraft noise level of between 85 dB(A) and 70 dB(A) are predicted.

In this regard and in addition to council's recommendation above, the department considers that the noise assessment should also demonstrate that the impacts from the operation of the helipad on the adjoining school and adjoining residences can be minimised to acceptable levels, through the appropriate location of the helicopter landing site and the careful selection of appropriate approach and departure flight paths.

In relation to operational noise from the future hospital, the department considers that noise from plant and machinery could be mitigated through standard acoustic treatments to be incorporated into the design of the plant areas during detailed design and would need to be identified in the acoustic assessment for the Stage 2 SSI application.

The proponent would also need to demonstrate that all feasible and reasonable mitigation measures have been considered to manage noise and vibration impacts from the construction of the hospital building to minimise impacts on The Forest High School and surrounding residences. The construction impacts and mitigation measures would be dependent on the final location of the hospital building. The department has recommended a condition requiring a detailed noise and vibration impact assessment to ensure that these issues are properly addressed through the Stage 2 SSI application.

Stage 1 works

The EIS was accompanied by an acoustic assessment for the site vegetation clearing for the NBH, which is expected to be undertaken over three months. The PIR was also accompanied by an acoustic assessment for the services diversion works, which includes works that would need to be undertaken outside of standard construction hours. **Table 3** identifies the noise management levels (NML) for the surrounding sensitive land uses during standard construction hours in accordance with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) (ICNG).

Table 3: ICNG Construction Noise Management Levels for Adjoining Sensitive Land uses

Type of Receiver	Measured RBL ($L_{A90(15\text{ min})}$)	NML $L_{Aeq(15\text{ min})}$ (RBL +10 dB(A))	Highly Noise Affected $L_{Aeq(15\text{ min})}$
Residential - Frenchs Forest Road West	44 dB(A)	54 dB(A)	75 dB(A)
Residential – Warringah Road	52 dB(A)	62 dB(A)	75 dB(A)
School Classroom	-	45 dB(A) (internal)	-
School Playground (Active Recreation)	-	65 dB(A)	-

The site was divided into nine zones (see **Figure 12**) to assess noise impacts given noise levels would vary significantly across the site depending on where the works are undertaken.

