Brookvale Community Health Centre

Environmental Impact Statement

Health Infrastructure

October 2015

www.smec.com

STATEMENT OF VALIDITY

Environmental impact statement prepared by:

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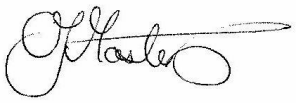
Proposed development:

Applicant:	Health Infrastructure on behalf of the Health Administration Corporation
Applicant's address:	PO Box 1060 North Sydney, NSW2059
Land to be developed:	612, 620 & 624 Pittwater Road, Brookvale, NSW 2100
Legal description:	Lots A, B, C, DP 375728 (612 Pittwater Road) Lot 1 DP 500541 (620 Pittwater Road) Lot 3 DP 539384 (624 Pittwater Road)
Project:	Brookvale Community Health Centre

Declaration:

This environmental impact statement:

- Has been prepared in accordance with the matters specified in Schedule 2 to the *Environmental Planning and Assessment Regulation 2000*
- Contains all available information that is relevant to the environmental assessment of the proposed development
- Does not contain any information that is false or misleading.

Name:	Chris Masters
Signature:	
Date:	19 October 2015

EXECUTIVE SUMMARY

Background to the project

The proposed Brookvale Community Health Centre is part of the Northern Beaches Health Service Redevelopment (NBHSR) project. The project objectives are to deliver a health solution that includes the strategic reconfiguration of the community health services across the Northern Beaches Health Service catchment at Dalwood, Mona Vale Hospital and Brookvale. The new community health centre will bring together a range of community health services that are presently in different locations in the southern catchment of the Northern Sydney Local Health District and will deliver substantial efficiencies in the provision of these services.

After consideration of a range of potential locations, the site at 612-624 Pittwater Road was identified as the preferred site. The location is adjacent to the Warringah Mall bus interchange and will facilitate access to new community health centre.

Purpose of the EIS

This environmental impact statement (EIS) has been prepared to support a request by Health Infrastructure for planning approval for State Significant Development Application SSD 6890 under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979*.

The EIS considers the environmental, social and economic impacts of the proposed Brookvale Community Health Centre. The EIS has addressed the issues specified in the Secretary's Environmental Assessment Requirements (SEARs) and accords with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* with regard to appropriate consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, noise, stormwater and construction-related impacts.

Overview of the project

The development generally comprises:

- A four (4) storey building with a gross floor area of 5591 m^2 located at the front of the site adjoining Pittwater Road and William Street, Brookvale, and incorporating features that complement the functionality of the upgraded bus interchange, including a pedestrian bridge across Pittwater Road.
- A multi-storey (seven levels) car park at the rear of the site, providing 475 car parking spaces, including 250 commuter car parking spaces.
- A main entrance off Pittwater Road, and secondary entrances at the rear of the building.
- Vehicle access from Pittwater Road (left in, left out only) and William Street (all movements).

The Brookvale Community Health Centre will provide a range of health-related services including Adult Mental Health Services, Allied Health Services, Breast Screen, Child and Adolescent Mental Health Services, Child and Family Health Services, Chronic Care, Community Nursing and Acute Post-Acute Care Services, Community Drug and Alcohol Services, HIV/AIDS and Related Programs, Health Information Services, Multicultural Health Service, Oral Health Services, Population Health, and Rehabilitation and Aged Care Service.

Environmental impacts

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and has included consultation with relevant stakeholders. Where practicable, impacts have been avoided or mitigated through the design process. Mitigation measures to manage and minimise residual impacts arising from the development are identified in the EIS.

Justification and conclusion

The proposed Brookvale Community Health Centre will deliver a significant public benefit to the local and broader Northern Beaches community both with regard to an improved level of community health but also for support of improved public transport. Appropriate consideration has been given to the associated impacts and suitable measures identified to adequately manage these. It considered that a satisfactory case has been presented for approval of the project under Part 4, Division 4.1 of the EP&A Act.

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1. Introduction

1.1 Background to the development

The proposed Brookvale Community Health Centre is part of the Northern Beaches Health Service Redevelopment (NBHSR) project. The project objectives are to deliver a health solution that:

- Provides acute and outpatient services at a new hospital at Frenchs Forest providing critical mass and optimisation of the delivery of health services across the Northern Beaches Health Service District
- Retains and redefines the Mona Vale Hospital to provide sub-acute services and other health services complementary to those at the new hospital
- Strategically reconfigures the community health services across the Northern Beaches Health Service catchment at Dalwood, Mona Vale Hospital and Brookvale
- Ceases the provision of health services from the Manly Hospital site.

The project has the following key outcomes:

1. Development of the new Northern Beaches Hospital at Frenchs Forest, combining public and private health care delivery so the Northern Beaches community has improved access and choices with regard to quality and sustainable health care.
2. Redesign of community health services on the Northern Beaches, with new Community Health Centres at Mona Vale and Brookvale, and enhanced child and family specialist services at Dalwood in Seaforth.
3. Redevelopment of Mona Vale Hospital and cessation of services at Manly Hospital to bring together acute health services onto one site, creating the opportunity to expand contemporary models of care, increase clinical collaboration, provide a broader range of professional opportunities, and implement sustainable service delivery. Mona Vale Hospital will provide complementary services including a 24 hour, seven day a week urgent care centre supported by easy access to diagnostic services, such as pathology and medical imaging along with sub-acute, rehabilitation, community and palliative care services.

Delivery of the Brookvale Community Health Centre is being managed by Health Infrastructure (HI) on behalf of the Health Administration Corporation.

1.2 Overview of the proposed development

The development will generally comprise:

- A four (4) storey building with a gross floor area (GFA) of 5591 m^2 located at the front of the site adjoining Pittwater Road and William Street, and incorporating features to complement the functionality of the upgraded bus interchange (which is being managed separately by Transport for NSW)
- A multi-storey (seven levels) car park at the rear of the site, providing 475 car parking spaces
- A main entrance off Pittwater Road, and secondary entrances at the rear of the building
- Vehicle access from Pittwater Road (left in, left out only) and William Street (all movements).

The Brookvale Community Health Centre will provide a range of health-related services including:

- Adult Mental Health Services

- Allied Health Services
- Breast Screen
- Child and Adolescent Mental Health Services (CAMHS)
- Child and Family Health (C&FH) Services
- Chronic Care
- Community Nursing and Acute Post-Acute Care (APAC) Services
- Community Drug and Alcohol Services
- HIV/AIDS and Related Programs (HARP)
- Health Information Services
- Multicultural Health Service
- Oral Health Services
- Population Health
- Rehabilitation and Aged Care Service.

The multi-storey car park will provide 250 car parking spaces for commuters to service the upgraded Warringah Mall bus interchange and future improvements in public transport such as a potential future Bus Rapid Transit (BRT) service for the Northern Beaches. These are anticipated to lead to an increase in the number of pedestrians in the general vicinity. The development provides an opportunity to address such potential future safety issues. In this regard, the development includes a pedestrian bridge across Pittwater Road to provide safe passage for commuters and other pedestrians.

A more detailed description of the development is provided in Section 3.

1.3 Analysis of feasible alternatives

The site selection process commenced with a Value Management workshop held in December 2012. This established the following evaluation criteria for consideration of site options:

- **Geographical Area:** The preferred location is the Brookvale area. The proposed site needs to be close to a place of high public activity to facilitate public access.
- **Adjacencies:** Details of adjacencies of any schools to the proposed site to be detailed.
- **Land Size:** The site is to accommodate a total net lettable area of approximately 4800 m^2 of Community Health Services. Additional provision for potential expansion space.
- **Zoning:** Site is to be in a commercial or non-residential planning zone and preferably outside flood zone.
- **Public Transport Accessibility:** The site is to be in close proximity of public transport nodes and an arterial road.
- **Street Presence:** The proposed site is to have an identifiable street presence.
- **Public Entrances:** Provision for two separate public street entrances.
- **Parking Requirements:** Space for a minimum of 180 parking spaces.
- **Slope:** Minimal level change across the site and clear access for disabled clients.
- **Contamination:** Land free from contamination.
- **Land Purchase Option:** Availability of Freehold Title.
- **Lease Option:** Availability of a minimum 20 year lease.

The workshop confirmed that the new community health centre should be situated near a transport hub to facilitate access for residents of the southern catchment area of the Northern Sydney Local Health District. Brookvale was endorsed as the preferred location with a preference for it to be located as close as possible to the bus interchange at Warringah Mall.

In November 2013, an Expression of Interest (EOI) for the provision of land and/or buildings in the Brookvale area for the community health centre was issued to the market. Seven parties provided a formal response and a total of 13 sites were put forward. A preliminary assessment of these sites against the agreed evaluation criteria was undertaken which reduced the number of potential sites to seven. Each of the remaining sites was subjected to a technical analysis to assess the capacity of the site to accommodate the required infrastructure and to identify risks/constraints and opportunities.

The seven sites were ranked according to how well each site met the agreed evaluation criteria. The site at 612-624 Pittwater Road scored the highest and was identified as the preferred site for the development.

The 'do nothing' option was not considered a practicable alternative as the objectives of the NBHSR project related to the strategic reconfiguration of the community health services across the Northern Beaches Health Service District would not be met. Existing services are provided from a number of locations across the NSLHD with varying levels of access. A number of services are currently also provided from Manly Hospital and alternative premises would still need to be found following closure of the hospital.

1.4 Secretary's Environmental Assessment Requirements

An application was made to the Department of Planning and Environment (DP&E) on 9 March 2015 for issue of the Secretary's Environmental Assessment Requirements (SEARs). The application identified that the proposed community health centre would comprise State significant development (SSD) and that the planning approval pathway would fall under Part 4, Division 4.1 of *Environmental Planning and Assessment Act 1979*.

The SEARs were issued on 16 April 2015 and a copy is provided at Appendix A. Table 1-1 lists the matters identified in the SEARs and indicates where they are addressed in the environmental assessment documentation.

Table 1-1 Consideration of Secretary's Environmental Assessment Requirements

Requirement	Where addressed
General requirements	
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 to the Environmental Planning and Assessment Regulation 2000.	EIS generally.
The EIS must include an environmental risk analysis to identify potential impacts associated with the infrastructure.	Section 6
The EIS must be accompanied by a report from a qualified quantity surveyor providing: ▪ a detailed calculation of the capital investment value (CIV), including details of all assumptions and components from which the CIV calculation is derived; ▪ an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and	Appendix C

Requirement	Where addressed
▪ certification that the information provided is accurate at the date of preparation.	
Key issues	
Statutory and strategic context	Section 5.1
Policies	Section 5.2
Built form and urban design	Section 5.3
Environmental amenity	Section 5.4
Transport and accessibility	Section 5.5
Ecologically sustainable development	Section 5.6
Biodiversity	Section 5.7
Heritage	Section 5.8 Appendix G
Aboriginal heritage	Section 5.9 Appendix G
Noise and vibration	Section 5.10 Appendix F
Contamination	Section 5.11 Appendix K
Utilities	Section 3.8
Contributions	Section 5.12
Drainage	Section 3.8 Appendix I
Flooding	Section 5.13
Waste	Section 5.14
Plans and documents	
Architectural drawings	Appendix D
Site Survey Plan	Appendix D
Site Analysis Plan	Appendix D
Stormwater Concept Plan	Appendix I (Appendix A)
Sediment and Erosion Control Plan	Appendix I (Appendix B)
Shadow diagrams	Section 5.4 Appendix D
View analysis/photomontages	Appendix D
Landscape Plan	Appendix D

Requirement	Where addressed
Preliminary Construction Management Plan	Appendix K
Geotechnical and Structural Plan	Appendix L
Arborist Report*	N/A
Acid Sulfate Soils Management Plan (if required)	Section 5.15
Schedule of materials and finishes	Appendix D
Consultation	
Warringah Council	Section 4
Transport for NSW	Section 4
Roads and Maritime Services	Section 4

* Note: An Arborist Report has not been prepared with reference to the following considerations:

- The site contains no native vegetation and only two mature trees, these being a conifer immediately adjacent to the derelict residence at 620 Pittwater Road and a palm at the front of 624 Pittwater Road. Both will be removed for the development.
- There are no street trees adjacent to the development site that could be affected by construction activities.

As such, it was not considered there would be a need for an arborist report as no vegetation would require protection during construction.

2. Site Analysis

2.1 Site location

The proposed community health centre is located at Brookvale, on Sydney's Northern Beaches, about 12 kilometres northeast of the Sydney Central Business District. The site is within the Warringah Local Government Area (LGA).

2.2 Land ownership

The land is owned by the Health Administration Corporation and comprises three separate but adjoining properties: 612 Pittwater Road, 622 Pittwater Road, and 624 Pittwater Road. The legal descriptions of the three properties are as follows.

- 612 Pittwater Road: Lot A DP 375728, Lot B DP 375728, Lot C DP 375728
- 620 Pittwater Road: Lot 1 DP 500541
- 624 Pittwater Road: Lot 3 DP 539384

2.3 Site description

The total area of the development site is 5571 m^2. Existing land use on the site is summarised in Table 2-1 and shown in Figure 2-1.

Table 2-1 Existing land use at development site

Land parcel	General description
612 Pittwater Road	This parcel of land is cleared of structures. It is currently occupied by Uniflow Concrete Pumping and used as a temporary storage area for construction and building materials. The site has temporary fencing along the southern and western frontages. There is a bus shelter immediately in front of the site on Pittwater Road.
620 Pittwater Road	This parcel of land contains an unoccupied brick and tile residence that is in a generally poor state. There are a number of other smaller structures on the property, mainly to the rear of the block. There is vegetation regrowth across the site but concentrated mainly in the eastern half of the site. The site has temporary fencing along the western frontage (continuing from the adjacent property at 612 Pittwater Road)
624 Pittwater Road	This parcel of land was previously occupied by two commercial tenants: ▪ Barbecues Galore (Units 1 & 2, 624 Pittwater Road, front of property) ▪ Stylewise Industries (Unit 3, 624 Pittwater Road, rear of property) The two premises were vacated in August 2015. The northern part of the site (parking area for Barbecues Galore customers) adjoins the access to the commercial premises (Pet O/veterinary surgery) at 626 Pittwater Road (at the rear of 624 Pittwater Road). There is currently no dividing barrier between these two areas.

Figure 2-1 Existing land use at 612-624 Pittwater Road

(Aerial imagery copyright NearMap).

2.4 Surrounding development

The surrounding land use consists of residential, commercial, retail and light industrial (refer Figure 2-2).

Warringah Mall is located to the west of the site across Pittwater Road. The existing bus interchange is located within the mall (with bus access from Green Street), however, the Warringah DCP identifies this as potentially being relocated to near the existing northbound bus stop.

The site is located immediately adjacent to the signalised intersection of Pittwater Road, Condamine Street and William Street. There is a southbound bus stop in front of the properties at 612 and 620 Pittwater Road, and a northbound stop on the opposite side of Pittwater Road.

The northern side of William Street to the east of the site contains a variety of commercial enterprises with building heights of 1-2 storeys. A four-level building is located immediately to the east of 612 Pittwater Road (at 2-4 William Street). There are multiple mobile telephone aerials mounted on the top of this building, principally on the western and southern sides.

Sydney Buses' Brookvale Depot is located to the northeast of the site. The nearest residential properties are located on William Street to the south, with the majority of these being single storey residences. Warringah Golf Club is located immediately to the south of the intersection of Pittwater Road and Condamine Street.

There is a Council facility for off-road parking of up to 20 bicycles at the intersection of William Street and Pittwater Road.

Figure 2-2 Surrounding land use

(Aerial imagery copyright NearMap).

3. Description of the Development

3.1 Development principles

A community health centre needs to be planned and designed with the user's perception and understanding as paramount. It needs to be a client-centred facility that optimises the experience for clients and carers, promoting client self-management and health independence.

