MAJOR PROJECT ASSESSMENT: Research and Education Facility Royal North Shore Hospital (RNSH) (MP 06_0192)

Axonometric Plan of Research and Education Facility Stage One (Source: HASSELL)

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

January 2007

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1 EXECUTIVE SUMMARY

1.1 NSW Health intends to redevelop the public element of Royal North Shore Hospital (RNSH) to meet the needs of the Northern Sydney Central Coast Area Health Service (NSCCAHS). The Department is concurrently assessing a concept plan under Part 3A of the Environmental Planning and Assessment Act 1979 (the Act) which has a capital investment value of **$1 billion**.

1.2 This project application is for the development of a new research and education facility on 0.95 hectares on the corner of Westbourne Street and Reserve Road. This represents the first project application lodged in respect of the extant RNSH concept plan redevelopment proposal. The development proposal has a CIV of **$110 million**.

1.3 The site is zoned 5(a) – Special Uses "A" Zone under the provisions of Willoughby Local Environmental Plan 1995 (WLEP 1995) and is lettered "Hospital". The **proposal is permissible** with development consent.

1.4 The development will involve the erection of an **eleven storey building** with a **total gross floor area of 24,000m^2**. The building will house a mix of **specialist medical research and education facilities** including a **240 seat lecture theatre** and a **new library**.

1.5 Detailed plans and elevations have been lodged for the **initial seven floors of the building** to provide a mix of research and education facilities. Stages two and three are not formalised at this stage as they are contingent upon funding from external sources. It is envisaged that they will yield approximately **350 additional researchers** in the future.

1.6 **Approval is sought for the full eleven stories of the building**.

1.7 Approximately **560 employees** will be housed within the facility upon its completion of which **410** will be relocated from existing buildings within the RNSH campus. The remaining **150** employees will be sourced from outside the site.

1.8 On 8 March 2006, the Director General, as delegate for the Minister, formed the opinion that the project is a development to which Part 3A applies and the Minister is the approval authority. The project was placed on formal exhibition from 25 September until 30 October 2006. The Department received **three submissions** from Council and external agencies.

1.9 The proponent lodged a response to issues, a preferred project report and a revised statement of commitments on **7 December 2006**. This was used an opportunity to make amendments to the proposal to address issues raised during the exhibition period. The amendments made to the proposal were relatively minor and did not require re-exhibition.

1.10 Issues raised include compliance with RNSH concept plan, development staging, car parking, traffic generation, telecommunications, visual impact and built form, contamination and remediation, construction management, acoustics and noise and environmental management.

1.11 Following the exhibition period the proponent met with representatives from the Department to resolve outstanding issues. Additional plans and documentation were subsequently lodged and appropriate conditions were discussed.

1.12 The Department is of the view that the combination of statements of commitment made by the proponent together with supplementary conditions of approval that are recommended be imposed by the Minister, will effectively mitigate and manage this issue within acceptable environmental limits.

1.13 The Department **recommends that the project application be approved** subject to the imposition of conditions set out in Appendix A.

2 BACKGROUND

2.1 Site Context

2.1.1 Royal North Shore Hospital (RNSH) is located on the North Shore of Sydney approximately 4 kilometres to the north west of the CBD. It is legally described as Lots 21 and 22 DP 863329 and Lot 102 DP 1075748. It comprises two distinct elements; a private hospital to the north of Westbourne Avenue and a public hospital to the south of Westbourne Avenue.

Figure 1 Site Context (Source: UBD Street Directory)

2.1.2 RNS public hospital is bounded by Westbourne Street to the north and Herbert Street to the east. 207 Pacific Highway and Gore Hill Oval form the sites southern boundary whilst Gore Cemetery delineates its western boundary. It is segmented by the North Shore and Western Railway Line and the Pacific Highway which skirts beyond the site's southern and eastern perimeter.

Figure 2 Aerial Photograph of RNSH (Source: Cox Richardson)

2.1.3 The RNSH site occupies a prominent ridge to the north of Pacific Highway consisting of a range of building types, styles and sizes ranging from small scale Queen Anne heritage buildings to multi-storey buildings. Building 2 is the largest of the hospital buildings and is a prominent landmark that is visible from several vantage points.

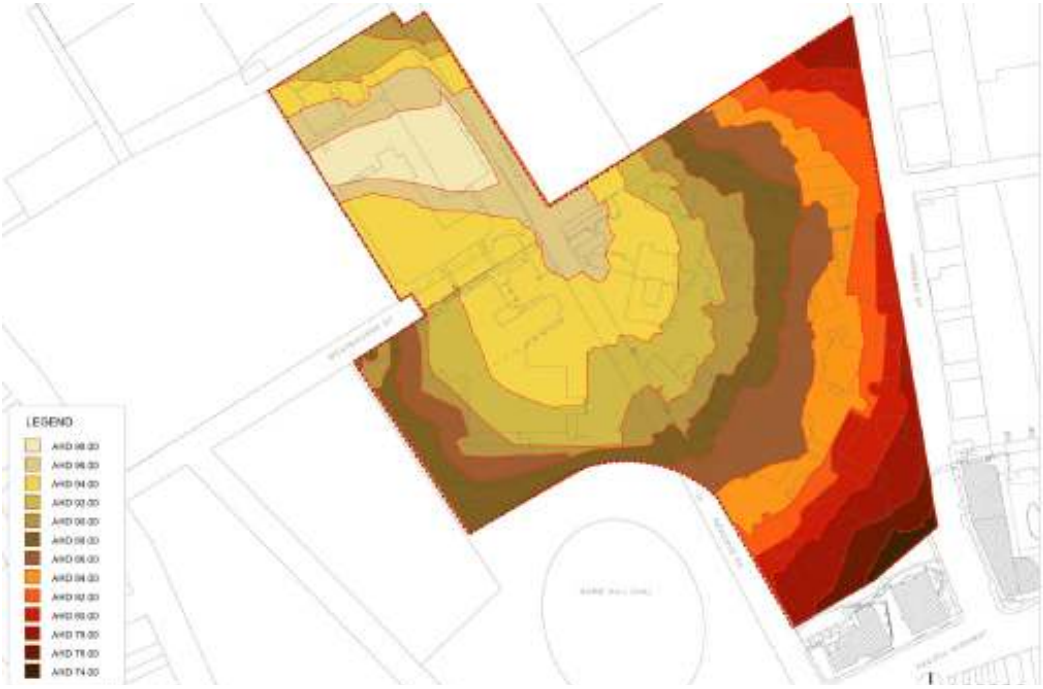

Figure 3 Existing Topography (Source: Cox Richardson)

2.1.4 The site itself comprises approximately 0.95 hectares and is located on the corner of Reserve Road and Westbourne Street. Rotary Lodge (Building 4) and a number of staff facilities, including the Staff Recreation Centre (Building 5), a swimming pool and tennis court hospital previously occupied the site. The site is cleared and excavated in readiness for construction to commence.

Figure 4 Existing Site (Source)

2.2 Surrounding Area

2.2.1 The RNSH site is surrounded by a wide variety of land uses, including Artarmon Industrial Estate, SBS, ABC Studios and the Australia Post building to the north. St Leonards CBD lies across the railway line to the east. New high density residential development has been constructed adjacent to Herbert Street, including the Forum towers adjacent to St Leonards Railway Station.

Figure 5 Site and Surrounding Land Uses (Source: Cox Richardson)

2.3 Vehicular Accessibility

2.3.1 The site is extremely accessible by road given its location adjacent to the Pacific Highway and the Sydney – Newcastle Freeway (Route 1), Gore Hill Freeway and Warringah Freeway (Route 2).

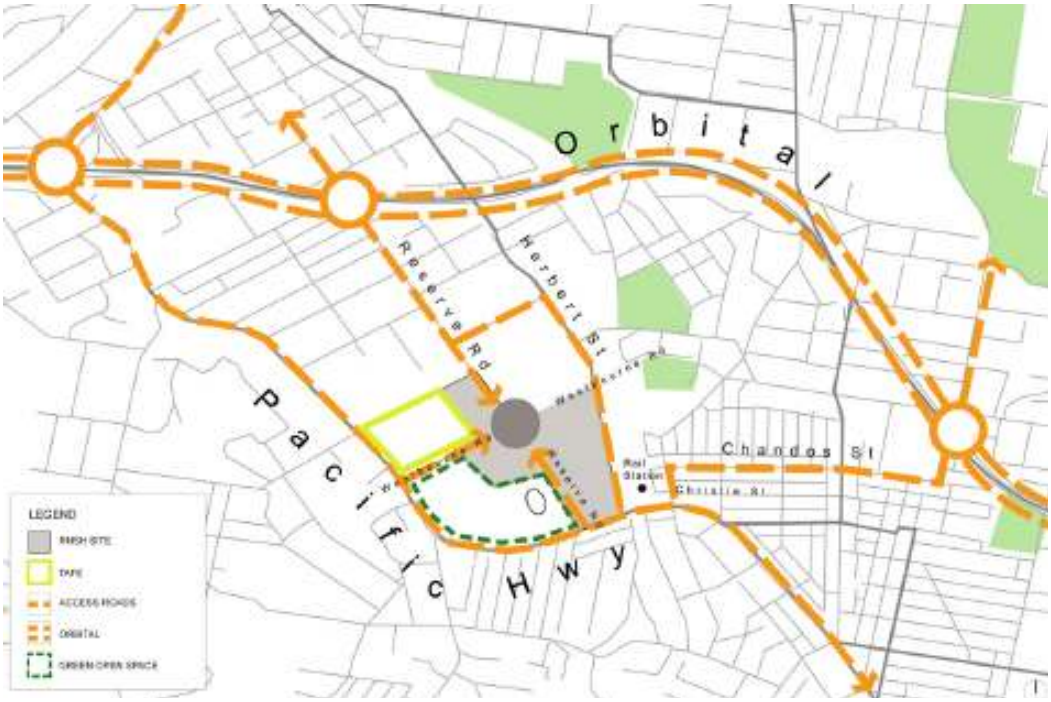

Figure 6 Vehicular Accessibility (Source: Cox Richardson)

2.3.2 Vehicular access to the site is gained via Pacific Highway to the south and west and Herbert Street to the east. Service vehicle access is available from Herbert Street and the western section of Westbourne Street. An internal road network provides vehicular access to the sporadic distribution of existing hospital buildings.

