



NSW GOVERNMENT  
**Department of Planning**

***MAJOR PROJECT ASSESSEMENT:  
Royal North Shore Hospital –  
Proposed Zone Substation  
Major Project Application MP 07\_0168***

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

April 2009



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# 1 EXECUTIVE SUMMARY

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This is a report on a project application seeking approval for a zone substation on the Royal North Shore Hospital (RNSH) site at St Leonards. The proponent is Health Infrastructure, a division of NSW Health.

The substation is proposed to supply the necessary energy requirements of the redeveloped hospital, which will include the new Acute Hospital and Community Health Facility currently under assessment by the Department.

On 29 September 2006, the redevelopment of the RNSH was included in Schedule 5 of *State Environmental Planning Instrument (Major Projects) 2005* (Major Projects SEPP) as a Critical Infrastructure project. The Concept Plan for the redevelopment of the RNSH site was approved on 13 April 2007.

The estimated Capital Investment Value (CIV) of the proposed substation is \$17.6 million.

The substation is a Part 3A project under the *Environmental Planning and Assessment Act 1979* ("the Act") as the CIV is greater than the threshold for Part 3A projects under Schedule 1, Clause 18 of the Major Projects SEPP. As the proposed substation part of the redeveloped hospital, it also meets the Critical Infrastructure criteria under Schedule 5 of the Major Projects SEPP.

The project was placed on public exhibition for a period of 48 days from 17 December 2008 until 2 February 2009. The Department received 1 letter from Willoughby City Council and 1 letter from Ramsay Healthcare on behalf of North Shore Private Hospital.

## Key Issues

Key issues raised in the submissions related to:

- Compliance with the approved Concept Plan in relation to electromagnetic radiation;
- Built form and visual impact of the substation when seen from North Shore Private Hospital;
- Construction impacts on North Shore Private Hospital;
- Management of stormwater including on-site detention.

## Preferred Project Report

On 4 March 2008, the proponent amended the application via the Preferred Project Report to address issues raised by the Department and in the submissions. The report provided amended plans with minor changes to the size and design details of the substation.

## Assessment

The Department has assessed the merits of the proposal and is satisfied that the impacts of the proposed development have been addressed via the proponent's Preferred Project Report, the Statement of Commitments and the Department's recommended conditions (including detailed stormwater designs and a dilapidation report). Furthermore the proposal adequately addresses the Director General's requirements for the project and is generally consistent with the approved Concept Plan. On these grounds, the Department is satisfied that the site is suitable for the proposed development and that the project will provide environmental, social and economic benefits to the region. All statutory requirements have been met.

## 2 BACKGROUND

### 2.1 INTRODUCTION

The Royal North Shore Hospital, St Leonards, comprises Lots 21 and 22 DP 863329 and is located within the Willoughby Local Government Area (LGA). The site is owned by the Health Administration Corporation, and has an area of approximately 12 hectares.