Community health centres should be considered by the community they serve as places they effectively own and which can be integrated into the fabric of the community through this sense of ownership. The built form and aesthetics therefore need to provide an image that portrays the following:

- A non-institutional form while representing a welcoming environment for clients of all ages and their families
- Is respectful of the scale form and materials of the surrounding built environment
- Capitalises on the views and outlook beyond
- A circulation system that allows ease of access
- Sets a framework for future development with a purpose built facility designed for flexible use that can be easily adapted over time and with the ability to expand and contract service provision.

The development includes a car park that will provide 250 parking spaces for commuters using public transport, including a potential future Bus Rapid Transit (BRT) service for the Northern Beaches. The development should therefore incorporate features to:

- Enhance the functionality of the transport interchange
- Improve amenity for bus patrons
- Facilitate safe crossing of Pittwater Road, particularly during peak travel periods when higher numbers of pedestrians would be expected to occur in the area.

3.2 Initial works, excavation and staging

Demolition of buildings and removal of vegetation at 620 and 624 Pittwater Road has been considered separately through a Review of Environmental Factors (REF) prepared by SMEC Australia in May 2015. Demolition activities are limited to the removal of all above ground structures including building slabs. The REF included consideration of biodiversity-related matters identified in the SEARs that pertain to 620 Pittwater Road.

Demolition and related activities on these parts of the site commenced in October 2015. This included further testing and analysis of soil and groundwater on the 624 Pittwater Road part of the site to assess the presence of any contamination and to identify appropriate management and treatment measures if required.

Initial works would include the removal of any subsurface structures remaining on the site (primarily related to the 624 Pittwater Road part of the site) and any required remediation under a Remediation Action Plan (refer Section 5.11).

Following completion of these initial works, construction of the main structures will occur commencing with foundation works.

It is anticipated the pedestrian bridge will be fabricated off site and installed through an overnight road possession following completion of the car park and the community health centre building.

The final sequence of works will be subject to detailed design and the construction contractor's planning and construction program.

3.3 Building layout, GFA and use

The community health centre building is aligned along its length to Pittwater Road and has a GFA of 5591 m^2 over five levels with a central core. The Lower Ground Floor and Ground Floor provide access to the two street frontages. The first and second levels form the major floor plates. The third level forms the smaller top floor and is setback from the Pittwater Road façade.

The following table provides a summary of the various uses in the building.

Table 3-1 Summary of building uses by level

Level	GFA (m^2)	Nature of use
Lower Ground	726	Contains the Opioid Clinic and HARP (HIV & Aid Related Programs) both of which have their own separate entries accessed from Pittwater Road. Also provides service areas for waste collection and plant.
Ground	952	Main entrance and front of house activities. Contains the Child and Family Department, the Child and Youth Mental Health Services and Health Information Services. Public facilities would include waiting areas, toilets, baby change and feeding area with controlled access to beverage areas.
First	1675	Contains the majority of the remaining community health services of Adult Mental Health, Drug & Alcohol, Breast Screening, Rehabilitation and Chronic Care, APAC and Community Nursing.
Second	1687	Secure staff zone containing staff offices, workstations, meeting rooms, staff amenities and store rooms.
Third	951	Accommodates Oral Health with a shell space for further expansion and the main air handling plant.

Cross sections through the southern and northern sections of the community health centre building are shown in Figure 3-1 and Figure 3-2 respectively. Larger versions are provided in Appendix D.

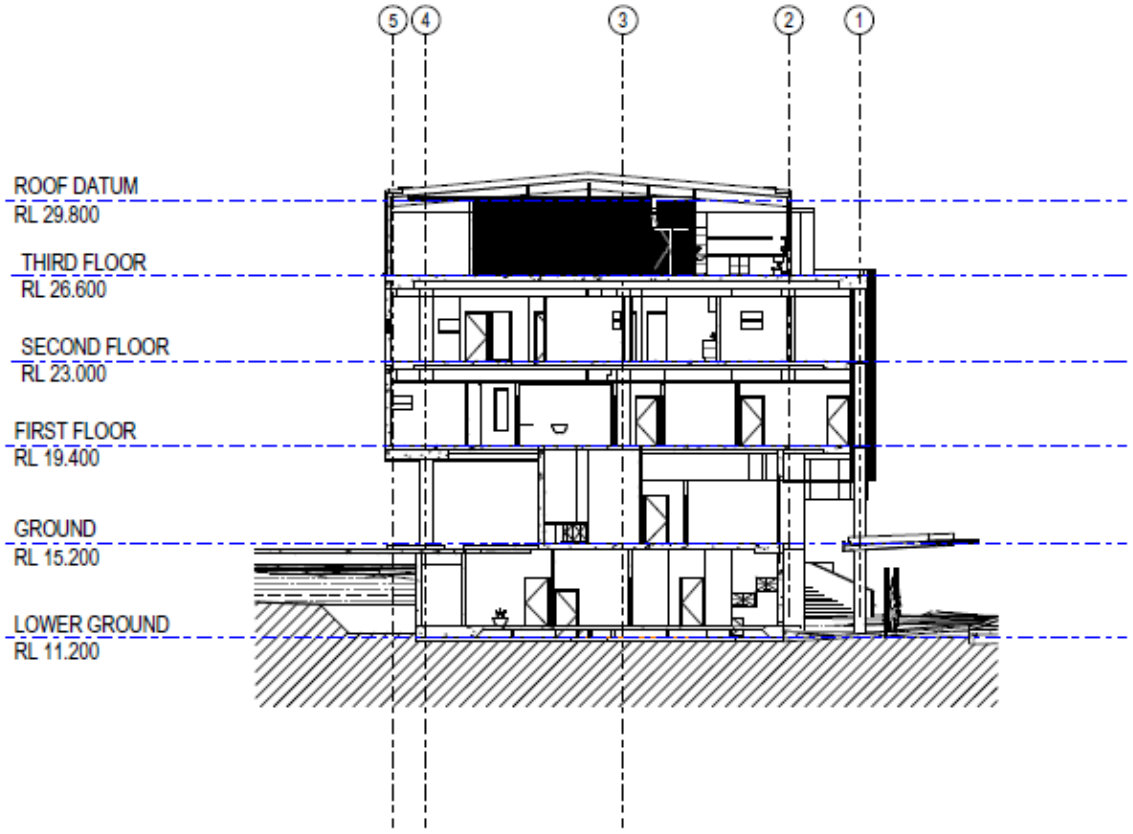


Figure 3-1 Section through south wing

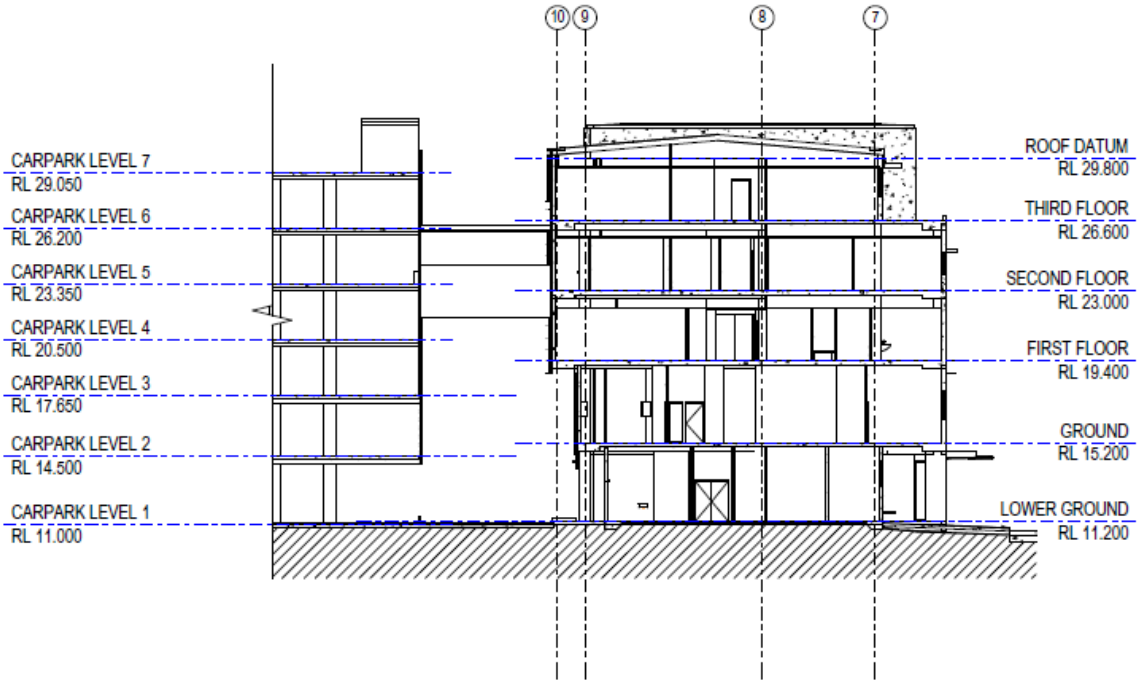


Figure 3-2 Section through north wing

3.4 External materials and finishes

The community health centre will be constructed using a range of high quality materials and finishes to create an attractive, modern development that is respectful of the streetscape and its location as a 'gateway' to Brookvale.

The western facade is conceived as two 'pavilions' in response to the kinked change in orientation of the western site boundary. These are separated by the central public stair and lift associated with the pedestrian bridge. The eastern façade addresses the access road to the car park and provides a more human scale to the 'drive by' civic scale of the western elevation.

The upper floors will be constructed from lightweight aluminium cladding while durable masonry materials would be used at the lower pedestrian levels.

On the western façade, sun control, in the form of an aluminium vertical blades, is proposed to screen the glazed curtain walls of Levels One and Two of the southern pavilion while on the northern pavilion discrete window openings would reduce and control sunlight penetration.

Materials will be selected to provide the required level of durability, be of long life and low maintenance.

A Schedule of Materials and Finishes is included in the Design Report provided as Appendix D.

3.5 Parking and loading

The development includes a seven storey car park at the rear of the site, providing 475 car parking spaces. This will be shared by staff, clients and commuters as follows:

- A ground level car park for clients directly off Pittwater Road with dedicated disabled car parking spaces, staff secure bicycle parking and undercover bicycle parking for commuters
- Commuter car parking on the mid-levels of the car park
- A dedicated secure staff fleet car park on the upper levels of the car park with a direct bridge connection to the dedicated secure staff level of the building at Level Two
- A dedicated secure staff car park on the upper levels of the car park.

Loading and unloading of service vehicles will take place in a dedicated service lay by located adjacent to the car park. Service vehicles will generally enter the site from Pittwater Road and leave either via Pittwater Road (left out only) or William Street (left and right turns permitted).

An assessment of traffic, parking and loading impacts has been undertaken by Taylor Thomson Whitting (Appendix E) and is summarised in Section 5.5.

3.6 Street interface and landscape works

The Pittwater Road streetscape will be further defined and enhanced by the façade of the building providing a human scale at street level. The building will be set back and include an awning to reduce the scale of the building at street level as well as provide pedestrian and commuter amenity.

The building setback provides space for bus commuter facilities and a human scaled open public space on Pittwater Road. New paving (including tactile indicators) and lighting along with seating, ticketing and signage facilitates will provide improved street amenity for pedestrians and commuters.

While the constrained site offers limited opportunities for soft landscaping, the development will consolidate the new bus interchange facilities and existing council bike parking facilities within a new cohesive paving scheme. Soft landscaping at northern and southern ends of the site will create areas of client and public seating under shade.

A landscape plan is included in the Design Report provided as Appendix D.

3.7 Building signage

Building signage will be selected to fulfil its function and comply with relevant Australian Standards, provide the required level of durability, be of long life and low maintenance while meeting design objectives.

Signage is proposed on the northern and southern facades comprising 'BCHC' aligned vertically (refer Figure 3-3). The external main building signs will be halo lit to limit unnecessary light spill while still providing strong legibility. Other key features include:

- Fabricated aluminium individual letters 1000mm high with 500mm returns
- Internally illuminated with LED backlights mounted inside each letter
- Fixed to the façade with 100mm space off wall.

Figure 3-3 Main signage, southern elevation

Other external signage will be located in well illuminated public areas of the building such as the Pittwater Road Lift Lobby, the pedestrian breezeway through the building to the car park and main entry drop off area off William Street. These other signs will be non-illuminated signs and contained within the site.

An assessment of the proposed signage associated with the community health centre against the relevant provisions of SEPP 64 is provided in Section 5.1.5.

The pedestrian bridge will provide for the future installation of advertising signage. Approval for this is being sought as part of this project application but subject to approval of a separate application regarding the actual sign content.

3.8 Services and infrastructure

An Infrastructure Management Plan, incorporating an Integrated Stormwater Management Plan (Appendix H), and a Stormwater Management Report (Appendix I) have been prepared by Arup and Taylor Thomson Whitting respectively. These have been prepared in consultation with the relevant authorities. An overview of the services required to support the proposed development is provided as follows.

Electrical

The preliminary maximum demand was calculated at 650 kVA based upon a design GFA of 6000 m^2. An application has been submitted to Ausgrid for 650 kVA supply to the site. The current site can be served by either a kiosk/chamber type substation and will be subject to final design.

Telecommunications

Telstra and Optus services are available at the perimeter of the site as the main telecommunications services routes run parallel with the site along Pittwater Road. An application would be submitted to either Telstra or Optus for connection of the development.

Incoming telecommunications pits will be laid as part of the new development to a pit located on the boundary of the site to allow the connection of the new services.

Hydraulic and fire services

New water main connections for domestic water and fire services water supplies will be from the 150 mm CICL main in Pittwater Road. Sydney Water has been consulted and advised that the water main will provide sufficient flow and pressure for the proposed development. Non-potable water will be provided via back flow prevention devices located as required to serve high risk zones, eg dirty utilities or cleaners rooms. Rainwater reuse is not generally incorporated into Health Infrastructure projects due to the risk of cross-contamination.

Subject to detailed design, sewer drainage for the development will connect to the existing Sydney Water 150 mm sewer main located at the rear of 624 Pittwater Road. Alternatively, sewer drainage could connect to the Sydney Water sewer trunk main under 624 Pittwater Road.

A new natural gas connection will be made to the existing Jemena 75 mm medium pressure (210 kPa) gas main in Pittwater Road and a new regulator and meter set will be provided. The pressure will step down to 7 kPa at the site boundary and be reticulated within the new building as required.

Stormwater and drainage

The stormwater infrastructure for the development incorporates a piped drainage network and an onsite detention tank. The on-site stormwater management strategy and design response is consistent with Warringah Council's *On-site Stormwater Detention Technical Specification*, August 2012.

Stormwater quality is addressed by incorporating a gross pollutant trap (HumeCeptor) and a Humes Jellyfish. This is consistent with the *Northern Beaches Stormwater Management Plan* (Warringah Council, 1999).

3.9 Operational waste management

Waste collected throughout the building will be transferred to a disposal room on each level. From there it will be collected and stored in a fully enclosed General and Recycled Garbage Room located in the Ground Level of the car park adjacent to the truck lay by. General and recycled garbage will be collected regularly by a private contractor from this area.

Sharps, clinical and cytotoxic waste will also be collected in a disposal room on each level and then transferred to the Lower Ground Floor Dirty Dock. Separate private contractors will individually collect each relevant waste product via external access to this room.

All plant and waste activities will be contained within the site and planned to ensure minimal impact on adjoining properties and occupants.

3.10 Energy efficiency

The development incorporates ecologically sustainable development (ESD) strategies and principles as defined in clause 7(4) of Schedule 2 to the EP&A Regulation. These are documented in Section 3.12 of the Design Report (Appendix D).

Measures relating specifically to energy include:

- Provision of louvres on the western façade of the building to reduce overall heat gain and reduce energy requirements for air conditioning
- Maximising the use of natural light in all habitable areas to reduce reliance on artificial lighting
- Inclusion of a Building Management System that will control all building services and automatically shut down air conditioning and lighting after hours.