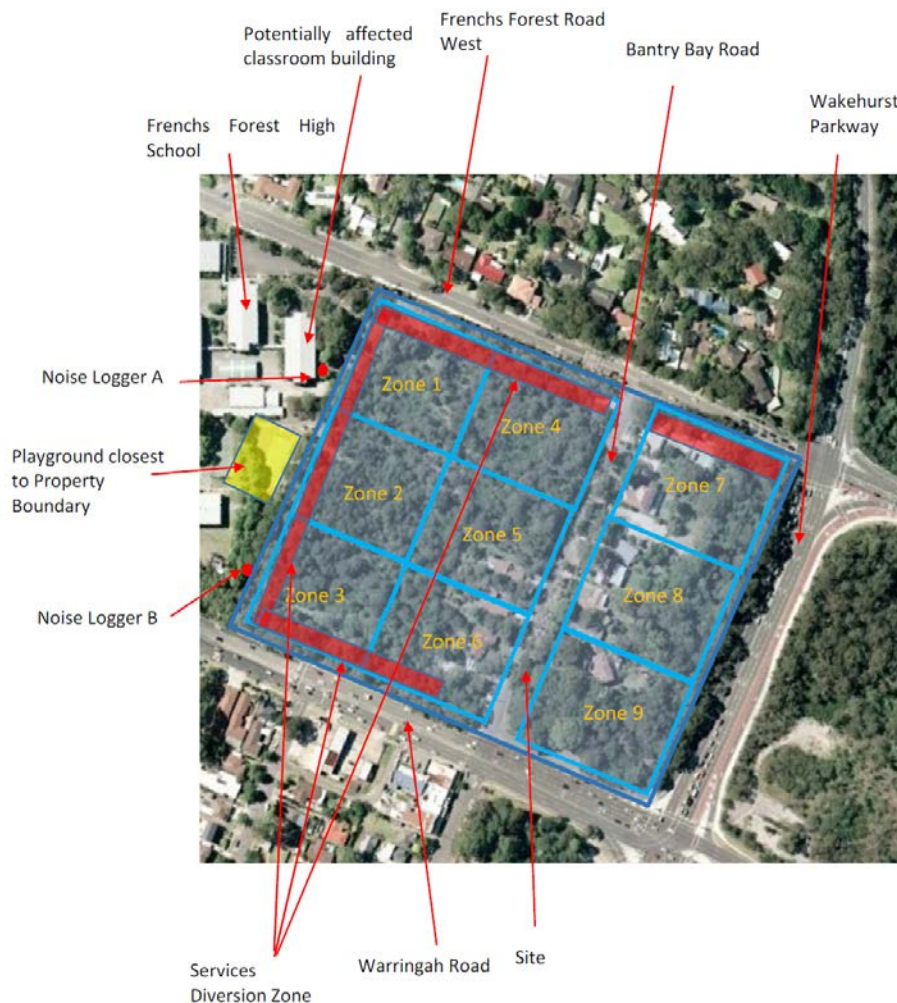


Figure 12: Construction sectors

Without noise mitigation, the predicted noise levels from the use of the wood chipper and chain saws in the zones closest to the sensitive land uses, as well as certain works in further zones, would exceed NML at all the sensitive land uses. Therefore the proponent has identified mitigation measures to address the impacts from the varying noise levels of the equipment as outlined in **Table 4**. The proponent has indicated that the specific mitigation measures for the school would be developed in consultation with the school, and could include the erection of a noise screen, the installation of double glazing and assisted ventilation for relevant school buildings. The management measures for mitigating noise on the residences generally relate to restricting works prior to 8 am in the closest zones and providing respite periods as the noise levels would still exceed NML.

Table 4: Proposed Noise Mitigation Measures

	Sensitive Land Use	Proposed Mitigation Measures	Department Comment
Site clearing - wood chipper	Residential - Frenchs Forest Road West	<ul style="list-style-type: none"> locate the wood chipper in zone 8 or 9 localised noise screen on the western side of the wood chipper 	<p>The proposed mitigation measures would ensure the NML can be achieved for all the sensitive land uses. The proponent has indicated that they would also seek to locate the wood chipper in zones 5 and 6. The Department has recommended that the wood chipper be placed in zone 9 and an acoustic barrier be provided to the southern and western side of the wood chipper. The department has also recommended that subject to complying with the NMLs, the wood chipper can also be located in zones 5 and 6.</p>
	Residential – Warringah Road		
	School Classroom		
	School Playground (Active Recreation)		
Site clearing - chainsaw	Residential - Frenchs Forest Road West	<ul style="list-style-type: none"> no use of chainsaw before 8 am in zones 1, 4 and 7 and provide respite periods 	<p>The noise generated by chainsaws would exceed the highly noise affected criteria when used in the zones closest to the residences. They would also exceed the NML in the central zones. Therefore, the department recommends that chainsaws be prohibited before 8 am in all zones and intra-day respite periods are provided in zones 1, 3, 4, 6 and 7.</p>
	Residential – Warringah Road	<ul style="list-style-type: none"> no use of chainsaw before 8 am in zones 3 and 6 and provide respite periods 	
	School Classroom	<ul style="list-style-type: none"> no use of chainsaws in zones 1 and 2 during school hours avoid use of chainsaw during school hours in zones 3, 4 and 5 and provide respite periods 	<p>Even with a noise screen and closed windows, NML are likely to be exceeded in classrooms if chainsaws are used in zones 1 and 2. NML for the playground would also be exceeded when used in zones 1, 2 and 3. Therefore the department supports the proposed mitigation measures and has recommended a condition that prohibits use of chainsaws in zones 1 and 2 during school hours and in zone 3 during lunch and recess periods.</p>
	School Playground (Active Recreation)		