2.4 Public Transport Accessibility

2.4.1 The site is extremely well served by public transport given the sites location to St Leonards Railway Station and Pacific Highway.

Figure 7 Public Transport Network (Source: Cox Richardson)

2.4.2 The North Shore and Western Rail Railway Line provides regular services to and from Sydney CBD to Chatswood and Hornsby and as far north as Wyong on the Central Coast during peak hours. Various bus routes operate along Pacific Highway providing services to the centres of Manly, St Leonards and Chatswood (143/144/I43/E43) and from Chatswood to Bondi Junction via Sydney CBD (200).

2.5 Pedestrian and Cycling Accessibility

2.5.1 There is not a strong formal pedestrian route through RNSH given the dispersed nature of the existing development. Signalised pedestrian crossings are provided at the Pacific Highway intersection with Reserve Road and Herbert Street providing a safe crossing to St Leonards Railway Station, bus stops and local shops.

2.5.2 A number of regional and inter-district cycling routes pass nearby the site but none traverse it. A route is present in St Leonards to the east but this does not continue through or around the site. The closest bicycle route is provided along Atchison Street between St Leonards Railway Station and Crows Nest into West Street.

2.6 Heritage Listings

2.6.1 The RNSH site itself, nor any element of it, is currently listed at Commonwealth, State or local level as having heritage significance. However, two buildings lying within the RNSH site are listed on the Department of Health Section 170 State Agency Heritage Register namely the Regional Diabetic Services Building (Building 7) and Lanceley Cottage (Building 9).

2.7 Relevant Development Consents

2.7.1 Development consent for the "demolition of existing accommodation Building 4, gymnasium, tennis court, swimming pool and associated infrastructure and bulk excavation" was granted by Council on 4 September 2006 subject to conditions (DA-2006/607).

2.7.2 This development consent has been implemented and the site is cleared and excavated in readiness for development to commence.

2.8 Existing Hospital Facilities

2.8.1 RNSH comprises two distinct elements comprising a public facility located to the south of Westbourne Street and a private facility to the north of Westbourne Street which is leased and operated by Ramsay Health Care Limited. The project application encompasses a small portion of the RNS public hospital site on the corner of Westbourne Street and Reserve Road.

2.9 Car Parking Provision

2.9.1 The total car parking provision at RNSH is approximately 2,555 car parking spaces. The main car parking facility is located off Reserve Road, north of Westbourne Street, and provides 1,500 car parking spaces. The remaining spaces are located in several surface car parking areas dispersed across the RNSH site, comprising 1,050 car parking spaces, primarily for use by staff and patients.

2.10 RNSH Concept Plan

2.10.1 The proponent is concurrently seeking approval of a concept plan to facilitate the redevelopment of the RNS public hospital site. The application seeks approval for the development of new, state of the art hospital facilities, including a new hospital building, community precinct and research and education facilities.

2.10.2 This refurbishment and expansion will result in an improved autonomous facility occupying less than half the current site. The residual land will provide opportunities for the development of complimentary health facilities and key workers accommodation as well as providing mixed use development private development opportunities to facilitate the hospital related redevelopment.

2.10.3 Overall, there will be no significant change to the range of services or floorspace provided within the existing hospital. The existing buildings will be consolidated into a smaller number of integrated and more efficient buildings so as to improve the existing services currently provided. Whilst the total floorspace will decrease from 136,000m^2 to 130,500m^2 useable hospital space will increase.

2.10.4 This project application represents the first stage of the redevelopment of Royal North Shore Hospital (RNSH).

2.10.5 The redevelopment of RNS public hospital will be realised, and is contingent upon, the release of residual land to the private sector for mixed use purposes. Those parts of the site not required in direct association with the hospital will be sold to a private developer(s) for a range of health related, commercial, retail, residential and community uses.

2.10.6 Five new development precincts or street blocks will be demarcated by a new road system incorporating four new public roads and the reopening of Westbourne Street. Potential purchasers will be approached once the necessary market certainty is obtained following approval of the concept plan for redevelopment.

Figure 8 Royal North Shore Hospital (RNSH) Concept Plan (Source: Cox Richardson)

Subdivision and Roads

2.10.7 The consolidated hospital will occupy the north western section of the site to meet the future needs of the consolidated hospital operation. A conceptual road layout has been developed to provide definition of both the hospital site to the northwest and demarcate the heritage and development precincts on the residual land to the east and southeast.

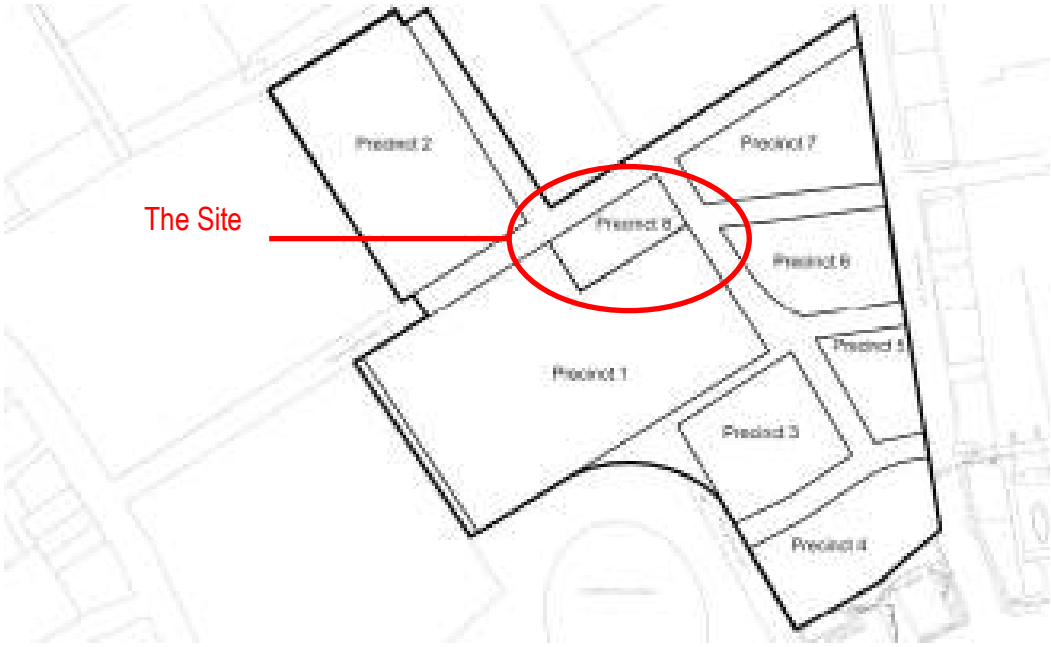

Figure 9 Precinct Plan (Source: Cox Richardson)

Access and Circulation

2.10.8 A grid shaped system of new roads is proposed to open up the site making it more permeable to traffic and pedestrians. The plan involves Reserve Road and Westbourne Street being re-opened and a new

grid system to allow direct vehicular access to each new block.

2.10.9 While the proposed road system is intended to be highly permeable, it will nevertheless be necessary to manage it in a way that separates potential through traffic movements from local access and circulation traffic. To achieve this, a three level local road hierarchy is proposed that comprises "major local" roads, "minor local" roads and "minor access" roads.

2.10.10 Major local roads will be formed by:

- *Reserve Road from Pacific Highway to the hospital entrance (to be suitable for buses).*
- *Reserve Road from Westbourne Street to the north into the Artarmon industrial area.*
- *Westbourne Street from Pacific Highway to Herbert Street.*

2.10.11 All other streets will be "minor local" or "access" roads. The major local roads will typically have carriageways 12 to 13 metres wide and priority at intersections and will read as being higher order streets.

2.10.12 The minor local streets will typically have two traffic lanes plus indented parking where appropriate. Minor access roads are intended to carry only limited through traffic and will emphasise pedestrian movements.