Other measures to control services will be further considered during detailed design including:

- A split HVAC system allowing different A/C zoning and operation times
- Sensor lights and lighting on timers
- Separate after hours A/C activation.

3.11 Crime Prevention Through Environmental Design

The creation of a safe built environment is a key consideration in the internal and external design of the community health centre building, and is reflected in the following design aspects:

- The building has been designed to provide casual surveillance over the main public area
- Appropriate levels of external lighting will be carefully considered in conjunction with pedestrian paths of travel and way finding to provide predictable routes and avoid entrapment areas
- The external perimeter and car park of the building will be monitored by CCTV
- The Opioid Clinic on the Lower Ground Floor will also use CCTV monitoring to confirm that clients are dispersing once they have exited the premises.

4. Consultation

As required by the SEARs, Health Infrastructure has consulted with Warringah Council, Transport for NSW, and Roads and Maritime Services and other relevant stakeholders to ensure the design and construction of the new Brookvale Community Health Centre addresses and incorporates where possible key stakeholder issues and feedback. The following table provides a summary of the consultation and engagement undertaken to date.

Table 4-1 Communication and engagement activities undertaken to prior to EIS exhibition

Stakeholder	Activity
Warringah Council	▪ Two meetings were held with Council as follows. ▪ The first meeting, on 24 April 2015, outlined the schematic design to Council and sought Council's views on a range of issues related to all aspects of the development. Clarification was also sought on specific matters in Council's DCP such as flooding, on-site detention, etc. ▪ Council provided a detailed list of issues to HI which informed a detailed review of the design, with the intention being to address Council's issues as far as practicable. ▪ Key issues included the building setback from Pittwater Road and the bulk and scale of the building, particularly with regard to its 'gateway' location. ▪ The second meeting, on 15 June 2015, outlined the revision of the design to address Council's issues where practicable and site constraints allowed. Council provided further feedback which would be considered during detailed design.
Transport for NSW (TfNSW)	▪ HI has met fortnightly with TfNSW since December 2014. ▪ HI's traffic consultants met with TfNSW on 30 April 2015 to discuss a range of issues related to public transport and the integration of the southbound bus interchange with the community health centre building. ▪ The issues raised by TfNSW have been taken into consideration in the design of the building and further detail is provided in Section 3.
Roads and Maritime Services	▪ HI met with RMS and TfNSW on 15 April 2015 to discuss a range of issues including site access, proposed changes to the at grade pedestrian crossing at William Street, the pedestrian bridge, and relocation of the existing bike parking facility. ▪ HI will continue to consult with RMS and TfNSW with regard to relevant matters.
Office of Environment and Heritage (OEH)	▪ OEH was formally consulted in May 2015 with regard to seeking an exemption from using the Framework for Biodiversity Assessment (FBA) as specified in the SEARs for the assessment of the development's impacts on biodiversity. The request was accompanied by relevant supporting information. ▪ OEH agreed to the exemption but specified certain matters to be addressed in the assessment (refer Section 5.7).
Westfield	▪ HI met with Westfield on 2 July 2015 to discuss specifically the western landing for the pedestrian bridge which would impact on Westfield's land. Westfield indicated general support for the pedestrian bridge.

Stakeholder	Activity
	▪ HI would continue to consult with Westfield with regard to potential opportunities to integrate the pedestrian bridge into the redevelopment of Warringah Mall.

In addition to the above stakeholders, Health Infrastructure has consulted 18 health service user groups across a range of disciplines during the schematic design phase of the project to ensure the functional design of the new Brookvale Community Health Centre met the requirements of staff and clients. Up to four separate meetings were held with user groups over two months to finalise the schematic design for the new centre. Consultation with these health service user groups will continue during the detailed design phase of the project, in line with Health Infrastructures standard engagement protocols.

Health Infrastructure will continue to consult with relevant stakeholders during delivery of the Brookvale Community Health Centre. A summary of the planned communication and engagement activities is provided in Table 4-2.

In addition to the consultation undertaken to date, Health Infrastructure will implement a communications program to support the 30 calendar day exhibition of the SSD application and encourage public feedback. It is important to note that the planned communication activities outlined in the following table only cover the public exhibition period. Communications and engagement with stakeholders will continue during all stages of the project through to the opening of the new Brookvale Community Health Centre in early 2017.

Table 4-2 Planned communication and engagement activities

Stakeholder	Activity
General public	▪ Notification to be distributed within a 1 km radius of the Brookvale Community Health Centre site informing residents of the public exhibition period. ▪ Notification of the public exhibition period to be uploaded on the Northern Beaches Health Service (NBHS) Redevelopment website (www.nbhsredev.health.nsw.gov.au). ▪ Brochure detailing information about the services and design of the new Brookvale Community Health Centre will also be distributed with the notification and uploaded on the NBHS Redevelopment website. ▪ Media release to be provided to the Manly Daily to publicise the exhibition of the SSD application and generate awareness about the comprehensive range of services to be delivered from the centre.
NSLHD staff	▪ Notification and brochure to be provided to NSLHD staff providing an update on the planning approval process and information regarding the public exhibition period.
Brookvale Client Consultation Group	▪ Health Infrastructure will convene a meeting with the BCCG to provide an overview of the new Brookvale Community Health Centre, ensure the group is aware of the functional design objectives and seek consumer feedback. The BCCG will be tasked with engaging other health service consumers within their network to publicise the public exhibition period.
TfNSW	▪ Continuation of fortnightly meetings and other consultation as required.

Stakeholder	Activity
Sydney Buses/ Commuters	▪ Provision of relevant information regarding any impacts on use of the southbound bus stops during construction.
Cyclists	▪ Provision of relevant information regarding any impacts on use of the bike parking facilities during construction.

5. Environmental Assessment

5.1 Statutory and strategic context

The following legislation and planning instruments are relevant to the proposed development:

- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)
- State Environmental Planning Policy 55–Remediation of Land (SEPP 55)
- Warringah Local Environmental Plan 2011
- Warringah Development Control Plan 2011
- Warringah Development Contributions Plan 2014 (Amendment 1).

Consideration of these is provided as follows.

5.1.1 Environmental Planning and Assessment Act 1979

The proposed development is consistent with the objects of the EP&A Act, specifically:

- it promotes the social welfare of the community
- it allows for the orderly and economic development of land
- it is development for public purposes and will facilitate the delivery of community services.

The proposed development is consistent with Division 4.1 of the EP&A Act, in that it:

- provides for the social welfare of the community
- has been considered and assessed against the relevant heads of consideration under Section 79C.

Section 89J of the EP&A Act provides that the following approvals/authorisations do not apply to SSD:

- Concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act
- A permit under Sections 201, 205 or 219 of the *Fisheries Management Act 1994*
- An approval under Part 4 or an excavation permit under Section 139 of the *Heritage Act 1977*
- An Aboriginal heritage impact permit under Section 90 of the *National Parks and Wildlife Act 1974*
- An authorisation referred to in Section 12 of the *Native Vegetation Act 2003* to clear native vegetation or State protected land
- A bush fire safety authority under Section 100B of the *Rural Fires Act 1997*
- A water use approval under Section 89, a water management work approval under Section 90 or an activity approval (other than an aquifer interference approval) under Section 91 of the *Water Management Act 2000*.

Under Section 89K(1) of the EP&A Act, certain approvals that may normally be required for carrying out certain development 'cannot be refused if it is necessary for carrying out State significant development…', these being:

- An aquaculture permit under Section 144 of the *Fisheries Management Act 1994*
- An approval under Section 15 of the Mine Subsidence Compensation Act 1961
- A mining lease under the *Mining Act 1992*
- A production lease under the *Petroleum (Onshore) Act 1991*
- An environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in Section 43 of that Act)
- A consent under *Section 138* of the Roads Act 1993
- A licence under the *Pipelines Act 1967*.

With the exception of the Section 138 consent, none of the above approvals are required for the development. The Section 138 consent will be required with regard to construction of the pedestrian bridge.

Environment Planning and Assessment Regulation 2000

The EIS has addressed the matters specified in clauses 1 and 2 of Schedule 1 to the Regulation. The assessment has also addressed the principles of ecologically sustainable development and a summary is provided in Section 5.6.

Clause 7(1)(f) of the Schedule 2 to the Regulation requires an EIS to provide the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in clause 7(4). This is provided in Section 8.

5.1.2 State Environmental Planning Policy (State and Regional Development) 2011

The aim of the SRD SEPP is to identify development that is SSD. Under the SRD SEPP a project is SSD if it falls into one of the classes of development listed in Schedule 1 of the SEPP. 'Hospitals, medical centres and health research facilities' with a capital investment value (CIV) of $30 million or more are identified as SSD and are considered to be development of State significance.

The proposed development has a CIV of $56.6 million and accordingly satisfies this criterion. A Quantity Surveyor certificate prepared by Davis Langdon confirming the total CIV of the proposal is included at Appendix C.

5.1.3 State Environmental Planning Policy (Infrastructure) 2007

The aim of this SEPP is to facilitate the effective delivery of infrastructure across the State, including providing for consultation with relevant public authorities about certain development during the assessment process.

In December 2008, the then Department of Planning issued *Development near rail corridors and busy roads – interim guideline* (DoP 2008) to support the provisions of the Infrastructure SEPP with regard to proposed developments in, or adjacent to, specific roads and railway corridors. The interim guideline identifies matters for consideration to minimise impacts of busy roads and railway corridors on residential and other sensitive development such as schools and child care centres.

Clauses 102 and 103 of the Infrastructure SEPP are of potential relevance to the proposed community health centre. Clause 102(1) states that

> *development for any of the following purposes that is on land in or adjacent to a road corridor for a freeway, a tollway or a transit way or any other road with an annual average daily traffic volume of more than 40,000 vehicles (based on the traffic volume data available on the website of the RTA) and that the consent authority considers is likely to be adversely affected by road noise or vibration:*
>
> *(a) building for residential use*
>
> *(b) a place of public worship*
>
> *(c) a hospital*
>
> *(d) an educational establishment or childcare centre.*

The most recent (2012) annual average daily traffic (AADT) volumes from the Roads and Maritime Services (RMS) permanent traffic counting station (ID 34016) at Manly Vale on Condamine Street near Manly Creek (about 1100 metres south of the development site) recorded 23,000 vehicles per day northbound and 22,300 vehicles per day south bound on a weekday (refer Section 2.2 in Appendix E).

While these traffic volumes do not exceed the threshold specified in clause 102(1), they do exceed the threshold of 20,000 vehicles AADT specified under 'Any other road' in the interim guideline. Further comment on this is provided in Section 5.2.7.

Clause 103 relates to excavation in or immediately adjacent to corridors of project identified in the clause. None of these are relevant to the proposed development.

A further relevant matter for consideration under the Infrastructure SEPP is the referral requirement for Traffic Generating Development (Schedule 3).

Health services facilities are not specifically identified as a development type in Schedule 3, however, parking facilities are. Parking facilities for 200 or more vehicles with access to any road and for 50 or more vehicles with access to a classified road require referral to Roads and Maritime Services.

The proposed development provides for 475 parking spaces. Pittwater Road is classified as a Main Road (MR164) under the *Roads Act 1993*. Therefore referral of the planning approval application to Roads and Maritime Services is required.

5.1.4 State Environmental Planning Policy 55–Remediation of Land

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

As noted in Section 5.11, a substantial number of investigations have been undertaken for the site in relation to contamination, principally with regard to the 612 Pittwater Road and 620 Pittwater Road parts of the site. A summary of the findings and recommendations of these investigations is provided in a report prepared by Parsons Brinckerhoff which is provided as Appendix K.

Parsons Brinckerhoff notes that considering both its investigations and previous investigations, the site does not require remediation for its future commercial/industrial use as a community health centre. This, however, is subject to further investigation of the 624 Pittwater Road part of the site where existing buildings constrained subsurface investigations. Demolition of these buildings commenced in October 2015 and the required investigation will occur as soon as practicable after this.

Parsons Brinckerhoff concluded that with the exception of the above area, the site is suitable for the proposed use as a community health centre in general accordance with *Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land* (DUAP/EPA 1998).

Further discussion of contamination is provided in Section 5.11.

5.1.5 State Environmental Planning Policy 64–Advertising and Signage

SEPP 64 applies to all signage that, under an environmental planning instrument, can be displayed with or without development consent and is visible from any public place or public reserve. The development will include signage that identifies it as a community health centre. While the pedestrian bridge will provide for the future installation of advertising signage, the installation of any such signage would be the subject of a separate development application.

Clause 4 defines 'building identification sign' as

> *a sign that identifies or names a building, and that may include the name of a business or building, the street number of a building, the nature of the business and a logo or other symbol that identifies the business, but that does not include general advertising of products, goods or services.*

The proposed signage for the community health centre is considered to satisfy this definition. Accordingly, Part 3 of the SEPP (which relates to advertising signage) does not apply. As such, only the objectives of the SEPP and the criteria in Schedule 1 are required to be considered.

Clause 3 states the aims and objectives of SEPP 64, which are:

(a) to ensure that signage (including advertising):

(i) is compatible with the desired amenity and visual character of an area, and

(ii) provides effective communication in suitable locations, and

(iii) is of high quality design and finish, and

(b) to regulate signage (but not content) under Part 4 of the Act, and

(c) to provide time-limited consents for the display of certain advertisements.

(d) to regulate the display of advertisements in transport corridors, and

(e) to ensure that public benefits may be derived from advertising in and adjacent to transport corridors.

The proposal is consistent with these objectives, as the proposed signage will facilitate the provision of high quality signage, consistent with the building's location and use. Table 5-1 provides a summary of the consideration of the various SEPP 64 criteria for the community health centre.

Table 5-1 Consideration of SEPP 64, Schedule 1 assessment criteria

Criterion	Comment
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The signage is consistent with identification of the building as a community health centre and is compatible with existing surrounding development.
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	Not applicable.
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	There are not considered to be any environmentally sensitive areas within the immediate vicinity of the development site.

Criterion	Comment
Does the proposal obscure or compromise important views?	The building signage will be integrated into the building façade and would not obscure or compromise views.
Does the proposal dominate the skyline and reduce the quality of vistas?	As per previous response.
Does the proposal respect the viewing rights of other advertisers?	Not applicable.
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	Yes, refer Figure 3-3.
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The signage for the community health centre building is sympathetic to the locality and will not detract from visual amenity.
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	Not applicable.
Does the proposal screen unsightliness?	As noted previously, the signage for the community health centre is integrated into the building. However, the building itself will screen the existing building at 2-4 William Street which has extensive graffiti covering it, particularly on the side of the building facing Pittwater Road and which is visible from multiple viewpoints.
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The building signage will be integrated into the building façade and will not protrude above the building.
Does the proposal require ongoing vegetation management?	Not with respect to the building signage.
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The signage is considered of an appropriate scale for the building (refer Figure 3-3).
Does the proposal respect important features of the site or building, or both?	The building signage will be integrated into the building façade and will not protrude above the building.
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The building signage reflects an equitable balance between functionality and its locational context.
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	The external high level main building identification signs will be designed in accordance with the relevant Australian Standards.
Would illumination result in unacceptable glare?	No.

Criterion	Comment
Would illumination affect safety for pedestrians, vehicles or aircraft?	No.
Would illumination detract from the amenity of any residence or other form of accommodation?	No.
Can the intensity of the illumination be adjusted, if necessary?	Yes.
Is the illumination subject to a curfew?	No.
Would the proposal reduce the safety for any public road?	The building signage will not reduce safety for road users.
Would the proposal reduce the safety for pedestrians or bicyclists?	The building signage will not reduce safety for pedestrians or bicyclists.
Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	Design development for all public areas has included consideration of safety issues and opportunities and CPTED principles.