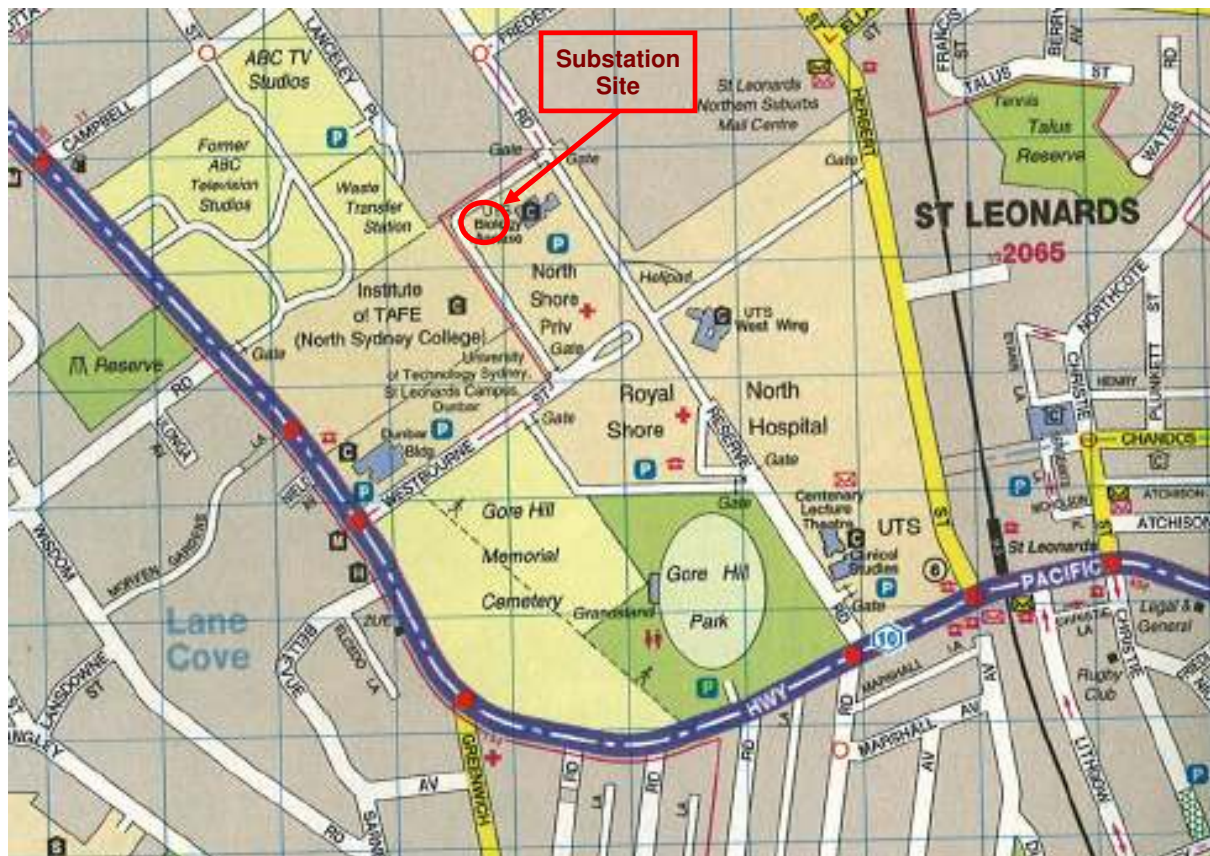


Figure 1. Royal North Shore Hospital site, and location of the proposed substation

## 2.2 THE SITE AND EXISTING LAND USE

The substation is proposed to be located at the rear of the North Shore Private Hospital (Refer to Figure 2). The 'the Cottage', most recently used as a breast screen facility, and the 'Animal House' buildings, previously occupying the site, have been demolished. The site is accessed from Saville Street, which runs alongside the private hospital from Westbourne Street. This street is used as an internal hospital road only and is not a public thoroughfare.



*Figure 2. Location of the proposed substation (in orange) within the RNSH site (within red boundary)*

## 2.3 SURROUNDING LAND USES

North Shore Private Hospital adjoins the southern boundary of the substation site. An approval to extend the first floor of the hospital to this boundary was granted by Willoughby City Council in 2006, however construction has not yet commenced.

Other land uses surrounding the site of the proposed substation comprise the North Sydney Institute of TAFE (Northern Sydney College) to west on the opposite side of Saville Street. The RNSH multi storey car park is located to the east and a hospital car park is to the north of the subject site. The Artarmon Industrial Estate is located further north and features a number of businesses including SBS and ABC studios, a waste transfer station and several smaller industrial premises. St Leonards CBD and railway station are located further east. Residential flat buildings have been constructed along the eastern side of Herbert Street opposite the hospital site, including the Forum towers adjacent to St Leonards Railway Station.

## 2.4 APPROVAL HISTORY

### Concept Plan

On 13 April 2007, the previous Minister for Planning approved a Concept Plan MP 06\_0051 for the redevelopment of the Royal North Shore Hospital. The Concept Plan approval comprised the following:

- Subdivision of the site into 8 precincts;
- Consolidated hospital development in precincts 1, 2 and 8;
- Land uses and maximum GFAs for the non-hospital precincts 3, 4, 5, 6 and 7;
- Maximum building heights, including a building height of RL 130m AHD for the proposed substation site;
- Design concepts for built form, open space and heritage;
- Conceptual road design;
- Car parking provision;
- Amenities and service provision;
- Staged reopening of Westbourne Street to vehicular traffic.

The Concept Plan did not seek significant changes to the current number of beds or staff. Bed and staff numbers will remain approximately the same (600 beds and 5100 staff), however the resultant hospital will be consolidated, reconfigured and be an updated, modern facility.



Figure 3. Approved Concept Plan for the RNSH site), including the 8 development precincts.

