

***Cochlear Global Headquarters Stage 1
Macquarie University Campus
Proposed by Lachlan Project Development Pty Ltd
MP 08_0032***

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

December 2008



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EXECUTIVE SUMMARY

This is a report on an application seeking approval for construction and operation of a commercial building for use as the global headquarters of Cochlear Limited within the campus of Macquarie University pursuant to Part 3A of the *Environmental Planning and Assessment Act, 1979* (the Act). The purpose of the proposal is to provide new specifically-designed headquarters for Cochlear Limited to replace existing headquarters at Lane Cove West.

The proposal is specifically described within and is generally consistent with the Macquarie University Concept Plan (MP 06_0016). The Concept Plan is currently under assessment by the Department of Planning.

Lachlan Project Development Pty Ltd (the proponent) is seeking approval for the following:

- development of the first stage of the purpose-built Cochlear Global Headquarters consistent with the parameters of the draft Concept Plan and proposed State Significant Site listing for Macquarie University Campus;
- design (and general fit-out) of the building accommodating a mix of uses including warehouse/storage space, office facilities and research/manufacturing space;
- a maximum storey height of seven storeys;
- 24,343sqm of gross floor area;
- 539 car parking spaces of which 398 will be located below ground in two levels of basement parking and 141 spaces which will be located at grade;
- an additional 35 at-grade car parking spaces for use by the childcare centres;
- vehicle and pedestrian access to the site from University Avenue;
- landscaping including riparian zone vegetation;
- associated amenities, bicycle parking and services;
- relocation of an existing bus stop along the southern side of University Avenue with a pull-in bay;
- proposed retention of the existing 'Waratah' Occasional Care Centre and 'Gumnut Cottage' Childcare Centre which adjoin the subject site to the west and south (with relocation of the play areas associated with these centres); and
- rehabilitation of the north-western side of the University Creek corridor within the site.

The estimated project cost of the development is \$71,093,000.

The proposal is prohibited under the City of Ryde Planning Scheme Ordinance 1979. However, Clauses 8N and 8O of the *Environmental Planning and Assessment Regulation 2000* permit the Minister to approve prohibited development where a Concept Plan has been authorised and the project is not located within an environmentally sensitive area of State significance or a sensitive coastal location. As the site does not qualify as an environmentally sensitive area of State significance and as the proposal is part of an authorised Concept Plan, it is able to be determined by the Minister for Planning under section 75J of the Act prior to determination of the Concept Plan.

The proposal was exhibited for a period of 30 days from 23 July 2008 to 22 August 2008. During the exhibition period, the Department received a total of four submissions from public authorities, specifically Sydney Water, Roads and Traffic Authority, Department of Environment and Climate Change and Ministry of Transport. The Department also received one submission from Macquarie University itself and one submission from parents of children attending the Gumnut Cottage childcare centre.

Key issues

Key Issues raised in public authority submissions include:

- whether the traffic likely to be generated by the proposal warrants intersection treatments and the nature of those treatments;

- whether the proposed parking is appropriate to the scale and location of the proposal; and
- whether adequate measures have been undertaken by the proponent to encourage modal shift towards public transport.

Issues raised in the public submission relate to construction impacts on the adjacent Gumnut Cottage childcare centre and include:

- noise and dust;
- provision of playground and parking amenities;
- safety; and
- communication and complaints processes.

In addition to the above, key issues considered in the assessment include:

- ecologically sustainable development and climate change;
- urban form and design;
- biodiversity; and
- infrastructure and services.

Preferred Project Report

On 23 October 2008, the applicant amended the application via a letter and attached information to address issues raised by the Department and submissions. The amendments included:

- addition of application for subdivision of the University land to create a separate title for the proposal land;
- reconfiguration of the vehicular and pedestrian access to the western edge of the development site to improve access to the childcare centres;
- relocation of playgrounds to provide additional playground space; and
- the deletion of five at-grade car parking spaces at the southern edge of the development to accommodate garbage compactors near the proposed loading dock, resulting in a reduction of total proposed car parking spaces for the development from 544 to 539.

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 amending Preferred Project Report, the Statement of Commitments and the Department's recommended conditions of approval. Furthermore, the proposal adequately addresses the Director-General's Requirements for the project. 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.

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1 BACKGROUND

1.1 The Site

1.1.1 Site context and location

The site, at Macquarie University Campus, is located within the local government area of Ryde and is owned by Macquarie University. It is within Precinct E (Station South Precinct) of the proposed Concept Plan for the Campus, in Lot 182 DP 1112777.



Figure 1: Locality plan (Macquarie University Campus outlined in red) (JBA 2008)

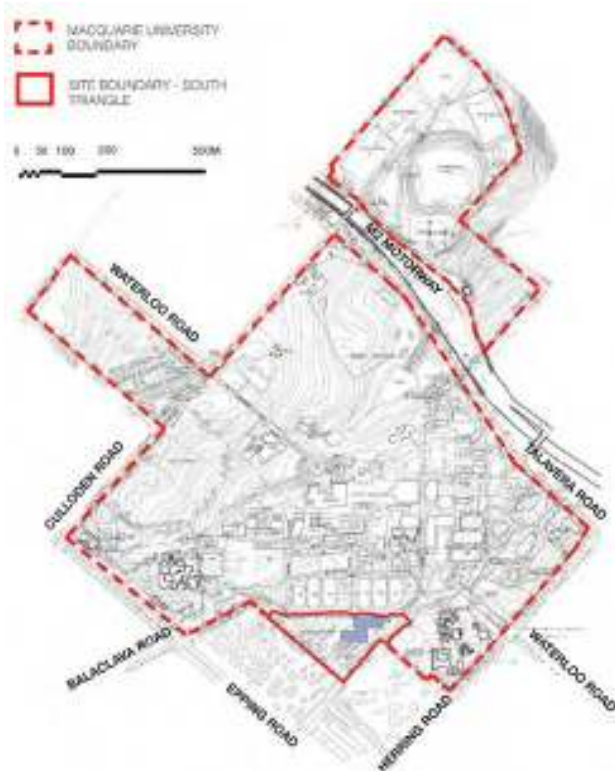


Figure 2: Site location plan – purple squares indicate proposal location within Macquarie University (JBA 2008)

1.1.2 Existing site features

The site for the proposed development is approximately 12,172sqm in size. It lies immediately to the south of University Avenue and its eastern boundary abuts the north-western bank of University Creek. A remnant Sydney Turpentine Ironbark Forest (STIF) ecological community is located to the south-east of the site on the other side of University Creek. The site slopes approximately 10 metres in height from north-west to south-east, resulting in stormwater run-off discharging into the creek.

1.1.3 Surrounding development

The site currently contains a small complex of single storey brick buildings used by the University's 'Waratah' Occasional Care Centre and 'Gumnut Cottage' Child Care Centre, ancillary structures and sheds and at-grade car parking. The proposal seeks to retain these structures but to relocate the play areas and vehicle and pedestrian access to the two Centres.

To the north of the site, across University Avenue, are a number of multi-storey car parking stations. To the south-west and south-east are located NSW Baptist Community Services' Willandra Village and the Morling Baptist Bible College respectively, with Dunmore Lang and Robert Menzies Colleges, providing student accommodation, to the east.

The site sits with the area designated as the Station South Precinct (Precinct E) within the Concept Plan for the Macquarie University Campus. The relationship between the proposal and the Concept Plan is discussed further below.

1.2 Project Context – Macquarie University Concept Plan

The proposal site sits with the area designated as the Station South Precinct (Precinct E) within the Concept Plan for the Macquarie University Campus. This Precinct surrounds the new Macquarie University Rail Station and forms a major terminus to the Macquarie Park Corridor and the Waterloo Road axis to the University. The Concept Plan proposes that this Precinct become the focus for new commercial and research-related development on the Campus, and that all existing development within the Precinct will eventually be demolished. The Concept Plan also states that new commercial development within the Precinct will have a component of research-related activities associated with it and/or will be encouraged to achieve a level of collaboration with the University.

The proposal is specifically listed within the Concept Plan and is generally consistent with the Guidelines for Precinct E. However, there is some contradiction with the placement of public domain space and pedestrian thoroughfare as proposed in the Concept Plan. This issue is further discussed in section 5 of this report.

The Concept Plan is accompanied by a proposed amendment to the State Environmental Planning Policy (Major Projects) 2005 which would result in the site being listed as State Significant and alter the zoning of Precinct E to B4 Mixed Use, under which the proposal would remain permissible. At the time of writing, the Concept Plan has been publicly exhibited and is under assessment by the Department of Planning.

2 PROPOSED DEVELOPMENT

2.1 The proposed development

The proposal is for development of the first stage of the purpose-built Cochlear Global Headquarters, to replace existing headquarters at Lane Cove West. Specifically it includes:

- design (and general fit-out) of the building accommodating a mix of uses including warehouse/storage space, office facilities and research/manufacturing space;
- two adjoining buildings, one six and the other seven storeys;
- a total of 24,343sqm of gross floor area;
- 539 car parking spaces of which 398 would be located below ground in two levels of basement parking and 141 spaces which will be located at grade, plus an additional 42 motorbike parking spaces and 152 bicycle storage spots;

- an additional 35 at-grade car parking spaces for use by the childcare centres;
- vehicle and pedestrian access to the site from University Avenue;
- landscaping including riparian zone vegetation;
- associated amenities, bicycle parking and services;
- relocation of an existing bus stop along the southern side of University Avenue with a pull-in bay;
- proposed retention of the existing 'Waratah' Occasional Care Centre and 'Gumnut Cottage' Childcare Centre which adjoin the subject site to the west and south (with relocation of the play areas associated with these centres); and
- rehabilitation of the north-western side of the University Creek corridor within the site.

The primary use as defined by gross floor area (GFA) would be commercial office (approximately 17,000sqm of the total GFA of 24,343sqm), with other uses such as research/manufacturing and warehouse/storage components ancillary to the primary commercial office use. The Capital Investment Value (CIV) of the proposal is estimated at \$71 million and it will employ approximately 1250 people.