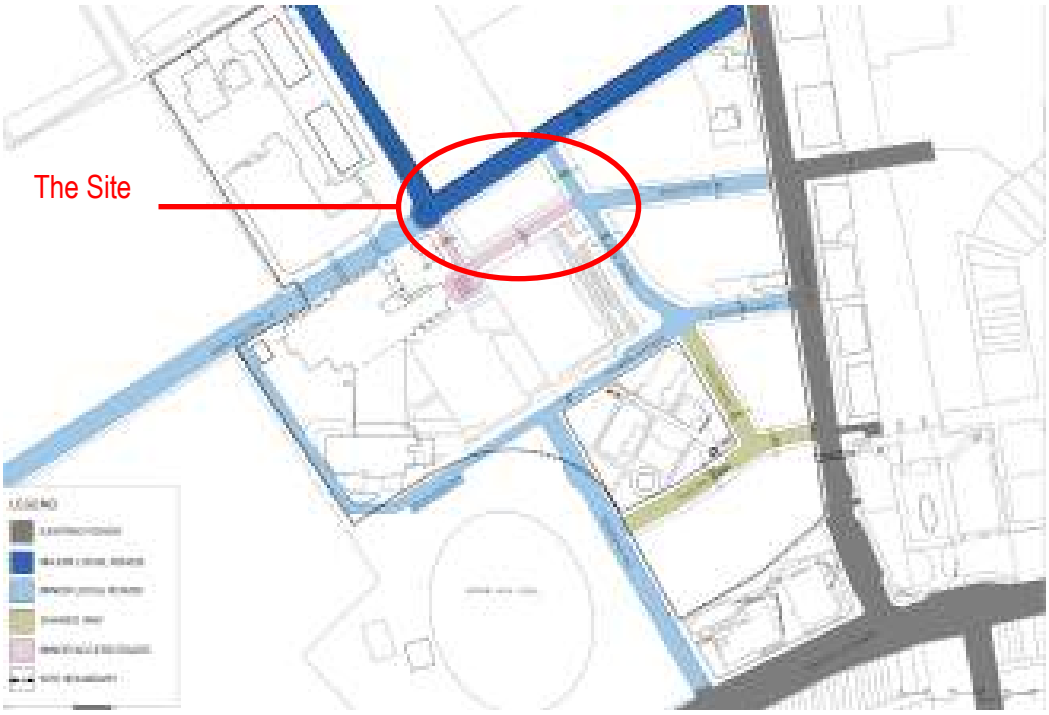

Figure 10 Road Hierarchy (Source: Cox Richardson

Development Staging

2.10.13 The RNSH concept plan will be a staged development comprising five distinct stages (see Figure 11 overleaf).

2.10.14 Stage A is the development of the new medical research and education facility and is the subject of this project application. The development of this building will take place first to permit various uses to be decanted out of the existing hospital so as to facilitate the commencement of construction of Stage B.

2.10.15 Stage B includes the main hospital buildings, the limited re-opening of Westbourne Street, the development of a community health building on the northern part of Precinct 5 and associated roads

and open spaces. Once complete, Stage B will be accessible via the existing alignment of Reserve Road and the newly constructed Blue Road, Eileen Street and Westbourne Street.

Figure 11 Development Staging (Source: Cox Richardson)

2.10.16 Following the decanting of existing hospital uses from the various development precincts, these will become available for redevelopment and Stages C to F will be developed. There is no clear timeframe for this to occur given that operational and management decisions are yet to be made in relation to the process of relocating various hospital functions in the new buildings.

2.10.17 Consequently, no specific staging order has been proposed for these stages and each has been packaged as a discrete and functionally independent stage. As each stage comprises a distinct mix of uses, the flexible staging programme will permit each stage to proceed based upon which use the market determines to be in most demand at the time these stages become available.

Car Parking

2.10.18 The existing multi-storey car park off Reserve Road will be retained to serve the RNS private hospital, public hospital staff and activities associated with re-use of the existing hospital building. Additional parking for the new public hospital including that for visitors, patients and others needing immediate parking will be provided beneath the new hospital building.

2.10.19 Other new non-hospital development will have its own parking beneath or beside it. It is intended that a constraint be placed on car parking with the aim of reducing reliance on private vehicle transport. Subject to the formulation of a hospital "green plan", no future increase in hospital parking is proposed, notwithstanding ongoing future growth of the RNS hospital over time.

Building Height

2.10.20 Solar access planes have been determined to preserve appropriate solar access at the following key locations on the basis that the principal potential environmental effect of optimised built form and height in this context relates to solar access to existing and proposed public open spaces and residences on and around the site.

2.10.21 The height of the buildings will not exceed those indicated in the Composite Building Height Control

Plan.

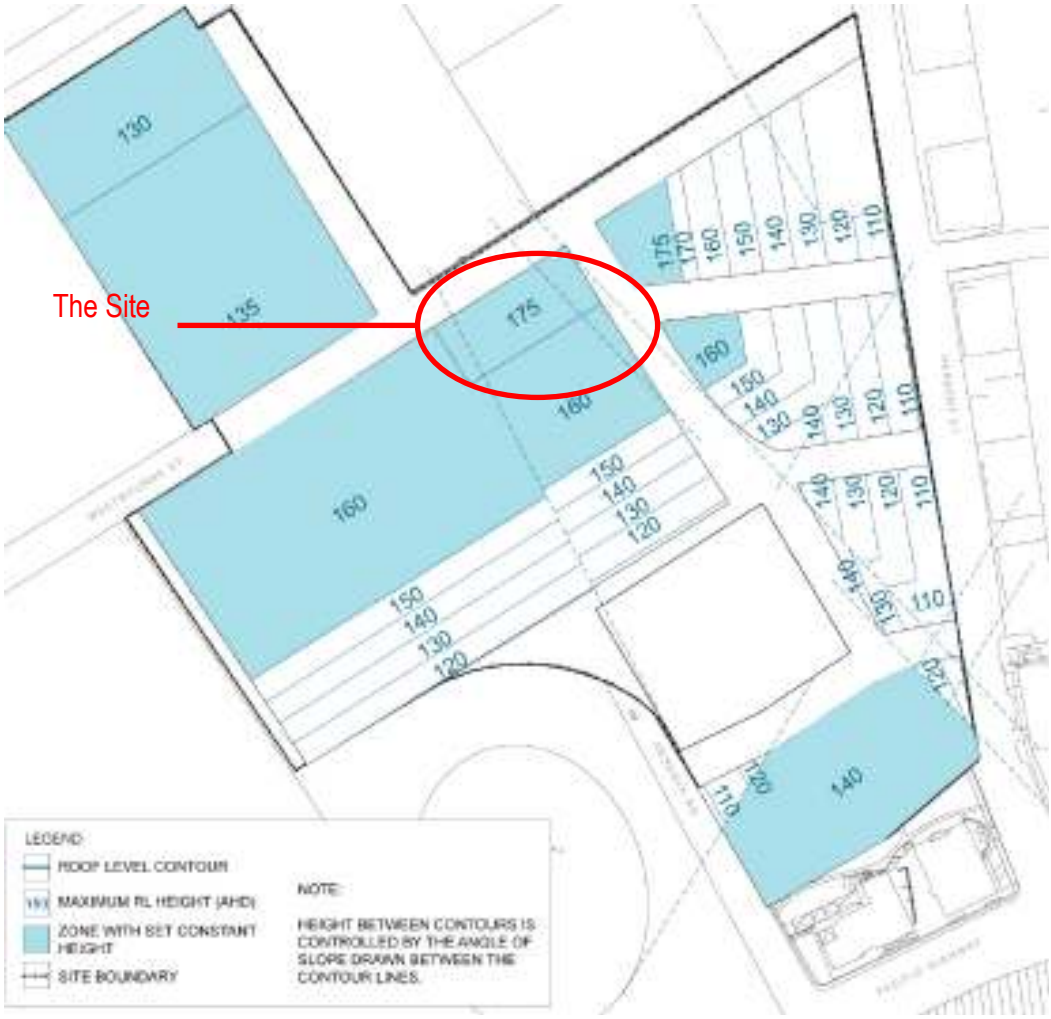

Figure 12 Composite Building Height Map (Source: Cox Richardson)

3 PROPOSED DEVELOPMENT

3.1 Approval Sought

3.1.1 Project approval is granted for the erection of an 11 storey building for use as a medical research and education facility, ancillary laboratory space and associated administration comprising 24,000m^2 gross floorspace as well as soft and hard landscaping measures, pedestrian access arrangements and utility services and associated infrastructure and plant.

Figure 13 Research and Education Facility in the Context of New Hospital Development (Source: HASSELL)

3.2 Decanting of Hospital Uses

3.2.1 Decanting plans have been developed in readiness for the redevelopment of the RNSH site which will be realised through the implementation of the concept plan proposal. The decanting strategy for the RNSH campus relies upon relocating existing hospital services to construct the new hospital buildings.

