

Our Ref : Cochlear Response to Agency Submissions

Contact: Anissa Levy

9th October 2008

Mr Michael File
Director
Strategic Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001



Dear Michael,

COCHLEAR LTD RESPONSE TO AGENCY SUBMISSIONS

Thank you for your recent comments in relation to the proposed development of the new Cochlear facility at Macquarie University. Following receipt of additional comments from the Department of Planning, Ministry of Transport, Roads and Traffic Authority and Ryde Council, we are pleased to provide you with the following consolidated response.

A full response to each agency comment is provided in this letter as well as provision of a table containing a summary of the comments, where the comments have been categorised into the following groups to avoid repetition:

- External Intersection works;
- Work Place Travel Plan;
- Internal Roadworks;
- Travel Demand Management;
- Car Parking Requirements;
- Car Parking Design;
- Cycling Requirements; and
- Other Comments.

Consultation with Macquarie University has been undertaken in preparing this response. Macquarie University support the project application and have prepared an accompanying letter acknowledging the additional work identified to be carried out by the University as part of its Concept plan Review.

Should you have any questions, please do not hesitate to contact Anissa Levy on (02) 9496 7700.

Prepared by
for and on behalf of
CARDNO EPPELL OLSEN PTY LTD

A handwritten signature in black ink, appearing to read 'Anissa Levy', written over a light grey circular stamp.

Anissa Levy
Sydney Office Manager / Project Director
for Cardno Eppell Olsen

Table 1: Summary of Agency Comments

Category	DoP	RTA	MoT
1. EXTERNAL INTERSECTION WORKS	d) Clarify the proposed timing and detail of the identified road intersection upgrades.	1. Improvements to Waterloo Road/ Herring Road 9. The proposed changes to the signalised intersection of Waterloo Road/Herring Road shall be designed to meet RTA's requirements, and endorsed by a suitably qualified and chartered Engineer 10. The developer shall be responsible for all public utility adjustment/relocation works, necessitated by the above work	No comment
2. INTERNAL ROADWORKS	No comment	No comment	5. The need to retain the existing roundabout at the intersection of University and Central Avenues is questioned, and if removed would enable a more prominent and functional bus stop with direct connection to the main pedestrian concourse within the proposal
3. WORK PLACE TRAVEL PLAN	No comment	3. Develop a Workplace Travel Plan prior to the occupation of the site.	4. The Optus Work Travel Plan for their Macquarie Park Campus includes an identified mode share target and specific measures to achieve this outcome. A work travel plan should be an element for approval under the concept plan particularly given the relocation of Cochlear from Lane Cove;
4. TRAVEL DEMAND MANAGEMENT	No comment	2. Implement Travel Demand Management initiatives (ie: carpooling, tele-working, etc) to reduce demand for car parking and traffic generation.	1. The Director General's Requirements include the need to consider measures that promote a modal shift to public transport. The environmental assessment does not adequately address this requirement by not identifying a sustainable mode share target for the proposal or a package of discrete measures that can realise a successful shift in mode share to public transport; 2. The draft Macquarie Park Traffic Study recommends a mode share target of 40% to public transport together with walking and cycling within the Macquarie Park corridor, which includes the University. The Ministry therefore recommends that further mode share analysis of the proposal be completed using current 2006 Journey to Work Census data;

Category	DoP	RTA	MoT
5. CAR PARKING REQUIREMENTS	c) Quantify the net impact on car parking for the immediate site and the Macquarie University campus as a whole, taking into account the number of spaces being replaced, in terms of: i) total spaces; ii) number of spaces per sqm for the childcare centres; and iii) number of spaces per student/staff/other regular users for the campus as a whole and for the childcare centres.	7. Carparking provision to the Department of Planning's satisfaction and provided in accordance with Ryde Council's DCP.	3. The interrelationship between car parking and achieving a sustainable mode shift to public transport is not adequately addressed. The Ministry has the following specific concerns with the proposal's car parking provision: iv) The Ministry notes that the proposal is within close walking distance to Macquarie Station and bus interchange and is also directly adjacent to frequent bus services on University Avenue and Epping Road. Given this high level of accessibility by public transport the Ministry recommends a lower car parking rate (maximum 1 space per 80m ²); v) The analysis does not consider what other parking options within the University could be utilised to reduce the overall provision within the subject site. Conversely the analysis does not consider the potential use of other parking facilities to further supplement the overall provision of parking to subject the development and its potential impact on mode share; vi) These options may include access to adjacent and under utilised parking facilities, which has been identified through surveys in the environmental assessment. Access to University parking for future commercial development should be considered as part of a broader parking strategy for the University as part of the Concept Plan; and vii) The parking analysis does not consider what range of potential Travel Demand Measures (TDM) are variable to reduce parking provision such as car-share and car-pooling spaces. Furthermore, the potential for bicycle travel to reduce parking has not been considered despite the proposal including 152 bike spaces and extensive amenities.
6. CAR PARKING DESIGN	No comment	5. Real time information for each car parking facility be provided at or near the car park accesses for all parking levels	No comment
	No comment	8. Off street parking associated with the proposed development should be designed in accordance with AS 2890.1 - 2004 and AS 2890.2 - 2002 for heavy vehicles	No comment
7. CYCLING REQUIREMENTS	No comment	4. Secure bicycle parking & change facilities for employees is provided on site	6. The provision of cycle access to the subject site along University Avenue is not clear within the proposal. Given the high level of proposed bicycle parking a more detailed design approach is required, which builds on the Macquarie University Concept Plan.
8. OTHER	No comment	6. Development must be consistent with and not preclude the suggested proposals as described within the Macquarie University Concept Plan	No comment
	No comment	11. All works / regulatory signposting associated with the proposed development shall be at no cost to the RTA.	No comment

INTRODUCTION

Cardno Eppell Olsen (Cardno) were commissioned by CRI Australia Pty Ltd on behalf of Project Lachlan Development Pty Ltd to prepare the Traffic and Parking Assessment (Cardno, June 2008) for the proposed Cochlear Global Headquarters facility to be located on Macquarie University's residual land at the Macquarie Park Campus known as the 'Station South Precinct' in the Macquarie University Campus Development Plan.

Cochlear undertake research and development as well as manufacturing and distribution of hearing implant devices. Cochlear proposes to move their current global headquarters from Lane Cove to the proposed site in Macquarie Park, the Asia Pacific (APAC) regional office are included in the move. The global headquarters houses predominantly office staff but also incorporates research, manufacturing and distribution.

The application is for the development of a new purpose built facility with a Gross Floor Area (GFA) of 24,343m². The project will consist predominantly of typical A-grade office buildings and some areas for manufacturing/research and product distribution usage. The type of development is consistent with the research oriented development that Macquarie University seeks for the Campus.

The relocation of facilities from Lane Cove to Macquarie Park will not result in a significant change geographically but will certainly provide opportunities for significant changes in mode share for the Cochlear staff. Cochlear are committed towards the achievement of a sustainable development and this includes a commitment to working towards sustainable travel to and from the proposed site. To ensure a smooth transition of staff based in Lane Cove to the site on Macquarie University Campus, Cochlear have appointed Cardno to develop a Work Place Travel Plan (WPTP) to educate and inform staff about sustainable and 'healthy' travel choices for their journeys to work.