Project approval for preliminary works was granted concurrent with the Concept Plan approval, and included approval for demolition of a number of buildings on the hospital site.



## 3 PROPOSED DEVELOPMENT

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### 3.1 PROJECT APPLICATION

The proponent seeks project approval for a zone substation on the RNSH site to provide the energy needs of the redeveloped hospital including the recently completed Research and Education Facility in Precinct 8, and the proposed Acute Hospital and Community Health Facility currently under assessment by the Department.

The substation is proposed to contain 2 transformer bays, an indoor 11kV switchroom, control room, cable basement, communications room, staff amenities and stairways. Underground 11kV cables will supply power to the hospital site, along with some interconnection with the existing Energy Australia Network.

The substation development is proposed to include vehicular access and 2 parking spaces. Ancillary works including site fencing, landscaping and lighting are also proposed.

The substation will require no permanent staff, other than maintenance and repair staff.

A buffer zone of 14.35m is proposed between the substation structures and the southern boundary adjoining the private hospital, to reduce risks relating to electromagnetic radiation. The transformer bays will be located a further 19m from the buffer zone.

The proposed substation is proposed to be 8m-9m above the height of the at-grade hospital car park on the northern side of the site, and up to 7m high on the southern side. It will be 52m in length along its longest site (east to west).



Figure 4. View of the south-western elevation of the substation, with the multistorey car park in the background. The approved extensions to North Shore Private Hospital are not shown.



Figure 5. View to the north- western elevation of the substation, with the multi storey car park and North Shore Private hospital in the background.

### 3.2 PREFERRED PROJECT REPORT

On 4 March 2009, the proponent submitted a Preferred Project Report (PPR). The PPR included details of design changes summarised as follows:

- Reduction in north-south length of the building from 29.77m to 27.37m (3.4m);
- Reduction in the height of the building height of 0.25m;
- Increased setbacks from the northern (rear) boundary from 6m to 5.5m, and from the southern (NSPH) boundary from 15.74m to 17.54m;
- Modification to window and door openings on the southern elevations of the switchroom and control room;
- Deletion of the awning on the western elevation;
- Minor changes to the materials schedule;
- Addition of on site detention system;
- Subdivision plan detailing easements.

The final Statement of Commitments was received on 18 March 2009. Additional details were also provided on 6 April 2009 regarding electric and magnetic fields (EMF) and details of a Deed of Agreement agreed to by North Shore Private Hospital, Northern Sydney Central Coast Area Health Service and Health Administration Corporation. The Deed of Agreement was a private agreement between the parties and the Minister is not bound by Deeds of this nature when making her decision (see Section 75J).



## 4 STATUTORY CONTEXT

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### 4.1 MAJOR PROJECT DECLARATION

The proposal is a Major Project under Part 3A of the Act as the proposal has a capital investment value of more than \$15 million and is ancillary to hospital purposes as described in Clause 18, Schedule 1 of the Major Projects SEPP. As the substation is a development ancillary to the redeveloped hospital, it also meets the Critical Infrastructure criteria under Schedule 5 of the Major Projects SEPP.

On 8 March 2006, the previous Minister for Planning formed the opinion that the RNSH stage 2 redevelopment is a Part 3A Major Project. The proposed substation forms part of this development, and as a result, separate declaration for the substation was not required to be obtained.

### 4.2 ZONING / PERMISSIBILITY

The site is zoned 5(a) Special Uses – Hospital under *Willoughby Local Environmental Plan 1995*. The proposed development is not prohibited by the LEP.

### 4.3 DIRECTOR GENERALS ENVIRONMENTAL ASSESSMENT REQUIREMENTS (DGRS)

On 30 January 2008, the Director General issued environmental assessment requirements (DGRs) pursuant to Section 75F of the EP & A Act. The key issues to be addressed in the DGRs issued related to:

- Built Form
- Access and parking
- Landscaping
- Stormwater
- Electro-magnetic radiation
- Noise and Odour
- Ecologically Sustainable Development
- Relationship to other approvals
- Statement of Commitments

### 4.4 OBJECTS OF THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

The objects of any statute provide an overarching framework that informs the purpose and intent of the legislation and gives guidance to its operation. The Minister's consideration and determination of a project application under Part 3A must be informed by the relevant provisions of the Act, consistent with the backdrops of the objects of the Act.