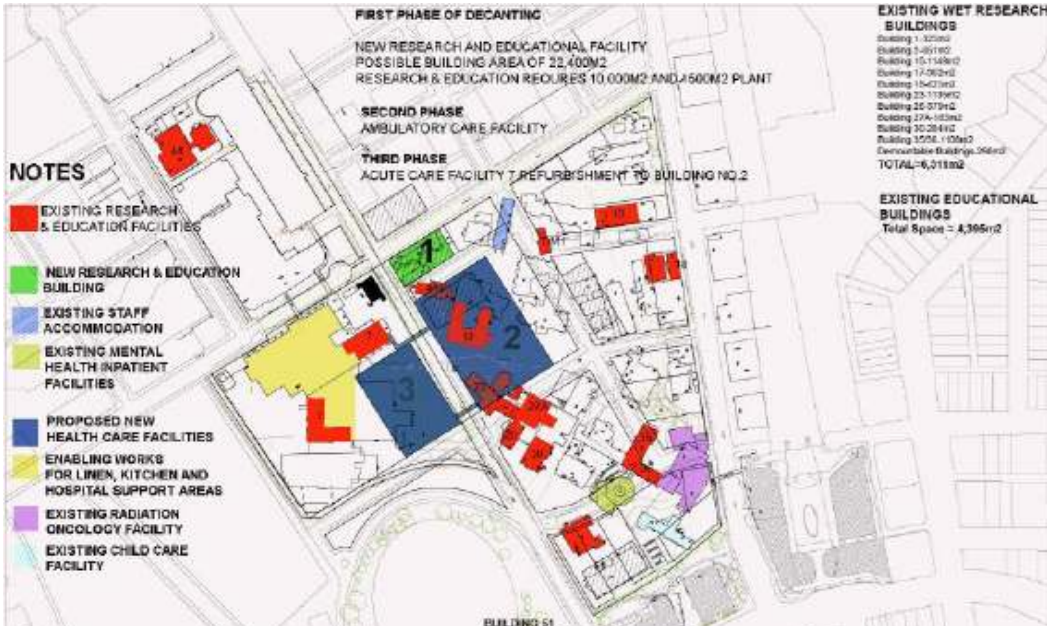

Figure 14 Staging and Decanting Strategy (Source: HASSELL)

3.2.2 The current buildings within the zone that accommodate high proportion of medical research and education facilities are Building 11 and 11A (Vindin House), Building 23, Building 26 and 27A and Building 13. The eastern section of Building 1 is located within the zone for the second stage of the hospital redevelopment.

3.2.3 Other buildings on the RNSH campus house medical research and education facilities namely parts of Buildings 1 and 2, Building 10, Building 35 and 36. These facilities, to varying degrees, will be relocated into the new medical research and education facility. Provision is to be made for the existing staff accommodation on site to be relocated off site.

3.3 Development Staging

3.3.1 Three distinct development stages have been developed to facilitate the development of the medical research and education facility so as to allow for existing staff to be relocated at the appropriate time, prior to the wholesale redevelopment of the RNS public hospital taking place. The issue of staging is assessed within Section 6.5.

Stage One

3.3.2 The education facilities will house a clinical training and simulation centre, a library and a 240 seat lecture theatre. The proposed occupants of the new research and education facility include a number of research and education staff that are currently located through the Royal North Shore Hospital (RNSH) campus. These will be decanted into the new research and education facility as part of the overall staging plan.

3.3.3 The basement will accommodate ancillary research space as well as plant rooms and shared storage facilities for the facility as a whole. Service access to this area will gained via a pair of loading located at the south of the facility directly between the building and the new Ambulatory Care service proposed within the RNSH concept plan. An access point has been provided at basement level on the north east elevation onto the ground floor.

3.3.4 Lobby access will be gained from Westbourne Street and the west side of the building at its north western corner on ground floor level. The library will be located on this level. The education facility can be accessed by lift or stairs through a four storey void space which opens to the exterior of the building. The research element of the facility will have its own entry point fronting Westbourne Street together with lift access provided from the west side of the building.

3.3.5 The first three floors will have a smaller footplate than floors four to six above them and will be supported by vertical colonnades. Floors one to three will primarily accommodate educational facilities including clinical educational facilities on floor two and an educational administration area on floor three. The first floor will house educational facilities including a 240 seat lecture theatre which will protrude out of the northern elevation of the building and will be enclosed by the external colonnades.

3.3.6 Floors four to six will become the first stage of the research facility development and will house approximately 50 personnel per floor. The seventh floor will initially house plant and equipment for the research personnel associated with stage one of the redevelopment. These floors, together with the future vertical extension in stage two, will be visually and physically linked by a stair void starting on level four which will concurrently function as an interaction zone for members of staff.

Stages Two and Three

3.3.7 Stages two and three of the development will provide facilities for a total of 350 researchers. Significant funding is expected from the University Sector in recognition of the key interactions between health and university sectors in both advancing care through research and in training (undergraduate and postgraduate) of health care professionals.

3.3.8 Stage two is a vertical expansion of four floors of wet research space and roof top plant as well as a

further expansion of the education facilities. Stage 3 comprises two distinct packages; 3A is a horizontal expansion on the western side of the building over two levels for education purposes whilst 3B is a further six levels of research space and rooftop plant based upon 50 researchers per level.

Figure 15 Staging Elevation Plan (Source HASSELL)

3.4 Accessibility and Servicing

3.4.1 There are three pedestrian access points to the research and education facility namely to the west of the paving to the Foyer/Lift lobby, to the north off the paved colonnade and via a temporary pathway to the south until such time as stage two is completed. Before this stage is implemented a temporary pathway will be provided.

3.4.2 It is intended that service vehicles will access via the loading docks to the south east of the building. Vehicular access will be via a road to east of the new facility and service way to the south of building. The roads and access ways are set out in the RNSH concept plan which is currently under assessment by the Department (see Section 2.10).

3.4.3 The area that is intended to be utilised falls outside the area proposed by this project application. The proponent intends to shortly lodge a subsequent application that will include the development of the new road pattern for the hospital (as currently delineated in the RNSH concept plan). The demolition of buildings required to facilitate this is also proposed within the RNSH concept plan.

3.4.4 In the interim (and in the event that the RNSH concept fails to be implemented), the proponent is to provide further plans and documentation showing details of temporary access road to service the research and education facility and the demolition of Building 6 (Sturt House) and Building 11A (Vindin House) which currently lies within the intended road reserve as referred to above.

3.5 Research Facilities

3.5.1 It is intended that the research and education facility will serve the North Sydney Catchment Area providing state of the art facilities for science research. A number of research groups will be accommodated within the centre.

Neurosciences

- *Pain Management, Kolling Institute*
- *Neurogenetics, Kolling Institute*
- *Hypertension and Stroke, Kolling Institute*

Cardiovascular health, diabetes and metabolism

- *Cardiac Technology, Kolling Institute*
- *Cellular Electrophysiology*
- *Cardiovascular and Hormonal Research*
- *Renal Research, Kolling Institute*
- *Geriatric Pharmacology*
- *Vascular Biology Laboratory*

Bone and joint research

- *Sutton Arthritis Research Laboratory, Kolling Institute*
- *Raymond Purves Laboratory, Kolling Institute*
- *Murray Maxwell Biomechanics Laboratory, Kolling Institute*
- *Northern Metabolic Bone Unit, Kolling Institute*

Cancer

- *Cancer Genetics, Kolling Institute*
- *Growth Research Group, Kolling Institute*
- *Bill Walsh Cancer Research Laboratories*
- *Northern Blood Research Centre*
- *Upper Gastrointestinal Surgery*

"Healthy start to life" including perinatal research and human reproduction

- *Perinatal Research*
- *Human Reproduction Unit*

3.6 Educational Facilities

3.6.1 Educational facilities will occupy the first four floors of the new building and will accommodate a number of services.

- *Northern Clinical School*
- *Northern Clinical Skills Centre*
- *Sydney Medical Stimulation Centre*
- *The Pam McLean Cancer Communications Centre*
- *Learning and Development*

3.7 Library Facilities

3.7.1 The new research and education facility will accommodate a new library. The existing Douglas Piper Library, located in the Northern Clinical School Building, will be relocated to this facility. The new Douglas Piper Library will offer a centralised campus library service to improve access and utilisation of all resources held on the campus, modern resources and services.

3.8 Staff Numbers

3.8.1 The building design will facilitate the staged development of floorspace for research and education

purposes and central support services.

Element	Building Use	Head Count
Education	Facility Management & Technical Support	3
	Northern Clinical School	11
	Learning & Development	16
	Northern Clinical Skills Centre	6
	Sydney Medical Stimulation Centre	9
	Medical Illustrations	5
	Pam McLean Cancer Centre	4
	Sub Total	**54**
Research	Stage One	150
	Stage Two	200
	Stage Three	150
	Sub Total	**500**
Library	Douglas Piper Library	7
	Sub Total	**7**
TOTAL		**561**

3.8.2 Subject to funding from the University Sector and based upon current growth trends, it is projected that similar facilities will be required for additional laboratory based researchers. It is anticipated stage one will accommodate 150 research personnel with 200 and 150 research personnel whilst stages two and three will house 200 and 150 research personnel respectively.

3.8.3 The total number of staff that will be accommodated within the building will be approximately 560.

3.9 Urban Design and Materials

3.9.1 The urban design philosophy intends to reflect those set out within the RNSH concept plan proposal (see Section 2.10).

3.9.2 The proponent is of the view that the design of the building:

- *Aligns with and is built to the street boundaries to the northwest and to the northeast to reinforce the corner element to proposed Red Road and Westbourne Streets.*
- *Is compatible with the building heights, bulk and scale indicated in the RNSH concept plan.*
- *Maintains and strengthens the streetscape on the existing Westbourne Street and Reserve Road and the proposed Red Road by being built to the site boundaries.*
- *Provides individual addresses for the education and research activities occupying the building.*
- *Maintains a 20 metre separation between this proposal and the RNSH concept plan Ambulatory Services block.*
- *Utilises public space for use as an effective zone for public gatherings, arrival, departure and interaction.*
- *Gives a strong link between the research and education facility and the new and existing hospital building blocks.*
- *Anticipates an accessible drop off / pick up pedestrian plaza, which will eventually be partly covered as the campus is further developed.*

- *Facilitates the library to be housed at this level so as to be directly visible from the public plaza and accessible from the building lobby.*

- *Addresses the "heritage" component of the Lincoln Haynes Memorial Chapel (open space address and "stepping back from" approach).*

- *Provides a separation of public and service access components through the use of a positive change of level at street level along Blue Road.*

- *Establishes a strong street corner element to the east and setting the pattern for defining future blocks as the first stage of the development is placed on the lower section of the site.*

- *Provides a common pivot and access point for the future extensions given that the core of the building is located at the site's western end.*

3.9.3 The palate of materials being considered include stone paving and wall cladding, double glazed infill windows, curtain wall sections and exposed off-form concrete elements. The north and south façades will incorporate a sun shading louvre system extruded aluminium or timber sections. A schedule of materials to be used is included within the Environmental Assessment at Appendix F.