The Macquarie University and Ryde Bicycle Plans, bus corridor improvements, bus reform and the Macquarie Park railway station will further support Cochlear staff to make a more sustainable transition from car travel to non-car based travel in the move from Lane Cave to Macquarie University. The Cochlear management look forward to their speedy implementation by the associated agencies.

Macquarie University Campus lies within the Contract Region 7 area of the Government's Bus Reform program. The program is targeted to introduce consistent service standards, clear performance requirements and sustainable funding, incorporating community consultation and regular service reviews into service planning. Cochlear has indicated that they would welcome the opportunity to provide feedback on proposals for region 7 during the consultation period to ensure that its staff can benefit from improved services.

1.0 EXTERNAL INTERSECTION WORKS

AGENCY COMMENT:

DoP(d): *Clarify the proposed timing and detail of the identified road intersection upgrades*

RTA1: *As identified within the Traffic Report, the additional traffic generated by the proposed development will worsen the operational performance of the following two key intersections:*

- i) *Epping Road / Balaclava Road; and*
- ii) *Waterloo Road / Herring Road*

However, the RTA's (Bus Network Development) is proposing to implement Stage 1 improvement works to the Epping Road/Balaclava Road intersection within the next 12 months. In lieu of the RTA's improvements to this intersection, the RTA recommends the following remedial improvements to the Waterloo Road / Herring Road intersection.

Waterloo Road/Herring Road:

- i) *Provide an additional short (55m) right turn lane in the Herring Road (north) leg;*
- ii) *Modify the Herring Road (north) leg to provide the following lane arrangement (LT/T/T/R) ;*
- iii) *Remove the kerbside parking (ie: Provide full time No Stopping) along Herring Road south of the Waterloo Road intersection (ie: southbound departure) for a distance of (minimum 150m) to ensure that three through southbound lanes are provided. (Note: The provision of full time No Stopping will be subject to the approval of Council's Local Traffic Committee);*
- iv) *Amend the Waterloo Road (east) leg to provide the following changes:*
 - a) *The westbound approach is amended from the existing (L/LT/R) to the following configuration of (L/L/T/R).*
 - b) *The change in point (a) above will require the provision of an 80m long right turn bay. The provision of this bay can be accommodated by reducing the existing (eastbound) three lane departure along Waterloo Road from the signals at Waterloo Road/ Herring Road down to a localised two lane departure in the area of the proposed right turn bay.*
- v) *It is strongly recommended that the applicant (Cochlear) and the Macquarie University make suitable arrangements for the funding / implementation of this work to ensure that the signal reconstruction has been completed in advance of the issue of the occupation certificate.*

RTA9: *The proposed changes to the signalised intersection of Waterloo Road - Herring Road shall be designed to meet RTA's requirements, and endorsed by a suitably qualified and chartered Engineer (i.e. who is registered with the Institute of Engineers, Australia). The design requirements shall be in accordance with the RTA's Road Design Guide and other Australian Codes of Practice. The certified copies of the traffic signal design plans shall be submitted to the RTA for consideration and approval prior to the release of the occupation certificate and commencement of road works.*

The RTA fees for administration, plan checking, signal works inspections and project management shall be paid by the developer prior to the commencement of works. The developer may be required to enter into a Works Authorisation Deed (WAD) for the abovementioned works. If required, please note that the Works Authorisation Deed (WAD) will need to be executed prior to the RTA's assessment of the detailed traffic signal design plans.

RTA10: *The developer shall be responsible for all public utility adjustment/relocation works, necessitated by the above work and as required by the various public utility authorities and/or their agents.*

RESPONSE:

Macquarie University (MQ) has acknowledged that the proposed upgrade works at the intersection of Waterloo Road/Herring Road will be incorporated into the revised TMAP, currently being prepared for the Macquarie University Concept Plan (MUCP).

Macquarie University has undertaken to include the proposed works in the Memorandum of Understanding (MoU) for the MQ and City of Ryde (CoR) Voluntary Planning Agreement (VPA). Based on the MU correspondence we recommend that the proposed works are undertaken as part of the Universities commitments for the TMAP rather than Cochlear Stage 1 development.

2.0 INTERNAL ROADWORKS

AGENCY COMMENT:

MoT5: *The need to retain the existing roundabout at the intersection of University and Central Avenues is questioned, and if removed would enable a more prominent and functional bus stop with direct connection to the main pedestrian concourse within the proposal.*

RESPONSE:

The removal of the subject roundabout at University Avenue/Central Avenue and relocation of the bus stop, with associated bus stop pedestrian facilities, will be investigated through the MUCP TMAP Review. Recommendations in relation to internal road circulation within the University and provision of bus only links and improved pedestrian facilities have been put to the MQ as part of the agency stakeholder submissions for the MUCP. MQ will be considering these recommendations as part of the TMAP review.

The assessment will need to consider the staging of other proposed works such as the plan to remove the multi-storey car parks to the north of the site. Furthermore, these recommendations will be considered as part of the overall proposed access routes (vehicular and pedestrian) for the whole University Campus and are not appropriate to be considered in isolation as part of this one development.

The University has acknowledged the need to consider these issues as part of the MUCP TMAP Review. This would include an assessment of the intersection of University Avenue and Central Avenue using the intersection modelling program SIDRA to ascertain whether the intersection can operate adequately as a priority-control T-junction. To address the potential removal of the bus stop, consultation with the Ministry of Transport and Sydney Buses will be carried out to develop a concept design for the bus stop and pedestrian accesses.

It should also be noted that currently the roundabout serves not only traffic travelling along University Avenue and access to the surface car park on the subject site but it also provides access to the multi-storey car parks on the northern side of University Avenue. It is unlikely that the intersection will operate adequately as a priority-control T-junction until the multi-storey car parks are removed.

3.0 WORK PLACE TRAVEL PLAN

AGENCY COMMENT:

RTA3: *In accordance with the Macquarie Park Corridor DCP, the applicant must develop a Workplace Travel Plan prior to the occupation of the site.*

MoT4: *The Optus Work Travel Plan for their Macquarie Park Campus includes an identified mode share target and specific measures to achieve this outcome. A work travel plan should be an element for approval under the concept plan particularly given the relocation of Cochlear from Lane Cove.*

RESPONSE:

Cardno will be working in partnership with Cochlear and its staff to develop a site specific Cochlear Work Place Travel Plan (WPTP). The overarching aim will be to work towards encouraging sustainable and 'healthy' travel to the proposed site. Furthermore the Cochlear WPTP will set mode share targets (MST) for the proposed Global Headquarters consistent with the MUCP and the CoR. The CoR recently established a MST of 40% public/active transport mode split for Macquarie Park Corridor as part of the Macquarie Park Traffic Study. Macquarie University will be establishing similar MST as part of the MUCP TMAP Review.

