Macquarie University New Office and Laboratory Building

State Significant Development Assessment SSD 9313

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Title: Macquarie University New Office and Laboratory Building

Cover image: Conceptual visualisation of the building from the North-east (Source: Sissons Kann Finch)

Glossary

Abbreviation	Definition
AHD	Australian Height Datum
BCA	Building Code of Australia
CIV	Capital Investment Value
Council	City of Ryde
Department	Department of Planning, Industry and Environment
EESG	Environment, Energy and Science Group, Department Planning, Industry and Environment
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
Heritage	Heritage NSW, Department of Premier and Cabinet
LEP	Local Environmental Plan
Minister	Minister for Planning and Public Spaces
SEARs	Planning Secretary's Environmental Assessment Requirements
Planning Secretary	Secretary of the Department of Planning, Industry and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
TfNSW	Transport for NSW

Executive Summary

This report provides an assessment of a State significant development (SSD) application for the development of two connected office and laboratory buildings with the Macquarie University Campus (SSD 9313). The Applicant is Macquarie University and the proposal is located within the City of Ryde local government area (LGA). The proposal seeks approval for construction of two buildings with a connected roof and the use of the buildings for University related office, administration and laboratories and commercially leased office and laboratory spaces. The proposal, as amended by the Response to Submissions (RtS), will not have any significant amenity impacts on the surrounding land uses as it is an appropriate response in terms of height, bulk and scale in the context of the existing campus. Therefore, the Department recommends the proposed development be approved, subject to conditions.

The Department has considered the merits of the proposal in accordance with the relevant matters under section 4.5(1) and the objects of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the principles of ecologically sustainable development (ESD) and issues raised in submissions. The impacts of the proposal have been addressed in the Environmental Impact Statement (EIS) and the RtS. Conditions of consent are recommended to ensure that any impacts are mitigated or managed appropriately.

Project Summary

The proposal seeks approval for:

- construction of two six to seven storey buildings over basement parking levels and use of the buildings for University related office, administration and laboratories and commercially leased office and laboratory spaces.
- 619 car parking spaces (including seven accessible spaces) and 140 bicycle parking spaces and end-of-trip facilities (lockers and showers).
- associated landscaping, road and public domain works.

The proposal has a Capital Investment Value (CIV) of $258 million and would generate 250 to 350 construction jobs and 3,465 additional operational jobs (including University staff and office workers) and accommodate 216 additional students.

The proposal is SSD under clause 15 of Schedule 1 of the State and Environmental Planning Policy (State and Regional Development) 2011, as it is development for the purpose of tertiary institution with a CIV of more than $30 million. Therefore, the Minister for Planning and Public Spaces is the consent authority.

Engagement

The application was publicly exhibited between 17 January 2019 until 22 February 2019. The Department of Planning and Environment (the Department) received a total of seven submissions, all from public authorities. The key issues raised in the submissions include urban design, traffic and transport, noise and contamination.

Assessment

The Department's assessment concludes that:

- the proposal is consistent with the built form controls of the existing Macquarie University Concept Plan and the Macquarie University Design Excellence Strategy and Urban Design Guidelines established under the Concept Plan. The design has evolved through a comprehensive design review process and the Department considers the proposal exhibits a high-quality design that would make a positive contribution to the campus and the public domain adjoining the site and would not result in any unacceptable adverse environmental or amenity impacts.
- the proposal complies with the car parking requirements of the Concept Plan approval and would result in reduced traffic impacts compared to the existing use of the site as a carpark. By limiting on-site parking, providing bike parking and facilities and recent improvements to the public transport network including the opening of the Sydney Metro north-west, it is expected that the proposal would achieve a 62 per cent non-car mode share, exceeding the requirements of the Concept Plan approval and improving sustainability outcomes on the site.
- noise impacts can be satisfactorily mitigated during construction and operation. This will require the Applicant to develop a construction noise management plan, undertake further acoustic review of plant, and to carry out noise monitoring to verify use of the site does not result in unacceptable noise impacts.
- contamination impacts can also be satisfactorily mitigated subject to further environmental investigations, remediation in accordance with an updated Remediation Action Plan and site validation, all overseen by a site auditor.
- the development would deliver educational infrastructure to address the needs of the community, in collaboration with business investment at Macquarie Park, consistent with strategic planning objectives for Greater Sydney and the North Sydney Region. The facilities provide further investment in social infrastructure and supports new construction and operational jobs.