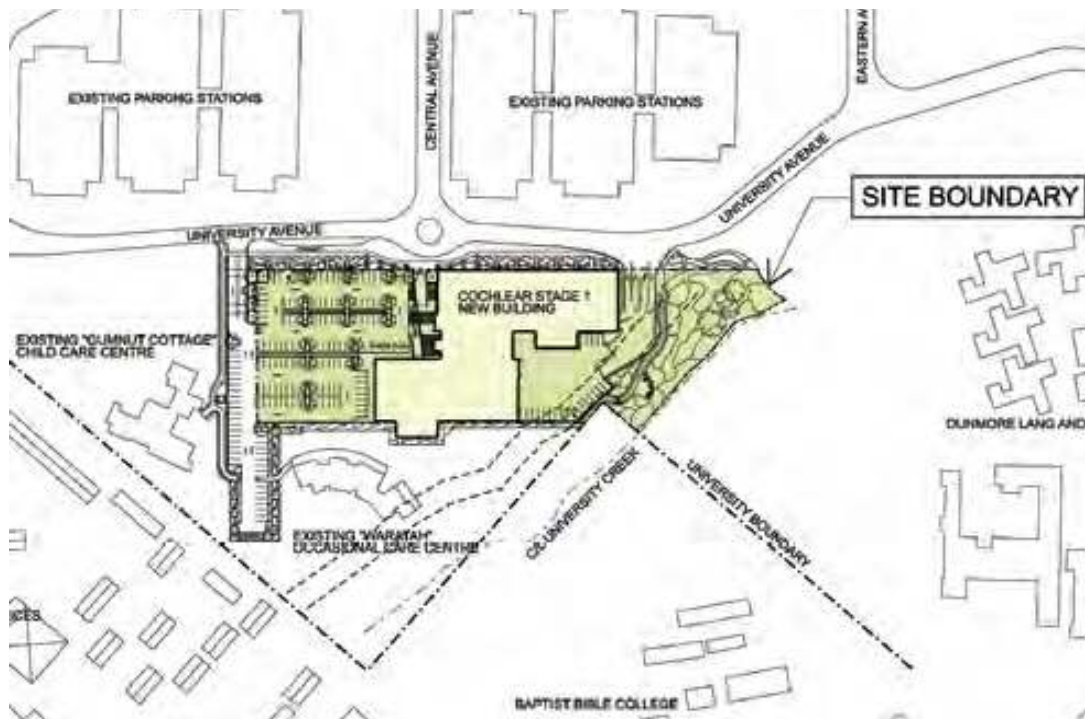


Figure 3: Cochlear development site and building footprint (JBA 2008)

2.2 Project amendments

The proposal has been amended slightly in a number of aspects, as detailed in Section 5 of this report and in Appendix D. The main changes are:

- addition of application for subdivision of the University land to create a separate title for the proposal land for the purpose of a long-term lease;
- reconfiguration of vehicular and pedestrian access to the western edge of the development site to improve access to the two childcare centres neighbouring the development;
- relocation of playground areas to result in no net loss of area to the Gumnut Cottage centre and a net gain of 537sqm for the Waratah centre; and
- deletion of five at-grade car parking spaces at the southern edge of the development in order to accommodate garbage compactors in accordance with the proposal's waste management and reuse plan, resulting in a reduction of total parking spaces for the development from 544 to 539.

2.3 Project need and justification

The objective of the proposal is to provide a purpose-built headquarters for the Cochlear company, with the potential to accommodate planned future expansion, as the existing headquarters at Lane Cove West are no longer adequate to meet the needs of the company. The company has a significant global role in the research, development, manufacture and marketing of implantable hearing devices and is continuing to expand its capacity. The proposed site is also more accessible to public transport for staff than the company's current location, and will enable the company to further develop an existing relationship with Macquarie University's Audiology Department, including accommodating research facilities available for the use of the University.

3 STATUTORY CONTEXT

3.1 NSW Environmental Planning and Assessment Act 1979 and State Environmental Planning Policy (Major Projects) 2005

A Concept Plan was authorised for the Macquarie University campus by the Minister for Planning on 4 April 2006. The Concept Plan, submitted by Macquarie University, has been publicly exhibited and is under assessment by the Department.

On the same day the Minister also declared the proposed development for the campus to be a Major Project under the *Environmental Planning and Assessment Act 1979* (the Act), as with a capital investment value of \$1.7 billion it met the criteria under Schedule 1, Group 7, clause 20 of the State Environmental Planning Policy (Major Projects) 2005 (the MP SEPP), namely an "Educational facility" *Development for the purpose of teaching or research (including universities, TAFE or schools) that has a capital investment value of more than \$30 million*. The description of the proposal in the clause 6 declaration includes the "creation of commercial and research precincts totalling 620,000m²", and therefore includes the proposed Cochlear development which is planned for the Station South commercial and research precinct.

Clauses 8N and 8O of the *Environmental Planning and Assessment Regulation 2000* permit the Minister to approve prohibited development where a Concept Plan has been authorised and the project is not located within an environmentally sensitive area of State significance or a sensitive coastal location. The proposal is currently prohibited under the City of Ryde Planning Scheme Ordinance 1979 (RPSO) (see below). However, as the site does not qualify as an environmentally sensitive area of State significance and as the proposal is part of an authorised Concept Plan, it is able to be determined by the Minister prior to the Concept Plan.

It is also noted that, concurrent with the Concept Plan, the Department is considering a proposal to list Macquarie University Campus as a State significant site under the MP SEPP. The proposed MP SEPP amendment includes altering the existing zoning of the proposal site (designated Precinct E under the Concept Plan) to B4 Mixed Use, which would permit business premises and office premises.

3.2 Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) and NSW Threatened Species Conservation Act 1995 (TSC Act)

An area of the critically endangered ecological community Sydney Turpentine and Ironbark Forest (STIF) adjoins the site, but the proposal would not have any negative impact on this community. The proposal will result in the removal of an individual *Eucalyptus scoparia* (Wallangarra white gum) and an individual *Eucalyptus nicholii* (Narrow-leaved black peppermint), both of which are listed as vulnerable under the EPBC Act and endangered or vulnerable under the TSC Act. Both have been assessed as being in poor health, are well outside of their natural habitat range and do not form part of the adjacent STIF community. The loss of these two individuals has been assessed as not having a significant impact on the survival of these species and as a result the proponent has advised the Department that they do not intend to refer the proposal to the Commonwealth Department of the Environment, Water, Heritage and the Arts.

3.3 State Environmental Planning Policies and Regional Environmental Plans

The following SEPPs apply to the proposal. There are no applicable REPs.

3.3.1 State Environmental Planning Policy No 55 - Remediation of Land

A contamination assessment has been undertaken for the proposal and has concluded that there is very low level contamination on the site, and that the site is suitable for the proposal.

3.3.2 State Environmental Planning Policy (Infrastructure) 2007

The proposed development qualifies as traffic-generating development under clause 104 of this SEPP, as it is for a new commercial building greater than 10,000sqm in area and will connect to a road, i.e. University Avenue. Therefore the proponent is required to undertake consultation with the NSW Roads and Traffic Authority (RTA) and the Department is required to give the RTA a copy of the determination of the project within seven days of a decision. The Department understands that the proponent has undertaken the necessary consultation with the RTA.

3.4 Local Environmental Plans

3.4.1 City of Ryde Planning Scheme Ordinance 1979

The site is within Ryde local government area. Under the City of Ryde Planning Scheme Ordinance 1979, the site is zoned Special Uses 5(c) University, within which commercial development is prohibited. The proposed MP SEPP amendment seeks to rezone the Precinct E area to B4 Mixed Use, under which the proposal would be permissible, as discussed above.

Some of the trees to be removed are also subject to a tree preservation order preventing their removal without the consent of Council. However, Council has not objected to the removal of the trees as part of the proposal.

3.4.2 Local Environmental Plan 137

Although it excludes the site of the proposed Cochlear development, LEP 137 applies to the Macquarie Park Corridor, including the eastern edge of the Macquarie University campus. It specifies a range of controls, many of which have been further clarified by the City of Ryde Development Control Plan (see section 3.5 below). In particular, LEP 137 specifies parking rates for the land adjacent to the development site (see Figure 5). This is further discussed in section 5.5 of this report.

3.4.3 Draft Ryde Local Environmental Plan 2008

Draft Ryde LEP 2008 is currently on public exhibition for comment. Under the LEP, the zoning for the proposed Cochlear site becomes SP2 Infrastructure (University), which permits, "development that is ordinarily incidental or ancillary to development" for the purpose of the University with consent. The proposed Cochlear development would not fall into this category and would therefore be prohibited under the draft LEP. Parking controls under the draft LEP are the same as under LEP 137.

3.5 Other Plans and Policies

3.5.1 City of Ryde Development Control Plan 2006 Part 4.5 Macquarie Park Corridor

This section of the City of Ryde DCP was added in 2008 as part of a review of the planning framework for the Macquarie Park Corridor. It includes the entire Macquarie University site, but development controls on the University site have only been specified for land corresponding with LEP 137, excluding the site of the proposed Cochlear development.

Under general controls, minimum ceiling heights of 3.6 metres for ground level and 2.7 metres for upper levels are specified for commercial development. There is also a general maximum height of six storeys for most buildings in the neighbouring Macquarie University Station Precinct, with some areas permitting eight storeys. The proposal is therefore reasonable in terms of what is permitted in the neighbouring precinct.

Under the DCP, the proposal exceeds 15,000sqm in floor space and is therefore required to have a Work Place Travel Plan to ensure a coordinated transport strategy for the site. The proponent has not yet provided such a plan but has indicated that one will be prepared for the proposal. The DCP also adopts an approach of applying transitional parking rates to new developments, by permitting additional 'temporary' parking spaces to be provided on top of those allowed by the applicable maximum rate, to be phased out in accordance with a submitted parking management strategy and a Work Place Travel Plan.

Parking and transport management are discussed in further detail in section 5.5 of this report where it is recommended that a Work Place Travel Plan be prepared and include measures to phase out the at-grade car parking over time.

3.5.2 City of Ryde Section 94 Contributions Plan 1997

The proponent has committed to making development contributions consistent with the terms of the Macquarie University Voluntary Planning Agreement currently under preparation in consultation with Macquarie University, Ryde City Council and other relevant parties.

The Department is satisfied that such an agreement would be appropriate to the proposal. The Department has been advised by Ryde Council that discussions regarding this agreement are progressing. The Department recommends a condition of approval that, if an agreement is not finalised by completion of construction of the proposal, the proponent must make contributions as determined by Ryde Council in accordance with Council's Section 94 Development Contributions Plan.

4 CONSULTATION AND ISSUES RAISED

4.1 Preparation of Director-General's Environmental Assessment Requirements

In the course of preparing the Director-General's Environmental Assessment Requirements (DGRs) for the proposal (see Appendix A), the Department consulted with Ryde City Council, NSW Roads and Traffic Authority (RTA) and the NSW Department of Environment and Climate Change (DECC).

The DGRs required the proponent to consult with Council, DECC, NSW Department of Water and Energy, RTA, the NSW Ministry of Transport and all relevant utility providers.

4.2 Public Exhibition and Notification

The Environmental Assessment (EA) for the proposal (*Cochlear Global Headquarters – Stage 1 Building University Avenue, Macquarie University Campus, North Ryde* (JBA July 2008)) was exhibited from 23 July 2008 to 22 August 2008 for a period of 30 days at the Department's Information Centre, the Macquarie University Library and Ryde Council's Civic Centre. The details of the exhibition were published at its commencement in the Northern District Times and the Sydney Morning Herald. The Department also notified the Directors of the Gumnut and Waratah Childcare Centres of the exhibition by telephone.

4.3 Submissions received

The Department received a total of four submissions from public authorities, specifically Sydney Water, the RTA, DECC and the Ministry of Transport. No submission was received from Council. A submission was also received from parents of children attending Gumnut Cottage childcare centre. Key issues raised by public authorities include:

- whether the traffic likely to be generated by the proposal warrants intersection treatments and the nature of those treatments;
- whether the proposed parking is appropriate to the scale and location of the proposal; and
- whether adequate measures have been undertaken by the proponent to encourage modal shift towards public transport.

Key issues raised by the Gumnut Cottage parents include:

- noise and dust;
- provision of playground and parking amenities;
- safety; and
- communication and complaints processes.

Discussion of the key issues which include those raised in submissions is in Section 5 of this report. Summaries of the issues raised in submissions can be found in Appendices C and D.

A letter of clarification was also received from Macquarie University with regard to the impact of the proposal on the Gumnut Cottage and Waratah childcare centres which currently operate adjacent to the proposal site. This letter confirmed that Macquarie University will own the Cochlear facility at its completion, that the Waratah centre will be temporarily closed for the duration of construction, and that children from this centre will be relocated to other centres within Macquarie University campus, commencing at the start of 2009.