Using data collected as part of a Cochlear staff survey, Cardno will calculate the current Journey to Work (JTW) mode share of the Cochlear staff at the Lane Cove facility. Working in consultation with Cochlear Management and staff the WPTP will identify a series of targets (supported by a package of measures) to be achieved over an agreed period of time. This will ensure that the mode share targets for the proposed project are realistically achievable. The MST for the Cochlear WPTP will act as a key performance indicator (KPI) for Cochlear Management to measure the success of the Cochlear WPTP over time.

Stage 1

It is envisaged that the WPTP report will be a 'living' document. The first stage of the WPTP will require implementation during occupation of the site and will contain information on the aims, objectives, baseline and projected targets based upon the analysis of staff surveys and the existing public transport network. Some key tasks will include:

- Agree WPTP aims, objectives and projected targets;
- Educating staff about the WPTP and their role in shaping the plan;
- Conducting data collection - staff surveys;
- Setting up a Cochlear Travel Plan Steering Group - consisting of staff interested in assisting with the roll out of WPTP actions;
- Informing staff of their travel options to the new site.

Stage 2

The next stage will involve using the data gathered in Stage 1 and working with the Cochlear staff and management to prepare a specific set of measures tailored to address the needs of staff prior to moving sites. The WPTP will consider a parking management strategy for the proposed new site. The strategy may establish car parking allocations to avoid confusion when staff move to the site.

Examples of activities that may be included in the WPTP for implementation prior to occupation of the site are:

- Creating a WPTP page on the Cochlear website/intranet providing:
 - Access to staff surveys;
 - Information on the WPTP;
 - Links to public transport information;
- Developing a rideshare (car-pool) system
 - Asking staff to consider rideshare;
 - Allocating rideshare spaces in the car park;
 - potentially matching staff living near each other working on matching shift patterns;
 - Setting up a support system for emergency travel if required;
 - Creating a Rideshare noticeboard - physical or intranet
- Providing public transport information to staff
 - Creating personalised journey plans;
 - Providing public transport maps for the new development;

Other travel demand management measures will be developed for implementation over a period of time once occupation of the new site has occurred.

Stage 3

Stage 3 will commence upon occupation of the site and will require establishing means of monitoring and continuing the work of the WPTP. This may include establishing a staff steering group that could meet regularly to address any travel issues arising in the first few months of occupation, this may involve refining or introducing new WPTP measures.

A second staff survey would be carried out within the first 3 months of occupation. This will allow for a period of settlement, to analyse the changes in travel pattern from the Lane Cove site to the Macquarie University Campus and to set a baseline for staff travel. The survey will allow staff to discuss positive and negative experiences about transportation to the site.

At this stage the timescales for achieving the MSTs should be reviewed and adjusted if necessary, for example if the 40% public transport mode share can be achieved earlier than predicted.

4.0 MODE SHARE TARGETS and TRAVEL DEMAND MANAGEMENT

AGENCY COMMENT:

- RTA2:** *Implement Travel Demand Management initiatives (ie: carpooling, tele-working, etc) to reduce demand for car parking and traffic generation.*
- MoT1:** *The Director General's Requirements include the need to consider measures that promote a modal shift to public transport. The environmental assessment does not adequately address this requirement by not identifying a sustainable mode share target for the proposal or a package of discrete measures that can realise a successful shift in mode share to public transport;*
- MoT2:** *The draft Macquarie Park Traffic Study recommends a mode share target of 40% to public transport together with walking and cycling within the Macquarie Park corridor, which includes the University. The Ministry therefore recommends that further mode share analysis of the proposal be completed using current 2006 Journey to Work Census data;*

RESPONSE:

The aim of the Cochlear Workplace Travel Plan is to achieve a set mode share target for Cochlear staff travelling to work by public and active transport (walking and cycling) during business hours. The MSTs for the Cochlear WPTP are anticipated to be consistent with those set for the Macquarie Park Corridor (MPC) in the Macquarie Park Traffic Study (40% by public and active transport) and the MUCP.

History of Macquarie Park MST

The Macquarie Park Transport Management and Accessibility Plan (MP TMAP) (April 2002) was undertaken by Maunsell for the then Planning NSW and Ryde City Council. The MP TMAP was prepared as part of the development of the Macquarie Park Corridor Master Plan and set out a range of transport measures to accommodate future development within Macquarie Park corridor over 15 to 20 years.

The MP TMAP acknowledged that *“the single most important element of the strategic context in the Macquarie Park area is the forthcoming development of the Parramatta Rail Link (PRL). This project will significantly increase the public transport accessibility of the Macquarie park area.”*

The TMAP noted that in 1996 Journey to Work census data showed that for the Macquarie Park corridor Workforce, 86% of people drove to work. As part of the TMAP process, a mode share target was set for the study, the goal was for a 20% reduction in car mode share to the Macquarie Park Corridor, to around 65%. The remaining 35% of trips to the Macquarie Park Corridor would be made on foot, cycle or public transport. Hence, the public transport mode share was targeted to be somewhat less than 35%.

A project specific multi-modal transport model was developed for the TMAP process, this involved extracting car and public transport networks and matrices from the Sydney metropolitan model. The modelling results attained a mode share of up to 23% for rail and 5% for bus in the AM and PM peak periods.

Maunsell patronage forecasting work on the PRL at the time, had predicted that with the full PRL in place 17,000 people would use the 3 PRL stations in the Macquarie Park area during the 3.5 hour morning peak in 2021, with Macquarie University Station being the busiest, with 10,000 people during the 3.5 hour period.

The Macquarie Park Traffic Study assumed a 40% public transport mode split for Macquarie Park. The strategic Sydney metropolitan model run by TPDC provided 2031 Metropolitan Sydney trip matrices (traffic and public transport). The matrices allowed a PT motorised mode split of 23% to be deduced for trips to, from and within the study area.

The justification offered for the 40% mode share target in the Macquarie Park Traffic Study over the 23 year development horizon included:

- Major public transport improvements committed in the Macquarie Park Corridor, including:
 - Bus lanes on Lane Cove Road; and
 - The Epping to Chatswood Rail Line (ECRL).
- Two stations within the Macquarie Park area were assumed to have the capacity to carry some 23,400 commuters in the one hour peak (subject to the completion of the North West Rail Link from Epping to Rouse Hill and the CBD Rail Link from Chatswood to Redfern);
- Scale of development, and hence the density of employment in the area will facilitate the introduction of many more public bus services covering more parts of Macquarie Park;
- Car parking pricing and limitations on parking supply;
- Some businesses will also develop their own transport plans to target lower car usage.
- The scale and nature of businesses expected to be attracted to Macquarie Park (i.e. with hundreds or thousands of employees in each business) will facilitate reductions in car usage through implementation of workplace travel plans.

Of particular concern from the above, are the assumptions in relation to the Epping to Chatswood Rail Line. The capacities indicated are noted to be dependent on the completion of the North West Rail Link (NWRL) and the Redfern to Chatswood Rail Link (RCRL). Previous announcements by the government indicated that the North West Rail Link (NWRL) would be replaced by the North West Metro and current government planning web-sites no longer make any mention of the RCRL. More recently the status of the North West Metro is under question.