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1 Introduction

This report provides an assessment of a State significant development (SSD) application for development of a new Office and Laboratory Building at Macquarie University (SSD 9313).

The proposal seeks approval for construction of two new six to seven storey buildings with a connected roof and the use of the buildings for University related office, administration and laboratories and commercially leased office and laboratory spaces. Approval is also sought for associated landscaping works, a pedestrian link between the buildings, and associated road and public domain works including change to roundabouts and a new pedestrian crossing.

The application has been lodged by Macquarie University (the Applicant). The site is located within the City of Ryde local government area (LGA).

1.1 Site description

Macquarie University is located approximately fifteen kilometres north-west of the Sydney central business district. The University North Ryde Campus has an area of approximately 126 hectares and comprises teaching and research spaces, parking areas, retail and services, cafes, bar, recreational facilities, a, medical clinic, private hospital, commercial spaces and other ancillary facilities.

The development site, subject to this application, is known as 8-12 University Avenue and has a legal description of Lot 191 in DP 1157041. It is located in the southern part of the campus (**Figure 1**) and has an area of approximately 15 hectares. Within the campus, it has frontages to University Avenue and Research Park Drive to the South, Eastern Road to the east, Macquarie Walk to the north and Second Way to the east (**Figure 2**).

Currently on the site there are multi-deck carparks and at-grade parking (providing 1096 parking spaces), a security office building, substation and service chamber and service tunnel. The site includes an area of open space (now cleared) and numerous trees around the site edges. The University Avenue frontage has recently been redeveloped and now incorporates a wide pedestrian footpath and two bus stops.

Within the University campus, the site is surrounded by other new development including the Australian Hearing Hub to the east, the Cochlear Global Headquarters to the south and the Macquarie University Library and existing campus buildings E3A and E4A to the north.

Figures 2 to **6** depict the current site and surrounding buildings.

Figure 1 | Aerial photo of University campus and location of proposed development (Base source: RtS)

Figure 2 | Aerial photo of site and surrounds (Base source: Google Maps)

Figure 3 | Aerial view of site (Base source: EIS)

Figure 4 | Multi-deck carparking on the site and University Avenue bus stops (Base source: Google Maps)

Figure 5 | Northern cleared section of the site (Base source: Google Maps)