The objects of the Act in section 5 are as follows:

- (a) to encourage:
  - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,
  - (ii) the promotion and co-ordination of the orderly and economic use and development of land,
  - (iii) the protection, provision and co-ordination of communication and utility services,
  - (iv) the provision of land for public purposes,
  - (v) the provision and co-ordination of community services and facilities, and
  - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
  - (vii) ecologically sustainable development, and
  - (viii) the provision and maintenance of affordable housing, and
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The Department has considered the Objects of the Act in the assessment of this application. The balancing of the project in relation to the Objects is provided in Section 5.

#### 4.5 ESD PRINCIPLES

The Protection of the Environment Administration Act 1991 provides five accepted ESD principles:

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the integration principle);
- (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle);
- (c) the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle);
- (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle); and
- (e) improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle).

The Department has considered the project application for subdivision in relation to the ESD principles and has made the following conclusions:

**1. Integration Principle** - The proposed substation will provide the ongoing energy needs for the new hospital development, which will service the population of the northern Sydney.

**2. Precautionary Principle** – The proposed substation will not impact on threatened or vulnerable species, populations, communities or significant habitats as the site has a low level of environmental sensitivity.

**3. Climate Change** –The proposed substation is not likely to be impacted by potential rises in river or sea levels due to the height of the site above sea level (at least RL 93m AHD).

**4. Inter-Generational Principle** –The substation will facilitate the Concept Plan by providing the energy needs of the redeveloped hospital.

**5. Biodiversity Principle** – There is little natural vegetation on the site and the site does not contain any threatened or vulnerable species, populations, communities or significant habitats. Therefore the proposal will not impact upon the conservation of biological diversity or ecological integrity.

**6. Valuation Principle** – The substation will facilitate the operation of the redeveloped hospital which serves a large population of northern Sydney and is a large employer in the region.

The proponent is committed to ESD principles which are detailed in the Preferred Project Report including:

- Installation of energy efficient light fittings and fixtures;
- Use of no or low VOC interior paints;

#### 4.6 SECTION 75I(2) OF THE ACT & CLAUSE 8B OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

Section 75I(2) of the Act and Clause 8B of the Environmental Planning and Assessment Regulation 2000 provides that the Director-General's report is to address a number of requirements in the Director General Report. These matters and the Department's response are set out as follows:

Section 75I(2) criteria	Response
Copy of the proponent's environmental assessment and any preferred project report	The Proponent's EA and Preferred Project Report are located on the assessment file.
Any advice provided by public authorities on the project	Submissions provided by public authorities on the project for the Minister's consideration are discussed in Section 6 and Appendix C of this report.
Copy of any report of a panel constituted under Section 75G in respect of the project	No statutory independent hearing and assessment panel was undertaken in respect of this project.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project	A brief assessment of each relevant State Environmental Planning Policies that substantially governs the carrying out of the project. Is provided in Section 4.7 of this report.
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	The application is a critical infrastructure project.
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. All environmental impacts associated with this proposal have been assessed within this report.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The EA and subsequent submissions by the proponent forms the basis for consideration of the environmental impacts associated with the development. The Department is satisfied that the project complies with the environmental assessment requirements issued on 30 January 2008.
Clause 8B criteria	Response
An assessment of the environmental impact of the project	An assessment of the environmental impact of the proposal is discussed in section 5 of this report.
Any aspect of the public interest that the Director-General considers relevant to the project	The public interest is discussed in section 5 of this report.
The suitability of the site for the project	The site is considered suitable for the proposed substation, based on the approved Concept Plan.
Copies of submissions received by the Director-General in connection with public consultation under section 75H or a summary of the issues raised in those submissions.	A summary of the issues raised in the submissions is provided in section 5 and Appendix C of this report.

Clause 8B of the Regulation sets out the matters which the Director General must present in his report 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. These issues are discussed in this report.

#### 4.7 ENVIRONMENTAL PLANNING INSTRUMENTS

Other than the Major Projects SEPP, the only other EPI that applies to this application, as required under Part 3A of the Act, is State Environmental Planning Policy No. 55 (Remediation of Land), discussed below:

### **State Environmental Planning Policy No. 55 (Remediation of Land) (SEPP 55)**

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 by specifying that certain considerations be made by the consent authority when determining development applications in general, and where relevant, land has been appropriately remediated.