Macquarie University through its Project Application for the MUCP has been asked by the Department of Planning to establish MST for the Macquarie University Campus consistent with the Macquarie Park Traffic Study.

Cochlear MST

Cochlear will work towards the achievement of this target through the implementation of tailored travel demand management measures contained within the Work Place Travel Plan. Cochlear will commence implementation of the WPTP at the occupation phase of the development, and continue to promote the achievement of the targets throughout occupancy of the site.

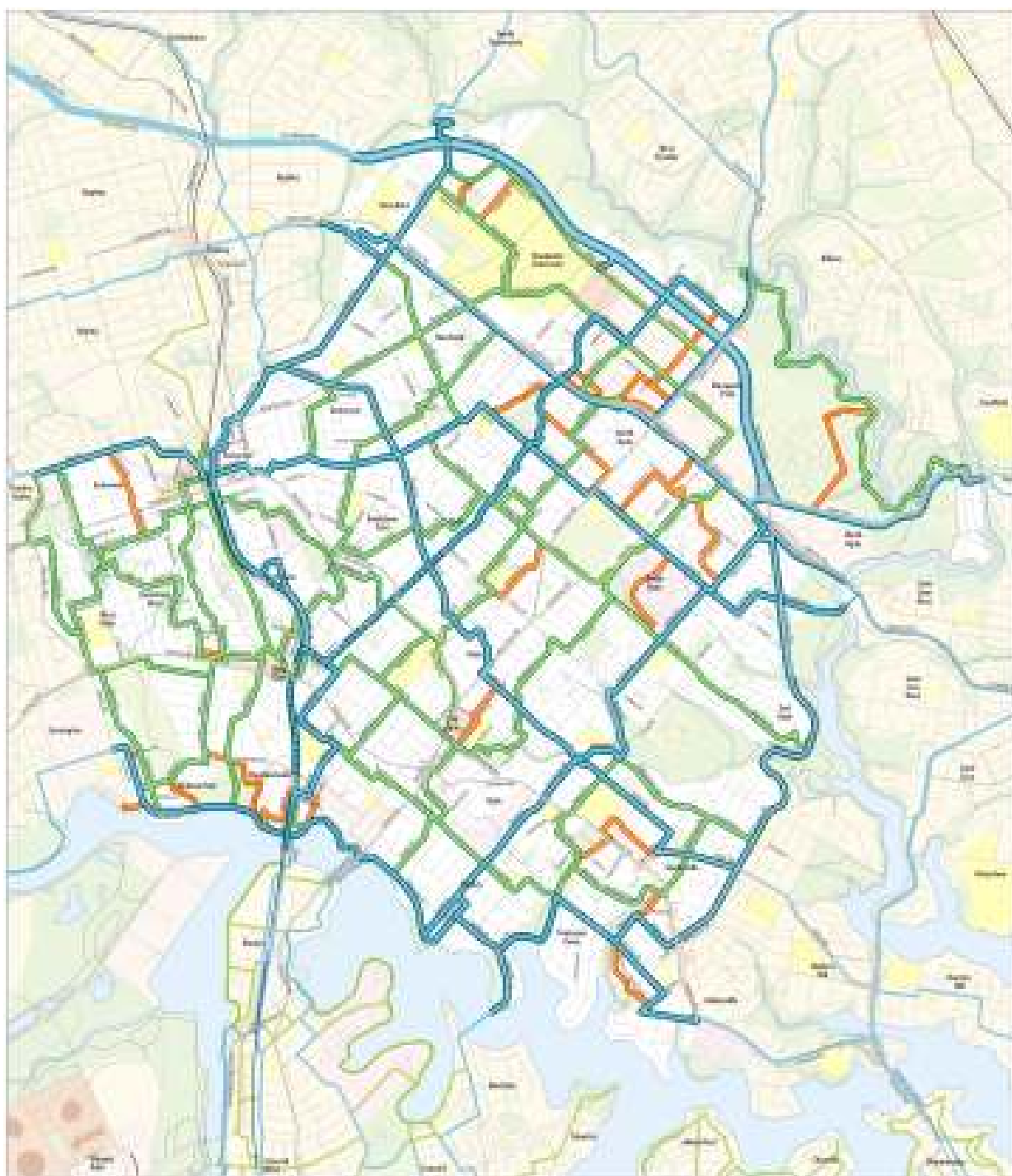
The detailed package of travel demand measures will be prepared in consultation with Cochlear staff to provide specific actions to address the needs of staff as discussed in section 3.0. The measures will be fully elaborated in the Work Place Travel Plan report, but it is envisaged that some of the likely TDMs will include (but not limited to):

- Rideshare (car-pool) opportunities;
- Personalised journey plans; and
- Forming a Bicycle User Group;

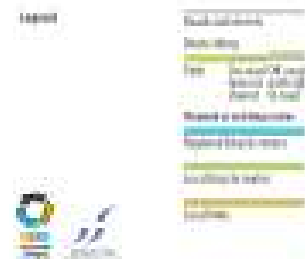
The recommendation to carry out an analysis of JTW using 2006 census data will only provide limited use to the development of the Cochlear WPTP. Instead, Cardno recommends the use of internal Cochlear staff surveys to establish JTW patterns for the actual Cochlear staff. The surveys will also be used to set the baseline, objectives and measures to achieve the MSTs consistent with the MUCP.