4.4 Proponent's response to submissions

The proponent lodged a Preferred Project Report on 23 October 2008 in the form of a letter (Appendix E) containing responses to issues raised in submissions and minor changes to the proposal. As the changes were not significant, the proposal was not re-exhibited but rather the amending document placed on the Department's website in accordance with the Department's policy.

5 ASSESSMENT

5.1 Legislative Requirements of the Director-General's Report

Section 75I(2) of the Act and clause 8B of the *Environmental Planning and Assessment Regulation 2000* provide that the Director-General's Report is to address a number of requirements. 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 attached to this report at Appendices B and E.
Any advice provided by public authorities on the project	All advice provided by public authorities on the project for the Minister's consideration is set out at 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	Each relevant SEPP that substantially governs the carrying out of the project is identified and assessed in section 3 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	An assessment of the development relative to all environmental planning instruments is provided in section 3 of this report.
Any environmental assessment undertaken by the Director-General or other matter the Director-General considers appropriate.	The Director-General's environmental assessment of the project application is this report in its entirety.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The proponent's EA addressed the Director-General's environmental assessment requirements and is considered to have satisfied those requirements as addressed in this report. Refer to the Conclusion in section 6 of this report for a statement relating to this requirement.
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 6 of this report.
The suitability of the site for the project	The suitability of the site for the proposal is addressed in sections 1 and 5 of this report.
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 Appendices C and D of this report.

The following sections assess each of the key issues associated with the proposal, based on submissions received by the Department, the proponent's assessment of the issue and response to submissions, and the Department's conclusions. In each case, where some environmental impact has been determined as likely to occur, the issue has been addressed through the proponent's commitments to mitigation measures, or the Department's recommended conditions of approval.

It is worth noting that the Statement of Commitments has been modified since the documentation was on public exhibition and that a number of issues raised during the exhibition period have been addressed by way of the revised Statement of Commitments and within the submitted Preferred Project Report.

5.2 Ecologically Sustainable Development (ESD) Principles

Issue

Whether the proposal meets the principles of Ecologically Sustainable Development (ESD), specifically the precautionary, integration, intergenerational, biodiversity and valuation principles.

Consideration

The proposal does not include threats of serious or irreversible environmental damage, as it does not include significant loss of biodiversity, heritage or other environmental values. It will result in an infrastructure asset that will be available for use for the foreseeable future and will facilitate the ongoing function and growth of an Australian business that currently employs up to 900 local people and will employ up to 1250 people once the new building is operational, with further growth predicted. While there is some impact on community facilities, namely two local childcare centres, these impacts are manageable for the foreseeable future. Mitigation measures for these changes are included in the proposal. It meets the immediate needs of a private company but is also consistent with Macquarie University's long-term Concept Plan, and so can be said to integrate both short-term and long-term considerations. The proposal includes remediation of one side of University Creek, with locally appropriate native species which will assist with future stability and health of this waterway. A few individual threatened trees will be removed; this will not result in significant loss of local or regional biodiversity in the longer term. The arborist report details tree protection measures which are to be implemented during construction to ensure the protection and long term health of the trees to be retained and this is considered satisfactory. Therefore the proposal will not result in detrimental impact to the environment for future generations, largely conserves biological diversity on the site where it is already present and in some respects it is likely to result in an improvement of the site's biodiversity.

The proposal includes water sensitive urban design (WSUD) measures and the building will achieve a minimum Green Star rating of 4 of a possible 6, equating to "best practice" and an Australian Building Greenhouse Rating (now renamed NABERS Energy and part of the NABERS voluntary environmental rating system for office premises) of 4.5 stars of a possible 5. The proposal adds value in that it seeks to provide a site of employment in an area that is more accessible to public transport than its current location in Lane Cove. It also complies with the integration principle in that it meets both the short- and some of the long-term infrastructure requirements of Cochlear Limited, with plans to add to the proposed building in the future. The environmental impact of future expansion on the proposal site is anticipated to be negligible, with positive social and economic impacts.

Having considered the above and the environmental issues in detail below, the Department is satisfied that the proposal meets the principles of ESD.

5.3 Climate Change

Issue

Whether the proposal is at risk from drought, storms or bushfire as a result of climate change.

Consideration

The proposal site is in a non-coastal area, is elevated from its surroundings and does not have any significant waterway flowing through it, so is unlikely to be impacted by coastal climate change issues or flooding. Therefore potential climate change impacts are limited to drought, storms or increased bushfire. Storms may affect existing structures but the proposed works should not result in any increased impact from storms. The site is in a suburban area so relatively unthreatened by bushfire, except with regard to the vegetation already existing on the site. The proposal will not increase the potential for bushfire to occur on the site.

5.4 Contamination

Issue

Whether the site is subject to any contamination that might be disturbed in construction of the proposal.

Consideration

Previous use of the site primarily includes agricultural uses from around 1930 to establishment of the University in 1967. The EA included the outcomes of a phase 1 contamination assessment, which found that levels of heavy metals in the groundwater marginally exceeded recommended levels and that the soil substrate was consisted of natural material underneath inert fill.

The DECC requested further investigation and analysis of this issue in response to the assessment provided in the EA. The proponent has undertaken further investigation which confirmed earlier findings that the potential for contamination on the site is very low and that the site is suitable for the proposed development.

The DECC also recommended the appointment of a site auditor for the site due to the size and complexity of the project. The proponent's consultant has concluded that, in light of the consistently low levels of contaminants detected and the proposed commercial use of the site, a site audit is not warranted.

The Department is satisfied with the extent of the investigative work undertaken by the proponent and considers it unnecessary to require that a site audit be undertaken.

5.5 Urban Form and Design

Issue

Whether the architectural quality, bulk and scale of the proposal design is compatible with the University campus.

Consideration

The proposal is located in an area of the campus that is currently relatively undeveloped, with the two main buildings currently being the two childcare centres, and the bulk of the site consisting of grassed areas and car parks. The proposed design is for two adjoining buildings of 6-7 storeys, set back 16 metres from the median of University Avenue and approximately 30 metres from University Creek, with the proposed design encroaching on the existing play areas of the two childcare centres.

The impact on the childcare centres has been further discussed in section 5.9 of this report. While the proposal will significantly alter the nature of the land use in the immediate vicinity of the site, it is consistent in nature and design with the proposed Concept Plan and therefore with planned future use of the precinct.

The Department notes that the proposed building envelope is different in alignment from that indicated within the Concept Plan, and as a result the western edge of the proposal, particularly the above-ground carpark, overlaps with land canvassed as future Public Domain space within the Concept Plan. This is acknowledged in the Concept Plan Environmental Assessment (April 2008) which proposes that, as the precinct is developed, car parking will be relocated into basements of additional new buildings and the planned open space provided. The Department also notes that the proposed building footprint overlays and blocks a proposed Major Pedestrian Route (also indicated as a north-south access road in the Concept Plan) but that alternative road and parking access given.

The proposed building design appears to be of high architectural quality (see Figure 4) and the proponent has submitted evidence that a high standard of materials and finishes will be used to construct the building. Impacts on the riparian corridor, energy efficiency, WSUD principles and parking issues are addressed below. Overall the Department is satisfied that the proposal is appropriate to the planned future use of the site and that any negative impacts on the existing childcare centres will be mitigated to an acceptable level.



Figure 4: Photomontage of proposal from north-east along University Avenue (JBA 2008)

5.6 Transport, Traffic and Access

5.6.1 Capacity of local road network

Issue

Whether the traffic likely to be generated by the proposal warrants intersection treatments and what the nature of those treatments should be.

Consideration

The EA traffic analysis found that the proposal would have some impact on the performance of the intersections of Epping Road / Balaclava Road, Waterloo Road / Herring Road and University Avenue / Research Park Drive. The latter intersection is within the boundaries of the campus and the project impacts are relatively minor. The external intersections are already operating with significant delays and poor levels of service in the morning and evening peak periods.

The EA for the proposal recommended some specific works for the two external intersections that could be undertaken to mitigate the particular impacts of the proposal. However, the proponent has not committed to undertaking these works.

The RTA has informed the Department that works to improve the Epping Road / Balaclava Road intersection will be undertaken by the RTA within the next 12 months, and recommends specific works that the proponent could undertake in the short-term to improve the level of service at the Waterloo Road / Herring Road intersection. The RTA also recommends that this work be completed prior to occupation of the new development.

The proponent has responded to the RTA's recommendations by referring the Department back to the Transport Management and Accessibility Plan (TMAP) currently being prepared by the University as part of the Concept Plan. The Ministry of Transport has noted that it has some concerns with the TMAP that have been raised with the University.

The Department is concerned that this issue has not yet been resolved through the Concept Plan assessment process, and considers that the RTA's recommendations are reasonable given the traffic impacts likely to result from the proposal. Therefore the Department recommends a condition of approval that detailed design of the upgrade of the Waterloo Road / Herring Road intersection be submitted to the RTA for approval prior to the issuing of a Construction Certificate, and that the works be completed prior to the issuing of an Occupation Certificate.

5.6.2 Car parking for Cochlear staff

Issue

Whether the proposed number of car parking spaces is appropriate to the scale of the development, the forecast levels of traffic congestion in the area and the public transport options available on the site.

Consideration

The proposal includes a total of 539 car parking spaces on site, including 141 at-grade and 398 below ground, with an additional 42 spaces for motorbikes and 35 spaces to be provided for the use of the child care centres (see Table 1). These would replace 197 existing at-grade spaces (including 20 "P30 Set Down" spaces) adjacent to the child care centres, which are currently used by child care centre staff, parents dropping off children to the centre and Macquarie University staff and students.

Table 1: Existing and proposed parking space provision for proposed Cochlear site

Purpose	Existing	Proposed
Macquarie University general use	177 spaces	-
Childcare centres	20 "P30 Set Down" spaces	35
Cochlear development	-	581 spaces (including 539 car and 42 motorcycle)

Local planning controls

Local Environmental Plan 137 applies to the Macquarie Park corridor, although not the actual proposal site, and is therefore a useful guide to the planning controls that could be applied in this case. LEP 137 stipulates three maximum parking rates based on distance from the nearest transport hub, as shown in Table 2 and Figure 5.

The Ryde DCP adopts an approach of applying transitional parking rates to new developments, by permitting additional 'temporary' parking spaces to be provided on top of those allowed by the applicable maximum rate, to be phased out in accordance with a submitted parking management strategy and a Work Place Travel Plan.