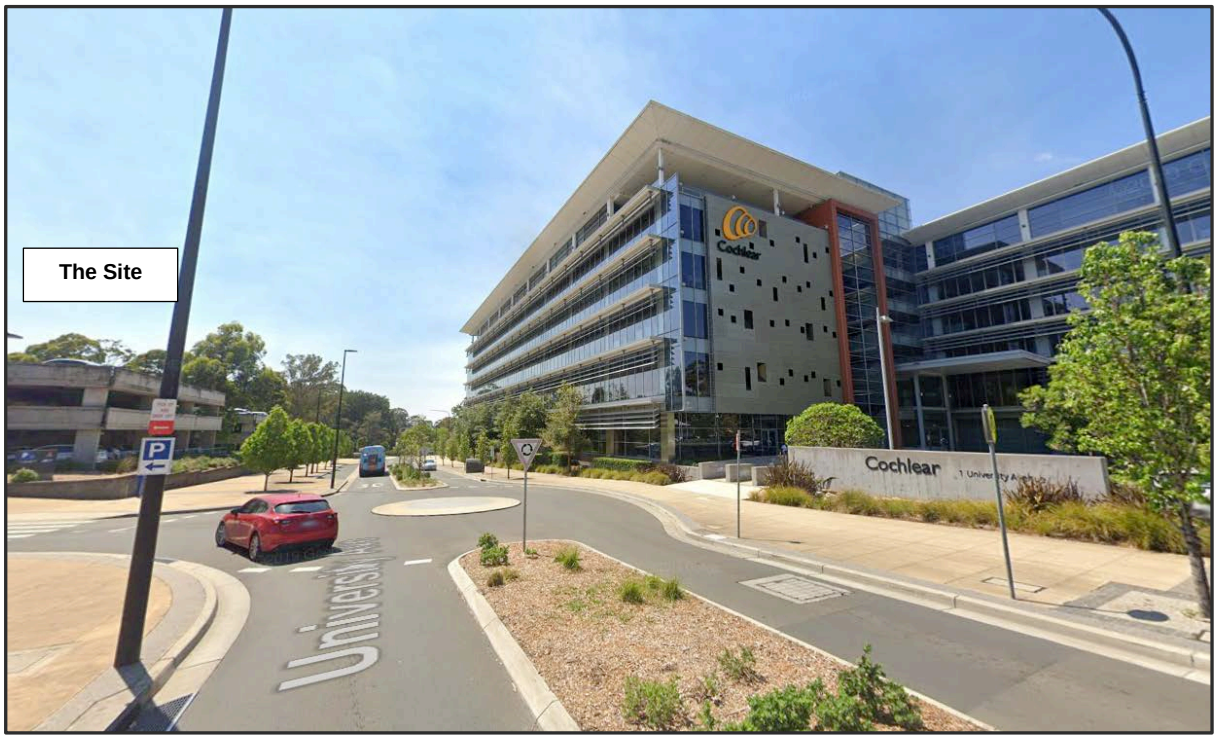

Figure 6 | Existing Roundabout on University Avenue (to be removed) and the Cochlear Building opposite the site (Base source: Google Maps)

1.2 Previous Approvals: Macquarie University Concept Plan

On 13 August 2009, the then Minister for Planning approved a Part 3A Major Project Concept Plan (MP06_0016) for the development of the Macquarie University Campus, including additional commercial and academic floor space, additional student accommodation, upgrades to roadworks and infrastructure and rationalisation of car parking.

The Concept Plan has been modified once. On 9 November 2018, MP06_0016 MOD 1 approved further floorspace increases, changes to height and floorspace controls, redistribution of floor space and revised and consolidated Design Excellence Strategy and Urban Design Guidelines.

The approved Concept Plan, as modified, permits:

- an additional 400,000sqm of commercial gross floor area (GFA) and associated parking.
- an additional 157,000sqm of academic GFA.
- an additional 3,450 beds for university purposes only.
- infrastructure upgrading and improvements to the road network as required.
- rationalisation of car parking locations within the campus.
- a maximum of 171,000sqm of GFA for Precinct D.

The Concept Plan divides the University into eight precincts (**Figure 7**). The application site is in Precinct E ('Station South'), a commercial area of the University with the aim of enriching the University's historic ties with business and technology. The site is also located immediately to the south of the Academic core in Precinct A.

Under the Concept Plan, Precinct E is divided into 11 development lots (**Figure 8**). This application relates to the development of Lots E02 and E03. The Design Excellence Strategy and Urban Design Guidelines approved as part of MOD 1, envisage the removal of the parking structures and development of two similar eight storey (or 36 metre high) buildings, separated by a transverse pedestrian connection (see **Figures 7** to **9**).

Figure 7 | Precincts under Macquarie University Concept Plan (Base source: EIS)