5.1.6 Warringah Local Environmental Plan 2011

The proposed community health centre is considered a 'health services facility' under the *Warringah Local Environmental Plan 2011* (Warringah LEP). Under the LEP, this is defined as

> *a building or place used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes any of the following:*
>
> *(a) a medical centre,*
>
> *(b) community health service facilities,*
>
> *(c) health consulting rooms,*
>
> *(d) patient transport facilities, including helipads and ambulance facilities,*
>
> *(e) hospital.*

An assessment of the proposed development against the relevant provisions of the LEP is provided in the following table.

Table 5-2 Consideration of relevant Warringah LEP provisions

Provision	Comment
Land use table	The subject land is zoned B5 Business Development. The objectives of this zone are to provide for a range of business-related uses. Health facilities are permitted with consent in this zone.
Clause 4.3 Height of buildings	The maximum building height is 11 metres. The development will exceed this height. Justification for the departure from the maximum building height for the development is provided after this table.
Clause 4.4 Floor space ratio	There is no maximum FSR for the subject land.

Provision	Comment
Clause 5.9 Preservation of trees or vegetation	This clause sets out requirements to preserve amenity through preservation of trees and other vegetation. There is minimal vegetation on the site, the majority being non-native vegetation associated with 620 Pittwater Road. Consideration of amenity is provided in Section 5.4 and biodiversity values in Section 5.7.
Clause 5.10 Heritage Conservation	This clause sets out requirements in relation to heritage conservation, including the preparation of heritage impacts statements and conservation management plans. Consideration of impacts on historic heritage has been undertaken by Australian Museum Consulting and is documented in Appendix G and in Section 5.8.
Clause 6.1 Acid sulfate soils	This clause sets requirements to manage potential disturbance of acid sulfate soils (ASS) and consequent environmental damage. The northeast corner of the site (624 Pittwater Road) is mapped as having Class 4 ASS. The development is considered unlikely to impact on ASS. The development would not trigger the criteria specified in clause 6.1(6) and therefore an ASS management plan would not be required. Further discussion of potential impacts on ASS is provided in Section 5.11.
Clause 6.3 Flood planning	This clause sets requirements to manage flood risk with respect to impacts on development and development on flood behaviour. Consideration of impacts on flooding has been undertaken by Taylor Thomson Whitting and is documented in Appendix I and in Section 5.13.

Exceedance of maximum building height

The roof of the community health centre building would be at a height of 18.6 metres. Additional structures on the roof such as mechanical plant, and heating and ventilation plant would have a maximum height of 22.6 metres. The community health centre building would therefore generally exceed the maximum building height of 11 metres by 7.6 metres, and by 11.6 metres with regard to the plant enclosures on the roof. This is considered to be reasonable in these circumstances for the reasons outlined below.

Clause 4.6 of the Warringah LEP provides for departures from the specified development standards to provide an appropriate degree of flexibility for particular development, and to achieve better outcomes for and from development by allowing development to be assessed on its merit in relevant circumstances. The delivery of the community health centre and car park are considered to be key pieces of social and community infrastructure that will contribute to both the local and regional community. In order to facilitate this level of public investment, flexibility with the design is considered warranted.

The community health centre will bring together a substantial number of community health services that are currently distributed across the Northern Beaches Health Service District, with those currently delivered from Manly Hospital needing to be relocated in view of the impending closure of the hospital. Comment on identification of the preferred site has been provided in Section 1.3.

Effective delivery and enhancement of these community health services requires appropriate accommodation in premises that are suitably located to facilitate access by clients. The required

functional performance outcomes for delivery of the services establishes the accommodation requirements which, with regard to the available developable area on the preferred site, requires a multi-storey building to house the services. This approach to delivering the community health centre will provide convenience and greater accessibility by public transport to the community. The site is well located in terms of public transport, convenience and retail opportunities to support clients and workforce. The increased height is considered appropriate in this context.

Health Infrastructure has undertaken multiple revisions of both site layout and design of the community health centre building to minimise the building height (and mass) without materially compromising functionality. This has resulted in a slight reduction in height from the initial building roof level.

Design of the building has considered privacy issues, particularly with regard to views from the upper levels on the southern end opposite residences in Williams Street; the number and configuration of windows addresses this issue. Design has also minimised impacts on solar access and overshadowing (refer Section 5.4). It is therefore considered that no material impacts on adjoining properties will result from the proposal.

As noted in Section 2.4, the northern side of William Street to the east of the site contains a variety of commercial enterprises with building heights of 1-2 storeys. A four-level building is located immediately to the east of 612 Pittwater Road (at 2-4 William Street). The roof level of the existing adjacent building at 2-4 William Street is at a height of about 16 metres with telecommunications infrastructure sited on the roof increasing this by up to 3.5 metres. The roof level of the community health centre building would not be inconsistent with the height of this adjacent building.

5.1.7 Warringah Development Control Plan 2011

Development control plans are not a matter for consideration in the assessment of SSD applications through the effect of clause 11 of the SRD SEPP which states that 'Development control plans … do not apply to … State significant development'.

This notwithstanding, an assessment of the proposed development against the relevant provisions of the DCP is provided in Table 5-3.

Table 5-3 Consideration of relevant Warringah DCP provisions

Provision	Comment
B2 Number of Storeys	Does not apply to the development.
B7 Front Boundary Setbacks	The setback for the property frontage to Pittwater Road is 6.5 metres. The development does not meet this setback. Design development has sought to set the building back from the front boundary (Pittwater Road) within the constraints of the site and the required functionality of the building, and the future BRT interchange. The adopted design is considered to best meet the functionality requirements of the community health centre building and the adjacent public transport interchange.
B8 Merit assessment of front boundary setbacks	Does not apply to the development.
B9 Rear Boundary Setbacks	Does not apply to the development.
B10 Merit assessment of rear boundary setbacks	The identified matters have been considered with regard to developing the site layout as outlined in the Design Report provided as Appendix D.

Provision	Comment
B14 Main Roads Setback	Does not apply to the development (the site is not land identified on the DCP Setbacks Main Road planning map).
C2 Traffic, Access and Safety	The identified matters have been considered in preparation of the Transport and Accessibility Report provided as Appendix E.
C3 Parking Facilities	As per previous comment.
C4 Stormwater	The identified matters have been considered in preparation of the Stormwater Management Report provided as Appendix I.
C7 Excavation and Landfill	The identified matters have been considered with regard to developing the site layout as outlined in the Design Report provided as Appendix D.
C8 Demolition and Construction	The identified matters have been considered in preparation of the Preliminary Construction Management Plan provided as Appendix J.
C9 Waste Management	The identified matters have been considered in preparation of the Design Report provided as Appendix D.
D3 Noise	A noise study has been prepared to assess the impacts of construction and operational noise and is provided as Appendix F. Mitigation of operational noise impacts has been addressed during design development.
D6 Access to Sunlight	The identified matters have been considered in preparation of the Design Report provided as Appendix D.
D8 Privacy	As per previous comment.
D9 Building Bulk	As per previous comment.
D10 Building Colours and Materials	As per previous comment.
E11 Flood Prone Land	The development is located on land identified as being in a Medium Flood Risk Planning Precinct. Relevant matters have been considered in the Stormwater Management Report provided as Appendix I. The design has adopted a flood planning level of 11.2 metres AHD for the lowest floor level and is consistent with the DCP.
Appendix 1 Car Parking Requirements	The identified matters have been considered in preparation of the Transport and Accessibility Report provided as Appendix E.

5.2 Policies

The following policies, strategies and guidelines are relevant to the proposed development:

- NSW 2021
- Rebuilding NSW – State Infrastructure Strategy 2014 (Rebuilding NSW)
- A Plan For Growing Sydney
- NSW Long Term Transport Master Plan 2012
- Sydney's Cycling Future 2013

- Sydney's Walking Future 2013
- Development near rail corridors and busy roads – interim guideline
- Healthy Urban Development Checklist (NSW Health).

Consideration of these with respect to the proposed community health centre is provided as follows.

5.2.1 NSW 2021

NSW 2021 is a 10 year plan to rebuild the economy, return quality services, renovate infrastructure, strengthen our local environment and communities and restore accountability to Government.

A key theme of the Plan is to deliver quality health services and Goal 11 (keep people healthy and out of hospital) is directly relevant to the proposed community health centre. The development will provide a range of health services that support Goal 11 and will facilitate improved community health.

The development is consistent with the relevant goals of NSW 2021.

5.2.2 Rebuilding NSW

Rebuilding NSW is the NSW Government's plan to boost the NSW economy over a 20 year period through the provision of new productive infrastructure. It allocates $1 billion for health-related infrastructure including $300 million for 'one stop shops' that will facilitate health care in metropolitan and regional centres. These will bring together a variety of healthcare providers to improve patient access to services and increase overall efficiency, and are expected to improve health outcomes for vulnerable members of the community.

The development brings together a range of health services that are currently dispersed across the Northern Sydney Local Health District and co-locates them adjacent to the Warringah Mall bus interchange which will facilitate access by public transport.

The proposed development supports and is entirely consistent with the goals of Rebuilding NSW.

5.2.3 A Plan For Growing Sydney

A Plan For Growing Sydney is intended to guide land use planning decision-making for the next 20 years. It provides a framework based around four key goals to develop a competitive economy with world-class services and transport; to deliver greater housing choice to meet changing needs and lifestyles; to create communities that have a strong sense of wellbeing; and to safeguard the natural environment.

Direction 1.10 addresses planning for health services to meet population growth that could place pressure on these health services leading to delays in obtaining health care or to a poorer quality of care.

The development supports and is entirely consistent with the goals of *A Plan For Growing Sydney*.

5.2.4 NSW Long Term Transport Master Plan 2012

The NSW Long Term Transport Master Plan provides a framework to deliver an integrated, modern transport system by identifying NSW's transport actions and investment priorities over the next 20 years.

Given the proximity of the site to existing public transport services, the proposed development will support the actions contained within the Plan. The development includes provision for commuter parking for bus patrons which will encourage a modal shift away from private vehicle use. Reducing the number of private vehicles on the road network will contribute to reducing congestion.

The development supports and is consistent with the goals of the NSW Long Term Transport Master Plan.

5.2.5 Sydney's Cycling Future 2013

Sydney's Cycling Future was released in December 2013, and is intended to facilitate creation a safer and easier bicycle riding experience for the people of Sydney.

There is an existing bicycle parking facility adjacent to the southern end of the site and this would be retained within the development. This facility is identified on the Warringah Bike Plan Bicycle Route Network and the development site is adjacent to two cycle paths identified in the plan.

The development will support cycle access to the community health centre.

5.2.6 Sydney's Walking Future 2013

Sydney's Walking Future was released in December 2013, and seeks to make walking the transport choice for short trips under two kilometres and to help people access public transport. Given the geographic extent of the Northern Sydney Local Health District, it is not anticipated that this will be a significant mode of travel for persons seeking to access health services.

5.2.7 Development near rail corridors and busy roads – interim guideline

As noted in Section 5.1.3, in December 2008, the then Department of Planning issued an interim guideline to support the provisions of the Infrastructure SEPP with regard to proposed developments in, or adjacent to, specific roads and railway corridors. The guideline identifies matters for consideration to minimise impacts of busy roads and railway corridors on residential and other sensitive development such as schools and child care centres. As previously noted, Pittwater Road is regarded as a 'busy road' under the interim guideline as the AADT volume is greater than 20,000 vehicles.

Part C of the guideline addresses the potential impacts of roads and railway development on adjacent development. It applies specifically to new residential and other sensitive developments (or replacement or alterations and additions that require development approval) such as single/dual occupancy and multi-unit dwellings (including residential aged-care facilities), places of public worship, hospitals and educational establishments (including schools and child care centres).

Noise and vibration impacts have been considered as part of the assessment for the proposed community health centre and a specialist assessment has been undertaken (refer Appendix F and Section 5.10). Potential issues with regard to indoor air quality related to adjoining traffic is addressed through the building design which incorporates mechanical ventilation plant located on the building roof.

Part D of the guideline addresses the potential impacts of adjacent development on roads and railways. It applies to any development that could have an adverse effect on the safety and/or integrity of the road or rail infrastructure. It also addresses specific Infrastructure SEPP requirements about safety and design, and excavation and other earthworks. Relevant matters have been addressed through the design development process (refer Appendix D Design Report).

5.2.8 Healthy Urban Development Checklist

The development involves the construction of a new community health centre. This will provide improved access to health services and improve efficiency in delivering these services. The proposed development is considered to be consistent with the intent of the *Healthy Urban Development Checklist* by providing a new development that is well connected to existing and future public transport, contributes to social infrastructure in the locality and region, and encourages non-car transport modes by providing commuter car parking on-site.

5.3 Built form and urban design

Detailed consideration of built form, urban design and related issues is provided in the Design Report prepared by MSJ Architects and provided as Appendix D.

The site context, streetscape, address and neighbouring residential developments have been taken into consideration in the design of the new community health centre, resulting in a building with its central mass positioned along the western edge of the site along Pittwater Road.

The building steps away at the top floor away from the southern residential area of William Street and the low rise industrial developments on the north.

The street frontages of the community health centre reflect the respective streetscapes. The William Street address incorporates a covered entry and encourages pedestrian activity, while the Pittwater Road frontage will be more prominent with the bus interchange including wider footpaths to accommodate larger numbers of commuters.

The building will provide an active frontage in line with CPTED principles to the upgraded bus interchange by including a small retail tenancy space at the same level overseeing and activating the area. The retail tenancy will also form the southern side of the covered area pedestrian colonnade to the car park.

The development includes provision for commuter parking which directly responds to one of the challenges identified in the NSW *Long Term Transport Master Plan* of increasing the number of car parks and bicycle spaces at interchanges. This and the commitments made in the *Northern Beaches Transport Action Plan* could be expected to contribute to an increased level of pedestrian activity in the vicinity of the community health centre related to the use of public transport.

The building design incorporates features to support the functionality of the bus interchange. The setback and form of the building at the Lower Ground Level provides space for seating and a canopy for pedestrian shelter.

In addition to the commuter car park, the community health centre building includes design features on the Pittwater Road frontage to improve amenity for bus patrons, and the pedestrian bridge will facilitate safer crossing of Warringah Road, particularly during peak travel periods when higher numbers of pedestrians are expected to occur.

The pedestrian bridge will allow removal of the at grade crossing at William Street. This will contribute to improved pedestrian safety and allow a right turn out from William Street without affecting the efficiency of other traffic flows through the intersection (ie no change in Level of Service). This will also reduce the number of vehicles using William Street and other locals streets to travel north.

The external public stairs and lift for the pedestrian bridge will direct clients and commuters to the Lower Ground/footpath level buses or through to the car park behind the community health centre building.

The existing Council bike parking facilities located at the corner of Pittwater Road and William Street will be incorporated into the community health centre, with a new cohesive paving scheme including areas of soft landscaping proposed for the northern and southern ends of the site.

5.4 Environmental amenity

Privacy

The number of windows on the southern façade of the community health centre building has been limited to minimise privacy impacts on residences to the south, and where provided are discrete window openings that restrict views. On the eastern façade, visual privacy is enhanced by the similar use of discrete windows adjoining south eastern commercial property.

The commercial and light industrial properties on the north and north eastern area of the site are screened from the community health centre building by the larger setback of the building created by the northern access way off Pittwater Road. Discrete windows on the northern and eastern elevations of the building will also contribute to visual privacy.

Solar access and overshadowing

Shadow diagrams have been prepared by MSJ Architects to characterise the nature of shadow impacts created by the proposed development (refer Appendix D). These illustrate that overshadowing impacts are minimal. The maximum extent of overshadowing occurs at the winter equinox when the sun is lowest in the sky.