	Sensitive Land Use	Proposed Mitigation Measures	Department Comment
Site clearing - other equipment	Residential - Frenchs Forest Road West	<ul style="list-style-type: none"> no work before 8 am in zones 1, 4 and 7 	The noise levels would range between 55 and 70 dB(A) $L_{eq(15min)}$ in the closest zones and are likely to exceed the NML. In addition to the proposed mitigation measure, the department recommends that respite periods must be provided when site clearing works are being undertaken in zones 1, 4 and 7.
	Residential – Warringah Road	-	The noise levels would range between 56 and 66 dB(A) $L_{eq(15min)}$ in the closest zones, which is lower than road noise on Warringah Road of 69 dB(A) $L_{eq(15min)}$.
	School Classroom	<ul style="list-style-type: none"> no work in zones 1 and 2 unless windows are closed 	The department considers that this is an acceptable solution and notes that with the classroom windows closed the noise levels from this equipment would be below NML in all zones.
	School Playground (Active Recreation)	<ul style="list-style-type: none"> no work when playground in use 	Even with the noise screen the NML would be exceeded. The department agrees that no site clearance works should be undertaken in zones 1, 2 and 3 during lunch and recess periods.
Site diversion works	Residential - Frenchs Forest Road West	<ul style="list-style-type: none"> use suitable acoustic treatments and no works before 8 am for a 25 m buffer along the northern boundary 	The noise levels would range between 60 and 70 dB(A) $L_{eq(15min)}$ in the closest zones. The proposed service diversion works fall in the 25 m buffer and therefore no service diversion works should be undertaken before 8 am in zones 1, 4 and 7. The department considers the proposed measure appropriate and also recommends that respite periods must be provided when site clearing works are being undertaken in zones 1, 4 and 7.
	Residential – Warringah Road	-	The noise levels would range between 61 and 66 dB(A) $L_{eq(15min)}$ in the closest zones, which is lower than road noise on Warringah Road of 69 dB(A) $L_{eq(15min)}$.
	School Classroom	<ul style="list-style-type: none"> no work in zones 1 and 2 unless windows are closed or erect a noise screen and use an electric crane / acoustically treated diesel crane 	The department considers that this is an acceptable solution and notes that with the classroom windows closed the noise levels in all zones would be below NML.
	School Playground (Active Recreation)	<ul style="list-style-type: none"> erect a noise screen and use an electric crane / acoustically treated diesel crane or avoid works in zone 3 during lunch and recess 	Even with the noise screen NML would be exceeded. The department recommends no works during lunch and recess in zone 1, 2 and 3.

Vibration impacts would only be generated by the service diversion works and are not predicted to be significant due to the 25 metre distance to the closest buildings.

E&C requested that noise mitigation measures be identified for The Forest High School due to the likelihood of construction noise exceeding the relevant criteria and monitoring be undertaken during the Stage 1 works. The department notes that the proponent has consulted, and is continuing consultation, with the school to identify the most appropriate mitigation measures, including potential double glazing and mechanical ventilation. The department and the EPA support this ongoing consultation and the proposed mitigation measures. The department has included as a requirement of the Noise Vibration Management Plan that community consultation with all noise sensitive receivers where noise levels exceed the NML must be undertaken in the preparation of the plan.

The EPA advised in its submission to the PIR that:

- on-site wood chipping is not supported;
- the proposed works are inherently noisy and noise levels should be controlled by restricting construction hours and using the least noisy 'feasible and reasonable' construction methods;
- chainsaw use and any on-site wood chipping should be restricted to between 8 am and 5 pm and respite periods should also be provided;
- further details of any proposed works to be undertaken outside of standard construction hours (e.g. service diversion works located within the roads and connection works which may affect supply or interrupt traffic) must be identified and must also be restricted to works required on safety grounds or to ensure network operational integrity; and
- 'quacker' type alarms should be used as an alternative to a 'beeper' type alarm where safety is not compromised.

The proponent has indicated that due to the use of the wood chips on site for erosion and sediment control, it would be appropriate that the wood chipping be undertaken on site. Furthermore, the noise generated by the wood chipper can be managed by locating the wood chipper in the south-east corner of the site with a noise barrier. This would also have the added benefit of minimising additional heavy vehicle construction traffic impacting on the road network.