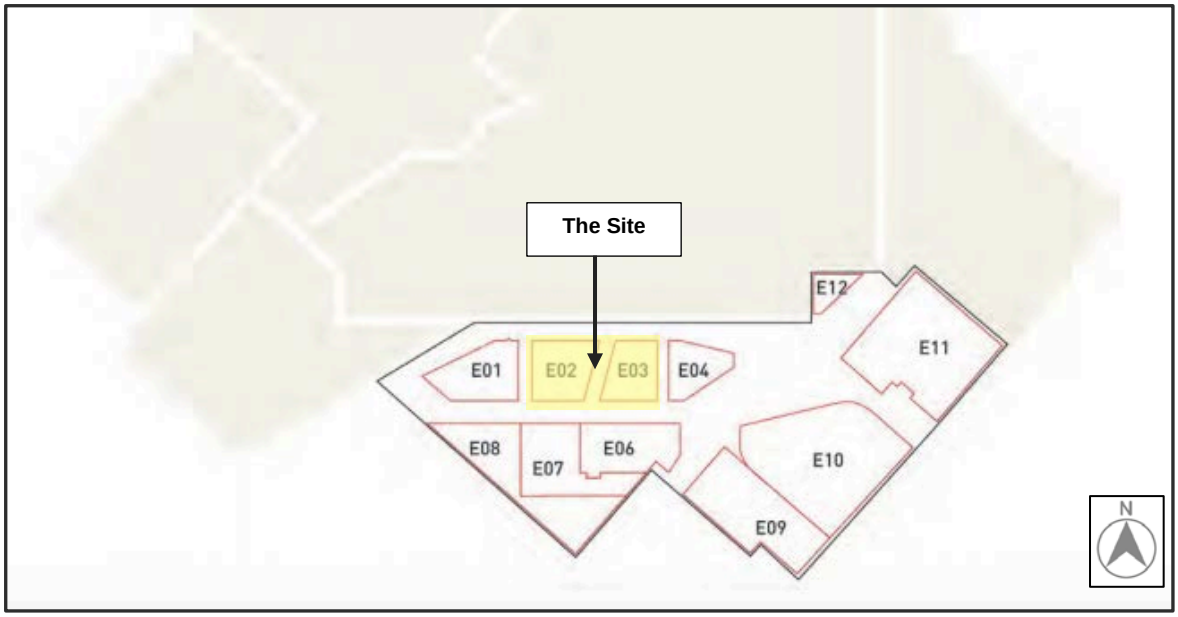

Figure 8 | Development lots in Precinct E (Base source: EIS)

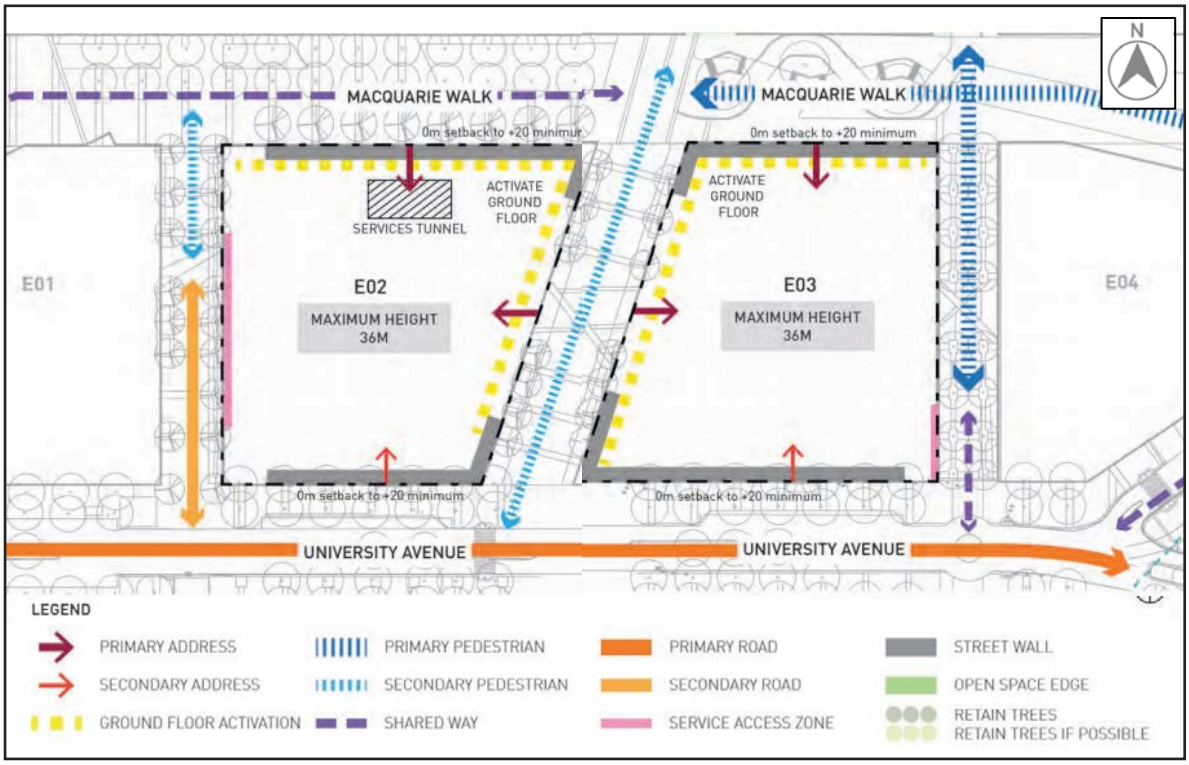

Figure 9 | Montage of Lot Controls (Base source: Design Excellence Strategy and Urban Design Guidelines)

2 Project

The proposed development is the third stage in the redevelopment of the Precinct E under the Concept Plan (following development of the Australian Hearing Hub and the Cochlear Building).

The key components and features of the proposal are provided in **Table 1** and shown in **Figures 10** to **14**.

Demolition of existing structures and tree removal does not form part of this application and has already been approved through a separate process under Part 5 of the EP&A Act. These works are yet to commence.