A contamination report was not submitted with the application, however due to the previous uses on the site, it is not considered that there would be significant contamination on the site, and should be suitable for the use as a substation. To address this issue, a condition of approval is recommended for a contamination report to be prepared to satisfy the requirements of SEPP 55, including any remediation work that may need to be undertaken prior to construction.

## 5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

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Key issues considered in the Department's assessment of the Environmental Assessment include:

- Compliance with the approved Concept Plan;
- Built form and visual impact;
- Structural and operational impacts on North Shore Private Hospital;
- Stormwater management and OSD.

### 5.1 COMPLIANCE WITH CONCEPT PLAN APPROVAL

#### Electromagnetic Radiation

The Concept Plan approval required the consideration of Electromagnetic radiation (EMR), also known as Electromagnetic emissions (EME) and Electric and Magnetic Fields (EMF), in any future development. A report was prepared by Energy Australia (Appendix L of the Environmental Assessment) to satisfy this requirement. The report concludes that EMF levels will be well below the exposure limits developed by the National Health and Medical Research Council, and draft Australian Radiation Protection and Nuclear Safety Agency standards.

Concerns were raised by Ramsay Healthcare on behalf of North Shore Private Hospital (NSPH) regarding the proximity of the substation to the hospital. In March 2006, Willoughby Council granted development consent for alterations and additions to the private hospital. The consent included the extension of the first floor of the hospital to the northern boundary, adjoining the substation site. Concerns were raised that the approved plans were not considered in the design of the substation, in particular the use sensitive electrical equipment in the extended area of the hospital which could be affected by the substation.

The PPR included a report from Radiation Services Group dated November 2008, which states that the maximum magnetic field from the substation at ground level at the private hospital will be a maximum of 3milliGaus, which is unlikely to have any noticeable effect on hospital equipment used in the part of the hospital closest to the substation. Only monitoring equipment (ECG and EEG devices) may be affected by 3milliGaus, however these are not proposed in the affected field. The report also notes that many pieces of equipment used within private hospital generate magnetic fields much greater than any levels of those potentially reaching the building from the substation.

A condition has been recommended for EMF measurements taken once the substation is operational to confirm the findings in the report. Should any levels exceed current standards or impact on the operation of the private hospital.

### 5.2 BUILT FORM

Concerns were raised by the Department and the private hospital regarding the appearance of the substation when viewed from the rear of the private hospital. The transformers and equipment are not screened on the side of the substation facing the private hospital, with a 1.8m metal palisade fence and light planting proposed along this boundary.

The development consent issued by Willoughby City Council for the private hospital includes the extension of the first floor of the hospital over the existing rear car park, to the boundary with the substation. The private hospital advised that this part of the building will accommodate day surgery, recovery and intensive care units, with patients generally confined to beds. Most of the substation will be below the floor level of this part of the hospital as the site slopes to the rear, and therefore patients would mostly look out over the roof of the substation. The proponent advised that the buffer zone between the substation and the private hospital is designed as a clearance zone to reduce the risk of fire and explosion impacts, and EnergyAustralia design guidelines do not support trees and large shrubs in these areas. As the substation is at the rear of the hospital, it will not experience high levels of public pedestrian and vehicle movements, and therefore the visual impact is not considered to be significant.

### 5.3 STRUCTURAL IMPACTS ON NORTH SHORE PRIVATE HOSPITAL

Concerns were raised by Ramsay Healthcare on behalf of North Shore Private Hospital, relating to potential structural impacts on the private hospital as a result of the construction and operation of the substation, in particular impacts on a retaining wall near Saville Street.

To address these concerns, a condition is recommended for a structural engineer to conduct a dilapidation report relating to the private hospital structures near Saville Street, including the retaining wall. The report is to make recommendations for the prevention of structural damage, and ways to address any structural damage that may occur as a result of the construction of the substation.

### 5.4 STORMWATER MANAGEMENT AND OSD

Council raised concerns regarding the stormwater management for the proposed substation, including the need for On-Site Detention (OSD) and connection to the existing stormwater system. The PPR included preliminary hydraulic plans detailing OSD, and has included possible reuse of rainwater for use elsewhere on the site, and any overflow to be connected to the existing stormwater system.

A condition has been recommended for detailed stormwater disposal and OSD design to be prepared in accordance with Willoughby City Council's technical standards for stormwater management to be prepared by a hydraulic engineer, generally consistent with the preliminary stormwater plans submitted with the application.