3.9.4 The soft landscaped component of the streetscape will be an extension of the currently established landscape master plan with appropriate avenue planting further enhancing the immediate public domain.

3.9.5 The building has been designed so as to provide strong vertical lines at ground level and through the use of colonnades. The façade has been interspersed with different textures, forms and materials (e.g. glazing) to break up the built form. It is a modern design approach which is deemed to be generally acceptable to the Department.

3.10 Car Parking Provision

3.10.1 The traffic and car parking assessment undertaken in support of the RNSH concept plan identifies 2,555 car parking spaces within the campus as a whole including between 150 and 200 surplus capacity within the existing multistorey car park. This car park is to be retained and utilised.

3.10.2 Upon completion of stage three of the research and education facility there will a need for 32 additional car parking spaces, 30 of which will be offset by the removal of the existing buildings on the site, resulting in a new requirement of 2 car parking spaces (based upon Willoughby Council's DCP). These can be provided within the surplus car parking capacity identified above.

3.11 Amendments to the Proposal

3.11.1 The original exhibited proposal constitutes the extent of development that the proponent is seeking approval for albeit staged in three distinct phases of development. The plans and documentation that were produced at that time were preliminary and were yet to be better formalised pending further design development that needed to be undertaken.

3.11.2 The proponent has taken an opportunity to formalise stage one of the proposal given there is now financial certainty that this stage can take place. The design development process has evolved to the necessary level of detail to allow this phase to take place. Consequently, further plans and documentation has been produced to demonstrate that the stage one building can be developed.

3.11.3 Additional plans have been produced showing floor layouts, dimensions and elevations for stage one. Staging information has been lodged to demonstrate that stage one can be developed in isolation of stages two and three which are currently awaiting confirmation of funding from the University Sector and will be subject to a similar design development process in due course.

3.11.4 A number of minor amendments have also been made to the exhibited proposal:

- *Floor to floor heights of the stage one building have been reduced by 1100mm to match a facade tiling module and refined floor to floor clearances.*
- *The ground to first floor level has been reduced by 100mm, levels 1, 2 and 3 have been reduced by 20mm and levels 4, 5, 6 and 7 have been reduced by 200mm.*
- *300mm has been removed from the east/west dimension of the site in a response to the finalisation of functional areas.*
- *Egress stair 3 has moved to the east side of grid D as a refinement of the design.*
- *Egress stair 1 has been reduced to serve level 1 only as it is not required to provide egress width at higher levels.*
- *The cafe indicated to the south of the building has been deleted as it does not form part of the works.*
- *The ground floor foyer has been reduced in size as a result of both on-going envelope development and design refinement.*
- *The internal planning of the building has been completed in detail including identification of the stormwater detention tank location.*
- *The configuration of the core of the building has been amended to accommodate both plant and subsequent internal planning of each floor.*
- *Existing in-ground services have been identified during the early works phase at the west end of the site requiring the boundary alignment to be amended.*

3.11.5 The changes were relatively minor and reduced the size of the overall development envelope. No re-exhibition was deemed to be necessary.

4 STATUTORY CONTEXT

4.1 The Environmental Planning and Assessment Act 1979

4.1.1 Part 3A of the Environmental Planning and Assessment Act 1979 (the Act) commenced operation on 1 August 2005. Part 3A consolidates the assessment and approval regime of all Major Projects previously considered under Part 4 (Development Assessment) or Part 5 (Environmental Assessment) of the EP&A Act.

4.1.2 Under the provisions of Section 75B of the Act development may be declared to be a Major Project by virtue of a State Environmental Planning Policy or by order of the Minister published in the Government Gazette.

4.2 State Environmental Planning Policy (Major Projects) 2005

4.2.1 State Environmental Planning Policy (Major Projects) 2005 (Major Projects SEPP) outlines the types of development declared a project for the purposes of Part 3A of the Act.

4.2.2 For the purposes of the Major Projects SEPP certain forms of development may be considered a Major Project if the Minister (or his delegate) forms the opinion that the development meets criteria it.

4.2.3 On 8 March 2006, the Minister formed the opinion that the RNSH redevelopment meets the criteria set out in Schedule 1, Group 7, Clause 18 of the Major Projects SEPP, namely:

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

- *a) day surgery, day procedures or health consulting rooms, or*
- *b) accommodation for nurses or health care workers, or*
- *c) accommodation for persons receiving health care or for their visitors, or*
- *d) shops or refreshment rooms, or*
- *e) transport of patients, including helipads and ambulance facilities, or*
- *f) educational purposes, or*
- *g) research purposes, whether or not they are used only be hospital staff or health care workers and whether or not any such use is a commercial use, or*
- *h) any other health related use*

4.2.4 This opinion was formed on the basis that the RNSH redevelopment (as a whole), with a Capital Investment Value (CIV) of $407 million, exceeds the $15 million threshold identified within the SEPP. Accordingly, the Minister is the approval authority. The CIV of the research and education facility itself is $110 million.

4.2.5 The Minister simultaneously authorised the submission of a concept plan for the site which is currently under assessment by the Department (see Section 2.10).

4.3 Permissibility

4.3.1 The site is zoned 5(a) – Special Uses "A" Zone under the provisions of Willoughby Local Environmental Plan 1995 (WLEP 1995) and is lettered *"Hospital"*.

4.3.2 The specific objective for the 5(a) zone is *"identify land to be used for particular public or community purpose"*.

4.3.3 Whilst the proposal is permissible with development consent, Clause 13 of WLEP 1995 provides that development consent must not be granted unless the proposed development is consistent with one or

more of the aims of this plan and at least one specific objective of the zone within which the development is proposed to be carried out. It is considered that the development proposal accords with the objective of the zone for the reasons set out in Appendix G.

4.4 Minister's power to approve

4.4.1 Section 75J of the Act provides the Minister with the power to approve the application as the proposal is not wholly prohibited.

4.5 Other relevant legislation and environmental planning instruments

4.5.1 Appendix G sets out the relevant consideration of legislation (including other Acts) and environmental planning instruments as required under Part 3A of the Act.

5 CONSULTATION AND ISSUES RAISED

5.1 Public Exhibition

5.1.1 Section 75H(3) of the EP&A Act requires that once the Environmental Assessment (EA) has been accepted by the Director General, the Director General must, in accordance with any guidelines published in the Gazette, make the EA publicly available for at least 30 days.

5.1.2 The Director General has not published any specific guidelines in relation to the public exhibition of the project application.

5.1.3 A "test of adequacy" was undertaken by the Department which determined that the matters contained in the Environmental Assessment Requirements were adequately addressed in the Environmental Assessment prior to public exhibition.

5.1.4 Broadly the process followed in terms of the public exhibition was as follows:

- *The application was placed on public exhibition from 25 September 2006 until 30 October 2006.*
- *Copies of the EA were available for inspection at Willoughby City Council and the Department of Planning's offices in Sydney during the exhibition period.*
- *Details of the application were published in the Sydney Morning Herald, the North Shore Times and the Mosman Daily and made available on the Department of Planning's website.*
- *Copies of the EA were forwarded to relevant Government agencies, key stakeholders and adjoining businesses.*
- *All landowners in the vicinity of the site were notified and invited to make submissions.*

5.1.5 In response, the Department received three written submissions from Council and external agencies. Copies of submissions received from public authorities are provided at Appendix E and were forwarded to the proponent on 29 November 2006. No public submissions were received.

5.2 Issues Raised

5.2.1 The relevant planning issues raised during the exhibition period can be summarised as follows and are addressed in detail in Section 6 below:

- *Compliance with RNSH concept plan*
- *Potential Impacts from Gore Hill Transmission Tower*
- *Development staging*
- *Car parking*
- *Traffic generation*
- *Visual impact and built form*
- *Contamination and remediation*
- *Construction Management*
- *Acoustics and noise*
- *Environmental management*

5.2.2 Upon expiration of the exhibition period, several meetings between the Department, the proponent and adjoining landowners took place both on and off site to discuss the issues raised. The proponent has been involved in ongoing discussions and negotiations with agencies, key stakeholders and adjoining landowners to address the effects of the proposal.

5.2.3 The proponent lodged a response to the issues raised in those submissions together with a preferred project report and a revised statement of commitments pursuant to Section 75H(6) of the Act. This is provided at Appendices B, C and D. The revised project application includes modifications and supplementary environmental assessment in response to issues raised.

6 ASSESSMENT

6.1 Director General's Environmental Assessment Report

6.1.1 The purpose of this submission is for the Director General to provide a report on the project to the Minister for the purposes of deciding whether or not to grant approval to the project pursuant to Section 75J of the Act.