The community health centre building will partly overshadow the corner residence at 610 Pittwater Road at the winter equinox from sunrise but this will have largely receded by midday (refer Figure 5-1) and the property would receive a minimum of two hours of sunlight during the day. The existing commercial building at 2-4 William Street already overshadows several William Street residences (shown by the blue shading).

The community health centre building will reduce the solar access of 2-4 William Street, but will also screen the building from the western sun. The proposed car park structure will cause some minor overshadowing to the surrounding light industrial and commercial properties.

Figure 5-1 Brookvale Community Health Centre shadowing at winter solstice
(Note: larger figures are provided in Appendix D Design Report)

Acoustic amenity

The development will not have any material effect on the acoustic amenity of surrounding residences and businesses (and noting that traffic on Pittwater Road is the principal influence on existing acoustic

amenity). The design of the development incorporates the following features to minimise operational noise impacts:

- The community health centre building will be air-conditioned with fixed windows
- Service and delivery activities will occur within the site
- A substation will be located off the corner of William Street and Pittwater Road to ensure the William Street residences are not affected by minor noise emissions and other plant will be contained within either the building or site
- Air conditioning plant is located on the top level away from residential properties in William Street as well as being remote from all other properties
- The solid fire wall on the southern side of the car park will shield noise generated by car park users
- Use of the top level of the car park will be restricted to community health centre staff only and therefore the likelihood of noise emissions outside of normal working hours will be low.

View loss

Due to the siting of the building and the adjoining industrial premises the majority of the surrounding development will not experience any view loss. The commercial building at 2-4 William Street will lose distant district views to the north and west.

Wind and lighting impacts

The buildings will not have any adverse wind impacts on adjoining properties. Summer afternoon breezes to the William Street residences will be unobstructed while the buildings will screen the commercial and light industrial properties on the east from cold winter breezes.

Any internal driveway and after hours lighting spill from the building will be screened by the existing commercial building at 2-4 William Street and will not affect the residential properties to the south of the site. With the exception of the top level, there will be no light spill from the car park to the residential properties to the south. As noted previously, use of the top level of the car park will be restricted to community health centre staff only and therefore the likelihood of light spill will be low.

There will be light spill from the car park into the light industrial and commercial properties on the northern and eastern boundaries. This will not have any material impact on these properties which are generally unoccupied in the evenings and if occupied are similarly engaged in work activities which are not adversely affected by any light spill.

All lighting will meet applicable lighting standards.

5.5 Transport and accessibility

A transport and accessibility assessment has been undertaken by Taylor Thomson Whitting and is provided as Appendix E. The report describes the road network surrounding the site, existing traffic volumes and parking facilities, and assesses the impacts of the proposed development with regard to traffic and parking.

Existing environment

The site is located on the eastern side of Pittwater Road, immediately to the north of the intersection of Condamine Street and Pittwater Road, Brookvale. Pittwater Road is an arterial route for the Northern Beaches. Roads and Maritime Services (RMS) has a permanent traffic counting station (ID 34016) at Manly Vale on Condamine Street near Manly Creek, about 1100 metres south of the development site. Table 5-4 presents AADT volumes for 2012 recorded at this station.

Table 5-4 Annual Average Daily Traffic Volumes 2012, Condamine Street, Manly Vale at Manly Creek

Direction	All Days	Week days	Weekends
Northbound	21,200	23,000	18,400
Southbound	20,500	22,300	17,600

Source: RMS (2012)

Pittwater Road is classified as a Main Road (MR164) under the *Roads Act 1993* and is under the care and control of RMS. The posted speed limit on Pittwater Road is 60 km/h.

William Street is a Local Road under the care and control of Warringah Council. The posted speed limit on this road is 50 km/h. The southern side of William Street is occupied by residences while the northern side is occupied by a range of business and commercial premises.

There are dedicated kerbside bus lanes on both sides of Pittwater Road and the location forms part of the Warringah Mall Interchange. There are two bus shelters on the eastern side of Pittwater Road at the back of the footpath, one located adjacent to 620 Pittwater Road and the other toward the southern end of 612 Pittwater Road. There is also a bus shelter on the western side of Pittwater Road.

Pedestrian access across Pittwater Road is currently available via two signalised crossings at the intersections of William Street and Cross Street. There is a pedestrian exclusion fence that extends from immediately north of the at grade pedestrian crossing at William Street to about the general location of the entrance to the bus depot. There is anecdotal evidence that pedestrians cross Pittwater Road to the south of the intersection rather than use the at grade crossing north of the Cross Street intersection.

There is a footpath along the eastern side of Pittwater Road that extends northward from William Street to the bus depot. Line marking is provided at the entrance to the bus depot to guide pedestrians to the footpath to the north of the depot entrance. Access to the depot is controlled via traffic signals.

Access is available to the site from 624 Pittwater Road. This is a shared access with 626 Pittwater Road (Pet-O/veterinary surgery). Access from Pittwater Road is restricted to left in, left out only and requires crossing of the bus lane.

Access to 612 Pittwater Road is available from William Street. Access is available for all directions, however, traffic exiting William Street (under traffic signals) to Pittwater Road is restricted to left turn only. The development provide for a right turn from William Street into Pittwater Road. The right turn phase will be a short phase (about 15 seconds). The pedestrian phase will be removed with alternative crossing provided for via the pedestrian bridge.

An investigation undertaken by GHD in 2011 identified that the intersection of William Street and Pittwater Road was operating satisfactorily (Level of Service C).

Access

There is good road access to the community health centre from all parts of the catchment. Vehicles travelling to the site from the north will generally use Pittwater Road which provides more direct access and avoid use of local roads. An alternative route is available via Mitchell Road (left turn from Pittwater Road), right turn into Wattle Street, and then right turn from Short Street into William Street. Other routes

Vehicles travelling to the site from the south can use several routes including:

- Left turn from Condamine Street into Old Pittwater Road, right turn into Cross Street, right turn from Cross Street (under traffic signals) into Pittwater Road
- Right turn from Condamine Street into Kentwell Road (under traffic signals), left turn into Pittwater Road (under traffic signals), right turn into Corrie Road, left turn into William Street.

The inclusion of the pedestrian bridge in the development will allow removal of the at grade pedestrian crossing at William Street, subject to RMS approval. This will allow provision of a right turn out from William Street for vehicles wishing to travel north from the community health centre and would reduce traffic impacts on locals roads. Minor alterations to the intersection will be required to provide the new right turn lane and will require relocation of the existing bike parking facility which would be accommodated in the ground level of the car park.

The site access locations and allowable movements will generally be unchanged from what currently exists, ie:

- Pittwater Road: left in, left out only
- William Street: all movements allowed.

Access via Pittwater Road will require vehicles to travel in the bus lane for a short distance which is the current situation.

These two access points will be connected by an internal road that would provide access to the car park and to facilities at the rear of the building such as the loading dock. There will be sufficient width to allow Medium Rigid Vehicles (MRV), such as those used for waste collection, and cars to pass safely.

Minor modifications will be required to the Pittwater Road access to accommodate vehicles up to 12.4 metres in length (such as emergency vehicles).

Access to 626 Pittwater Road will remain unchanged.

Pedestrian access to and from the car park will be available at all times through the Lower Ground level of the community health centre.

Car parking

Car parking demand on site has been determined with regard to:

- Staff and client numbers as established through the functional requirements for the facility
- A travel demand survey of staff and clients of existing facilities.

The analysis identified that about 200 car parking spaces would be required to satisfy the estimated demand. An additional 250 spaces would be required for commuter car parking in line with Transport for NSW's minimum requirement for the Brookvale BRT interchange.

The development would provide 475 car parking spaces. A breakdown of this is provided in Table 5-5 together with where within the car park the allocation would be located.

Table 5-5 Car parking allocations and locations

Allocation	No. of spaces	Location
Visitor/short term parking	44	Level 1
Accessible parking	10	Level 1
Commuter parking	250	Levels 2-5
BCHC fleet parking	54	Levels 5, 6
BCHC staff parking	117	Levels 6, 7

Subject to final design, the car park allocation will be controlled as follows:

- Level 1 short term parking (1 hour limit) – this will be policed by approved authorities such as Council officers.
- Level 2-5 commuter parking – the daily parking limit will likely be access-controlled (possibly integrated with the TfNSW Opal card system) and may be policed by approved authorities such as Council officers.
- Level 5-7 BCHC Staff/Fleet – access to these levels will be restricted through the use of approach-activated boom gates. This will reduce delays and queuing within the car park at the boom gates as well as avoiding infrastructure associated with a swipe card system.

Traffic generation

The transport and accessibility assessment included consideration of the amount of traffic generated by the development and the impact of this on the performance of the William Street/Pittwater Road intersection, and the local road network more broadly.

The analysis identified that the development could generate 450 vehicle trips per peak hour. This will have a negligible effect on the arterial road network. Traffic queuing at the William Street intersection during peak periods could temporarily preclude vehicles turning right out of the community health centre site and instead require them to travel east along William Street to reach a suitable alternative route to the north or south. While no quantitative information is available on traffic volumes on local streets, the additional traffic from the community health centre will be unlikely to have a significant impact on the local traffic network.

The analysis also identified that there will be no change to the existing level of performance of the William Street/Pittwater Road intersection.

Active transport

As noted previously, the provision of the right turn from William Street into Pittwater Road will impact the area currently used for bike parking which caters for up to 20 bicycles. These will be relocated within the development which will provide the following cycle parking provisions:

- A cage facility under the main building (southern end) for the use of commuters to accommodate up to 16 racks (32 bicycles) securely
- A cage facility on car park level 1 for the use for public, commuters and staff suitable to store 10 racks (20 bicycles) securely
- 15 racks (30 bicycles) within covered areas of the car park on level 1 that can be utilised for short term bicycle parking for public, commuters and staff.
- Eight racks (16 bicycles) located under the main building (northern end) that can be utilised for short term bicycle parking for public, commuters and staff.
- Three racks (6 bicycles) located at the southern end of the site that can be utilised for short term bicycle parking for public, commuters and staff.

As noted previously, the community health centre will be co-located with the Brookvale BRT interchange and the design of the building includes various features to provide for anticipated growth in pedestrian traffic in the locality. This includes a pedestrian bridge which will provide for safer crossing of Pittwater Road. Access to the bridge will be available by lifts and stairs.

Construction

Construction vehicles travelling to the site from the north will generally use Pittwater Road which provides more direct access and avoids use of local roads. Vehicles travelling to the site from the south can use several routes including:

- Left turn from Condamine Street into Old Pittwater Road, right turn into Cross Street, right turn from Cross Street (under traffic signals) into Pittwater Road
- Right turn from Condamine Street into Kentwell Road (under traffic signals), left turn into Pittwater Road (under traffic signals), right turn into Corrie Road, left turn into William Street.

The second route has a three tonne weight limit and a 40 km/h local area speed limit on Corrie Road.

Site works will generate about 20 truck movements daily during day to day activities. This will increase to approximately 50-60 truck movements per day during concrete pours. On concrete pour days communication between the site, concrete batching plant and truck drivers will be maintained to stagger the arrival of vehicles in order for them to be accommodated within the designated work area and to minimise traffic disruptions.

All deliveries will be within approved work hours and, as far as practicable, be outside of peak traffic periods to reduce impacts on traffic.

Construction vehicles would primarily comprise dump trucks, up to 12.5 m long Heavy Rigid Vehicles (HRV). Semi-trailers may be used to deliver steel reinforcing requirements to the site.

All construction vehicle movements can be accommodated within the existing road network.

A Preliminary Construction Traffic Management Plan is provided in Appendix J.

Pedestrian access along Pittwater Road and William Street will be maintained as far as practicable. If required, alternative access is available on the opposite sides of both roads and safe crossing is available via the signalised intersection at William Street.

Footpath works along Pittwater Road will need to be staged to maintain pedestrian through access and access to buses. The option exists to temporarily relocate the bus stop to the north during footpath works, subject to TfNSW and Sydney Buses approval.

Access to adjoining properties will be maintained at all times during construction.

Where practicable, parking will be provided on site. If required, additional parking would be provided through a short term lease of suitable land. The need for this additional parking would be assessed by the construction contractor as part of site works planning and programming.

To minimise the required parking demand, the construction contractor will be encouraged to assist in the transportation of workers to the site. As part of the site induction, employees will be advised of the public transport options and encouraged to use these facilities or arrange carpooling.

5.6 Ecologically sustainable development

Schedule 2 to the EP&A regulation lists the four ESD (ecologically sustainable development) principles adopted across NSW planning and environmental legislation, these being:

- The precautionary principle
- Inter-generational equity
- Conservation of biological diversity and ecological integrity
- Improved valuation, pricing and incentive mechanisms.

These have been considered as part of the design development process and the design presented in Section 3 responds to these separately and collectively through a balanced consideration of the following factors:

- Environmental: emissions, occupancy and user controls
- Health benefits: daylight, air quality ,thermal, visual comfort and user control
- Flexibility: operational, layout and load adaptability and future expansion
- Operation: security, user interaction, training and education
- Cost: capital, maintenance, energy life cycle and related building costs
- Reliability: ease of maintenance, resilience and proven technology.

Health Infrastructure requires energy modelling and an independent commissioning agent for projects greater than $10 million. The design commitment is for:

- Energy performance that achieves a minimum 10 per cent improvement when compared with either the 'stated value' or the deemed to satisfy reference building
- All mechanical services and automated control systems to be commissioned to meet the required function with minimum energy use.

Additionally, Health Infrastructure will target a 4 Star Green rating, however will not be seeking formal certification against this rating tool.

Other ESD aspects of the development are summarised in the following table.

Table 5-6 Brookvale Community Health Centre ESD design responses

Aspect	Design response
Energy consumption	▪ A Building Management System (BMS) will control all building services (air conditioning and lighting) shutting them down automatically after hours ▪ The western façade of the southern pavilion incorporates louvres to reduce overall heat gain and energy requirements for cooling ▪ Use of natural light is maximised in all habitable areas to reduce the reliance on artificial lighting
Water consumption	▪ Water conserving WC suites and tap ware ▪ Time controlled taps in public amenities
Materials	▪ No use of rainforest timbers unless plantation grown ▪ No use of timbers from high conservation forests ▪ Use of recycled timber, engineered and glued timber composite products, timber from plantations or from sustainably managed regrowth forests ▪ Use of materials/products which: + Adequately and economically perform their intended functions, and also have lower adverse environmental impacts throughout their life cycle + Contain reduced or nil hazardous substances + Are low VOC products + Reduce the amount of PVC used throughout the building + Reduce the demand for rare or non-renewable resources

Aspect	Design response
	+ Are made from or contain recycled materials or can be recycled at the end of their useful life.

5.7 Biodiversity

Existing environment

There is limited vegetation on the site (refer Figure 5-2) with most of it being associated with the 620 Pittwater Road part of the site.

Figure 5-2 Brookvale Community Health Centre site – existing land use

(Aerial imagery copyright NearMap).

An inspection by an experienced ecologist on 4 May 2015 identified that there is no native vegetation present. With regard to the 620 Pittwater Road part of the site, the following was noted:

- There is a small grove of mature banana trees (*Musa* sp.) at the eastern corner

- A large exotic conifer (*Cupressus* sp.) is present at the front of the derelict residence
- Vegetation across the rest of the site is dominated by the weeds Cobbler's Pegs (*Bidens pilosa*), Morning Glory (*Ipomoea indica*), Cassia (*Senna pendula*), Fleabane (*Conyza bonariensis*), Blackberry Nightshade (*Solanum nigrum*), Sugar Cane (*Saccharum* sp.) and Common Couch (*Cynodon dactylon*).

The only notable vegetation on 624 Pittwater Road is a Cocos Palm (*Syagrus romanzoffiana*) at the front of the property and a small area of landscaping at the front of the Barbecues Galore building. The tree at the rear of the property is on the adjacent 626 Pittwater Road property.