Table 2: LEP 137 parking rates and implications for the Cochlear proposal

Local Environmental Plan 137	Total spaces permitted for Cochlear (24,343sqm GFA)
1 space per 46 sqm GFA	529
1 space per 70 sqm GFA	348
1 space per 80 sqm GFA	304

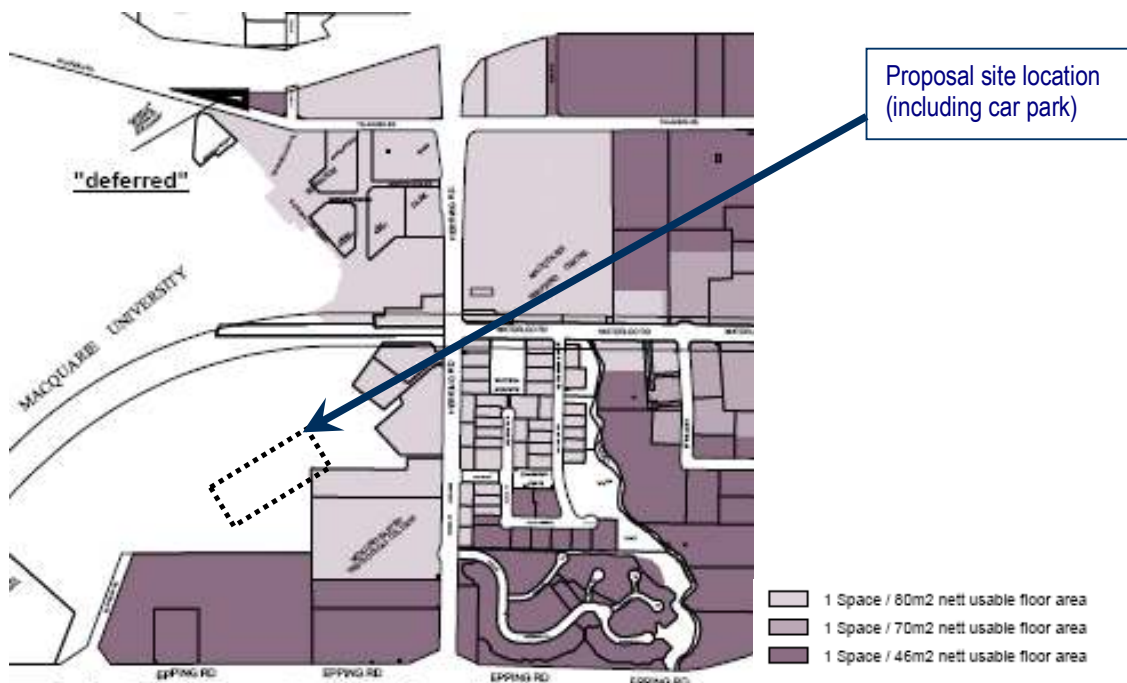
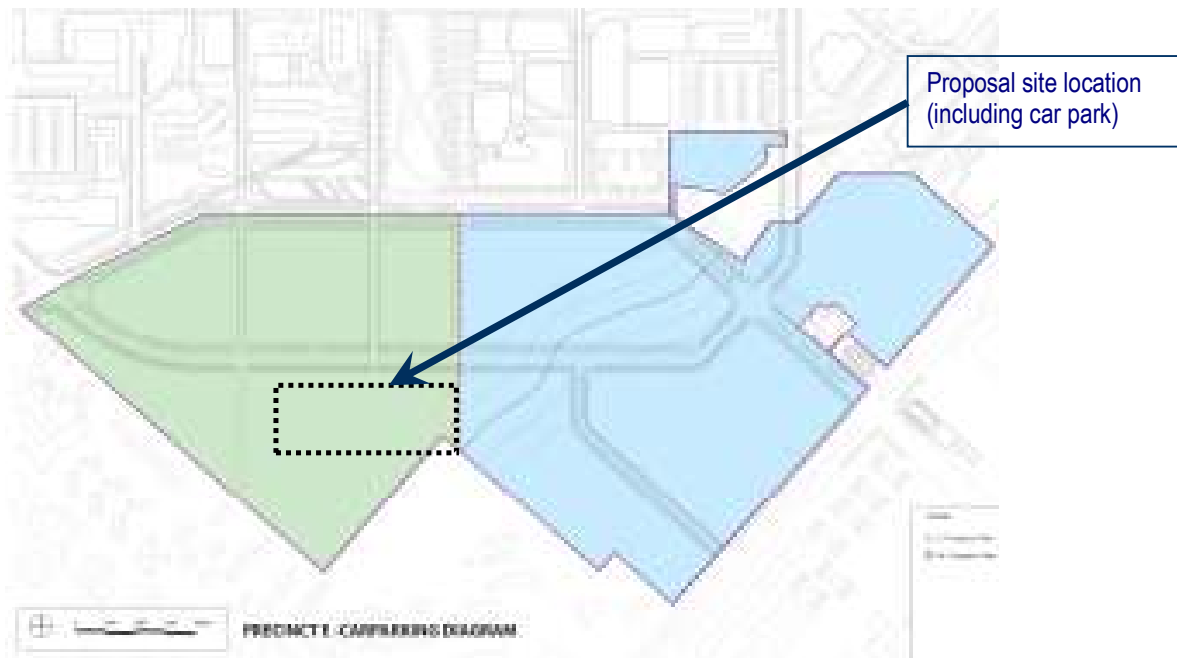


Figure 5: Ryde Local Environmental Plan No 137 Parking Rates and approximate proposal location

Application of local controls to proposal site

Based on a visual comparison of the proposal site maps and the LEP 137 Macquarie Park corridor Parking Restriction map, the Department considers the proposal site to be physically closest to the 1:80 ratio.

However, the Macquarie University Concept Plan proposes an extension of the LEP 137 rates for commercial development into the precinct in accordance with Figure 6, based on a distance of approximately 400 metres from the Macquarie Rail Station, resulting in the Cochlear proposal site being within the area for which the 1:46 ratio would be applicable. If 539 car spaces are permitted, this equates to approximately 1 space per 45sqm GFA. An additional 42 motorbike spaces are also proposed; if these are counted in the number of spaces, the proposed ratio is actually 1:42.



Blue = permitted parking ratio of 1 space per 80sqm, Green = permitted parking ratio of 1 space per 46sqm

Figure 6: Precinct E Car parking diagram (Figure 71 in Macquarie University Concept Plan 2008) with approximate proposal site location

Planning policy

The draft Ryde Council Macquarie Park Traffic Study concludes that approximately 23% of current motorised travel in the Macquarie Park area is undertaken by public transport and concludes that a target of 40% for non-car mode share should be aimed for by the year 2031 to manage congestion in the area.

The Optus development at Macquarie Park has been cited in the draft Macquarie Park Traffic Study as having a Workplace Travel Plan with the goal of achieving a modal share of 40% of its employees using public transport, 2% cycling and 1% walking.

The objectives for off-street parking controls in the Macquarie Park Corridor under the draft Ryde LEP 2008, indicate that Ryde Council policy supports the restriction of parking as a primary measure to limit car driving and manage congestion.

The Ministry of Transport (MoT) has requested further analysis of the proposed Cochlear parking provision and transport mode share, citing the target of 40% public transport use for the area, and recommends a maximum parking rate of 1 space per 80sqm due to the relative availability of public transport options at the site.

Department's analysis

The Department considers the target of 40% public transport modal share to be consistent with the current target of Ryde Council and necessary as a minimum in order to manage congestion in the area. The capacity of the public transport system will require ongoing review as new services commence and further development takes place in the area.

Cochlear has approximately 900 existing staff but the proposal is designed to comfortably accommodate up to 1250 staff to cater for the anticipated growth of the company. The proponent has also indicated that up to 1350 staff may be housed at the site if anticipated future stages of the development are delayed.

With regard to the number of parking spaces, the Department has calculated what would be needed by the proposal to enable a 40% public transport modal share and 3% walk/cycle modal share, assuming that 7.5% of staff travelled to work as car passengers, treating motorbikes as non-public transport (i.e. the same as cars), and assuming a maximum on the site at any one time based on the shift work figures indicated by the proponent (see Tables 3 and 4).

Table 3: Calculated maximum staff on site at any one time

Total staff (100%)	Office (72%)	AM Shift (16%)	PM Shift (12%)	Maximum on site at any one time (88%)
900 (existing)	648	144	108	792
1250 (future)	900	200	150	1100
1350 (future if Stage 2 delayed)	972	216	162	1188

Table 4: Calculated car/motorbike spaces required based on maximum staff on site, 40% public transport modal share and 3% walk/cycle modal share.

Total staff (100%)	Public Transport (40%)	Walk/cycle (3%)	Car passenger (7.5%)	Car/motorbike spaces (49.5%)
792 (existing)	316.8	23.8	59.4	392
1100 (future)	440	33	82.5	544.5
1188 (future if Stage 2 delayed)	475.2	35.6	89.1	588.1

These figures indicate that the existing staff levels result in a need for 392 vehicle spaces, which could be fully accommodated in the proposed basement car parking of 398 spaces. However, the proponent has indicated to the Department that the forecast growth in staff numbers is likely to occur quickly after the opening of the new headquarters. Therefore the Department is satisfied that the proposed number of parking spaces is reasonable in the short term, with the exception of 11 car parking spaces recommended to be deleted to provide sufficient width for the riparian corridor needs of University Creek (see the Department's assessment of biodiversity impacts in this report). This results in a total of 570 spaces, including 42 for motorbikes (see Table 5).

Primarily, the Department is seeking to ensure that the proponent is committed to undertaking workplace travel demand management for its employees with the goal of reducing overall use of private motorised vehicles. The MoT has raised the need for a Work Place Travel Plan (WPTP) for the proposal in accordance with the Macquarie Park Corridor DCP and, with the RTA, has queried the lack of specific travel demand management measures in the proposal. The proponent has indicated that one will be prepared for the proposal at the commencement of operation, with the aim of encouraging sustainable travel to the site, and that travel demand management measure will be implemented as part of the WPTP, to be submitted to the Department for approval.

However, in order to ensure that the WPTP is developed in a timely manner, the Department recommends a condition of approval that the proponent develop the WPTP prior to the issuing of an Occupation Certificate for the development, with the goal of achieving 40% public transport modal share by Cochlear employees in their journey to work.

As public transport services to the area improve with the opening of the Chatswood to Epping rail line, there is opportunity to promote further mode shift to public transport. The proponent has also indicated that further stages of development are planned for the Cochlear headquarters which would likely be constructed on the proposed at-grade parking site. Therefore, the Department recommends that the proponent be required to

demonstrate plans to phase out the 130 at-grade car parking spaces in the medium to long term and that details of the proposed timing and staging for this be included in the Work Place Travel Plan.

Given that the Concept Plan is currently under assessment by the Department, and that determination of the Concept Plan is likely to result in some form of limitation on parking spaces for the campus in order to encourage modal shift and limit congestion, it is envisaged that future Cochlear or other developments on the campus would be subject to the parking limitations imposed by the Department under the Concept Plan, and may be permitted fewer spaces as a result of this proposal. Future Cochlear developments would also have access to existing travel information arising from this proposal's travel demand management.

Table 5: Proposed and recommended number of motor vehicle spaces to be provided

Project	Car spaces	Motorbike spaces	Total vehicle spaces
Proposed	539	42	581
Recommended for approval	528	42	570

5.6.3 Bicycle facilities

Issue

Whether the bicycle facilities provided for the proposal are adequate.

Consideration

The Ryde DCP specifies for commercial development a minimum of 1 bicycle parking space per 200sqm GFA for employees and 1 space per 750sqm GFA for visitors. For Cochlear, this translates to a requirement of 122 bicycle spaces for employees and 32 spaces for visitors, or a total of 154 bicycle spaces. The proposal includes parking for 152 bicycles. The submitted building plans indicate that at least 32 of these would be outside in the at-grade parking and therefore available to visitors, provided that the car parking barriers did not exclude the entry of bicycles. The proponent has also committed to supplying appropriate access and changing facilities for staff.

The proponent also notes that a University Bicycle Network has been proposed as part of the Macquarie University Concept Plan, which includes implementation of bicycle paths in the vicinity of the Cochlear development in the short term. The Department accepts that the implementation of such paths is a matter for the Concept Plan, currently under assessment. Therefore the Department is satisfied that the proposed bicycle facilities are adequate for the proposal.

5.6.4 Car park design

Issue

Whether adequate landscaping is to be provided for the carpark.