6.1.2 Section 75I(2) sets out the scope of the Director General's report to the Minister. Each of the criteria set out therein have been addressed below, as follows:

(a) *a copy of the proponent's environmental assessment and any preferred project report; and*

The proponent's EA is included at Appendix F whilst the preferred project report is set out for the Ministers consideration at Appendix C.

(b) *any advice provided by public authorities on the project; and*

All advice provided by public authorities on the project for the Minister's consideration is set out at Appendix E.

(c) *a copy of any report of a panel constituted under Section 75G in respect of the project; and*

No independent hearing and assessment panel was undertaken in respect of this project.

(d) *a copy of or reference to the provisions of any State Environmental Planning Policy (SEPP) that substantially govern the carrying out of the project; and*

An assessment of each relevant State Environmental Planning Policies that substantially govern the carrying out of the project is set in Appendix G.

(e) *except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division; and*

An assessment of the development relative to the prevailing EPI's is provided in Appendix G.

(f) *any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate.*

The environmental assessment of the project is this report in its entirety.

(g) *a statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.*

A statement relating to compliance with the environmental assessment requirements is provided at Appendix H.

6.2 Summary of Significant Issues

6.2.1 Clause 8B of the Regulations sets out the matters for environmental assessment and Ministerial consideration. It states that the Director General's report is to include an assessment of the environmental impact of the project, any aspect of the public interest that the Director General considers relevant to the project, the suitability of the site for the project and copies of public submissions received by the Director General.

6.2.2 The Department, in consultation with Willoughby City Council, relevant Government Agencies and key stakeholders identified a number of issues that were incorporated into the DGEAR's (see Appendix H) which were subsequently addressed in the proponent's EA. Following the exhibition period there are a number of outstanding issues which require further consideration and resolution under Clause 8B of the Regulations as set out below.

6.3 Compliance with RNSH Concept Plan

Raised By

6.3.1 Department of Planning

Consideration

6.3.2 As set out within Section 2.10, the proponent is separately and concurrently seeking approval of a concept plan to facilitate the redevelopment of the RNS public hospital site. The application seeks approval for the development of new, state of the art hospital facilities, including a new hospital building, community precinct and research and education facilities.

6.3.3 This refurbishment and expansion will result in an improved autonomous facility occupying less than half the current site. The residual land will provide opportunities for the development of complementary health facilities and key workers accommodation as well as providing mixed use development private development opportunities to facilitate the hospital related redevelopment.

6.3.4 The site is to be subdivided into eight development precincts namely the consolidated hospital site (Precincts 1, 2 and 8), the heritage building group (Precinct 3) and the facilitatory development parcels (Precincts 4, 5, 6 and 7). Precinct 8 will accommodate the medical research and education facility and represents the first stage of the redevelopment of Royal North Shore Hospital.

6.3.5 The Department is obliged to assess each project application on its merits whilst ensuring that each stage is in accordance with and does not contravene RNSH concept plan.

Resolution

6.3.6 No further action required. The project application is appropriate, with or without other works set out within the concept plan.

6.4 Potential Impacts from Gore Hill Transmission Tower

Raised By

6.4.1 Department of Planning; Broadcast Australia (BA) (during exhibition of RNS concept plan)

Consideration

6.4.2 The Department, in consultation with Broadcast Australia (BA), the operator of the broadcast tower at 217A Pacific Highway, has raised concerns regarding the potential effects of the development (and the RNSH concept plan proposal as a whole) upon the current and future operational needs of its nearby telecommunications tower and impacts upon the elevations of the research and education facility. Gore Hill Transmission Tower has strategic value to broadcasting and communications in the Sydney area providing a channel for a range of television and radio stations and digital services.

6.4.3 The proponent has supplemented RNSH site-wide report with a site-specific report which specifically addresses issues pertaining to the proposed research and education facility. The issues primarily of relevance are RF Electromagnetic Radiation (EMR) exposure (from the health and safety perspective), Electromagnetic Interference (EMI) for electrical devices within the proposed development, impact upon existing microwave/line of sight links upon the tower and RF "ghosting" as a result of signal deflection from the proposed building and building materials.

6.4.4 Dealing firstly with RF EMR, based upon the height proposed (151.4 metres AHD) the current EMR has been calculated at less than 1% of the general public reference level as defined by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). The maximum exposure as defined by the future needs of the transmission tower has been calculated as 7.5% of the general public reference

level. This is deemed to be generally acceptable given the low level of RF EMR exposure concerned.

6.4.5 An existing microwave link exists in the direction of the RNSH located at 30 metres on the eastern leg of the transmission tower at an azimuth of 82.5^{0}TN at a length of approximately 11 kilometres towards North Head. The proposed research and education facility will not interfere with the existing link including during the construction phase as it does not block the line of sight (LOS). Should future microwave links LOS be required in the future (e.g. towards East Sydney) this issue can be overcome by installing link dishes higher on the transmission tower.

6.4.6 The most significant issue is the potential for EMI to affect the research and education facility and vice versa. High electromagnetic fields can cause electrical equipment and more importantly, medical equipment to perform with steady, momentary or intermittent disruption. As mentioned above, the worst case field on top of the research and education facility is 7.5% of the general public reference level. This falls within the EMI Immunity of 3V/metre and 10V/metre. Standard equipment is generally compliant with the 3V/metre whilst critical medical equipment has a more stringent standard of 10V/metre.

6.4.7 Similarly, "ghosting" effects are produced when part of the signal comes directly from a transmitter whilst another part has been reflected from a hill, building or other large object than the direct signal and arrives slightly later in time thus producing another image, or ghost, offset slightly from the main image. Strong ghosting signals are usually as a result of the interaction of the radio signal with high reflective materials (e.g. glass, metals) whereas weaker ghosting is usually as a result of high absorptive building materials (e.g. concrete, brick).

6.4.8 Typical construction materials all have electromagnetic properties and the important RF properties of each material will depend upon the ability of the material to reflect and absorb the RF signal. Minimising the effects of EMR and EMI will require good RF reflective materials such as glass and reinforced concrete. However, by minimising the RF fields within the building (i.e. more of the signal is reflected) ghosting and multipath may become evident. However, absorptive materials such as concrete drywall, masonry brick and plywood can be used to minimise ghosting.

6.4.9 Many factors affect RF level attenuation (i.e. losses through walls and windows) and to a lesser extent reflection (i.e. building shielding and reflection) have not been included within the proponent's analysis at this stage. Given that many variables can affect EMI, the report recommends that EMI measurements be taken at a number of locations within the research and education facility (post development) to determine the likely effect of EMI. During the construction phase, it is anticipated that EMI causing the electronics in construction cranes will not be an issue provided they are shielded accordingly.

6.4.10 The Department, in consultation with BA, is satisfied that the EMI effects of the development proposal upon the operation of Gore Hill Transmission Tower is likely to be minimal and is of the view that a combination of the proponent's statement of commitment and the imposition of a Departmental condition satisfactorily mitigates this issue in the terms set out below.

Resolution

6.4.11 The proponent has committed to designing the building to consider EMI concerns as required and states that where EMI levels are found to be too high following construction (or due to the telecommunications operator having to increase power to the maximum level then local internal screening or relocation of sensitive electronic equipment will be considered.

6.4.12 The Department recommends that a condition be imposed to supplement the proponent's statement of commitment as follows. The building shall, where relevant and appropriate, be designed to minimise the effect of Electromagnetic Interference (EMI). The proponent shall demonstrate to the Director of Strategic Assessments the extent of any EMI impacts the building may have given the current operating condition of Gore Hill Transmission Tower and how potential impacts are mitigated through the use of internal and external design elements (e.g. façade treatment, shielding of machinery,

earthing etc).

6.5 Development Staging

Raised By

6.5.1 Department of Planning; Willoughby City Council

Consideration

6.5.2 The proponent is seeking approval for the development of an eleven storey building to be used for research laboratories, medical training and educational facilities. Three distinct development stages have been identified which fit into the overall staging and decanting strategy for shortly to take place at the RNSH site.

6.5.3 Stage one involves the development of the initial seven stories of the building with educational facilities being provided on floors one to three and research facilities being provided on floors four to seven. A plant room will be developed with a reinforced concrete roof slab. It is intended that this be developed and occupied as soon as possible to facilitate the initial decanting of staff to commence.

6.5.4 Stage two is a vertical expansion of four floors of wet research space as well as a further expansion of educational facilities. Stage three is a horizontal expansion of the western side of the building which will provide an additional eight stories for further educational (two stories) and research (six stories) purposes. Upon completion, the entire building will be capable of housing 500 research personnel.

6.5.5 The early works for stage one has commenced following the receipt of development consent on 4 September 2006 for the demolition of existing buildings on the site and subsequent bulk excavation. The likelihood of stages two and three being implemented is contingent upon the availability of funding which are understood to be sourced from the University Sector.

6.5.6 The original exhibited proposal constitutes the extent of development that the proponent is seeking approval for albeit staged in three distinct phases of development. The plans and documentation that were produced at that time were preliminary and were yet to be better formalised pending further design development that needed to be undertaken.

6.5.7 The Department requested that further information and clarification be provided to demonstrate that each stage can operate in isolation and in perpetuity, should future stages not come to fruition, in the event that funding streams are not forthcoming. It advised that further plans and documentation should be submitted demonstrate the intended staging strategy.