Table 1 | Main Components of the Project

Aspect	Description
Project Summary	Construction of two seven storey buildings over basement parking levels and use of the buildings for University related office, administration and laboratories and commercially leased office and laboratory spaces. Associated landscaping, road and public domain works.
Excavation, site preparation and remediation	• Remediation works, including removal of contaminated soil from the site in accordance with a remediation action plan. • Bulk excavation to depths of between four metres and 10.6 metres to accommodate basement levels.
Built Form	Construction of two new six to seven storey buildings (connected by a single roof form) over a two to three level shared basement: Western Building 'Building 12' (Site E02): • seven storey office building. • incorporates a northern and southern wing connected by service and circulation core surrounding a central courtyard / atrium area. • facade design is a typical grid pattern with expressed horizontal joints at each level, evenly spaced mullions and a variety of glazed, lightweight concrete or louvred panels. Horizontal and vertical sunshade devices are also incorporated in the façade design. Eastern Building 'Building 8' (Site E03): • six storey building incorporating offices, laboratories and collaboration space. • built to same height as Building 12 (includes double height / void space above level five). • northern and southern wing connected by service and circulation core surrounding a central courtyard / atrium area.

	• facade design of the southern wing is a typical grid pattern consistent with Building 12. • the northern wing is further articulated into two building elements with a curved façade design, to present a sculptural interface with the main campus and university common area. The façade features a double skin of glazing containing a series of rotating vertical louvres.
Gross Floor Area	Total GFA of 49,445sqm, comprising: • 19,231sqm University Office Space • 6,594sqm University Laboratory Space • 16,112sqm Commercial Office Space • 6,665sqm Commercial Laboratory Space • 873sqm Retail Space.
Building Population	3,681 (3,465 new staff and 216 additional students).
Uses	Western Building ‘Building 12’ (Site E02): • Ground floor: foyer, university office and retail space • Levels 1 and 2: university office space • Levels 3 to 6: commercial office space. Eastern Building ‘Building 8’ (Site E03): • Ground floor: foyer, retail and university laboratory and office • Mezzanine: university collaboration space • Levels 1 and 2: university collaboration, laboratory and office • Levels 3 to 5: part university collaboration, part commercial laboratory and office space.
Car, bicycle and service vehicle parking	Basement level parking accommodating: • 619 parking spaces (including 7 accessible spaces). • 140 bicycle parking spaces and end of journey facilities (lockers, showers). A loading dock at ground level.
Public domain and landscaping	• Retention and protection of 84 existing trees surrounding the site. • New planting of 174 trees along all street frontages and within the diagonal link, to offset the 111 trees recently removed from the site. • Road and public domain works around the proposed buildings.

Road works and Access	• Removal of two existing roundabouts on University Avenue and replacement with one roundabout at the main vehicular entry to the building on University Avenue. • New pedestrian crossing on University Avenue.
Jobs	• 250-350 construction jobs. • Additional 3,465 full time operational jobs.
CIV	• $258 million.
Proposed construction hours	• Monday to Friday: 7am to 7pm. • Saturdays: 8am - 4pm.