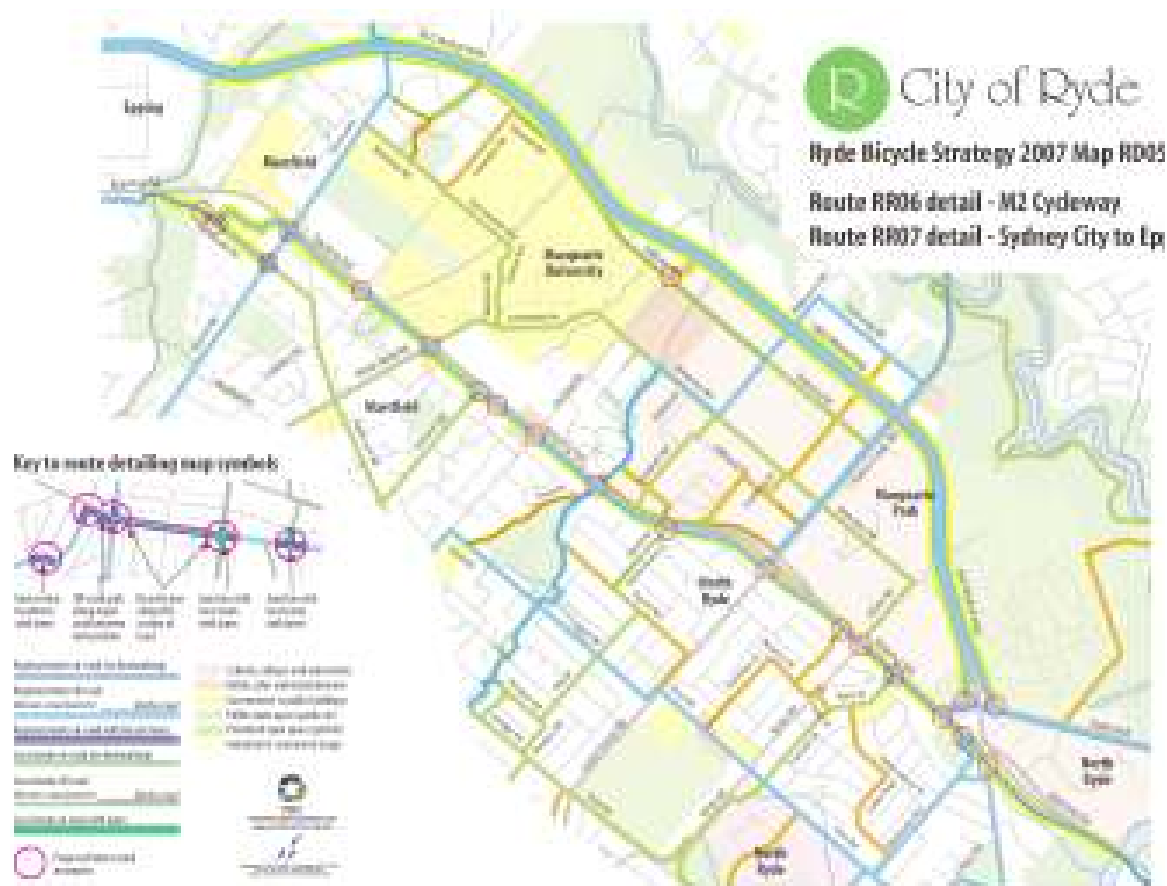
To assist staff to use sustainable travel from the first day of occupation, consideration will be given to the early implementation of the proposed off-road segregated bicycle path along University Avenue as discussed in Section 7.0 of this document.

Further consideration will be given to the installation of a pedestrian and cyclist wayfinding system which would comprise directional signage from the rail station, bus interchange, campus facilities, shopping to from/Cochlear. Signage to direct cyclists from local University cycle paths onto strategic routes (as shown in the City of Ryde Proposed bicycle network) would be implemented.



Ryde Bicycle Strategy and Masterplan
Map 8 Proposed bicycle network connectivity
Version 1 May 2007





5.0 CAR PARKING REQUIREMENTS

AGENCY COMMENT:

DoP(c): *Quantify the net impact on car parking for the immediate site and the Macquarie University campus as a whole, taking into account the number of spaces being replaced, in terms of:*

- i) *total spaces;*
- ii) *number of spaces per sqm for the childcare centres; and*
- iii) *number of spaces per student/staff/other regular users for the campus as a whole and for the childcare centres.*

RESPONSE:

The net impact on car parking resulting from all proposed developments on the University site would be best co-ordinated and addressed in the MUCP.

It is proposed to contain all staff parking on the Cochlear development site to allow Cochlear to monitor parking as part of the Work Place Travel Plan, so as to avoid utilising parking on the Macquarie University Campus.

Currently 197 off-street University car parking spaces are available on the subject site adjacent to the Waratah Day Care Centre this includes 20 "P30 Set Down" parking spaces for drop-off to the child car centres. The proposal involves the removal of these 197 University parking spaces. With the development of Cochlear 35 parking spaces will be provided on the site for the Day Care Centres. This will result in a net loss of 162 University parking spaces.

With regards to the existing Child Care Centres next to the Cochlear development, the combined GFA of Gumnut Cottage Child Care Centre (747sqm) and Waratah Occasional Care Centre (585sqm) is 1,332sqm. 35 parking spaces will be provided, which equates to a parking rate of 1 space per 38m² GFA. At its capacity Gumnut Cottage can cater for 90 children and Waratah Cottage can hold a maximum of 45 children.

The parking rate for child care centres in the City of Ryde's DCP 2006 is '*1 space per 2 employees and a parking area to the satisfaction of council*'. The suggested RTA parking rate for child care is '*1 space per 4 children in attendance*'.

Using the RTA parking requirements for childcare developments, which requires the provision of 34 spaces, the level of proposed parking supplied on site is adequate.

AGENCY COMMENT:

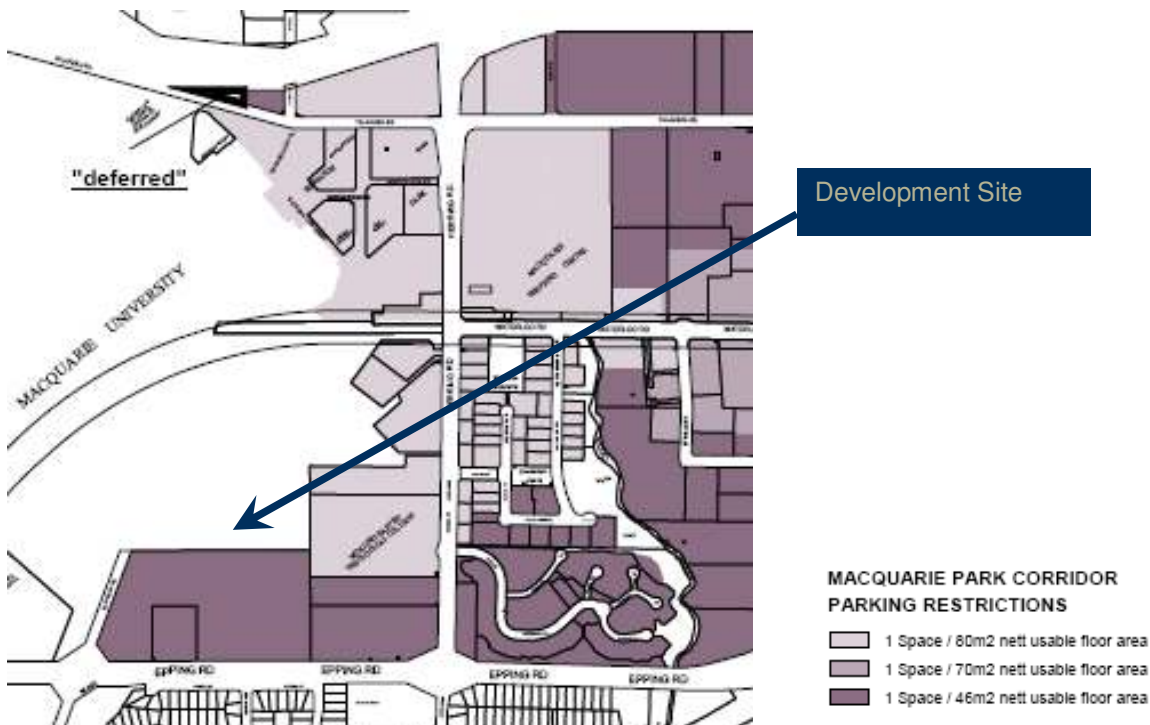
RTA7: *Carparking provision to the Department of Planning's satisfaction and provided in accordance with Ryde Council's DCP.*

RESPONSE:

The application of the current Ryde DCP 2006 Section 9.3 - Parking requires the provision of a minimum of 703 parking spaces for the Cochlear development. This however, differs from the parking restrictions as set out in Ryde LEP 137. The subject site falls within the area identified to be included in the Draft DCP and the Macquarie University Concept Plan. The Draft DCP states that car parking for commercial and industrial activities is to be provided for in accordance with the rates contained in the Ryde Planning Scheme. The Ryde Planning Scheme Ordinance indicates that off-street parking requirements should be in accordance with LEP 137.