The department considers that the proponent is exploring reasonable mitigation measures and consulting with the most sensitive neighbours. Whilst the use of the chainsaw would result in exceedances of the NML, the proponent has indicated that works would not be undertaken during school hours in zones that would affect the school unless windows are closed in the affected school buildings. Further to the specific mitigation measures proposed by the proponent and the specific conditions recommended in **Table 4**, The department recommends that the Stage 1 works be undertaken in accordance with the following conditions:

- a Noise and Vibration Management Plan be prepared for the site clearance and site diversion works in consultation with the school and sensitive residences, which must:
 - a) be prepared by a suitably qualified expert;
 - b) be prepared in consultation with council and in accordance with EPA guidelines;
 - c) describe the measures that would be implemented to ensure:
 - best management practice is being employed;
 - compliance with the relevant conditions of this approval;
 - d) describe the proposed noise and vibration management measures in detail;
 - e) include strategies that have been developed with the community, including all noise sensitive receivers where noise levels exceed the NML, for managing high noise generating works, including ongoing consultation with the school throughout the construction period;
 - f) describe the community consultation undertaken to develop the strategies in e) above;

- g) evaluates and reports on the effectiveness of the noise and vibration management measures; and
- h) include a complaints management system that would be implemented for the duration of the project.
- that as far as reasonable and practicable, vegetation clearance works be undertaken from east to west and from the centre towards the boundaries given the potential noise buffering qualities that the existing vegetation provides;
- that site clearance works and site diversion works should not be undertaken within the same zone if the combined works result in higher noise levels unless adequate mitigation measures have been identified in the noise and vibration management plan; and
- any works proposed outside of standard construction hours (e.g. connection to existing services and works in proximity to Warringah Road and Frenchs Forest Road West) must be justified on safety and network integrity grounds and should not generally be undertaken on Sunday night/Monday morning and should not be undertaken for more than two nights of a single week. Furthermore, affected residents must be duly notified and an appropriate complaints handling procedure established.

5.6 Other Matters

Hospital Operation

The department notes that a number of submissions raised concerns regarding the future operation of the NBH and the provision of public hospital beds. The department considers that this is an operational issue and generally beyond the scope of its assessment of the proposal. The department notes Health Infrastructure's position that the integration of health services provides many benefits to the community accessing the health services provided, such as co-location of medical resources.

The proponent advises that co-location minimises resource duplication and increases the cost effectiveness of the health service delivery. It also notes that the preferred hospital operator would be subject to stringent national and state health care standards and the requirement that all patients are treated as they would in other contemporary NSW public hospitals.

Bushfire Impacts

The site is identified as bushfire prone land. The proposal comprises clearing the land and managing the retained vegetation on the eastern edge (former Blinking Light Reserve), including clearing of the understorey in order that the land no longer constitutes bushfire prone land. The proponent's bushfire assessment also assumes that the land to the east of Wakehurst Parkway would also be cleared or managed for the proposed Town Centre so that it does not constitute bushfire prone land. Therefore, the bushfire assessment considers the bushfire prone threat to be located to the northeast and southeast only.

The bushfire assessment recommends that an asset protection zone of 70 metres be provided to the north-east vegetation and a 100 metre asset protection zone be provided to the vegetation to the south and south-east. The bushfire threat to the south-east would also potentially result in higher construction standards for any buildings located within 100 metres of the bushfire risk as shown in **Figure 13**.

While NSW Rural Fire Service raised no objections to the project, it advised that without detailed plans, no assessment can be carried out at this stage. Notwithstanding, it commented that the DFEC proposed to be retained along the eastern end of the site should be managed to the standard of an asset protection zone and that any development be setback in accordance with the *Planning for Bushfire Protection Guidelines 2006*.

Council commented that the retention of the vegetation in the former Blinking Light Reserve would potentially constitute bushfire prone vegetation. Accordingly, the vegetation retention plan for the vegetation buffer required in the recommended conditions of approval must be prepared in consultation with a suitably qualified bushfire consultant to ensure that it meets the standards of an asset protection zone, which would generally limit retained vegetation to clumps or islands with a covering of less than 20 percent of the vegetative buffer area and no continuous tree canopy.