Consideration

The Concept Plan includes a design principle that parking be accommodated generally within basement parking and all above-ground parking be appropriately screened. The Department notes that approximately one quarter of the proposed parking for the development is to be above-ground, clustered around the western side of the proposed building, with boundary planting and landscaping around the outer edge of the car park. The Department considers this proportion of above-ground parking to be reasonable for the needs of the proposal (as discussed in section 5.6.2 of this report) and the footprint of the parking to be proportionate to the footprint of the proposed building. However, it is unclear to what extent the proposed landscaping will screen the car park from view, particularly from the childcare centres and from University Avenue, and it appears that inadequate shading has been provided to some parts of the car park, particularly the areas allocated to the childcare centres.

Therefore the Department recommends a condition of approval that the car park landscaping is to include one tree per five parking spaces, evenly distributed throughout, with additional trees at the perimeter, and that the proponent is to submit the final landscaping plan to the Department for approval prior to the issue of a Construction Certificate.

5.6.5 Parking provision for childcare centres

Issue

Whether adequate parking provision is made in the proposal for use by the adjacent childcare centres.

Consideration

The proposal includes an additional 35 car parking spaces designated to the exclusive use of the childcare centres. This replaces 197 existing spaces adjacent to the centres, of which 20 are "P30 Set Down" spaces for parents to drop children off at the centres. The existing spaces are currently available to all users of the campus and are utilised fully during the day.

The two centres can cater for a maximum of 135 children in total. Under the City of Ryde DCP 2006 child care centres require one space to be provided per two employees and a parking area to the satisfaction of Council. The Department has been informed that a total of 41 employees are currently employed at both centres, including casual staff, which means that a minimum of 22 spaces is required under the DCP. The suggested RTA parking rate for child care centres is one space per four children in attendance, which results in a minimum of 34 spaces. The proponent has also reported that U@MQ, the university organisation that runs the centres, has agreed to the parking allocation. The Department is therefore satisfied that the 35 spaces to be provided are adequate.

The proponent has stated that the childcare spaces will be designated through signage. However, the Department is concerned that Cochlear staff or other campus users may use the spaces if a monitoring system is not put in place. Therefore the Department recommends a condition of approval that the proponent, in consultation with Macquarie University, implement some form of car identification or barrier system to ensure that the designated child care centre spaces are not used by Cochlear staff and other general users of the Macquarie campus, but remain accessible to centre staff and parents dropping off their children to the centres.

5.6.6 Disability parking provision

Issue

Whether the proposed number of designated parking spaces for people with disabilities is adequate.

Consideration

The proponent has proposed 11 parking spaces for people with disabilities, specifically seven spaces of 3.2m wide by 5.4m long and four spaces of 2.4m wide by 5.4m long provided in pairs with a 2.4m wide shared area for each pair. If 528 car spaces are provided as recommended by the Department, this equates to 2% of the provided parking spaces.

The Ryde DCP 2006 specifies a minimum width of 3.66m for spaces for people with disabilities, and that commercial buildings with parking areas of more than ten spaces should provide 3% of spaces as wide bay, which would result in 15 spaces for the proposal.

Australian Standards for parking generally require that 1-2% of spaces be allocated to people with disabilities, while the Building Code of Australia (BCA) indicates that 1% of car parking spaces should be set aside. As the proposal is in agreement with the Australian Standard and the BCA, the Department considers the proposed number of 11 spaces to be adequate.

The proposed widths of these spaces are in agreement with a draft Australian Standard for parking facilities (AS2890.6). The minimum width of 3.66m in the Ryde DCP is to allow people with wheelchairs to get in and out of their cars successfully. The Department considers that the draft Australian Standard of providing two 2.4m wide parking spaces with a shared 2.4m wide area would satisfy this requirement. Therefore the Department is satisfied with the proposed number of designated parking spaces for people with disabilities.

While the proposed locations of the disability parking spaces are appropriately close to building entrances, it is noted that the at-grade disability parking spaces appear to be separated from the main building entrance by bicycle parking facilities, which would provide an obstacle in the approach to the building from those spaces. The Department therefore recommends a condition of approval that ease of access is to be provided from the designated disability parking spaces into the building without any barriers.

5.6.7 Pedestrian access

Issue

Whether pedestrian access provided as part of the proposal is adequate and safe.

Consideration

The EA states that the proposed design will result in the existing pedestrian crossing on University Avenue being located immediately to the west of the western car park entrance, and implies that this may be too close for safety. The proponent has not committed to making any changes to the entrance location or the pedestrian crossing.

Access to the childcare centres will be moved as part of the proposal, resulting in access to the Waratah centre being moved from the front to the western side of the building, and access to the Gumnut Cottage centre remaining in its current location. The Department is generally satisfied with this outcome but, as discussed in section 5.9 of this report, recommends that the final design of the access be submitted to the Department for approval prior to commencement of construction.

The Department considers pedestrian safety to be of paramount importance and therefore recommends a condition of approval that the proponent shall employ a qualified practitioner to undertake a Road Safety Audit to determine whether the location of the existing pedestrian crossing on University Avenue in relation to the proposed car park entrance provides an acceptable level of safety to pedestrians. If the audit finds that the level of safety is not acceptable, the proponent shall pay for the relocation of the crossing to a point recommended by the Audit practitioner, if agreed by Macquarie University.

5.7 Biodiversity

5.7.1 Threatened flora

Issue

Whether the impact of the proposal on threatened species is acceptable.

Consideration

The proposal will result in the removal of two isolated threatened flora individuals, a *Eucalyptus nicholii* (Narrow-leaved black peppermint) and a *Eucalyptus scoparia* (Wallangarra white gum). No threatened fauna species were recorded on the site and the trees to be removed do not constitute significant fauna habitat.

The Department considers that the removal of the trees does not qualify as significant impact as the existing flora quality is poor and does not constitute a viable population of either species. In addition, further landscaping and revegetation of the area is proposed, as discussed below. Therefore the Department considers the removal of the two trees to be acceptable.

The proposal site abuts a small area of the critically endangered ecological community Sydney Turpentine and Ironbark Forest (STIF), but is unlikely to result in any negative impact on this community.

5.7.2 Riparian corridor

Issue

Whether the proposed revegetation works for the University Creek area are adequate.

Consideration

Landscaping works are planned as part of the proposal, including the creation of a native vegetation buffer on the western bank of University Creek, which flows between the development site and the STIF community. The NSW Department of Water and Energy (DWE) has stipulated a 20 metre riparian zone and a 10 metre vegetative buffer for the Creek, which the proposal generally complies with. However, some parts of the proposed car park overlay the 10 metre buffer zone.

The proponent has committed to undertaking revegetation of the western bank of University Creek using species appropriate to the STIF community on the opposite bank, and existing trees in this area will be retained. The proponent has provided a statement from the DWE that University Creek includes a number of 'pinch

points' where the Creek narrows and water flow is restricted, and that when these are taken into account the proposed design technically complies with the riparian buffer specifications.

The Department acknowledges this advice but considers it a poor outcome to adjust the recommended riparian buffer to gain 11 car parking spaces. Therefore the Department recommends a condition of approval that the proponent redesign the car park to delete the 11 car park spaces proposed for the south-eastern corner of the site, and replace them with vegetation while retaining sufficient sealed area to permit vehicle turning as needed (noting that garbage compactors may still be required in this area). This will result in a total of 528 permitted car spaces, as discussed in section 5.5.

5.8 Stormwater drainage

Issue

Whether the proposed stormwater drainage is sufficient for the site and scale of development and whether best practice water sensitive urban design will be implemented.

Consideration

The proposal includes significant upgrades to the existing site stormwater drainage system, including an on-site water detention system, a gross pollutant trap (GPT) and filtration unit, a rainwater re-use tank and permeable paving on the eastern hardstand area of the site to reduce run-off volume. Stormwater will continue to be discharged into University Creek as is currently the case, but through one outlet rather than several, with an energy dissipater to reduce the flow velocity and energy of the discharged flow. The drainage system is to remain separate from other University infrastructure and maintain its own discharge point.

Sydney Water has sought assurance that the relevant best practice water sensitive urban design treatment objectives can be met. The proponent has demonstrated that the proposal will meet and exceed these objectives. The proponent has also demonstrated that the proposed GPT and filtration unit will be sufficient to treat the estimated average flow of the stormwater outlet the majority of the time.

The Department is satisfied that the proposed stormwater management and water sensitive urban design measures are sufficient to meet best practice water treatment objectives and water efficiency levels.

5.9 Construction impacts

Issue

Whether the negative impacts resulting from the construction phase of the proposal will be adequately managed and mitigated by the proponent to minimise negative impact on the childcare centres and other sensitive receivers.

Consideration

The only neighbouring sensitive receivers to the proposal site are the two childcare centres 'Waratah' and 'Gumnut Cottage' which are located to the south and south-west of the proposal site respectively. The Waratah centre is the closest to the site of the proposed building and therefore likely to experience the greatest impacts during construction. There are also some student colleges and other buildings within 100-150 metres of the site to the south-west and south-east, beyond the campus boundary. A further 50-70 metres beyond the two centres is Willandra Village, a retirement living development operated by Baptist Community Services.

Potential construction impacts include noise, vibration, dust and alteration of vehicle and pedestrian access. The EA states that construction noise levels at both Willandra Village and the childcare centres are highly likely to exceed acceptable noise criteria.

Macquarie University has confirmed that the Waratah centre will close for the duration of the construction works, while Gumnut Cottage will remain open. The public submission received by the Department raised concerns about impacts on the Gumnut Cottage centre during construction, including parking and playground access, and about noise and air quality impacts and safety. In particular, they raised concerns about children who may have particular health sensitivities, such as to air quality, and whether there were any standards that applied specifically to childcare facilities.

The proponent has committed to providing adequate pedestrian and vehicular access to the centres during construction and to managing construction noise and vibration generally in accordance with the

recommendations made in the acoustic assessment submitted as part of the EA. These recommendations include limiting work to standard daytime construction hours, minimising use of noisy equipment, erecting hoardings at all site boundaries adjacent to receivers, monitoring noise levels on the site, informing sensitive receivers of work progress and noisy works and instituting a complaints handling procedure. The assessment also refers to the Australian Standard AS 2436 – 1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*.

The proponent has also provided a preliminary construction plan which includes general measures for the management of construction traffic, vehicle and pedestrian access, air quality, noise and vibration and flora and fauna.

The Department notes that there are no specific standards applicable to childcare centres for air quality or noise levels, although the DECC's Industrial Noise Policy specifies noise levels appropriate to school classrooms and active recreation areas such as school playgrounds. The proponent has identified recommended maximum noise levels based on this Policy.

The Department remains concerned about the potential for negative impacts on sensitive receivers during the period of construction. To ensure that this issue is managed adequately, the Department recommends conditions of approval that:

- standard construction hours (7am-6pm Monday-Friday, 8am-1pm Saturday) be adhered to, with the option for a variation if approved by the Department;
- the construction noise objective be to manage noise levels to within acceptable limits as quantified in the noise assessment submitted by the proponent or otherwise in accordance with the DECC's draft NSW Construction Noise Guideline;
- the proponent must implement all reasonable noise mitigation and management measures with the aim of achieving the construction noise objective;
- if works are planned that will exceed the construction noise objective, all sensitive receivers are to be notified in writing at least 48 hours prior to the commencement of those works;
- the proponent must submit a compliance report to the Department every three months from the commencement of construction, reporting on compliance with the conditions of approval relating to construction noise, with noise monitoring to be undertaken at both Gumnut Cottage and Willandra Village; and
- adequate and specific measures shall be taken to prevent dust from affecting the amenity of the area during construction, particularly the neighbouring childcare centres.