The proposed project site is not included in the Macquarie Park Corridor Parking Restrictions Plan provided in LEP 137. Refer to Figure 1.

Figure 1 Ryde Local Environmental Plan No 137 - MPC Parking Restriction Plan (excerpt)



Source:

www.ryde.nsw.gov.au/WEB/SITE/RESOURCES/DOCUMENTS/Planning/lep137_parking_restrictions.pdf

It is considered that applying the parking rate applicable to the area immediately to the south of the subject site (1 space per 46m²), as indicated in LEP 137, would be applicable to this site and therefore appropriate for use in calculating maximum parking provision.

The Macquarie University Concept Plan will guide the development of the University precinct for the next 20-25 years. When adopted, the Plan will act as the DCP for Macquarie University lands, currently not covered by existing City of Ryde planning instruments. The Concept Plan proposes that parking spaces at 'Station South Precinct' are provided at a ratio of 1 space per 46m².

Given the above and that the parking rates included in the LEP are consistent with the Macquarie University Concept Plan, it is considered that the parking provision should be supplied in accordance with LEP 137 i.e. 1 space per 46m² GFA, which equates to 529 spaces. The proposal has undergone minor changes and the project application now proposes to provide a total of 539 spaces which is within 2%.

AGENCY COMMENT:

MoT3: *The interrelationship between car parking and achieving a sustainable mode shift to public transport is not adequately addressed. The Ministry has the following specific concerns with the proposal's car parking provision:*

- i) *The Ministry notes that the proposal is within close walking distance to Macquarie Station and bus interchange and is also directly adjacent to frequent bus services on University Avenue and Epping Road. Given this high level of accessibility by public transport the Ministry recommends a lower car parking rate (maximum 1 space per 80m²);*

RESPONSE:

As stated in the previous response, it is considered that the parking spaces should be provided at a rate 1 space per 46m² GFA, consistent with the parking rates included in the Draft Ryde LEP 137 and the Macquarie University Concept Plan. The revised design includes a total of 539 spaces.

Several agencies have recommended consideration of the Optus Campus in Macquarie Park as “best practise” situation. Optus implemented an Integrated Transport Strategy to manage staff travel to the Macquarie Park campus prior to occupation of the seven hectare site, which represented a consolidation of 9 Sydney Sites. This focused on increasing travel choices, improving access by sustainable models of transport and managing the demand for single occupancy car use.

The Optus Integrated Transport Strategy for the Macquarie Campus set mode share travel plan targets of:

■ car driver	40%
■ car passenger	7.5%
■ public transport	45%
■ walk & cycle	7.5%

Optus are reported to have had great success in achieving excellent mode share for non-car based travel to work. Table 2 provides a comparison of the Optus “best practise” situation and the Cochlear Global Headquarters.

Table 2 Comparison of Optus and Cochlear Parking Provisions

	Optus*	Cochlear
Base Floor Area (sqm GFA)	84,000	24,343
Parking Spaces (All spaces including Visitor or Service)	2,100	539
Total Rate of Parking (total spaces/sqm GFA)	1 space per 40m ²	1 space per 45m ²
Number of Employees:		
- All Staff	6,100	1,350
- Shift workers	-	350
- Office staff	-	1,000
Parking Spaces		
- Total	2,100	539
- Allocated to shift workers	-	200**
- Available for Office staff	-	339
Employee Rate of Parking (employee spaces per employee)		
- Total Available to All Staff	0.34	0.40
- Available for Office staff	-	0.34

* Source: ‘Getting There’ Presentation on the Optus Integrated Transport Strategy by Kate Mackay and Optus Management Plan

** Assumes that shift workers arriving prior to 6am will drive and occupy allocated shift worker parking spaces

A number of spaces may be allocated as service and/or visitor vehicle spaces and hence will be unavailable for employee parking. This will be determined in the WPTP through the parking management strategy which will further decrease the amount of car parking available to staff.

Table 2 shows that parking is provided at the Optus Macquarie Campus at a rate of 1 space per 40 m² this is in excess of the 1 space per 45m² proposed for the Cochlear project. Furthermore the ratio of employee parking per employee is only slightly higher at the Cochlear site than at the Optus Campus.

Cochlear has advised that the total number of employees at the Cochlear site at full occupation of Stage 1 is estimated to be 1350 people. It should be noted that of the 1350 staff, 350 staff are shift workers:

- 200 staff working from 6am - 2pm; and
- 150 staff working from 2pm - 10pm.

Whilst the Optus Campus may have some element of shift work, it is unknown how many staff are shift workers versus office staff. Due to the early start and late finish of the Cochlear shift workers, it is envisaged that the majority of these staff will drive to work. This will reduce the number of spaces available to office staff to as low as 339 spaces, and would reduce the ratio of employee parking per employee (for office staff) to 0.34 (equal to the overall Optus rate per employee).

To apply a maximum parking rate of 1 space per 80m² together with a mode share target of 40% of JTW to be made by public transport is deemed to be unreasonable and would leave Cochlear with a shortfall of parking during the daytime hours.

With a total of 539 spaces available for parking, if 200 spaces were allocated for shift workers this would mean up to 339 spaces would be available for day-time staff. The Cochlear WPTP will make specific recommendations about further parking allocations. Even if parking were not allocated to shift workers, these spaces would be occupied by the shift workers prior to the day time staff arriving and hence rendering the parking spaces unavailable to general office staff.

Table 3 demonstrate how the 40% public and active transport MST can be easily achieved with the proposed parking supply.

Table 3 Projected Mode Share and Parking Allocation

Mode	Number of Staff by Mode			
	Day Shift 6am - 2pm (mode share)	Night Shift 2pm - 10pm (mode share)	Office Staff (mode share)	Total Daily (mode share)
Car (Driver)	200 (100%)	150 (100%)	339* (33.9%)	689 (51.1%)
Car (Passenger)	0	0	102 (10.2%)	102 (7.5%)
Public or Active Transport	0	0	559 (55.9%)	559 (41.4%)
Total Staff per shift	200	150	1,000	1,350

* Based on available supply of employee parking (539) less allocated shift workers (200) have parked.

With 1,000 day time employees and only 339 available spaces, this will mean only 34% of office staff will be able to drive to work. The remainder will arrive as car passengers or via public or active transport. The Optus Travel Plan targets suggest that car passengers would be around 16% of total car travel or 7.5% of all travel. For Cochlear, it has been assumed that around 10% of office staff will arrive as car passengers or 7.5% of total staff travel to be car passengers. The remaining 56% of day time office staff would be assumed to arrive using public and active transport modes.