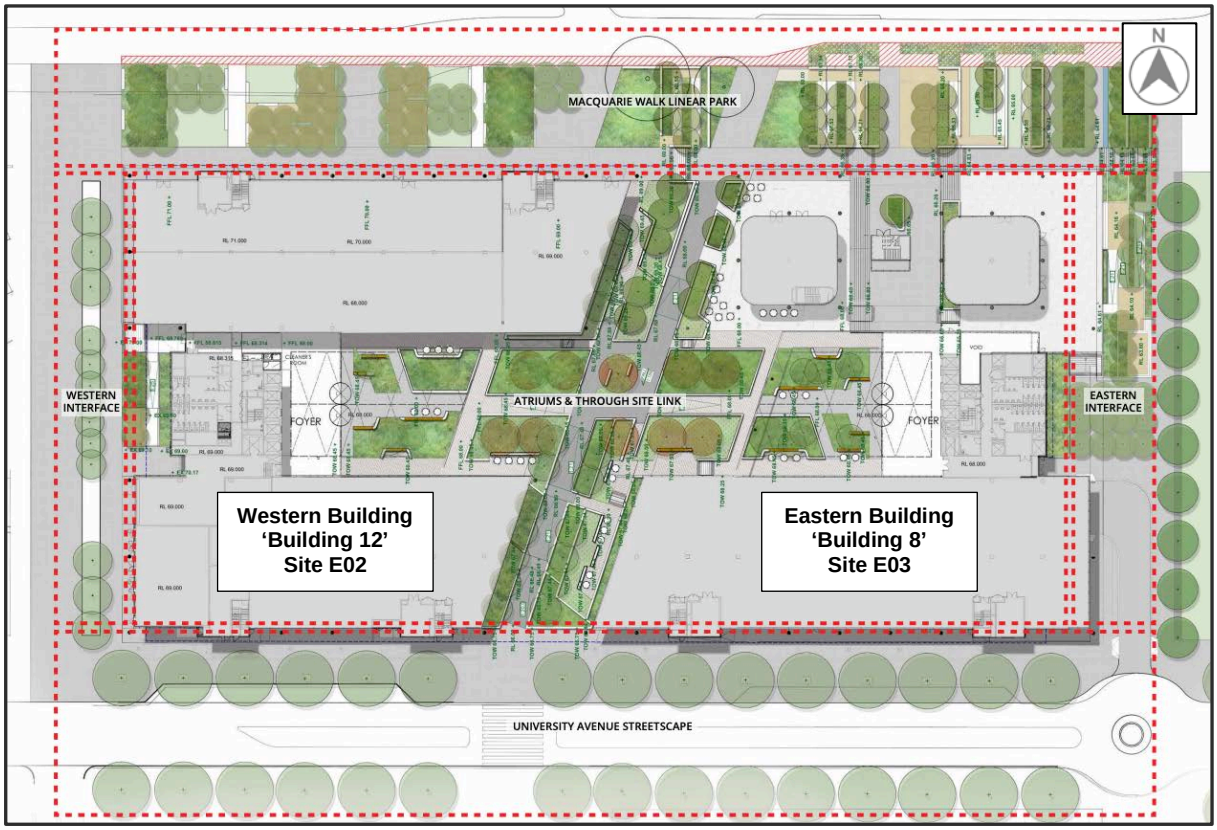

Figure 10 | Extract from Landscape Plan showing site layout (Base source: EIS)

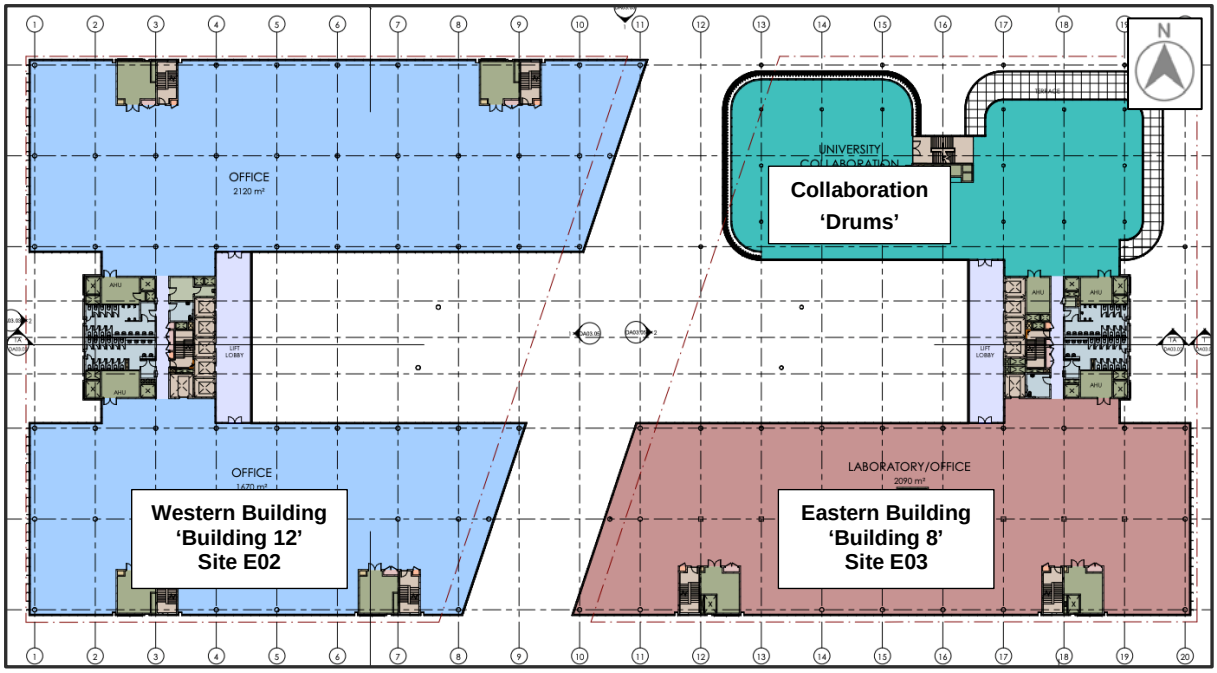

Figure 11 | Level 5 floor plan indicating typical floor plan arrangements (Base source: EIS)