Figure 2-2 shows that the land both immediately adjacent to the site and in the wider vicinity is fully developed. Warringah Golf Course is located about 100 metres to the south of the site and while extensively vegetated, is a highly modified landscape. There are no waterbodies on the site with the only notable waterbody in the wider area being Brookvale Creek which runs southward through the golf course, eventually discharging to Manly Lagoon. Upstream of the golf course, the creek is largely in culverts where it traverses the developed area.

The subject land does not comprise 'critical habitat' as defined under Section 4 of the *Threatened Species Conservation Act 1995*.

Assessment of impacts

The SEARs require biodiversity impacts to be assessed with reference to the NSW Framework for Biodiversity Assessment (FBA) (OEH 2014) unless otherwise agreed to by OEH. Given the absence of native vegetation on the study site, HI sought formal agreement from OEH (in consultation with DP&E) that application of the FBA would not be necessary. OEH provided written confirmation to DP&E that use of the FBA would not be required but requested appropriate documentation be provided to substantiate various matters including that the site does not support native vegetation, waterbodies, FBA-assessable habitat for threatened biota, etc.

Assessment of impacts on flora and fauna for the 620 Pittwater Road part of the site has been separately assessed through an REF prepared in May 2015 by SMEC Australia. The assessment included reference to the SEARs relating to biodiversity issues.

Given the virtual absence of vegetation on the development site, there will not be any material impact on native flora and fauna, including species, populations, communities or ecosystems listed under NSW of Commonwealth legislation.

The location of the western landing of the pedestrian bridge has been sited avoid mature landscape trees.

5.8 Heritage

An assessment of the impacts of the development on historic (non-Aboriginal) heritage has been prepared by Australian Museum Consulting and is provided as Appendix G. A summary of the findings is provided as follows.

Assessment of heritage significance

European settlement of the Brookvale area began in 1836 when William Frederick Parker was granted two 50 acre parcels of land on either side of what is now Old Pittwater Road. In 1837, Parker purchased an additional 58 acres to the east of his original holdings and the study area is located on this land. A track running through this land would later become Pittwater Road.

Parker subsequently constructed a house in the vicinity of the study area which he named *Brookvale*. An indication of the general location of this building is provided in an 1884 sales lithograph advertising property at Greendale (the former name of Brookvale).

At the time of Parker's death in 1892, the 158 acres had largely been subdivided. Parker's son, William Francis Parker, took possession of a land parcel containing the study area on 23 January 1894. A sketch map of the property on the 1894 Certificate of Title shows three structures with Pittwater Road being shown on a slightly different alignment to its current alignment.

By the time of William Francis Parker's death in 1927, the property had been further subdivided. The sketch plan attached to the 1943 Certificate of Title shows 612 Pittwater Road divided into four parcels of land, and showing land resumed by the Commissioner of Main Roads for the widening of Pittwater Road.

Despite the subdivision of William Parker's original landholdings and the extension of the tram line to Brookvale in 1910, the study area remained relatively undeveloped until the 1940s. The 1943 aerial imagery shows a single structure at 602 Pittwater Road. The property at 624 Pittwater Road appears to have been used for agriculture while 612 Pittwater Road is still undeveloped.

No historical evidence can be found to suggest that any structures were present at 624 Pittwater Road prior to the construction of the buildings currently on the site.

The property at 612 Pittwater Road was used as a service station until 1997, with demolition of the buildings on the site occurring the following year. In recent years the site has been remediated with works including the removal of 11 underground storage tanks.

Outcome of the assessment

The historic heritage investigation did not identify any definitive evidence of historically significant activity (beyond agriculture) on 612 Pittwater Road, 624 Pittwater Road or the area affected by the pedestrian bridge on the western side of Pittwater Road. The level of disturbance at these locations is such that it would be very unlikely that any historic archaeological evidence would have been preserved.

The presence of an early house at 620 Pittwater Road that may have been connected with the Parker family, the first European settlers in the area, was confirmed through review of 1943 aerial photography. The widening of Pittwater Road and the construction of the later house (the one presently occurring on site) is likely to have destroyed much of the archaeological evidence. However, there is considered to be potential for physical evidence of the earlier house or associated features (cess pit, rubbish pits, outbuildings) to still be present.

5.9 Aboriginal heritage

An assessment of the impacts of the development on Aboriginal heritage has been prepared by Australian Museum Consulting and is provided as Appendix G. The SEARS specify that, where relevant, the EIS shall address Aboriginal heritage in accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005* and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The Aboriginal heritage assessment has been undertaken in accordance with Step 1 of the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.* As per Step 1 of the guidelines, a preliminary assessment was undertaken to determine the potential for Aboriginal cultural heritage values to occur on the site, and to identify any requirement for further assessment of the proposed development site. The preliminary assessment comprised a staged approach involving a search of the Aboriginal Heritage Information Management System (AHIMS) and review of previous archaeological studies to develop a predictive model. The outcome of this step also informed the need for consultation with stakeholders.

A summary of the findings is provided as follows.

AHIMS search

An extensive search undertaken of the AHIMS on 28 May 2015 identified 83 sites within the wider study area (refer Table 4.3 and Figure 4.1 in the heritage report). However, no Aboriginal heritage sites, objects or places have been recorded within or near the immediate study area.

Aboriginal heritage site predictive modelling

With regard to the registered archaeological sites in the region, the review of previous archaeological studies, and the environmental context of the study area, there is considered to be low potential for Aboriginal artefact sites to be present within the study area.

The study area is within 200 metres of Brookvale Creek and encampment of Aboriginal people may have occurred in the vicinity. However, any such sites are likely to have been significantly disturbed, damaged and/or removed as a result of past vegetation clearing, and previous earthworks and construction activities in the study area.

A review of the soil landscapes mapping for the region identified that the study area occurs within *Disturbed Terrain* which means undisturbed natural soil horizons are unlikely to remain in situ. Accordingly, it is unlikely that there are any in situ Aboriginal artefact sites within the study area. Should any such sites remain, they would likely have been disturbed and would be of low archaeological research potential and limited heritage significance.

Extensive vegetation clearance has resulted in the removal of all original native vegetation in the study area and therefore there is no potential for culturally modified trees to occur in the study area.

Stone quarry sites, axe grinding grooves stone engravings/art and shelter sites are highly unlikely to be found in the study area due to the absence of suitable stone outcrops.

Outcome of the assessment

The preliminary assessment concluded that the development site is unlikely to retain Aboriginal heritage sites, objects or places. As per Step 1 of the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005*, no further Aboriginal cultural heritage assessment, including consultation, is required prior to the works.

5.10 Noise and vibration

A noise and vibration assessment has been prepared by Acoustic Logic (refer Appendix F). The outcomes of the assessment are summarised as follows.

Existing environment

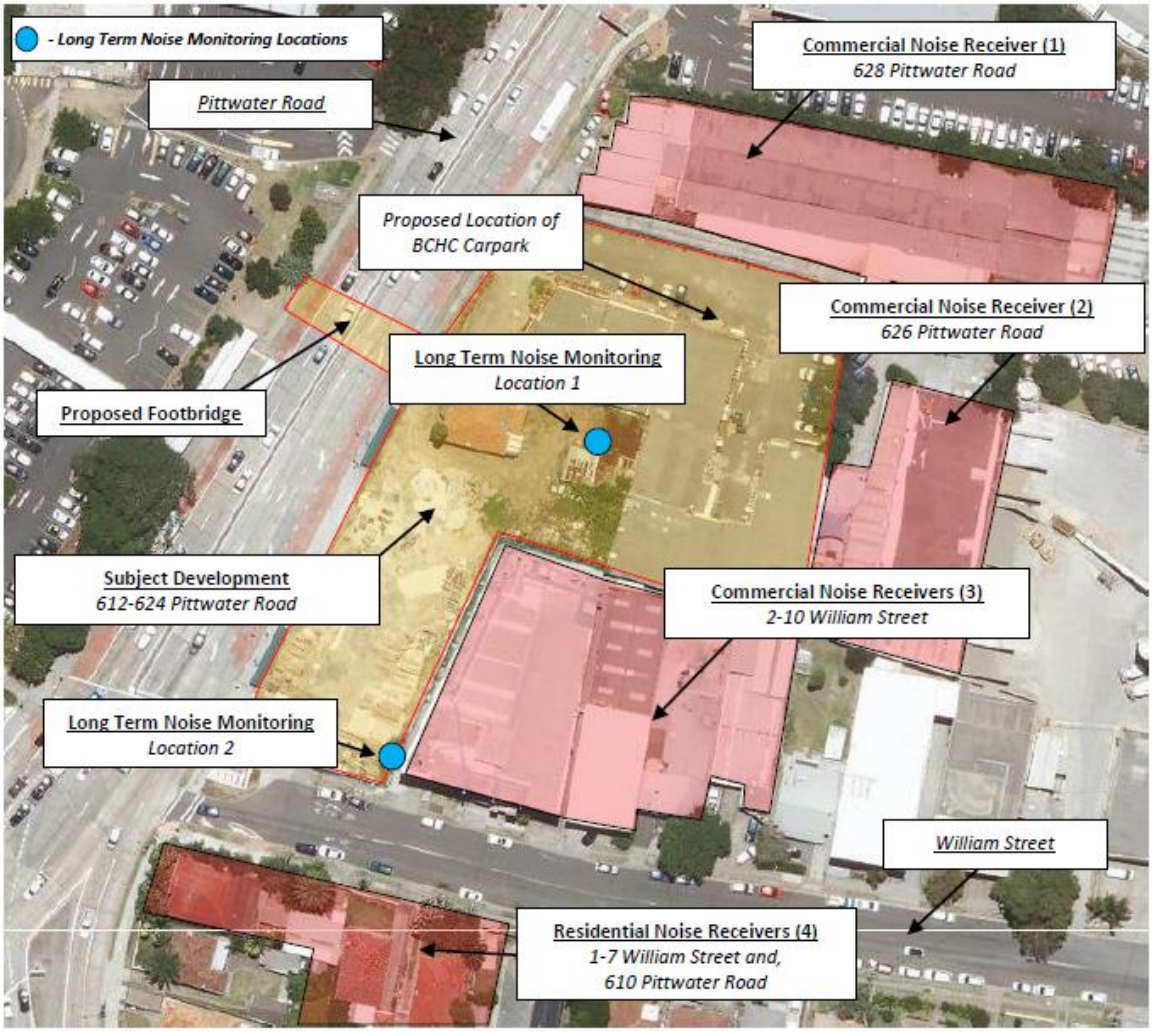
The existing noise environment is dominated by traffic noise from Pittwater Road which is an arterial route for the Northern Beaches. RMS has a permanent traffic counting station (ID 34016) at Manly Vale on Condamine Street near Manly Creek, about 1100 metres south of the CHC site. The most recent publicly available counts are for 2012 and indicate that on average there are about 23,000 vehicles using this route on weekdays. Traffic volumes on weekends were slightly lower by about 4,500 vehicles

Other sources of noise emissions in the locality include vehicles using William Street, operation of buses at the Brookvale Bus Depot to the north of the development site, and commercial activities at premises on the northern side of William Street, and within Warringah Mall on the western side of Pittwater Road.

The noise and vibration assessment identified the following sensitive receivers (refer Figure 5-3) in the vicinity of the site:

- Receiver 1: Commercial tenancy at 628 Pittwater Road located along the northern boundary of the development site

- Receiver 2: Commercial tenancy at 626 Pittwater Road located behind the development at the northeast corner of the development site
- Receiver 3: Several commercial tenancies at 2-10 William Street at the south-eastern corner of the development site
- Receiver 4: Several residential dwellings located on the southern side of William Street at 1-7 William Street and at 610 Pittwater Road located on the corner of William Street and Pittwater Road.



Source: Acoustic Logic noise and vibration assessment

Figure 5-3 Locations of sensitive receivers and noise monitors

The dwellings on William Street and at 610 Pittwater Road are all single storey dwellings. The dwelling at 9 William Street is a two-storey dwelling but is largely shielded from noise emissions from the majority of the site by the multi-storey commercial building at 2-4 William Street.

Background noise monitoring was undertaken at two locations on the development site between 29 May and 5 June 2015 (refer Figure 2.1 in Appendix F). The results of this monitoring are presented in Table 5-7.

Table 5-7 Measured background noise levels

	Background noise level (dB(A) $L_{90(15\ mins)}$)		
Monitor	**Daytime (7am – 6 pm)**	**Evening (6pm – 10pm)**	**Night time (10pm – 7am)**
Location 1	53	49	46
Location 2	51	48	38

Assessment of construction noise and vibration impacts

Consideration of construction noise and vibration impacts was undertaken with reference to the *Interim Construction Noise Guideline* (ICNG) (DECC 2009) and *Assessing Vibration: A Technical Guideline* (DEC 2006) respectively. Reference was also made to AS2436-2010 *Guide to noise and vibration control on construction, demolition and maintenance sites*. A full description of the methodology is provided in Appendix F.

The nature and magnitude of noise impacts on nearby development from construction activities will depend on the type of construction activity and the relative location of the works on the site. Works adjacent to the southern boundary would have the greatest impact on the nearby residential dwellings while works along the eastern and northern boundaries of the site would impact on adjacent commercial premises.

The noise and vibration assessment makes the following observations:

- Excavation and piling works typically tend to be the loudest construction activity. Noise emissions from construction plant used for these activities typically having sound power levels of about 115 dB(A)$_{Leq(15min)}$. Noise levels of 65-70 dB(A) at the boundaries of the nearest residences would potentially be generated. These would exceed the EPA acoustic criteria, with higher noise levels associated with works undertaken near the southern boundary of the site.
- During erection of structures, use of cranes, hand tools (eg angle grinders) and concrete pumps are the loudest typical activity (sound power levels of about 105 dB(A)$_{Leq(15min)}$. Noise levels of 55-60 dB(A) at the nearest residences could occur. These would exceed the EPA acoustic criteria, with higher noise levels associated with works undertaken near the southern boundary of the site.
- Once construction of the building shell is complete, noise from hand tools will be relatively low, as the new building façade would provide considerable noise attenuation. Once the building shell is largely complete, use of hand tools in internal areas is unlikely to exceed EPA recommended levels.

The noise and vibration assessment notes that noise impacts can be effectively mitigated such as through:

- Selection of equipment and process.
- Location of static plant (particularly concrete pumps and cranes) away from receivers.
- Use of screens or enclosures (typically only feasible for static plant).
- Scheduling of noisy activities and provision of respite periods.

The noise and vibration assessment identifies a range of potential measures to mitigate noise impacts including:

- Utilisation of a 2.4 metre high solid Class-A perimeter hoarding on the southern boundary of the site to act as a barrier for lower level receivers across William Street to the south.
- Where practicable, position major mobile temporary plant such as concrete crushers, concrete pumps, concrete trucks and the like as far as possible from sensitive receptors. Appropriate positioning of these items can result in construction noise levels not exceeding the applicable noise goals for the site.
- Where feasible, begin morning site works at the northern boundary of the site furthest from the residential receivers and progressively advance towards the residential receivers throughout the day. In this way, noise impacts from the site would be reduced while residents are at home.

It notes that as detailed construction noise management planning typically occurs following engagement of a contractor and the subsequent development of a construction program, there are limitations in developing specific management measures. A range of recommendations are made to facilitate identification and implementation of the most suitable mitigation and management measures.

Assessment of vibration impacts from construction activities considers both potential impacts on built structures (structure-borne vibration) and on human comfort (amenity), the latter also taking account of regenerated noise within buildings. Excavation and piling works would be the principal vibration-generating activities, occurring during the initial stages of site development with vibration levels highest at the adjacent commercial receivers adjacent to the northern and eastern boundaries.