### 5.5 STATEMENT OF COMMITMENTS

A copy of the Statement of Commitments submitted with the application is located at **Appendix B**. The key issues identified are:

- Traffic Management , Construction Environmental Management (including noise and vibration) and Emergency Response Plans to be prepared;
- Construction hours of 7am and 6pm, seven days a week.

The Statement of Commitments is generally considered to be reasonable for this application. The proposed hours of construction are considered to be acceptable as no residential properties are located in the vicinity of the site, with two 24 hour operation hospitals in the vicinity.

The Statement of Commitments proposed further approvals to be obtained from the Director General of the Department of Planning relating to contamination and dilapidation reports. Conditions have been recommended for these studies to be completed and forwarded to either the Certifier or Council where appropriate.

### 5.6 PUBLIC INTEREST

The public interest can be satisfied on the basis that the proposed substation will facilitate the provision of a greater range of hospital services and meet the needs of the northern Sydney. The declaration of the RNSH redevelopment as a critical infrastructure project highlights the strategic need of the proposal to the wider community and the social and economic benefits that delivery of the hospital redevelopment will secure.



## 6 CONSULTATION AND ISSUES RAISED

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### 6.1 PUBLIC EXHIBITION DETAILS

The EA was publically exhibited from **17 December 2008** until **2 February 2009** for a period of 48 days and was published in the North Shore Times, Sydney Morning Herald, and were made available on the Department of Planning's website. Copies of the EA were also available for inspection at Willoughby City Council offices and the Department of Planning's offices in Sydney during the exhibition period.

### 6.2 SUBMISSIONS RECEIVED ON ENVIROMENTAL ASSESSMENT

The Department received a submission from Willoughby City Council, and a submission from Ramsay Healthcare as the owners of North Shore Private Hospital (NSPH). The following issues were raised:

Submissions	Issues Raised
Willoughby City Council	<ul style="list-style-type: none"><li>• Ensure the design of Saville Street does not conflict with the development consent for the private hospital.</li><li>• Plans detailing OSD and possible re-use of rainwater should be provided.</li><li>• Waste management plan for demolition works should be prepared.</li><li>• Sustainable development commitments should be provided.</li></ul>
Ramsay Healthcare/North Shore Private Hospital	<ul style="list-style-type: none"><li>• Little consultation with the private hospital.</li><li>• Drawings do not show the planned redeveloped of NSPH and therefore may be misleading.</li><li>• Potential for structural damage to the hospital and retaining wall from vehicles using Saville Street, adjoining the western boundary of the NSPH.</li><li>• The substation should be more enclosed for safety reasons.</li><li>• Concerns about EMF, particularly on redeveloped hospital.</li></ul>

A summary of the response to these issues is located at **Appendix C**, as well as a discussion of the major issues in sections 5 and 6 of this report. It was concluded that the relevant issues could be adequately addressed by the Statement of Commitments and conditions of approval.

## 7 CONCLUSION

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The Department has assessed the EA and considered the submissions in response to the proposal. The key issues relating to the proposed substation are visual impact, electromagnetic radiation, structural impacts on the adjoining private hospital and ESD measures.

The Department has considered these issues and a number of conditions are recommended to ensure the satisfactory addressing of these issues. Recommended conditions include:

- Preparation of a dilapidation report;
- Detailed stormwater and on site detention plans;
- EMF levels tested once the substation is operational.

On these grounds, the Department considers the site to be suitable for the proposed development and that the proposal is in the public interest as the substation will provide the energy needs of the redeveloped Royal North Shore Hospital generally in accordance with the approved Concept Plan. Consequently, the Department recommends that the proposed substation be approved, subject to conditions.

## 8 RECOMMENDATION

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It is recommended that the Minister:

- (A) **consider** the findings and recommendations of this report; and
- (B) **approve** the proposal under section 75J(1) of the NSW *Environmental Planning and Assessment Act, 1979*, subject to conditions, and **sign** the Determination of the Major Project (**Tag A**).

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## APPENDIX A. RECOMMENDED INSTRUMENT OF APPROVAL

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## APPENDIX B. STATEMENT OF COMMITMENTS

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## APPENDIX C. RESPONSE TO SUBMISSIONS

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## APPENDIX D. ENVIRONMENTAL ASSESSMENT AND PPR

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