To ensure that all potential construction impacts are managed adequately, the Department recommends a condition of approval that Environmental Management Plan(s) (EMPs) shall be prepared for all construction activities and shall address a range of matters including construction traffic, pedestrian management and parking of construction vehicles (including staff cars), noise and vibration, impact on native vegetation, air quality, erosion and sediment control, waste management and stormwater management. Measures for the control of dust are also specified. The Department considers that employment of these measures and of others as determined through the EMP will be adequate to manage construction impacts, including those raised in the public submission.

To ensure that a mechanism is provided for affected stakeholders to give feedback during construction, the Department also recommends a condition of approval requiring the implementation of a complaints management system prior to the commencement of works, including a direct phone number for receiving and registering complaints, notification of the complaints number on the site notice and a system for responding to all complaints.

To clarify the requirements for pedestrian and parking access, the Department recommends a condition of approval that at least 20 car parking spaces be provided for the use of the childcare centre staff and parents at all times within 100 metres of the Gumnut centre, with safe pedestrian access from the car park to the centre also provided.

To ensure that access to the construction site is restricted, the Department recommends a condition of approval that a construction safety fence be erected around the perimeter of the construction zone at all times, with safe pedestrian access maintained between the childcare car park facilities and the Gumnut Cottage centre.

To ensure that the centres have access to appropriate playground areas at all times, the Department recommends a condition of approval that the relocation of the childcare playground for Gumnut Cottage and any accompanying modifications shall be completed prior to the issuing of a Construction Certificate for the proposal, while the playground relocation works for the Waratah centre shall be completed prior to the issuing of an Occupation Certificate for the proposal and the reopening of the centre.

5.10 Operational impacts on childcare centres

Issue

Whether the design of the proposal will result in an acceptable outcome for the childcare centres adjacent to the proposal site.

Consideration

Potential operational impacts on the childcare centres include shading, permanent loss/alteration of vehicle and pedestrian access and permanent loss/alteration of play areas and other amenities. Both centres will lose significant parts of existing playground areas, with additional playground areas proposed to be provided to compensate. The additional playground for Gumnut Cottage would be to the north-west of the centre, beyond a stand of existing vegetation, while the additional playground for the Waratah centre would be to the south-west of the centre on the opposite side of the building from the existing playground. Visual amenity for both centres would also be significantly altered.

The proposal will result in the existing building and playground of the Waratah centre being in complete shade in mid-winter during the morning, and some minor shading of the centre in the morning in autumn. While this would normally be an undesirable outcome, childcare centres generally work to provide shading of playground areas and so this may ultimately benefit the centres.

The Department notes that detailed design of the new playgrounds is not yet complete and considers it likely that further design adjustments may be required in order to adequately accommodate the needs of the childcare centres.

Therefore the Department recommends a condition of approval that the final detailed design of the childcare centre parking, pedestrian access and playground and building modification be submitted to the Department for information prior to the commencement of construction.

5.11 Utilities and Infrastructure

Issue

Whether the site is appropriately serviced by the necessary utilities and infrastructure for the proposal to proceed.

Consideration

The proposal includes new connections to existing services as required. The existing site is considered to be fully serviced.

It is noted that a new University gas main is proposed as part of the Concept Plan, and that connection to this main will be undertaken as part of the proposal. Lighting will be provided in accordance with all relevant standards and guidelines. The proponent has flagged that there is the potential for an electricity cogeneration plant to be included at roof level, but no further information regarding this has been provided.

The Department is satisfied that the proponent has given adequate consideration to the utilities requirements of the proposal and that provision of these services will be feasible with no adverse environmental impacts.

6 CONCLUSION

The Department has assessed the EA and PPR and considered the submissions in response to the proposal. The key issues raised in submissions include nature of intersection treatments, transport modal share and parking provision and construction and operational impacts on the neighbouring childcare centres.

The Department has considered these and other relevant issues and recommends a number of conditions of approval to ensure that all environmental impacts are minimised or managed to an acceptable level. On these grounds, the Department considers the site to be suitable for the proposed development and that the proposal is in the public interest. Consequently, the Department recommends that the proposal be approved, subject to conditions.

7 RECOMMENDATION

It is recommended that the Minister:

- (A) consider the findings and recommendations of this report;
- (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. DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Director-General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

Application No.	MP 08_0032
Project	The proponent is seeking project application approval for the construction of a new Cochlear Global Headquarters within the southern precinct of the Macquarie University campus.
Site	Land known as the southern precinct of the Macquarie University Campus , Ryde, (Lots 181 and 182 DP 1112777).
Proponent	Lachlan Project Development Pty Ltd
Date of Issue	14 March 2008
Date of Expiration	14 March 2010 (2 years from date of issue)
General Requirements	<p>The Environmental Assessment must include:</p> <ul style="list-style-type: none"> • an executive summary; • a description of the proposal comprising: <ul style="list-style-type: none"> ➢ textual and diagrammatic articulation of the proposal; ➢ description of the site, including cadastre and title details; ➢ design, construction, operation, maintenance, rehabilitation and staging as applicable; ➢ project objectives and need; • an assessment of the environmental impacts of the project, with particular focus on the key assessment requirements specified below; and • a statement on the validity of the Environmental Assessment, the qualifications of person(s) preparing the assessment and that the information contained in the Environmental Assessment is neither false nor misleading.
Key Issues to be addressed	<p>Part A – Heads of Consideration</p> <ul style="list-style-type: none"> • Suitability of the site; • Likely environmental, social and economic impacts; • Justification for undertaking the project; and • Public Interest. <p>Part B – Relevant EPIs, Guidelines and other requirements to be addressed</p> <ul style="list-style-type: none"> • Planning provisions applying to the site including permissibility and the provisions of all plans and policies; (SEPP 55 and Infrastructure SEPP 2007); and • Nature and extent of compliance with relevant EPIs and policies. • Consistency with the proposed concept plan for the wider campus. <p>Part C – Key Issues to be addressed</p> <p>Requirements of the Department are as follows:</p> <p>Urban Form and Design</p> <ul style="list-style-type: none"> • urban design, height, density, bulk and scale of the proposal in relation to the surrounding campus, landscape and topography; • impact on streetscape/landscape and view analysis/photomontages; • details of proposed materials, colours and finishes; and • details of proposed areas of and nature of landscaping and open space. <p>Transport, Traffic & Access</p> <ul style="list-style-type: none"> • demonstrate compliance with the RTA <i>Guidelines for Traffic Generating Development</i>; • existing traffic conditions, road network and road capacity on and in the vicinity of the site; • proposed internal road and access arrangements; • measures to promote public transport usage and modal share including bus and train networks and connections; • pedestrian and bicycle linkages; • proposed car parking arrangements; and

	<ul style="list-style-type: none"> proposed emergency evacuation and public access. <p>Biodiversity</p> <ul style="list-style-type: none"> provision of a riparian zone along the creek; Vegetation Management Plan providing for the on-going care and improvement of the vegetated buffer along the creek; impact of the development on any existing native flora and fauna and their habitats, including identified threatened species, having regard to the <i>Threatened Species Assessment Guidelines</i>; and assessment of the significance/condition of any trees on the site proposed to be removed and details of tree protection measures for any trees to be retained. <p>Stormwater drainage and flooding</p> <ul style="list-style-type: none"> flooding impacts, including details of the 1:100 year flood level, and any overland flow paths; drainage and stormwater management, including on-site detention of stormwater, WSUD, and drainage infrastructure. <p>Construction and operational impacts</p> <ul style="list-style-type: none"> measures to minimise construction related impacts (eg traffic, noise, vibration, dust etc) on the existing childcare centre; any likely geotechnical impacts for the development on the site; details of any cut and fill and whether any fill is proposed to be imported or exported to/from the site; noise, vibration and air pollution. <p>ESD measures</p> <ul style="list-style-type: none"> details of the development's proposed ESD measures including thermal massing, water sensitive urban design measures, energy efficiency, recycling and waste disposal; recycling and waste disposal <p>Services</p> <ul style="list-style-type: none"> capacity of water, sewer, stormwater, gas, power and telecommunications infrastructure which will serve the project; and any upgrading works to infrastructure necessary to service the development and contributions applicable under any adopted contributions plans. <p>Part D – Draft Statement of Commitments</p> <ul style="list-style-type: none"> A Statement of Commitments detailing measures for environmental management and mitigation measures and monitoring for the project.
Consultation Requirements	<p>During the preparation of the Environmental Assessment, you should undertake an appropriate level of consultation with the relevant Local or State government authorities, service providers, community groups and other stakeholders, including:</p> <ul style="list-style-type: none"> City of Ryde Council; NSW Department of Environment and Climate Change; NSW Department of Water and Energy; Roads and Traffic Authority; Ministry of Transport; and all utility providers.
Deemed refusal	60 days
Application Fee Information	<p>The application fee is based on the Capital Investment Value of the project as defined in the Major Projects SEPP and as set out in Clause 8H of the Environmental Planning and Assessment Regulation 2000. Based on the submitted Capital Investment Value of \$71,093,000, an application fee of \$120,899.80 is payable.</p>
Landowners Consent	Landowner's consent is to be provided in accordance with the <i>Environmental Planning and Assessment Regulation 2000</i> .
Documents to be submitted	<p>Once the draft EA has been submitted and determined to be adequate by the Department the applicant should submit:</p> <ul style="list-style-type: none"> 10 hard copies of the environmental assessment report & sets of subdivision plans; and 5 copies of the environmental assessment report and plans on CD-ROM (in PDF – please ensure all files are less than 2Mb in size)

APPENDIX B. ENVIRONMENTAL ASSESSMENT

See attached disc Cochlear Global Headquarters – Stage 1 Building University Avenue, Macquarie University Campus, North Ryde (July 2008)

APPENDIX C. PUBLIC AUTHORITY SUBMISSIONS

Issues raised	Comment
Ministry of Transport	
Need to identify a sustainable transport mode share target for the proposal or a strategy to achieve modal shift with target of 40% public transport.	Recommended condition of approval requiring proponent to develop a Work Place Travel Plan for the proposal prior to the issuing of an Occupation Certificate for the development, with the goal of achieving 40% public transport modal share by Cochlear employees in their journey to work.
Proposed car parking deemed excessive; recommend a lower maximum rate of 1 car space per 80sqm GFA.	Department considers proposed parking reasonable considering future staff numbers.
Whether other parking options in the University could be utilised to reduce parking provision on the proposal site.	University Concept Plan currently under assessment by the Department – likely to result in overall parking controls.
The need for a work travel plan for the proposal and/or the Concept Plan.	See above.
Whether the existing roundabout at the intersection of University and Central Avenues should be removed to enable a more functional bus stop.	Under investigation through the Concept Plan TMAP review. Concept Plan under assessment by Department.
Provision of cycle access to the subject site along University Avenue.	Proponent to continue liaison with University regarding bicycle path proposed as part of Concept Plan.
Roads and Traffic Authority	
Recommend that proponent undertake specific remedial improvements to the Waterloo Road / Herring Road intersection to mitigate impacts of additional traffic created by proposal, with designs to be submitted to RTA for approval. The proponent is responsible for all public utility adjustment/relocation works necessitated by the intersection upgrade.	Recommended condition of approval that the proponent shall submit the detailed design of the upgrade of the Waterloo Road / Herring Road intersection to the RTA for approval prior to the issuing of a Construction Certificate for the proposal, and complete the works as approved by the RTA prior to the issuing of an Occupation Certificate. All upgrades to roads external to the University campus shall be designed and constructed to comply with standards and specifications agreed with the NSW Roads and Traffic Authority.
Proponent should implement travel demand management initiatives and develop a workplace travel plan.	See above.
Secure bicycle parking should be provided on site with changing facilities.	Secure facilities, including changing rooms, provided for up to 152 bicycles on site.
Real time information on space availability should be provided at or near the car park accesses for all parking levels.	Proponent to allocate parking areas to staff rather than provide real time information. Department satisfied with this outcome.
Development should be consistent with the	Department considers proposal to be consistent.