The noise and vibration assessment identifies a range of measures to mitigate vibration impacts including:

- Consultation with occupants of the adjacent commercial premises to ascertain whether there is any particularly vibration sensitive equipment so as to determine appropriate vibration criteria if required.
- Where practicable, excavation in rock should be done using rock saws rather than pneumatic hammers.
- If piling is required, augured or vibro-piling should be used rather than impact piling.
- For the initial stages of excavation and piling, vibration monitoring within the surrounding commercial and residential structures should be conducted to assess the occurrence of excessive levels of vibration. Any monitoring system should allow for rapid feedback to the contractor in the event that excessive levels occur.

The construction mitigation and management measures provided in the noise and vibration impact assessment have been included in Section 7.

Assessment of operational noise and vibration impacts

Consideration of operational noise impacts was undertaken with reference to the NSW *Industrial Noise Policy* (INP) (EPA 2000). This considered noise emissions from both the community health centre building and from the multi-storey car park. A full description of the methodology is provided in Appendix F.

The INP provides guidelines for assessing operational noise impacts from development sites. The recommended assessment objectives vary depending on the potentially affected receivers, the time of day, and the type of noise source. The INP has an amenity criterion (which also takes into account sleep arousal) and an intrusiveness criterion that have to be complied with.

The noise assessment established separate noise criteria for the residential and commercial receivers for day time (7am to 6pm), evening (6pm to 10 pm), and night time (10pm to 7am).

Noise emissions associated with use of the community health centre building will generally be associated with:

- Operation of external plant such as heating, ventilation and air conditioning
- Staff and clients entering and leaving the building
- Service vehicles.

Development of the building design has considered noise emissions from plant and where practicable has sought to locate it away from sensitive receivers. Noise emissions will also be attenuated through suitable treatment, eg installation within acoustic enclosures, to meet required noise performance objectives. General requirements for typical plant are identified in the noise assessment report. Staff, clients and service vehicles will generally access the facility during day time hours and are unlikely to be a significant source of noise emissions.

Noise emissions associated with use of the commuter car park will include:

- Vehicles entering and exiting the car park
- Vehicles manoeuvring within the car park
- Vehicle occupants entering and leaving vehicles.

The noise assessment adopted a 'worst case' scenario comprising noise emissions from the top level of the car park (the southern façade of the car park for all lower levels will comprise a solid pre-cast concrete wall with no openings). The assessment concluded that subject to implementation of a range of recommended mitigation measures, the amenity and intrusiveness criteria would be met including with regard to sleep arousal.

Use of the top level of the car park would be limited to the community health centre staff and would not be accessible by commuters. This will further reduce the likelihood of noise emissions from the top level of the car park during evening and night time periods when impacts on residential receivers would be relatively greatest.

The operational mitigation and management measures provided in the noise and vibration impact assessment have been included in Section 7.

5.11 Contamination

A substantial number of investigations have been undertaken for the site in relation to contamination, principally with regard to the 612 Pittwater Road and 620 Pittwater Road parts of the site. A targeted environmental site assessment was undertaken by SMEC in August 2014 on behalf of Health Infrastructure prior to acquisition of the site. A copy of this report is proved as Appendix K. A summary of the findings and recommendations of previous investigations is provided in a report prepared by Parsons Brinckerhoff which is provided as Appendix K. The report includes consideration of acid sulfate soils (ASS) and additional investigations carried out by Parsons Brinckerhoff since April 2015.

Contamination and hazardous materials

There is a comprehensive understanding of the nature of contamination for the 612 Pittwater Road and 620 Pittwater Road parts of the site from previous investigations. Due to the presence of the existing buildings on the northern part of the site (624 Pittwater Road), the understanding of the nature of any soil or groundwater contamination on this part of the site is limited and further investigation will be undertaken once the buildings are vacated/removed.

Site audit statements have been prepared by an EPA-accredited site auditor for the 612 Pittwater Road and 620 Pittwater Road parts of the site. The statement for 620 Pittwater Road indicated that 'the hydrocarbon contamination has been remediated to the extent practicable and that the site has been remediated to a standard suitable for commercial/industrial land use with respect to petroleum hydrocarbons.'

The statement for 612 Pittwater Road certified that the site is suitable for commercial/industrial land use subject to a number of conditions relating to use of groundwater on site and whether any future building included a basement level. In this regard, the following is noted:

- Water demand for the site would be met by other sources than groundwater.
- The community health centre building and multi-story car park do not comprise any below ground levels.

Extracts from the site audit statements relating to suitability for use of the site for commercial/industrial land use are provided as attachments to Appendix K.

Parsons Brinckerhoff noted that considering both its investigations and previous investigations, the site does not require remediation for its future commercial/industrial use as a community health centre. This, however, is subject to further investigation of the 624 Pittwater Road part of the site as previously noted. Following removal of the existing buildings (which is scheduled to occur in October 2015), Parsons Brinckerhoff will conduct a soil investigation below the building footprints and the removal and validation of the UST at the north-eastern portion of the site. A draft Remediation Action Plan (RAP) has been prepared (provided as an attachment to Appendix K) and will be finalised following completion of the soil investigation.

Parsons Brinckerhoff concluded that with the exception of the 624 Pittwater Road part of the site, the site is suitable for the proposed use as a community health centre in general accordance with Department of Urban Affairs and Planning/NSW Environment Protection Authority *Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land*.

There is potential for the existing buildings at 624 Pittwater Road to contain hazardous material. A limited, non-intrusive inspection confirmed the presence of asbestos-containing material within the fabric of the buildings. A further, more detailed inspection will be undertaken prior to commencement of demolition works.

Acid sulfate soils

The ASS map for the Warringah LEP identifies the general north-eastern portion of the site (about 1000 m^2) as being Class 4 ASS, the second lowest ASS risk classification. An extract of the ASS risk map showing the site (boundary shown in red) is provided as Figure 5-4 (following page).

Reflecting the relatively low risk, clause 6.1 of the LEP specifies that for such soils, development consent is required only for works more than 2 metres below the natural ground surface, or works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface.

Clause 6.1(3) specifies that development consent must not be granted unless an ASS management plan has been prepared for the proposed works in accordance with the *Acid Sulfate Soils Manual* (ASSMAC 1998) and has been provided to the consent authority. However, clause 6.1(6) provides that development consent (and therefore an ASS management plan) is not required if the works involve the disturbance of less than one tonne of soil and the works are not likely to lower the watertable.

Work in this part of the site relates to the multi-storey commuter car park. The ground level of the car park (level 1) will be at RL 11.0. Existing ground levels over this part of the site are below this level. Spoil from other parts of the site (outside the mapped area of ASS) will be used to build up the ground surface to the required level. The only activity involving ground disturbance below the existing ground surface in the mapped ASS area will be associated with installation of piles for the multi-storey car park.

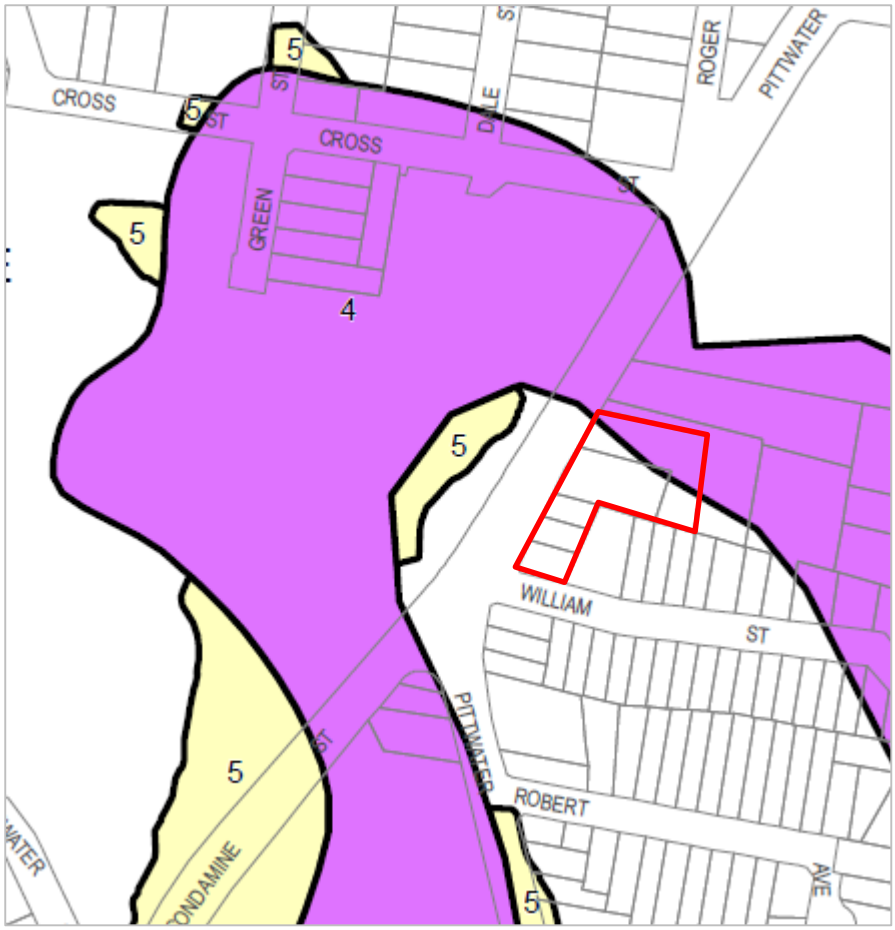


Figure 5-4 Acid sulfate soil risk at Brookvale Community Health Centre development site

Source: Warringah Council LEP 2011, ASS risk map

The extent of disturbance would not exceed the one tonne threshold nor would the works result in any lowering of the watertable. Accordingly, it is anticipated that preparation of an ASS management would not be required.

This notwithstanding, field and confirmatory laboratory analyses for ASS will be undertaken in the northern portion of the site during waste classification sampling for the proposed piles, and under the building footprints during the additional soil investigations. The results of the field and laboratory analyses will determine the requirement for the development of an ASS management plan which, if required, will be incorporated into the construction environmental management plan (CEMP).

5.12 Contributions

The relevant contributions plan for the site is the *Section 94 Warringah Development Contributions Plan 2014 (Amendment 1)* which commenced operation on 1 May 2015.

Part 2.6 of the Plan specifies that development proposed by Government agencies for 'public purposes' is exempt from the Plan and payment of the Section 94 levy. The Dictionary to the Plan defines 'public purposes' as including the provision of public services.

The proposed development is considered to comprise provision of public services, being a facility that would deliver a range of community health services including:

- Adult Mental Health Services
- Child and Adolescent Mental Health Services

- Community Drug and Alcohol Services
- Community Nursing Acute
- Post-Acute Care (APAC)
- Breast Screen
- Rehabilitation and Aged Care Services
- Child and Family Health Services
- Adult and Paediatric Oral Health Services.

The proposed development will clearly deliver a public benefit and therefore exemption from developer contributions is appropriate. This is also consistent with numerous previous public health-related developments.

5.13 Flooding

An assessment of the impacts of the development on flood behaviour (and vice versa) has been prepared by Taylor Thomson Whitting and is provided as Appendix I. The assessment has been undertaken with relevant reference to the *Floodplain Development Manual* (DIPNR 2005). A summary of the findings is provided as follows.

Existing environment

The *Manly Lagoon Flood Study – Flood Planning Levels* (BMT WBM 2013) identified that the northern part of the site is subject to flooding by the 1 in 100 year Average Recurrence Interval (ARI) flood event and that over half the site, principally the northern half, is subject to flooding by the Probable Maximum Flood (PMF) event. The extent of flooding associated with these two events is shown in Figure 5-5.

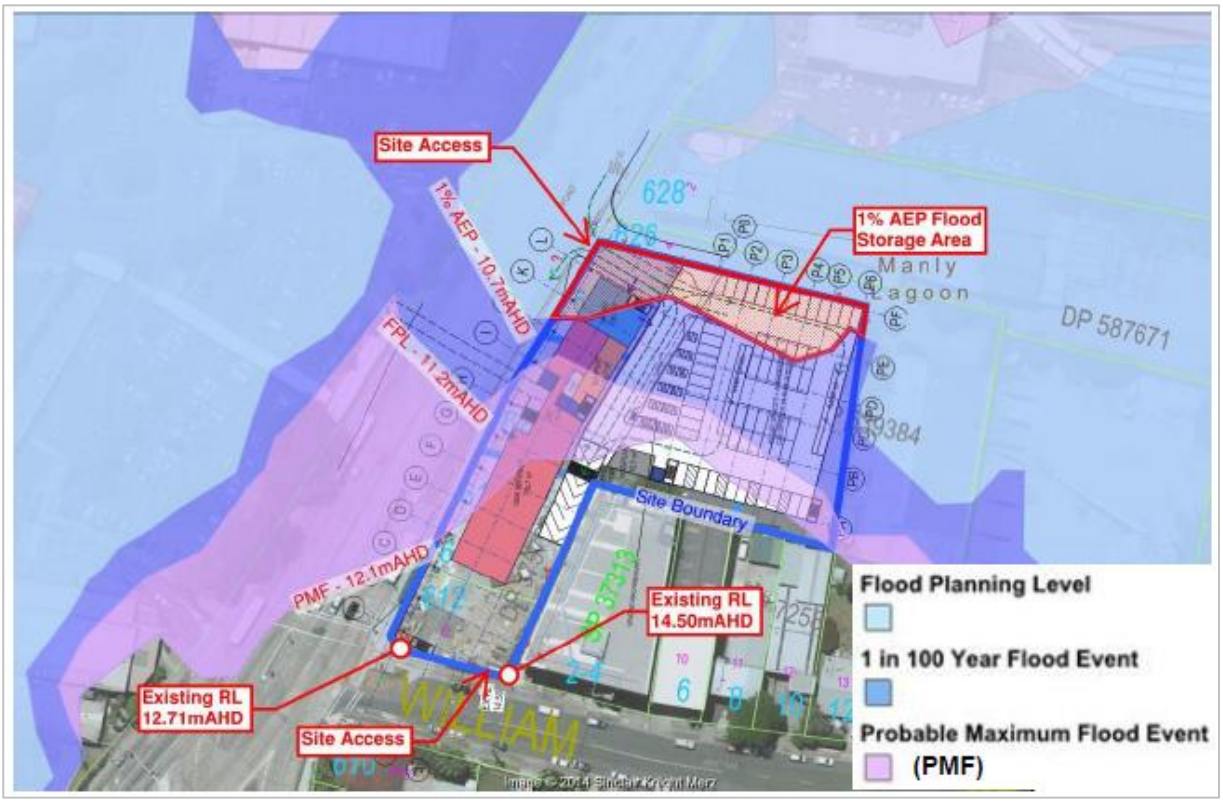


Figure 5-5 Extent of flooding on Brookvale Community Health Centre site

Source: Taylor Thomson Whitting (2015), Stormwater Management Report (Appendix I).

Assessment of impacts

Consideration of flood impacts was undertaken using the two dimensional hydraulic model TUFLOW, developed by BMT WBM for the Manly Lagoon flood study. The base model was calibrated against Warringah Council's published flood data for the PMF event and a revised model was then developed to account for the development. A comparison was then made of pre- and post-development flood behaviour.

The key findings of the flooding analysis are as follows:

- Changes to flooding behaviour will generally affect the part of the site presently comprising 620 and 624 Pittwater Road
- The flood level for the PMF event is predicted to increase by 0.2 metres on the western half of this part of the site and reduce by a similar amount on the eastern half of this part of the site
- The existing overland flow path for the PMF event runs in a generally east-west direction along the northern boundary; the development will not have any material impact on this flow path
- The development will provide flood storage on-site during the PMF flood event; the at grade parking level set at the 100 year ARI flood level would be inundated during this flood event
- Safe flood evacuation access will be available via the William Street access.

The Manly Lagoon flood study considered potential issues associated with climate change including sea level rise and changes to rainfall patterns such as increased frequency and intensity of rainfall events. These considerations, where relevant, have been brought forward into the assessment of flooding impacts for this development.