Figure 13: Recommended Asset Protection Zones

Aboriginal Heritage

The proponent's Aboriginal Heritage Impact Assessment documented investigations undertaken on and around the site and provided a range of mitigation measures. Aboriginal stakeholder consultation was also undertaken during the preparation of the report, with some also participating in the on-site field survey undertaken. The report noted the following key findings:

- no sites were identified during the survey of the study area;
- there are no Aboriginal items of State significance listed on the State Heritage Register or any register kept by RMS under section 170 of the *Heritage Act 1977* within the study area or its vicinity;
- there were no Aboriginal heritage items listed on the National Heritage List, Commonwealth Heritage List, or on the Warringah LEP within the study area or its vicinity;
- due to the high level of disturbance observed within the major component of the study area and the lack of substantial intact topsoil, the likelihood for archaeological potential for intact or substantial Aboriginal stone artefact deposits and their recovery is low; and
- it is possible that art/engravings may be present on sandstone outcrops in the north eastern section of the study area.

During the exhibition of the proposal, comments received from OEH stated that the recommendations of the proponent's Aboriginal Heritage Impact Assessment should be included as conditions. This includes the requirement for pre-site clearance work investigations of the sandstone outcrops in the north eastern section of the study area to determine the potential for art and engravings in this location.

The department notes the proponent's proposed mitigation measures include the implementation of the recommendations of the Aboriginal Heritage Impact Assessment, ensuring that any potential for areas of significance are satisfactorily clarified prior to the commencement of the Stage 1 works. Accordingly, the department considers these recommendations should be appropriately conditioned for action prior to the commencement of Stage 1 works as part of any final approval.

On the basis of the above assessment and the recommended mitigation measures and conditions, the department is satisfied that the proposal is unlikely to result in significant impacts on Aboriginal heritage and that the likelihood of recovering Aboriginal items of significance is low.

Site Contamination

The proponent has undertaken a preliminary Phase 1 contamination assessment for the NBH site to identify areas of environmental concern (AEC) through a desktop review, review of historical information, and limited intrusive soil sampling that focused on identified AEC. Those AEC identified included areas of the site that had previously been occupied by residential buildings, which were noted as having the potential to still contain asbestos and lead containing materials following their demolition, and the former community health centre on Bantry Bay Road. Following the reviews undertaken, the following key results, recommendations and conclusions were provided:

- historical information indicates that large areas of the subject site have not been developed and have remained as bushland;
- subsurface soil sampling provided no signs of gross contamination and all laboratory results were within stringent health investigation levels (i.e. for residential purposes);
- the potential for chemical contamination on site is considered low;
- the previous demolition of the former residential buildings on site may have resulted in asbestos and lead containing materials still being present and that the proponent have these areas cleared by a suitable qualified occupational hygienist; and
- due to the dense bushland, an unexpected finds protocol should be integrated into the procedures for demolition and earthworks contractors.

In response to comments by the EPA during the exhibition of the project regarding Bantry Bay Road and its removal, the proponent advised that the road is not intended to be removed until a subsequent stage and that it poses a low contamination risk. The proponent further advised that the road reserve and any potential contamination risk would be investigated and considered in the subsequent Stage 2 application.

The proponent proposes to include the recommendations contained within its Phase 1 report in the procedures for demolition and earthworks contractors to ensure that appropriate management procedures exist if potential contaminants are encountered during site clearance works.

The department notes the proponent's Phase 1 report and considers that, subject to clearance being received from an occupational hygienist for the former residential buildings, that the subject site is suitable for the intended hospital land use. The department also recommends that a further Phase 2 contamination assessment for the site be undertaken following the completion of site clearance works and submitted with the subsequent Stage 2 application for the NBH development.

Services Diversion Works

To accommodate the proposed future development of the NBH and its associated demands, a series of services diversions works to existing infrastructure is proposed. The proposed services diversion works generally comprise of the following:

- diversion of existing high pressure natural gas main;
- diversion of existing 33 kV transmission line;
- diversion of existing 11 kV transmission line;
- decommission and diversion of existing section of 415 V power line;
- decommissioning of existing street lighting associated with decommissioned section of 415 V line;
- decommissioning sections of existing redundant water/sewer supplies; and
- diversion of existing telecommunications services.

The proposed services diversion works are generally located within the site in areas that would also be impacted upon by site clearance works. Though, works are also proposed within the carriageways and nature strips of existing adjacent roads, including Wakehurst Parkway, Warringah Road and Frenchs Forest Road West.