Concept Plan and Ryde Council's DCP.	
Off street parking should be in accordance with relevant Australian Standards, including for heavy vehicles.	Proponent committed to complying with relevant Australian Standards.
Department of Environment and Climate Change	
Whether development is in accordance with the NSW Government's Flood Prone Land Policy.	Proposal in accordance with relevant policy and adequate for maximum predicted flood levels.
Whether adequate investigation of potential site contamination has been undertaken. Recommend that a site auditor be appointed.	Further investigation now undertaken by proponent which found the potential for contamination to be very low and that a site audit not necessary. Department considers proponent's conclusion to be reasonable.
Sydney Water	
Any needed Sydney Water infrastructure to be funded by the developer.	Will be addressed by proponent seeking necessary certificates from Sydney Water.
Whether proposal results in any impact on fire fighting capacity on the site.	Proponent commits to ensuring water supply arrangements do not adversely impact fire fighting capability in the vicinity.
Whether proposal integrates water sensitive urban design and will result in stormwater being treated to best practice objectives.	Proponent has demonstrated that proposal will incorporate water sensitive urban design and meet best practice objectives.
Whether water conservation measures will be utilised.	Proposal will employ appropriate water conservation measures.

APPENDIX D. SUMMARY OF PUBLIC SUBMISSIONS

The following issues were raised in the submission received from the public, with regard to the potential impact of the development on the users of the Gumnut Cottage childcare centre:

Key issue	Specific concerns	Response from Department
Noise pollution	Determination of acceptable noise limits.	Proponent to comply with identified noise objectives based on DECC guidelines and submitted acoustic assessment.
	Measurement and management of noise targets for construction.	Proponent to submit compliance report to Department on noise objectives and management every three months during construction. Noise levels to be monitored at Gumnut Cottage centre and Willandra Village.
Air quality	Determination of acceptable air quality levels.	The DECC has guidelines as to the levels of dust considered acceptable to be generated as a result of construction, and the Ambient Air Quality NEPM sets out the generally acceptable levels of ambient air pollutants that might be produced by vehicle emissions.
	Measurement and management of air pollution for construction.	The proponent is to employ a range of measures to manage dust and general air quality during construction.
Parking	What temporary parking will be provided. Safety of parking and access.	The proponent is to provide at least 20 'P30' or longer term car parking spaces for the use of the childcare centre staff and parents at all times during construction within 100 metres of the Gumnut Cottage childcare centre, with safe pedestrian access from the car park to the centre also provided.
Play areas	Timing of relocation of outdoor play areas.	The relocation of the childcare playground for Gumnut Cottage and any accompanying modifications shall be completed prior to the issuing of a Construction Certificate for the proposal. The playground relocation works for the Waratah centre shall be completed prior to the issuing of an Occupation Certificate for the proposal and the reopening of the centre.
	Design and safety of proposed new areas.	The proponent shall submit the final detailed design of the childcare centre parking, Cochlear staff parking, landscaping, pedestrian access and childcare playground and building modification to the Department for approval by the Director, Strategic Assessments prior to the issue of a Construction Certificate.
Ongoing Communication	Whether parents committee will be recognised as a stakeholder in the project.	The Department has assessed impacts on the childcare centres as neighbouring sensitive receivers, and requires the proponent to notify the operators of the childcare centres and Willandra Village of commencement of construction works and any noisy works. Communication with the parents is an issue for the operators of the childcare centres.
Governance	How are requirements for managing pollution monitored.	Proponent to submit compliance report to Department on noise objectives and management every three months during construction. The proponent must also implement a Complaints Management System for the duration of construction. The public can also contact the Department with any concerns they may have about compliance with the conditions of approval.

The following points were made in the submission received from Macquarie University. These points did not require a response or assessment from the Department but were noted as relevant.

Issue	Detail
Ownership of proposed facility	That Macquarie University is in partnership with Cochlear for the development and will own the facility at its completion.
Consultation	The University has maintained consultation with student services organisation U@MQ throughout the development of the proposal design and the project application. U@MQ have undertaken dialogue with staff and parents of the childcare centres in regard to the proposal.
Waratah centre	The University in consultation with U@MQ has decided to temporarily close the Waratah centre for the duration of construction.
Gumnut centre	The Gumnut centre will remain operational with modifications to access and relocation of play areas affected by the development. The facility will be buffered by a non-construction traffic zone.

APPENDIX E. PROPONENT'S RESPONSE TO SUBMISSIONS

See attached disc *Cochlear Global headquarters Project Application – Preferred Project Report 20 October 2008*.

APPENDIX F. CONDITIONS OF APPROVAL

PART A – PROJECT

Proponent:	Lachlan Project Development Pty Ltd (14 Mars Road Lane Cove 2066)
Application made to:	Minister for Planning
Major Project Number:	08_0032
On land comprising:	Lot 182 DP 1112777 Macquarie University Campus, Ryde
Local Government Area:	Ryde City Council
Approval in summary for:	Construction of a two-section building with a maximum of height of seven storeys and a gross floor area (GFA) of 24,343sqm, car parking and bus stop relocation, with landscaping and revegetation.
Capital Investment Value:	\$71,093,000
Type of development:	Project approval under Part 3A of the Act
Determination made on:	See Instrument of Approval
Determination:	Project approval is granted subject to the conditions in Schedule 2 below.
Date of commencement of approval:	This approval commences on the date of the Minister's approval.
Date approval will lapse:	5 years from the date of determination

PART B – DEFINITIONS

In this approval the following definitions apply:

Act, the	<i>NSW Environmental Planning and Assessment Act, 1979</i>
Childcare Centres	Gumnut Cottage Childcare Centre and Waratah Occasional Care Centre
Concept Plan	<i>Macquarie University State Environmental Planning Policy (Major Projects) Amendment and Concept Plan</i> (including accompanying Appendices) prepared by CRI Australia Pty Ltd on behalf of Macquarie University dated April 2008.
Council	Ryde City Council
Department, the	Department of Planning
Director-General, the	Director-General of the Department of Planning (or delegate).
Environmental Assessment (EA)	<i>Environmental Assessment Report Project Application – Cochlear Global Headquarters – Stage 1 Building University Avenue, Macquarie University Campus, North Ryde</i> (including accompanying Appendices) prepared by JBA Urban Planning Consultants Pty Ltd for Lachlan Project Development and dated July 2008.
Minister, the	Minister for Planning
Preferred Project Report (PPR)	Letter titled <i>Cochlear Global Headquarters – Macquarie University (MP 08_0032) / Response to Submissions and Preferred Project Report</i> and appended documents submitted by JBA Urban Planning Consultants to the Department on 22 October 2008 (letter dated 20 October 2008).
Proponent	Lachlan Project Development Pty Ltd
Statement of Commitments	Revised Statement of Commitments submitted as part of the Preferred Project Report.

SCHEDULE 2
CONDITIONS OF APPROVAL
MAJOR PROJECT APPLICATION NO. MP 08_0032

1 Development description

Project approval is granted only to construction and operation of the proposed Cochlear Global Headquarters (Stage 1) within the Macquarie University Campus as described in the EA and amended in the PPR, principally:

- a) Subdivision of the existing title to create a separate lot for the development site, reflecting the boundary of the proposed Lot 190 in the Subdivision Plan(s) referenced in Condition 2;
- b) A building accommodating warehouse/storage space, office facilities and research/manufacturing space to a maximum height of seven storeys, and two levels of below ground car parking in accordance with the plans referenced in Condition 2;
- c) A maximum 528 car parking spaces for the use of the development, with up to 42 motorbike parking spaces;
- d) 35 additional at-grade car spaces for the use of the adjacent Gumnut Cottage Childcare Centre and Waratah Occasional Care Centre; and
- e) Landscaping and revegetation of the north-western site of the University Creek Corridor adjacent to the site.

2 Development in accordance with plans and documentation

The development shall be in accordance with the following plans and documentation, as provided in the EA and PPR, unless otherwise approved by the Director, Strategic Assessments, Department of Planning or amended by these conditions of approval. The proponent must submit a revised plan demonstrating the approved number of car parking spaces to the Department prior to construction.

Drawing Number	Revision Number	Name of Plan	Date
30431-31394	Issue C	Plan of Subdivision of Lot 182 DP 1112777 Sheet 1 of 2	10 September 2008
30431-31394	Issue C	Plan of Subdivision of Lot 182 DP 1112777 Sheet 2 of 2	10 September 2008
A01	Issue A	Location Plan and Architectural Drawing Schedule	13 June 2008
A02	Issue B	Site Plan	1 July 2008
A03	Issue A	Basement Level B1 Floor Plan (Base Building only)	13 June 2008
A04	Issue A	Lower Ground Floor Plan (Base Building only)	13 June 2008
A05	Issue A	Ground Floor Plan (Base Building only)	13 June 2008
A06	Issue A	Level 1 Floor Plan (Base Building only)	13 June 2008
A07	Issue A	Level 2 Floor Plan (Base Building only)	13 June 2008
A08	Issue A	Level 3 Floor Plan (Base Building only)	13 June 2008
A09	Issue A	Level 4 Floor Plan (Base Building only)	13 June 2008
A10	Issue A	Level 5 Floor Plan (Base Building only)	13 June 2008
A11	Issue A	Roof Plan (and Plantrooms Plan)	13 June 2008
A12	Issue A	Plant Rooms Roof Plan	13 June 2008

A13	Issue A	Elevations (North and South)	13 June 2008
A14	Issue A	Elevations (East and West)	13 June 2008
A15	Issue A	Sections A & B	13 June 2008
A16	Issue A	Sections C & D	13 June 2008
A17	Issue A	Sections E & F	13 June 2008
A18	Issue A	Section G	13 June 2008
A19	Issue A	Shadow Diagrams	13 June 2008
A20	Issue A	View Analysis (Views 1, 2, 3)	13 June 2008
A21	Issue A	View from Northeast (View 4)	13 June 2008
A22	Issue A	View from Northwest (View 5)	13 June 2008
I-PA-LG	02	Planning Application Drawings Lower Ground – Interior Fitout Plan	18 June 2008
I-PA-00	02	Planning Application Drawings Ground Floor – Interior Fitout Plan	18 June 2008
I-PA-01	02	Planning Application Drawings Level 01 – Interior Fitout Plan	18 June 2008
I-PA-02	03	Planning Application Drawings Level 02 – Interior Fitout Plan	18 June 2008
I-PA-03	02	Planning Application Drawings Level 03 – Interior Fitout Plan	18 June 2008
I-PA-04	02	Planning Application Drawings Level 4 – Interior Fitout Plan	18 June 2008
I-PA-05	02	Planning Application Drawings Level 05 – Interior Fitout Plan	18 June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams Lower Ground	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - Ground	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - One	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - Two	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - Three	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - Four	June 2008
I-PA-06	02	Indicative Interior Fitout Zoning Diagrams - Five	June 2008
C09459.00-C10	0	Concept Stormwater Drainage Plan	July 2008
C09459.00-C14	0	Finished Levels Plan	July 2008
C09459.00-C09	0	Stormwater Drainage Catchment Plan	July 2008
LA-CV00	A04	Landscape Cover Sheet, Keyplan and Drawing List	17 June 2008
LA-0102	A02	Landscape Plant Character Images Sheet	16 June 2008