Given the development site's location in the catchment, sea level rise is not considered a material issue. However, the BMT WBM study noted that the upstream catchment areas would be more impacted by increases in rainfall intensities. For increases in rainfall intensity in the range of 10–30%, peak flood level increases of between 0.2–0.4 metres would be typical, depending on the nature of the channel or creek section.

The Condamine Street culvert is located about 90 metres to the south of the site. The BMT WBM study indicated that flood level increases of up to 0.1 metres were recorded at this location for the 100 year ARI event with rainfall intensities increased by 30%.

Management and mitigation of flood risk

The Warringah DCP 2011 identifies the site as being located in a Medium Flood Risk Planning Precinct. The DCP lists a range of matters for consideration with regard to addressing flood risk. The assessment of flood risk has considered the relevant matters listed and the design response accommodates these as far as practicable. A detailed response to the DCP matters is provided in Table 1 of the Stormwater Management Report.

Stormwater management

Consideration of stormwater management requirements has been undertaken with reference to Warringah Council's *On-site Stormwater Detention Technical Specification* (Warringah Council, 2012). This specifies that for all developments except single residential dwelling developments the permissible site discharge is to be calculated on the maximum impervious fraction of 0%, that is, discharge off the development site is to be restricted to its undeveloped condition. Post-development runoff is to be determined on the post-development impervious area for the 5 year, 20 year and 100 year storm events. On-site detention (OSD) systems are required to be designed to restrict runoff to the undeveloped condition (noting the latter is referred to as 'pre-development' in Council's specification).

The assessment was undertaken using the DRAINS software which is an accepted tool for assessing urban runoff. The assessment identified that a detention tank with a capacity of 155 m^3 will provide sufficient on-site storage to accommodate storms events up to and including the 100 year ARI storm event, and which would more than meet Council's requirements.

Potential impacts on stormwater quality were assessed with reference to the *Northern Beaches Stormwater Management Plan* (Warringah Council 1999). This specifies the following performance requirements for developments in developed urban areas:

- Suspended solids (SS) – 80% retention of the average annual load
- Total phosphorus (TP) – 45% retention of the average annual load
- Total nitrogen (TN) – 45% retention of the average annual load
- Litter (including organic material – retention of litter greater than 50 mm for flows up to 25% of the 1 year ARI peak flow
- Coarse sediment – retention of sediment coarser than 0.125 mm for flows up to 25% of the 1 year ARI peak flow
- Oil and grease (hydrocarbons) – in areas with concentrated hydrocarbon deposition, no visible oils for flows up to 25% of the 1 year ARI peak flow.

Post-development stormwater quality was modelled using MUSIC which is an accepted software tool for assessing urban runoff water quality. The assessment identified that the water quality controls that will be incorporated into the on-site stormwater management system would be likely to meet the relevant water quality objectives, including Council's requirements for oil and grease.

5.14 Waste

Construction

Waste streams and approximate quantities associated with the construction phase of the community centre will generally comprise the following:

- Demolition materials such as concrete, timber, metal, etc (5000–7500 m^3)
- Green waste (10–20 m^3)
- Site office refuse and sanitary waste (minimal).

Demolition materials will be collected and removed from the site for disposal/reuse at an appropriate receival facility. With regard to managing demolition materials potentially containing asbestos:

- All such materials will be handled in accordance with the *Asbestos Management Plan for 612-624 Pittwater Road*, prepared by Solutions in Engineering
- A NSW licensed Asbestos Removalist as per the *Code of Practice for the Safe Removal of Asbestos*, Safe Work Australia (2005) will be engaged to remove any asbestos present on site
- An Unexpected Findings Protocol will be established and implemented in case potentially contaminated, hazardous or unsuitable material were encountered during the site works.

Green waste will be removed from the site and transported to an appropriate receiving facility for recycling (composting).

Operation

The general waste management and collection process is described in Section 3.9. Operational waste will be managed in accordance with the *NSLHD Waste Management and Resource Recovery Plan*.

Waste streams and approximate quantities associated with operation of the community centre will comprise general waste and hazardous waste, such as sharps, clinical and cytotoxic waste. These would be removed on a weekly basis by licensed waste collection services.

5.15 Cumulative impacts

Cumulative impacts are the combined impacts of existing and/or future activities in a locality or region, and can be both positive and negative. Evaluation of the significance of the impacts of a proposed development needs to also consider the collective impacts of it and other existing and proposed development in the social, economic and environmental contexts in which they occur.

A search of the DP&E's Major Projects Register did not identify any existing or proposed major development proposals for the Warringah LGA.

Part G of the Warringah DCP identifies Warringah Mall as a 'Special Area' and outlines the various planning controls that apply to development of the site. The DCP includes indicative details with regard to the future development of the site. Redevelopment of the mall has commenced and it is likely that various activities associated with this will occur concurrently with construction of the Brookvale Community Health Centre.

As noted in Section 4, Health Infrastructure has initiated consultation with Westfield and this will continue as required with respect to the pedestrian bridge as it affects Westfield's property.

6. Environmental Risk Assessment

The SEARs require the EIS to include an environmental risk assessment to identify potential environmental impacts associated with the proposal. This is provided in this section. The assessment undertaken comprised a qualitative assessment consistent with AS/NZS ISO 31000:2009 *Risk management–Principles and guidelines* (Standards Australia 2009). The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures. Comment on residual risk (the remaining level of risk following implementation of mitigation and management measures) is also provided.

It should be noted that the assessment is not intended to be exhaustive, rather it focuses on key impacts.

Risk comprises the likelihood of an event occurring and the consequences of that event. For the proposal, the following descriptors were adopted for 'likelihood' and 'consequence'.

Likelihood:		*Consequence:*	
A	Almost certain	1	Widespread irreversible impact
B	Likely	2	Extensive but reversible (within 2 years) impact or irreversible local impact
C	Possible	3	Local, reversible (within 2 years) impact
D	Unlikely	4	Local, reversible, short term (<3 months) impact
E	Rare	5	Local, reversible, short term (<1 month) impact

Risk scores for likely and potential impacts were derived using the following risk matrix.

		Likelihood				
		A	**B**	**C**	**D**	**E**
Consequence	**1**	High	High	Medium	Low	Very Low
	2	High	High	Medium	Low	Very Low
	3	Medium	Medium	Medium	Low	Very Low
	4	Low	Low	Low	Low	Very Low
	5	Very Low	Very Low	Very Low	Very Low	Very Low

The results of the environmental risk assessment are presented in Table 6-1. This provides a risk rating prior to any mitigation and a residual risk rating after mitigation. The risk assessment has been based on information available at the time of finalising the EIS.

Table 6-1 Environmental risk assessment

Aspect	Potential impact	Unmitigated risk			Treatment	Residual risk		
		L	C	R		L	C	R
Traffic	Disruption to traffic on local roads from construction vehicles.	B	3	M	Implementation of Construction Traffic Management Plan.	C	4	L
	Impact on local roads from traffic generated by development	C	3	M	Development provides for car parking which will limit impact on off-site parking. Development includes provision of right turn out from William Street which will reduce impacts on local roads.	D	4	L
Noise and vibration	Noise and vibration emissions from construction activities impact adjacent residences and businesses	B	2	H	Implementation of Construction Noise and Vibration Measures which considers the construction methodology and details specific mitigation measures in accordance with the DECCW *Interim Construction Noise Guideline*. Appropriate mitigation measures implemented to ensure vibration levels does not affect human comfort or result in building damage.	B	3	M
	Noise and vibration emissions from the development impact adjacent residences and businesses	C	3	M	Appropriate sound minimisation measures to be incorporated within the plant and mechanical areas. Location of plant away from residential receivers	C	5	VL
Flooding	Development impacted by major flood event	C	2	M	Ground level of community health centre building set at 100 year ARI flood level.	D	2	L
	Development alters local flooding behaviour	C	2	M	Development includes on-site detention to minimise off–site impacts.	D	2	L

Aspect	Potential impact	Unmitigated risk			Treatment	Residual risk		
		L	C	R		L	C	R
Contamination	624 Pittwater Road part of the site unsuitable for commercial land use	B	3	M	Undertake further investigations following removal of buildings and implement management measures as appropriate.	C	4	L
Air quality	Reduced amenity during construction from dust and related emissions	C	3	M	Management of dust emissions will form part of the Construction Management Plan.	C	5	VL
Amenity	Potential loss/reduction of privacy for adjoining properties	D	1	L	The community health centre building has been designed within the constraints of the site to limit privacy and overlooking of the adjoining buildings.	D	1	L
	Overshadowing of adjoining properties	C	1	M	Siting of the building to the west of the site has reduced the impact of overshadowing on adjacent buildings.	E	5	VL
Heritage	Disturbance of heritage material at 620 Pittwater Road part of site during construction	C	5	VL	A heritage specialist would be present on site during initial ground disturbance activities at 620 Pittwater Road. An incidental finds procedure will be implemented to manage any heritage material encountered during excavation.	C	5	VL
Biodiversity	Given absence of vegetation on the site, impacts on flora and fauna are unlikely.	E	5	VL	No specific measures required.	E	5	VL

Key: L = likelihood, C = consequent, R = risk rating

7. Management and Mitigation Measures

The management and mitigation measures required to mitigate the impacts associated with the proposed works are detailed in the following table. These measures have been developed from the assessment documented in Section 5 and from the specialist investigations.

Table 7-1 Management and mitigation measures

Aspect/issue	Management/mitigation measure
Construction impacts	▪ The matters outlined in the Preliminary Construction Management Plan (Appendix K) will inform the development of the final Construction Management Plan that will be prepared by the works contractor prior to commencement of construction.
Traffic impacts during construction	▪ Access to and from the site during construction will be managed through a Construction Traffic Management Plan (CTMP). A Preliminary CTMP is included in the Preliminary Construction Management Plan provided as Appendix K.
Noise and vibration	▪ Measures to mitigate operational and construction noise and vibration will be implemented in accordance with the recommendations of noise and vibration assessment prepared by Acoustic Logic.
Contamination	▪ The recommendations in the report prepared by Parsons Brinckerhoff will be implemented prior to and during construction. ▪ A Remediation Action Plan will be developed and implemented for the 624 Pittwater Road part of the site.
Acid sulfate soils	▪ Material excavated from below 2 metres at the northern end of the site will be tested for ASS in accordance with relevant requirements of the *Acid Sulfate Soil Manual*. ▪ If required, An ASS Management Plan would be prepared in accordance with all relevant matters in the *Acid Sulfate Soil Manual*.
Demolition waste	▪ All demolition materials containing asbestos will be handled in accordance with the *Asbestos Management Plan for 612-624 Pittwater Road*, prepared by Solutions in Engineering. ▪ A NSW licensed Asbestos Removalist as per the Code of Practice for the Safe Removal of Asbestos, Safe Work Australia (2005) will be engaged to remove any asbestos present. ▪ An Unexpected Finds Protocol will be established and implemented in case potentially contaminated, hazardous or unsuitable material are encountered during site works. ▪ Green waste will be removed from the site and transported to an appropriate receiving facility for recycling.
Historic heritage	▪ A suitably experienced heritage specialist will be present on site during initial ground disturbance at 620 Pittwater Road to advise on relevant heritage matters. ▪ An unexpected finds procedure will be implemented during construction to allow for the possibility of encountering heritage material during ground disturbance activities.

Aspect/issue	Management/mitigation measure
Operational waste	▪ Operational waste will be managed in accordance with the *NSLHD Waste Management and Resource Recovery Plan*.
Ecologically sustainable development	▪ The development will be designed to achieve a 4 Star Green ratting with the ESD initiatives in Section 3.12 of the MSJ Architects report being finalised during detailed design.

8. Justification and Conclusion

This EIS has been prepared to consider the environmental, social and economic impacts of the proposed Brookvale Community Health Centre. The EIS has addressed the issues specified in the SEARs (Appendix B) and accords with Schedule 2 of the EP&A Regulation with regard to appropriate consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, noise, stormwater and construction-related impacts.

Clause 7(1)(f) of the Schedule 2 to the EP&A Regulation requires an EIS to provide the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in clause 7(4). This is provided in the following table.

Table 8-1 Consideration of ESD principles

ESD principle	Response
The precautionary principle	The environmental assessment for the proposal is supported by a suite of technical investigations that have informed an accurate characterisation of the environmental risks and the development of management and mitigation measures to effectively manage these risks. The environmental issues are well understood and it is considered there are no material threats of serious or irreversible damage associated with development of the site for a community health centre.
Inter-generational equity	The development is specifically aimed at improving public health for both existing and future generations, particularly with regard to equitable access to needed health services.
Conservation of biological diversity and ecological integrity	Due to past activities on the site, its biodiversity values are very low and site constraints limit opportunities in this regard, apart from landscaping.
Improved valuation, pricing and incentive mechanisms	The development includes a range of features, as described in Section 5.6 that internalise costs to the project, and that seek to reduce resource consumption associated with both construction and operation of the development.

Justification for the project is provided as follows:

- The proposed community health centre brings together a range of community health services that are presently in different locations in the southern catchment of the Northern Sydney Local Health District and will deliver substantial efficiencies in the provision of these services
- The development displays design excellence reflecting its gateway location to Brookvale
- The community health centre will be readily accessible by public transport, being co-located with a bus interchange
- The project is consistent with key NSW government policies to deliver quality health services and improve community health

  The provision of commuter parking as part of the development will deliver a broader community benefit by supporting use of public transport

- The environmental assessment has demonstrated that the development will not generate any environmental impacts that cannot be appropriately managed or mitigated, and is consistent with the relevant planning controls for the site.
- The proposal is consistent with the principles of ecologically sustainable development as defined in Schedule 2 to the EP&A Regulation 2000.

With regard to the above matters, it is considered that a satisfactory case has been presented for approval of the project under Part 4, Division 4.1 of the EP&A Act.

9. References

BMT WBM Pty Ltd (2013) *Manly Lagoon Flood Study – Flood Planning Levels*, prepared for Warringah Council, Sydney.

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Department of Planning (2008) Development near rail corridors and busy roads – interim guideline, Dept of Planning

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National Native Title Tribunal (2009) *Areas that can be claimed in native title applications*, brochure prepared by NNTT, Oct 2009, Canberra.

NSW Acid Sulfate Soil Management Advisory Committee (1998) *Acid Sulfate Soil Manual*, Wollongbar, NSW.

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Office of Environment and Heritage (2014) *Framework for Biodiversity Assessment*, OEH, Sydney.

Roads and Maritime Services (2012) *Average Daily Traffic Volumes*, RMS, Sydney.

Warringah Council (2012) *On-site Stormwater Detention Technical Specification*, revised August 2012, Warringah Council, Sydney.

APPENDIX A
SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

APPENDIX B
CONSIDERATION OF EPBC ACT MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Under the environmental assessment provisions of the *Environment Protection and Biodiversity Conservation Act 1999*, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the proposal should be referred to the Australian Government Department of the Environment.

NES Matter	Comment
a. Any impact on a World Heritage property?	No World Heritage property would be affected by the development.
b. Any impact on a National Heritage place?	No National Heritage place would be affected by the development.
c. Any impact on a wetland of international importance?	There are no Ramsar wetlands in proximity to the site that would be affected by the development.
d. Any impact on a listed threatened species or communities?	There are no identified EPBC threatened species or communities that would be affected by the development
e. Any impacts on listed migratory species?	The development would not impact on EPBC-listed migratory species.
f. Does the proposal involve a nuclear action (including uranium mining)?	No.
g. Any impact on a Commonwealth marine area?	The development would not impact on any Commonwealth marine area.
h. Are there any activities being undertaken within the Great Barrier Reef Marine Park?	No.
i. Would there be a significant impact on water resources associated with coal seam gas development and/or large coal mining development?	No.
Additionally, any impact (direct or indirect) on Commonwealth land?	The development would not have any direct or indirect impacts on Commonwealth land.