It should be noted that consideration of associated construction traffic, biodiversity and noise and vibration impacts of the proposed services diversion works has been provided above in sections 5.2, 5.3 and 5.5. In this regard, the department is satisfied that the impacts associated with these works can be appropriately mitigated and managed, subject to recommended conditions.

The conditions will also require the proponent to satisfactorily address mitigation and management measures of potential impacts, associated with: connections to the existing telecommunications infrastructure located in the south-eastern corner of The Forest High School site; temporary restriction of pedestrian access through the site via the informal pathway; and temporary driveway impacts associated with the undergrounding of the 11 kV line along the nature strip of the northern side of Frenchs Forest Road West.

Public Pathway

The department notes the community's desire for the retention of the existing informal pathway along the western boundary of the site and the access it provides from the residential neighbourhood to transport and retail services along Warringah Road.

Within the proponent's PIR, it is proposed that the informal pathway be formalised for general public use following the completion of Stage 1 site clearance and services diversion works, incorporating appropriate landscaping and safety features. It is further proposed that the pathway be opened prior to the commencement of construction works for the main hospital. The department has recommended conditions requiring the submission of details of the public pathway be submitted to the Secretary for approval prior to the commencement of Stage 1 works and that the pathway is constructed in a timely manner following the completion of works along the Western Boundary.

6. CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The proposed SSI application seeks approval for a concept proposal for the development of the Northern Beaches Hospital and concurrent first stage approval for biodiversity management and site clearance works at Frenchs Forest.

The department has reviewed the EIS and PIR, and considered the advice and comments of public authorities and the general public in its detailed environmental assessment of the project. Issues raised in submissions have been thoroughly considered and all relevant environmental issues associated with the proposal have been thoroughly assessed. The project is consistent with the strategic objectives for the state and the region.

It is acknowledged that the site's identification as a suitable location for the NBH will result in unavoidable impacts on local flora and fauna and that there are limited options to minimise biodiversity impacts on the site without unnecessarily restricting the development. The site and proposed NBH would provide significant health and social benefits and that at a regional context, the proposed biodiversity impacts are considered satisfactory. The department also note that the road works proposed by the RMS will offer a suite of staged local road upgrades to support the proposed operation of the NBH and provide network enhancement works for the benefit of the wider Northern Beaches community.

Based on its assessment, the department considers that the project is justified and in the public interest, and that the site is suitable for the proposed development, given the significant social and economic benefits associated with the delivery of the future hospital. The project represents an approximate \$467 million investment in health infrastructure for the NSLHD that will provide an increase and improvement in the quality of health services for the surrounding region and address the current limitations of existing services as identified by NSW Health.

Recommended conditions of approval and the implementation of measures detailed in the proponent's EIS and PIR will ensure that the project can be constructed and operated in a manner to minimise and mitigate the residual environmental and social impacts of the project.

Therefore, the department recommends that the State significant infrastructure for the Northern Beaches Hospital concept proposal be approved, subject to the recommended conditions of approval.

6.2 Recommendation

In accordance with section 115ZB of the Environmental Planning and Assessment Act, 1979, it is recommended that the Minister for Planning:

- (a) **consider** the findings and recommendations of this report;
- (b) **approve** the development by granting approval for the staged State significant infrastructure, subject to the recommended conditions
- (c) **sign** the attached 'Infrastructure Approval', attached at **Tag A**

Endorsed by:


Daniel Keary
Director
Industry, Key Sites and Social Projects

11/6/14



12.6.14

Chris Wilson
Executive Director
Development Assessment Systems and
Approvals

APPENDIX A RELEVANT SUPPORTING INFORMATION

The Environmental Impact Statement and Preferred Infrastructure Report are included in attached CD. These documents and submissions received can also be found at Planning and Infrastructure's website:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5982

APPENDIX B CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENT(S) AND DCP(S)

The primary controls guiding the assessment of the proposal are:

- a) State Environmental Planning Policy (State and Regional Development) 2011
- b) State Environmental Planning Policy No.55 – Remediation of Land
- c) State Environmental Planning Policy (Infrastructure) 2007
- d) Warringah Local Environmental Plan 2010

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

The aims of the SRD SEPP are to identify State significant development and State significant infrastructure and provide the necessary functions to joint regional planning panels to determine development applications.