Over a day even with all shift workers driving the mode share target of 40% by public and active transport is achievable with the proposed level of car parking and is not inconsistent with the Optus provisions. The above table shows over 41% arriving by public and active transport.

Table 4 provides a comparison of the Optus and Cochlear mode share targets and potential mode share patterns.

Table 4 Comparison of Optus and Cochlear Mode Share Targets

		Optus*	Cochlear
Parking		2,100	539
Number of Staff	Daytime	Not available	1,000#
	Total	6,100	1,350
Number of staff by Mode (JTW)	Public/Active Transport	3,203 (52.5%)	559 (41.4%)
	Total Car Travel (driver & passenger)	2,897 (47.5%)	791 (58.6%)
Rideshare Opportunity (No of Staff)		458 (7.5%)	102 (7.5%)

* Source: 'Getting There' Presentation on the Optus Integrated Transport Strategy by Kate Mackay and Optus Management Plan

excludes shift workers

Given the significant differences in the scale of development the parking provision at Cochlear compares very favourably with Optus Macquarie Campus and will provide a consistent basis for achieving a satisfactory mode share target for non-car based travel.

An analysis of the staff travel survey undertaken through the WPTP will assist in determining the optimum mix of parking which may be categorised into the following groups:

- Visitor;
- Small cars;
- Fuel efficient vehicles (e.g. hybrid);
- Rideshare (car pool);
- Shift Workers
- Priority eg Senior Management;
- General Employee;
- Mode share - by agreement (i.e. 2 days cycle, 3 days car);
- Mobility;
- Motorcycle; and
- Casual (paid, whereby the levy will be fed into the WPTP).

AGENCY COMMENT:

MoT3: *The interrelationship between car parking and achieving a sustainable mode shift to public transport is not adequately addressed. The Ministry has the following specific concerns with the proposal's car parking provision:*

- ii) *The analysis does not consider what other parking options within the University could be utilised to reduce the overall provision within the subject site. Conversely the analysis does not consider the potential use of other parking facilities to further supplement the overall provision of parking to subject the development and its potential impact on mode share;*
- iii) *These options may include access to adjacent and under utilised parking facilities, which has been identified through surveys in the environmental assessment. Access to University parking for future commercial development should be considered as part of a broader parking strategy for the University as part of the Concept Plan;*

RESPONSE:

The encouragement of off-site parking is not considered to be in keeping with the encouragement of employees to consider alternative travel methods. If Cochlear are to achieve the MST, then its staff would not be encouraged to utilise University car parking. By containing all staff parking on the Cochlear site exclusively, a number of benefits are achieved such as the ability to monitor journey to work patterns, working towards implementation of the WPTP, allowing successful ride-share and parking containment within the site thus reducing potential demand on University parking.

If non-specific off-site parking is to be encouraged for use by Cochlear staff, it would be likely that staff seeking parking on the University site would add to congestion during peak periods by searching around the site to locate a space. If the University was to supply allocated parking areas for Cochlear staff, the ability to enforce this may be problematic. To effectively manage this parking would require a formal agreement to enable the use of University car parking by non University staff/students/visitors, and as such a car parking strategy would need to be prepared as part of the MUCP.

In addition one of the aims of the MUCP is to reduce the parking supply to staff/student ratio over time on the basis that as the campus expands, no additional parking will be provided to meet the increase in demand generated by the extra academic staff and students. Macquarie University are effectively losing 162 parking spaces in the short term as a result of the development of the proposed site (which currently provides parking for approximately 197 vehicles).

AGENCY COMMENT:

MoT3: *The interrelationship between car parking and achieving a sustainable mode shift to public transport is not adequately addressed. The Ministry has the following specific concerns with the proposal's car parking provision:*

- iv) *The parking analysis does not consider what range of potential Travel Demand Measures (TDM) are variable to reduce parking provision such as car-share and car-pooling spaces. Furthermore, the potential for bicycle travel to reduce parking has not been considered despite the proposal including 152 bike spaces and extensive amenities.*

RESPONSE:

As previously stated, the limited parking supply will actively encourage staff to arrive by public/active transport or rideshare (carpool).

A range of Travel Demand Measures specifically tailored to the Cochlear staff needs and a supporting Parking Management Strategy will be formed as part of the Work Place Travel Plan to allocate parking to staff in a sustainable manner. Staff without an allocated parking area will have limited ability to park on-site and will be encouraged to consider alternative transport methods through the Cochlear WPTP.

Possible categories for consideration of the allocation of parking could include the following, but will not be restricted to:

- Visitor;
- Mobility;
- Small cars;
- Fuel efficient vehicles (e.g. hybrid);
- Rideshare (car pool); and
- Shift Workers.

In relation to the potential for bicycle travel to reduce the need for parking this will be fully encouraged through the strategies within the WPTP. The provision of custom designed storage and changing facilities at the Cochlear demonstrates positive measures taken to encourage staff to cycle to work. There are many factors outside of the control of Cochlear that will influence the ability and frequency of staff cycling to work such as the availability of safe cycle lanes, distance and weather conditions.

The proposals within the Macquarie University Bicycle Network Masterplan and the Ryde Bicycle Strategy combined will form a comprehensive bicycle network for staff, visitors and students to Macquarie Park, and offer connections to safe cycleways throughout the region. The early implementation of the University Avenue cycle network proposals by Cochlear will greatly enhance connectivity to the already established links.

6.0 CAR PARKING DESIGN

AGENCY COMMENT:

- RTA5:** *Real time information for each car parking facility be provided at or near the car park accesses for all parking levels.*
- RTA8:** *Off street parking associated with the proposed development (including driveways, grades, aisle widths, aisle lengths, turning paths, sight distance requirements, and parking bay dimensions) should be designed in accordance with AS 2890.1 - 2004 and AS 2890.2 - 2002 for heavy vehicles.*

RESPONSE:

The need for real-time parking availability information at or near the car park accesses has been considered at length. The majority of people parking at the Cochlear facility will be staff, many of these with allocated parking areas. Parking allocation will be addressed as part of the Parking Management Strategy which will be formed as part of the Work Place Travel Plan to assist with the allocation of parking.

The Parking Management Strategy and parking allocation will result in limited opportunities for staff without an allocated parking area to park on-site. Possible categories for consideration of the allocation of parking have been discussed in previous sections. Consultation with the Optus Travel Plan Co-ordinator may be of assistance to give Cochlear an insight into the operating systems used in car parks at Optus to allocate preferential parking to some of the categories and assist with the operation of an allocation based system of parking.

The implementation of such a parking scheme would require clear signage to differentiate between each of the categories and is likely to be located in the basement level of the car park.

The project proposal includes two driveway accesses. The first driveway provides access to the basement car park, the service vehicle area and the loading area. The access is located where a current driveway exists, on the eastern boundary of the site, approximately 85 metres from the existing roundabout. A second driveway access is proposed at the western end of the site, approximately 75 metres from the roundabout, allowing entry and exit to the at-grade off-street parking facility.