6.5.8 The proponent has taken an opportunity to formalise stage one of the proposal as there is financial certainty that this stage can take place. The design development process has evolved to the necessary level of detail to allow this phase to take place. Consequently, further plans and documentation have been produced to accompany the preferred project report.

6.5.9 In particular, additional plans have been produced showing floor layouts, dimensions and gross floor areas as well as detailed elevations. Staging information has been lodged to demonstrate that stage one can be developed in isolation of stages two and three. These will be subject to a similar design development process in the future.

6.5.10 The Department's assessment of the proposal has been undertaken for the development of an eleven storey research and education facility with a gross floor area of 24,000m^2 and it is concluded that the development is acceptable subject to the imposition of conditions requiring provision of additional information for subsequent stages as summarised below.

Resolution

6.5.11 It is recommended that prior to commencement of development of stages two and three (as identified within the staging strategy), detailed plans and documentation shall be submitted to and approved by the Director General (or his delegate) so as to provide the Department with sufficient clarity and detail to approve the detailed design elements of these subsequent stages and demonstrate its compatibility with stage one. Any significant departure from the approved project will require submission and approval of a modification application or approval of a project application afresh. The Director General will determine what constitutes a significant departure.

6.6 Car Parking

Raised By

6.6.1 Department of Planning

Consideration

6.6.2 The proponent has lodged a traffic report in support of the project application which analyses likely traffic generation and its effects upon the existing road network. The report states that of the total 560 employees to operate from the building, approximately 410 currently are to be relocated from within the RNSH campus, with the remaining 150 employees to be sourced from outside the area once stage three is implemented. It has been assumed that additional car parking is required for the new employees as current RNSH employees will continue to use existing car parking provision at RNSH.

6.6.3 An analysis of stage three has indicated that there will be 150 researchers exclusively occupying 3,480m^2 of gross floor area, a ratio of 23.2m^2 per employee. By way of comparison, RTA guidance identifies a density of 29m^2 per employee for office space in the health sector. In the absence of any definitive indicator of the level of car parking required for research users, a rate of 1 space per 110m^2 has been adopted from Willoughby DCP, which applies where the proposed development is located within 500 metres from a railway precinct thereby requiring provision of an extra 32 spaces.

6.6.4 The buildings that previously occupied the site comprised a Rotary Lodge and staff recreation facilities. Based upon car parking rates set out with Willoughby Council's DCP and RTA guidance, it is estimated that existing facilities on the site would require 30 car parking spaces thereby offsetting the car parking requirement to 2 additional spaces. The proponent has nevertheless identified a surplus of between 150 and 200 car parking spaces within the nearby multistorey car park for use by RNSH employees (2,555 spaces in total) following the completion of a 352 bay extension earlier this year.

6.6.5 The Department is satisfied that there is sufficient car parking to cater for the proposed development.

Resolution

6.6.6 No further action required.

6.7 Traffic Generation

Raised By

6.7.1 Department of Planning; RTA; Willoughby City Council

Consideration

6.7.2 The submitted traffic report assumes that car parking is only required for the 150 new employees as existing employees will continue to use existing car parking provision at RNSH. Based on RTA guidelines, the 32 car parking spaces allocated to new staff would generate approximately 27 vehicle trips per peak hour. RNSH as a whole generates approximately 1,030 vehicle trips in and 330 trips out

in the AM peak and 525 trips in and 935 trips out in the PM peak (a total of 1,460 vehicle movements at the busiest time of the day). The Department is satisfied that the said increase would be negligible.

6.7.3 The traffic report lodged in support of the project application assesses the potential effects of additional traffic upon the local road network. The report has been undertaken in the context of traffic generation that is attributable to the RNSH. Existing traffic volumes and intersection operation analysis has been undertaken in accordance with RTA traffic analysis requirements. It is estimated that the intersections surrounding the site operate at a satisfactory level (LOS B) or better except at Pacific Highway/Greenwich Road which operates at or near capacity.

6.7.4 Council is of the view that the assumptions made in relation to intersection performance set out with the proponent's traffic report are conservative. The proponent has responded by stating that it is currently negotiating with the RTA in relation to potential upgrading of the intersections referred to within the report, as part of its ongoing negotiations regarding the RNSH concept plan, and this issue does not require resolution at this stage.

6.7.5 The RTA is of the view that the issues raised in relation to the RNSH concept plan relating to traffic infrastructure provision, execution of a Planning Agreement(s) and implementation staging should be satisfactorily resolved prior to the issue of a construction certificate for development of this site. The Department is aware of the ongoing negotiations that are taking place between the proponent and the RTA and is satisfied that approval of the project application can occur prior to RNSH site wide traffic works being resolved.

6.7.6 In summary, the majority of employees are to be relocated from existing research facilities currently dispersed throughout the RNSH campus. Existing traffic movements caused by these employees will remain unaltered and those generated by additional employees will be relatively insignificant. Estimated traffic movements may in fact decrease as measures are introduced to encourage increased public transport usage and minimise use of private cars through the implementation of a transport modal shift as part of the RNSH concept plan.

Resolution

6.7.7 No further action required.

6.8 Visual Impact and Built Form

Raised By

6.8.1 Department of Planning

Consideration

6.8.2 The design of the building aligns with and is built to the street boundaries to the north west and north east to reinforce the corner element. The development proposal maintains and strengthens the existing streetscape on the existing Westbourne Street and Reserve Road.

6.8.3 The proposed height and scale of development proposed is compatible with the immediate context of the surrounding area. The dominant skyline building mass is the existing form of development, and nearby commercial developments to the east. The proposed height at 11 stories once the final stage of development has been completed will be compatible and in keeping with the context of the existing RNSH buildings in particular Buildings 1 and 2 which are 10 and 12 stories in height respectively.

6.8.4 Diagrams have been lodged in support of the proposal to show the extent of existing overshadowing at RNSH and to demonstrate the extent of overshadowing once the development is completed. Whilst it is acknowledged that there will be overshadowing during the winter months this will not impinge upon any area of public open space in nor is it significantly more overshadowing than is currently caused by the existing hospital buildings nearby.

Resolution

6.8.5 The proponent has lodged an indicative schedule of finishes for all exterior and interior components of the building and has committed to consult with the Crime Prevention Officer for Chatswood Police regarding measures to ensure that the principles for Crime Prevention Through Environmental Design (CPTED) are implemented through the detailed design and ongoing operation of the building.

6.8.6 The Department recommends that two conditions be imposed the first of which requires stipulates that the final design of proposed external materials and finishes (as identified within the staging strategy) to be submitted and approved by the Director of Strategic Assessments prior to construction of above ground works. Secondly, the visible light reflecting from building materials used on the façades shall not exceed 20% and shall be designed so as not to result in glare that causes nuisance or interference to any person or place.

6.9 Contamination and Remediation

Raised By

6.9.1 Department of Planning

Consideration

6.9.2 Development consent for the "demolition of existing accommodation Building 4, gymnasium, tennis court, swimming pool and associated infrastructure and bulk excavation" was granted by Council on 4 September 2006 subject to conditions (DA-2006/607). Council imposed a number of conditions upon the consent in relation to demolition and construction impacts including management of erosion and sediment control, removal of asbestos, pollution control and hazardous waste management and remediation and validation. The existing buildings have since been demolished and the site has been cleared and excavation in readiness for development to commence.

6.9.3 The proponent carried out a preliminary site contamination investigation for the RNSH site (excluding the land west of Reserve Road) dated 13 September 2004. A number of potential areas of environmental concern (AEC's) have been identified within the investigation area. The proponent's consultant is of the view that, based upon the site history and the limited sampling and analysis undertaken and experience with similar sites in the past, that the site is capable of being remediated for re-use, provided further investigations are carried out to establish the extent of remediation required.

6.9.4 The proponent has lodged a detailed Environmental Site Assessment dated 20 August 2006 that specifically deals with the subject site. The results indicate that the majority of fill materials which require excavation and offsite disposal for construction of basement levels are likely to be classified as inert waste whilst the majority of underlying natural residual soils and shale are likely to be classified as virgin excavated natural material (VENM). The report concludes that whilst the site is likely to be suitable with respect to contamination for re-use in the future, investigations were unable to be undertaken across approximately half the site due to the presence of existing buildings (at that time).

6.9.5 Consequently, the report recommends that further investigation be carried out within the footprint of the buildings (given they have now been demolished) so as to confirm the contamination status and waste classification of the soils within these areas. Prior to commencing excavation on the site, two further assessments have since been undertaken of the materials present within the area occupied by the hospital building, surrounding walkway and gardens. In the light of the investigation and remediation activities that have taken place, the Department is satisfied that the site is suitable for re-use subject to the imposition of conditions as summarised below.

Resolution

6.9.6 In order to ensure that remediation activities have been undertaken to meet the necessary statutory

requirements, the Department recommends that a condition be imposed requiring the Proponent to prepare a detailed Site Audit Summary Report and Site Audit Statement and Validation Report. The site audit must be prepared in accordance with the Contaminated Land Management Act 1997 and completed by a site auditor accredited by the Environmental Protection Authority to issue site audit statements prior to commencement of any building works, excluding demolition and excavation works. The site audit must verify that the land is suitable for the proposed uses.