LA-0103	A02	Landscape Precedent Images Sheet	16 June 2008
LA-0201	A02	Landscape Site Analysis, Circulation and Visual Environs	17 June 2008
LA-0202	A02	Landscape Analysis, Open Space Hierarchy Plan	17 June 2008
LA-0501	A08	Stage 1 Overall Landscape Plan	7 October 2008
LA-0502	A06	Stage 1 Landscape Plan – Sheet 1 of 2	17 June 2008
LA-0503	A06	Stage 1 Landscape Plan – Sheet 2 of 2	17 June 2008
LA-2401	A06	Stage 1 Landscape Sections – Sheet 1 of 2	17 June 2008
LA-2402	A04	Stage 1 Landscape Sections – Sheet 2 of 2	17 June 2008
LA-8901	A04	Stage 1 Landscape Details	17 June 2008
SKH-01	Issue A	Hydraulic Services Stage 1 – Concept Site Plan	18 June 2008
SKE-01	Issue A	Electrical Services Stage 1 – Concept Site Plan	18 June 2008

Appendix in EA	Title	Author	Date
A	Base Building Architectural Plans, Shadow Diagrams and Photomontages, View Analysis and Photograph of Materials Board	Toland Williams	July 2008
B	Indicative Internal Layout Plans	Geyer	July 2008
D	Stormwater Management Plan	Costin Roe	July 2008
F	Vegetation Management Plan Report Flora and Fauna Assessment	DEM Total Earth Care	16 June 2008 June 2008
G	Report on Phase 1 Contamination Assessment	Douglas Partners	March 2008
H	Report on Geotechnical Investigation	Douglas Partners	March 2008
J	Tree Report	Treescan	March 2008
K	ESD Report – Issue C	Hyder Consulting	19 June 2008
L	Waste Management and Re-use Plan	CRI	11 July 2008
M	Preliminary Construction Plan	CRI	July 2008
N	Preliminary Building Code of Australia Report	McKenzie Group	May 2008
O	Site Infrastructure Services Report	Hyder Consulting	18 June 2008
P	Acoustic Assessment	Heggies	10 July 2008
Q	Fire Safety Statement	Raw Fire Safety Engineering	23 May 2008
R	Review of Site Flooding	Costin Roe	July 2008
S	Structural Engineer Letter	Paul Davis Rajalingham Consulting Engineers	8 May 2008

3 Inconsistency between plans and documentation

In the event of any inconsistency between conditions of this project approval and the plans and documentation referred to above, the conditions of this project approval prevail.

4 Development contributions

The proponent shall make development contributions in accordance with the terms of a voluntary planning agreement between Macquarie University, Ryde City Council, the proponent and other relevant parties. If such an agreement is not reached by completion of construction of the proposal, the proponent shall make contributions as determined by Ryde City Council in accordance with Council's Section 94 Development Contributions Plan.

5 Improvement of road intersections

The proponent shall submit the detailed design of the upgrade of the Waterloo Road / Herring Road intersection to the RTA for approval prior to the issuing of a Construction Certificate for the proposal, and complete the works as approved by the RTA prior to the issuing of an Occupation Certificate.

All upgrades to roads external to the University campus shall be designed and constructed to comply with standards and specifications agreed with the NSW Roads and Traffic Authority.

6 Vehicle parking

Vehicle parking for the proposal is to be designed and constructed in accordance with the following:

- a) the maximum number of car parking spaces to be provided for cars for the use of Cochlear staff is 398 spaces at basement level, 130 at-grade parking space and 42 motorbike spaces. The at-grade car parking shall be phased out through the implementation of a Work Place Travel Plan to be prepared in accordance with Condition 7 of this approval.
- b) an additional 35 at-grade car spaces will be provided and designated for the use of the adjacent Gumnut Cottage Childcare Centre and Waratah Occasional Care Centre;
- c) the 11 car park spaces proposed for the south-eastern corner of the site shall be deleted and replaced with vegetation while retaining sufficient sealed area to permit vehicle turning in accordance with the relevant Australian Standard; and
- d) safe and direct access is to be provided from the designated disability parking spaces into the building without any barriers.

7 Work place travel plan

The proponent shall develop a Work Place Travel Plan for the proposal with the goal of achieving 40% public transport modal share by Cochlear employees in their journey to work, and submit the Plan to the Department for approval by the Director, Strategic Assessments prior to the issuing of an Occupation Certificate for the development. The Work Place Travel Plan shall also include details for the staging and timing for the phasing out of the at-grade car parking.

8 Parking permit system

The proponent, in consultation with Macquarie University, shall implement a barrier, car identification or parking permit system to ensure that the designated childcare centre spaces referred to in Condition 6 are able to be used only by childcare centre staff and parents of children using the centres.

9 Relocation of pedestrian crossing

The proponent shall employ a qualified practitioner to undertake a Road Safety Audit to determine whether the location of the existing pedestrian crossing on University Avenue in relation to the proposed car park entrance provides an acceptable level of safety to pedestrians. If the audit finds that the level of safety is not acceptable, the proponent shall pay for the relocation of the crossing to a point recommended by the Audit practitioner, if agreed by Macquarie University.

10 Submission of final parking, access and childcare centre design

The proponent shall submit the final detailed design of the childcare centre parking, Cochlear staff parking, landscaping, pedestrian access and childcare playground and building modification to the Department for approval by the Director, Strategic Assessments prior to the issue of a Construction Certificate. Final car park landscaping is to include one tree per five (5) parking spaces, evenly distributed throughout, with additional trees at the perimeter.

11 Provision of childcare amenities

The relocation of the childcare playground for Gumnut Cottage and any accompanying modifications shall be completed prior to the issuing of a Construction Certificate for the proposal. The playground relocation works for the Waratah centre shall be completed prior to the issuing of an Occupation Certificate for the proposal and the reopening of the centre.

At least 20 car parking spaces shall be provided for the use of the childcare centre staff and parents at all times during construction within 100 metres of the Gumnut Cottage childcare centre, with safe pedestrian access from the car park to the centre also provided. Details of these arrangements are to be provided to the operators of the childcare centres prior to the commencement of construction.

12 Environmental Management Plan

Prior to the issuing of a Construction Certificate for the proposal, Environmental Management Plan(s) shall be prepared for excavation and construction activities by a suitably qualified person in accordance with relevant legislation and guidelines. The Plan(s) shall include mechanisms for monitoring and recording results of management measures, and be implemented prior to and throughout the period of construction, as relevant. Detailed plans may be prepared for individual stages of construction, sites or issues as appropriate.

The Plan(s) shall address, but not be limited to, the following matters where relevant:

- a) Contact details of site manager;
- b) Construction traffic, pedestrian management and parking of construction vehicles (including staff cars);
- c) Noise and vibration management;
- d) Management of impact on native vegetation;
- e) Air quality, including dust and vehicle exhaust emissions;
- f) Erosion and sediment control;
- g) Waste management; and
- h) Stormwater management.

13 Notification of commencement of works

The operators of the childcare centres and Willandra Village are to be notified of commencement of construction works one week prior to commencement.

14 Site fencing

A construction safety fence shall be erected around the perimeter of the construction zone at all times during construction, with safe pedestrian access maintained between the childcare car park facilities and the Gumnut Cottage centre.

15 Site notice

A site notice(s) shall be prominently displayed at the boundaries of the site for the purposes of informing the public of project details including, but not limited to the details of the Proponent, Builder and Engineer. The notice(s) is to satisfy all but not be limited to, the following requirements:

- a) Minimum dimensions of the notice are to measure 841mm x 594mm (A1) with any text on the notice to be a minimum of 30 point type size;
- b) The notice is to be durable and weatherproof and is to be displayed throughout the works period;
- c) The approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice; and
- d) The notice(s) is to be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted.

16 Approved plans to be on site

A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification shall be kept on the site at all times and shall be readily available for perusal by any officer of the Council or the Department

17 Complaints Management System

The Proponent must prepare and implement a construction Complaints Management System before construction commences and maintain the System for the duration of construction. The System shall include the following:

- a) a direct telephone number on which complaints and enquiries about the project may be registered;
- b) a postal address to which written complaints and enquires may be sent; and
- c) an email address to which electronic complaints and enquiries may be transmitted.

The telephone number, the postal address and the email address shall be included on the Site Notice prior to the commencement of construction. A record of complaints received and responses shall be maintained for the duration of construction.

18 Construction hours

The hours of construction, including the delivery of materials to and from the site, shall be restricted as follows, unless approved by the Director, Strategic Assessments, Department of Planning:

- a) Between 7:00am and 6:00pm, Mondays to Fridays inclusive;
- b) Between 8:00am and 1:00pm, Saturdays; and
- c) No work on Sundays and public holidays.

19 Construction noise and vibration

The construction noise objective for the project is to manage noise from construction activities (as measured by a L_{A10} (15minute) descriptor) so it does not exceed the measured existing background L_{90} (15 minute) noise level by more than 5dB(A) or to within acceptable limits in accordance with the Department of Environment and Climate Change's draft NSW Construction Noise Guideline. Background noise levels are those identified in the report by Heggies Pty Ltd titled *Cochlear Global Headquarters Project Application Acoustic Assessment* or as otherwise identified in the Environmental Management Plan.

Any activities that have the potential to produce noise emissions that exceed the objective must be identified and managed in accordance with the Environmental Management Plan. The proponent must implement all reasonable noise mitigation and management measures with the aim of achieving the construction noise objective. If the noise from a Construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the *NSW Industrial Noise Policy*), 5dB(A) must be added to the measured Construction noise level when comparing the measured noise with the Construction noise objective.

20 Notification of noisy works

If works are planned that will exceed the construction noise objective, all sensitive receivers are to be notified in writing at least 48 hours prior to the commencement of those works.

21 Compliance with construction noise conditions

The proponent must submit a compliance report to the Department for review every three months from the commencement of construction until completion, reporting on compliance with conditions 18, 19 and 20, with noise monitoring to be undertaken at both Gumnut Cottage and Willandra Village.

22 Dust control measures

Adequate measures shall be taken to prevent dust from affecting the amenity of the area during construction, particularly the neighbouring childcare centres. Specifically, the following measures must be adopted:

- a) physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions,
- b) earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed,
- c) all materials shall be stored or stockpiled at the best locations,
- d) the surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs,
- e) all vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material,
- f) all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays,
- g) gates shall be closed between vehicle movements and shall be fitted with shade cloth, and
- h) cleaning of footpaths and roadways shall be carried out regularly.

23 Disposal of seepage and stormwater

Under no circumstances is any collected water or additional stormwater flow or drainage to be directed or discharged into any endangered ecological communities. Discharges are to be managed in accordance with the provisions of the NSW *Protection of the Environment Operations Act 1997*.

24 Tree protection measures

Tree protection measures shall be implemented in accordance with the recommendations of the arborist report prepared by Treescan and dated March 2008 to ensure that all trees to be retained are suitably protected during construction.