The basement car park is expected to be allocated for staff parking only and will have restricted access via a boom gate and roller shutter system proposed at both the entry and exit points to the car park. The eastern driveway will also provide access to the loading dock and service vehicle parking. Sign-posting at this vehicle entry will indicate that the access is for loading/service vehicles and staff parking only.

All visitor parking would be directed to the main surface car park and will be clearly sign-posted at the Western entry. Car parking for the child care centres will also be via the Western driveway with appropriate signage provided.

This parking allocation system and use of appropriate clear signage will remove the need for real-time information as many drivers will know in advance as to the location of their allocated area within the car park. Others will have adequate signage to inform their decision.

7.0 CYCLING REQUIREMENTS

AGENCY COMMENT:

RTA4: *The Department of Planning should ensure that secure bicycle parking is provided on site together with change facilities for employees.*

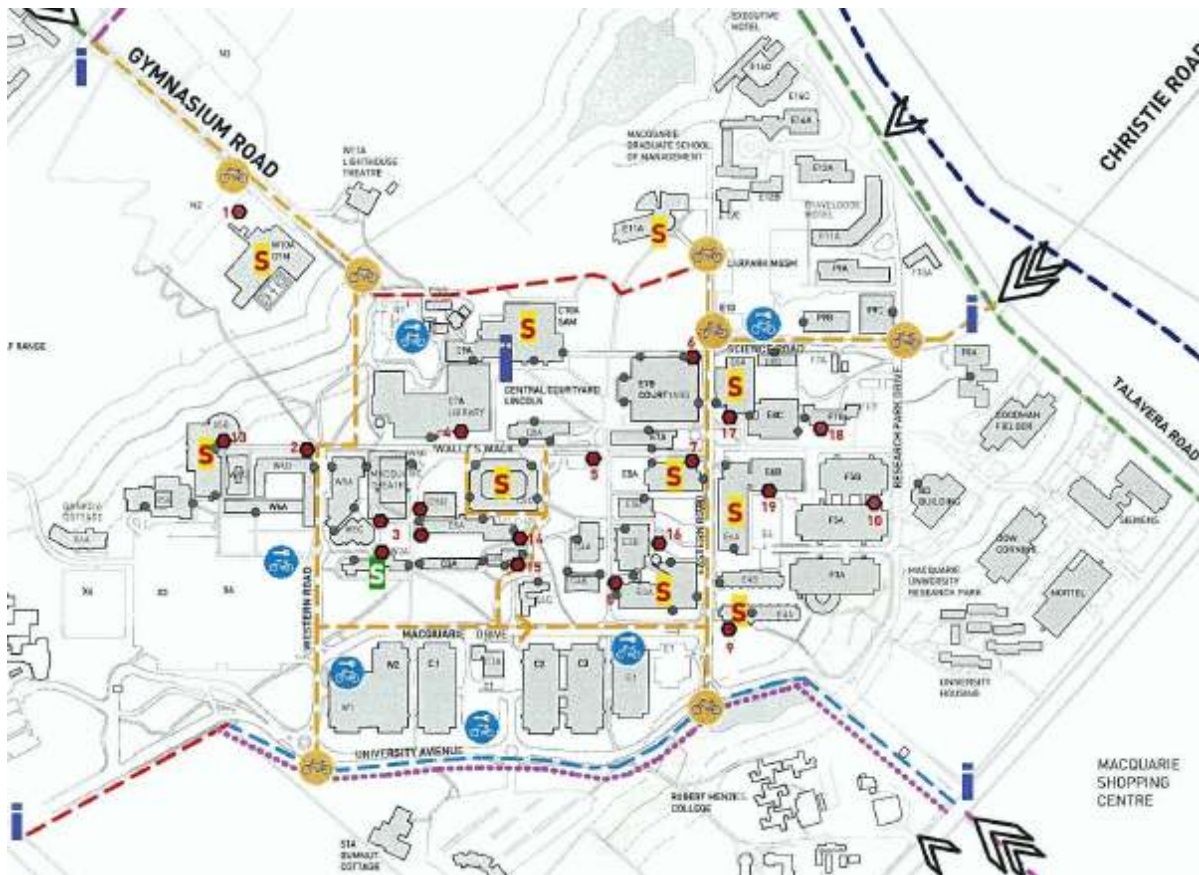
MoT6: *The provision of cycle access to the subject site along University Avenue is not clear within the proposal. Given the high level of proposed bicycle parking a more detailed design approach is required, which builds on the Macquarie University Concept Plan.*

RESPONSE:

As illustrated in the development plans, parking for 152 bicycles will be provided at the Cochlear development. This facility will be conveniently accessed and supported with a custom designed changing facility for staff. The cycle storage will be covered and monitored by CCTV and additional measures to encourage cycling will be included in the WPTP.

To assist staff to use sustainable travel from the first day of occupation, consultation will be undertaken with MQ regarding the early implementation of the proposed off-road segregated bicycle path along University Avenue as shown in Figure 7.2 Short Term Option of Macquarie University Bicycle Network Masterplan see Figure 1.

Figure 2 Suggested Early Implementation Works - University Avenue Segregated Bike Path



The proposed bicycle paths include:

- Proposed 2.5m wide off-road two-way segregated cycle path connecting the Balaclava Road and Waterloo Road intersections; and/or
- University Avenue Roundabouts - proposed green surfaced bicycle lanes at the two roundabouts on University Avenue to highlight the presence of cyclists at this location and provide further protection for cyclists accessing the University.

Other measures to promote cycling will be developed through the WPTP, as discussed in Section 4.0 a cyclist wayfinding system to direct cyclists from local University cycle paths onto strategic routes (as shown in the City of Ryde Proposed bicycle network) would be implemented.

8.0 OTHER REQUIREMENTS

AGENCY COMMENT:

RTA6: *The development must be consistent with and not preclude the suggested proposals described within the Macquarie University Concept Plan (MP 06-00 16).*

RTA11: *All works / regulatory signposting associated with the proposed development shall be at no cost to the RTA.*

RESPONSE:

The Cochlear development proposal is consistent with and will not preclude the suggested proposals described within the Macquarie University Concept Plan (MP 06-00 16). It is noted that any costs as a result of this development for signposting, will be at no cost to the RTA.

CONCLUSION

Upon review of the comments submitted by the Department of Planning, the Ministry of Transport and the Roads and Traffic Authority, Cochlear will undertake to include all issues noted within this document for inclusion and consideration in the development of their WPTP.

There are a number of projects requiring implementation by the University and government agencies to fully support the shift towards sustainable transport to Macquarie Park and the Cochlear development site.

Cochlear are fully committed to the creation of a Work Place Travel Plan to encourage staff to choose more sustainable and 'healthy' transportation choices for their journey to work. Cochlear would also support the development of an overarching travel plan for Macquarie University Campus to enable a co-ordinated network of travel demand measures, in order to identify some measures which may not be fully viable at individual sites.