6.9.7 The Department recommends that a further condition be imposed upon the approval as recommended within the proponent's Environmental Site Assessment. This requires the design and implementation of an inspection and test program and contingency plan during construction providing procedures to be followed in the event that as yet unidentified potentially contaminated material including asbestos is identified. Any new information that comes to light during construction works which has the potential to alter previous conclusions about site contamination must be immediately notified to the Department.

6.10 Construction Management

Raised By

6.10.1 Department of Planning, Willoughby City Council

Consideration

6.10.2 The proponent has prepared a Construction Management Plan (CMP) to address the requirements for safe work practices to protect the safety and welfare of the public, hospital staff, students and workers on the project during the construction of the research and education centre. The CMP addresses measures to be adopted for the construction site, waste minimisation and management and geotechnical investigation.

6.10.3 Currently Westbourne Street east of Reserve Road is primarily used as a staff car park with a boom-gate restricting access at the intersection with Herbert Street. Westbourne Street was previously designated as one-way westbound with staff entering the car park from Herbert Street and exiting via Reserve Road. The Department, in consultation with Council, is concerned that the proposal for construction traffic to exit onto Herbert Street from Westbourne Street may be potentially dangerous.

6.10.4 Council has indicated that its preferred site wide option is to redesignate Westbourne Street as an entry road only (i.e. one way westbound) as previously managed and have all staff vehicles and construction traffic existing via Reserve Road. This option is currently being negotiated between the proponent, Council and the RTA as part of the RNSH concept plan proposal as is yet to be resolved.

Resolution

6.10.5 Pending resolution of the potential redesignation of Westbourne Street as part of the concept plan proposal, Council's alternative is that the proponent introduce a left-turn only restriction, on all vehicles (staff and construction) turning onto Herbert Street. It is further recommended by Council that appropriate signage be installed in an area to the south of the hill crest, informing approaching motorists that construction traffic will be entering ahead.

6.10.6 The proponent is satisfied with this outcome and has incorporated a statement of commitment accordingly. "No Right Turn" signs (RTA Standard: R2-6(R)A) on Herbert Street and Westbourne Street and a temporary warning sign stating "Caution Construction Traffic Entering Ahead" (RTA Standard: W5-22A) are to be installed at the appropriate distance from the intersection, for the duration of the construction works. The Department is generally satisfied that this issue has been addressed provided other generic construction management measures are imposed.

6.10.7 The proponent has made a number of other more generic statements of commitment for site management during construction such as appropriate fencing and waste disposal. It is recommended that other generic Departmental conditions be imposed for action during construction including

provision of approved plans on site a site notice a 24 hour contact telephone number, protection of trees, dust control measures and hours of work.

6.10.8 The Department recommends that a number of its standard construction management conditions be imposed to strengthen and further rationalise the measures to be adopted during the construction process. These include lodgement of pre and post construction dilapidation reports (Conditions C3 and E1), preparation of a detailed Construction Management Plan (CMP) and Construction Waste Management Plan for approval prior to commencement of works (Conditions C5 and C6) to be implemented during construction.

6.11 Acoustics and Noise

Raised By

6.11.1 Department of Planning; Willoughby City Council

Consideration

6.11.2 The proponent has undertaken an acoustic assessment report in support of the project application to assess internal noise levels once the research and education facility (e.g. mechanical plant, traffic and helicopter noise) and environmental noise emission levels. Based upon the aforementioned assessment, the report subsequently recommends maximum criteria for noise emissions, road traffic noise intrusions and maximum helicopter noise intrusion criteria. The noise criteria are based upon DEC's Industrial Noise Policy as well as Australian Standards and Willoughby City Council guidelines.

6.11.3 Council is concerned that the location and type of noise impacting plant and equipment has not been sufficiently detailed within the exhibited proposal and noise mitigation measures need to be assessed prior to works commencing. Furthermore, Council recommended that all plant and equipment should be housed in plant room structures to ensure satisfactory acoustic and visual amenity is retained in the area and validation is provided prior to occupation to ensure that all the environmental noise criteria is not exceeded.

6.11.4 The proponent has formalised stage one of the proposal given there is now financial certainty that this can take place. Sufficient space has been retained within the basement level for provision of mainstay plant and machinery for all three stages. A supplementary plant room will be located on the seventh floor which includes a reinforced structure to provide a noise buffer to the floors above and other supplementary plantrooms have been incorporated into stages two and three as appropriate.

6.11.5 The proponent states within its response to submissions that noise mitigation measures will be addressed within the site management plan and an environmental noise emission assessment will be provided to ensure that all relevant criteria are complied with at nearby sensitive locations. The acoustic report will demonstrate the overall design implementation of noise mitigation measures including provision of acoustic shielding where necessary.

6.11.6 The Department is generally satisfied that this issue has been satisfactorily addressed at this stage subject to further information being provided prior to commencement of use of the building including a means of validating the findings in the report so as to address Council's concerns.

Resolution

6.11.7 It is recommended that a condition be imposed requiring submission and approval of an operation noise management plan. The scope of the report will ensure compliance with both the internal noise levels (and reverberation times) and the environmental noise emission criteria set out within the approved acoustic report and specify any noise mitigation techniques, management methods and procedures to be implemented and mitigation equipment and/or means of attenuation (e.g. acoustic shielding) that have been adopted. The condition also requires the proponent to undertake a noise monitoring program following the commencement of operations on the site.

6.12 Environmental Management

Raised By

6.12.1 Department of Planning

Consideration

6.12.2 The proponent has adopted a number of Environmentally Sustainable Design (ESD) objectives within the overall design of the building which cross the disciplines of architecture, mechanical services, lighting design, hydraulic services, lifts and construction to the benefit of users of the new building. These include building orientation, circulation, insulation, external louvre system, glazing, parking/cycling facilities, environment rating tool and a green star rating.

6.12.3 The proponent has prepared a stormwater drainage statement in support of the proposal setting out how it is intended to deal with stormwater requirements on the site. The stormwater system is to be designed in accordance with relevant Australian Standards, BCA and design codes, the combined stormwater detention/rainwater reuse to be calculated in accordance with Council's DCP and post-development flows into Council's system are no greater than existing pre-development flows.

6.12.4 As part of the overall water management at the site and to minimise town water usage a rainwater harvesting system will be used to collect stormwater runoff to the reused within the facility. Water will be pumped from the tank via a separate non-drinking piping network throughout the facility for toilet flushing. During periods of high rainfall when the tank has reached capacity it will have the facility to overflow to the stormwater drainage system.

6.12.5 A geotechnical investigation has been carried out to provide information on subsurface conditions, a geotechnical model and discussion and recommendations on relevant aspects such as suitable footing types, retention systems, foundation and pavement design parameters. It is concluded that there should not generally be significant geotechnical constraints to developments consisting of basement excavations and typical foundations loadings from multistorey buildings.

6.12.6 A number of waste management and resource recovery objectives have been developed in accordance with the requirements of relevant professional and statutory bodies to ensure that the existing certified waste management and resource recovery policy is effective. This avoids waste production through purchasing strategies, reuse, maximised recycling and proper handling and disposal of remaining refuse and complies with relevant legislation.

6.12.7 In relation to stormwater management, the proponent has committed to roof water collection and positive water demand management such as provision of low flow taps, AAA rated fixtures and smart flush toilets.

Resolution

6.12.8 The Department recommends that this be further strengthened through provision of a number of Conditions. Firstly, a condition of approval should be imposed which ensures compliance with the RNS Hospital Waste Management & Resource Recovery Plan 2004 in perpetuity during the operation of the new building. The condition requires that the proponent shall submit to the Department an audit demonstrating the waste management practices being undertaken in the building no sooner than two years from the date of the Minister's approval.

6.12.9 It is further recommended that an erosion and sedimentation control plan should be prepared and implemented (Conditions B7 and D2). Stormwater and drainage works design shall be prepared in accordance with Council's requirements and basement drainage details are to be forwarded to Council prior to commencement of drainage and stormwater works. Finally, any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system without prior approval by Council.

7 CONCLUSION

7.1 The Department has reviewed the environmental assessment and the preferred project report and duly considered advice from public authorities as well as issues raised in general submissions in accordance with Section 75I(2) of the Act.

7.2 Issues raised include compliance with RNSH concept plan, electromagnetic radiation from a nearby major transmission tower, development staging, car parking, traffic generation, visual impact and built form, contamination and remediation, construction management, acoustics and noise and environmental management.

7.3 Following the exhibition period the proponent met with representatives from the Department to resolve outstanding issues. Additional plans and documentation were subsequently lodged and appropriate conditions were discussed.

7.4 The proposal has been carefully assessed to demonstrate that the research and education facility does not contravene the RNSH concept plan (being separately assessed) whilst ensuring that it can operate in perpetuity in the event that the RNSH concept plan is not implemented (and approved). The Department is satisfied in this regard.

7.5 The Department is of the view that the combination of statements of commitment made by the proponent together with supplementary conditions of approval that are recommended be imposed by the Minister, should effectively mitigate and manage this issue within acceptable environmental limits. The proponent agrees to the content of all conditions of approval.

7.6 The delivery of a consolidated and autonomous research and educational facility will improve the equity, efficiency and effectiveness of health services provided from Royal North Shore Hospital (RNSH). The proposal is in the public interest and will improve overall healthcare to Sydney and the State.

7.7 The Department **recommends that the project application be approved** subject to the imposition of conditions set out in Appendix A.