On 16 October 2012, the then Minister for Planning and Infrastructure made an order under section 115U(4) of the EP&A Act to amend State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) to provide that development on land in the Northern Beaches Hospital Precinct, carried out on or on behalf of a public authority, that has a capital investment value greater than \$30 million is State significant infrastructure.

The proposal is State significant infrastructure because it is development by a public authority that has a capital investment value of more than \$30 million on land identified as being within the Northern Beaches Hospital Precinct on the State Significant Infrastructure Sites Map, under clause 2 of Schedule 4 of the SRD SEPP. Therefore the Minister for Planning is the consent authority.

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) is the primary environmental planning instrument guiding the remediation of contaminated land in NSW. SEPP 55 aims to:

- provide a state-wide planning approach to the remediation of contaminated land
- identify when consent is required or not required for a remediation work
- specify certain considerations that are relevant to applications for consent to carry out a remediation work
- require that remediation work meet certain standards and notification requirement.

Clause 115ZF(2) of the EP&A Act provides that EPIs do not apply to SSI applications. Notwithstanding, the proponent has undertaken a Phase 1 contamination assessment for the site that consisted of a desktop assessment of existing and historical information of the site and some limited site sampling and analysis.

The results of soil sampling undertaken indicated that there are no significant contaminants were identified on site and laboratory results indicated that the adopted site criteria were not exceeded. Notwithstanding, future detailed site investigations will be necessary by the

proponent prior to the lodgement of the Stage 2 application for the NBH, as well as clearance being provided by an occupational hygienists for the previously demolished residential buildings. The department are also satisfied that the proposed recommendations for the stage 1 site clearance works, including the preparation of an unexpected finds protocol for contractors for implementation during site clearance works.

The department is satisfied that, subject to the recommendations, the proposed development satisfactorily addresses the requirements of SEPP 55, and that the site will be suitable for hospital use prior to commencement of operation.

State Environmental Planning Policy (Infrastructure) 2007

The Infrastructure SEPP aims to facilitate the effective delivery of public infrastructure across the State.

Schedule 3 of the Infrastructure SEPP applies to traffic generating developments and requires that the RMS is consulted on certain traffic generating applications before a consent authority makes a determination on the development. The project was referred to the RMS, who raised no objections to the redevelopment of the site for the purposes of a new hospital facility. RMS's comments are discussed in Section 4 and 5.2 of this report.

Warringah Local Environmental Plan 2010

The site is zoned R2 Low Density Residential, RE1 Public Recreation and SP2 Infrastructure (Hospital) under the Warringah Local Environmental Plan 2011 (Warringah LEP). Under the R2 zoning, 'hospitals' are a use that is permissible with development consent of council. Under the RE1 and SP2 zones, 'hospitals' are not a permissible land use.

Notwithstanding, section 115ZF(2) of the EP&A Act provides that Part 3 of the EP&A Act and environmental planning instruments (EPIs) do not apply to State significant infrastructure.

APPENDIX C GLOSSARY

Accredited Assessment under the EPBC Act

If the development involves a "controlled action" under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the development can be assessed as an accredited assessment under the EPBC Act. This means that separate assessment processes are not required under both the EPBC Act and the EP&A Act, and the NSW assessment process has been accredited by the Commonwealth. However, the Commonwealth Minister for the Environment maintains an independent approval role, and the Commonwealth provides input to certain stages of the assessment process

Where a controlled action is involved the department has consulted with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) throughout the assessment process.

Ecologically Sustainable Development can be achieved through the implementation of:

- (a) *the precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
 - (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) *an assessment of the risk-weighted consequences of various options,*

- (b) *inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
- (c) *conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) *improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:*
 - (i) *polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.(Cl.7(4) Schedule 2 of the Regulation)*

Objects of the Act

- (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.*

Relevant Environmental Planning Instruments

These are EPIs that are required to be taken into consideration in the assessment of the development under s. 79C. A detailed evaluation of each is provided at Appendix B.