Figure 12 | Proposed building as viewed from the north (Base source: EIS)

Figure 13 | Proposed building as viewed from the north-east (Base source: EIS)

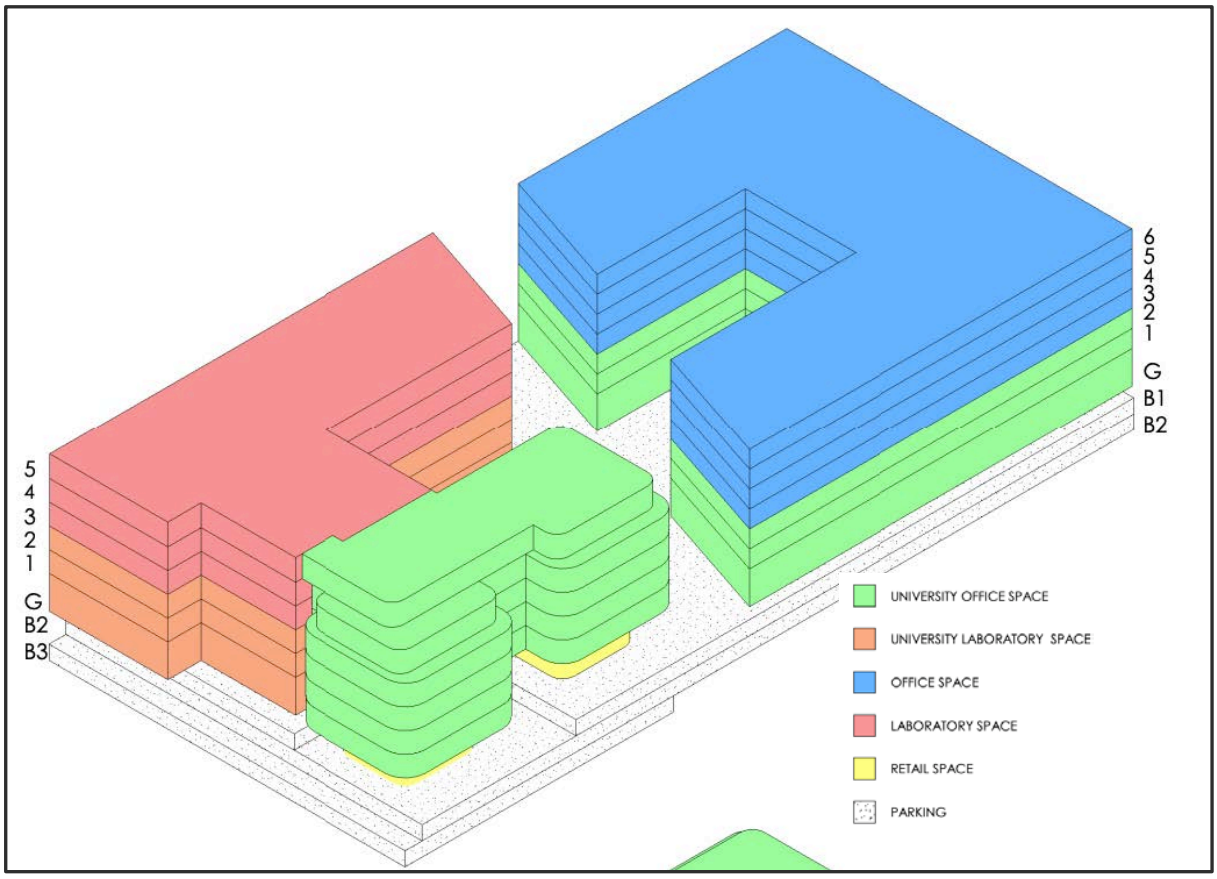

Figure 14 | General arrangement of proposed uses as viewed from the north-east (Base source: EIS)

3 Strategic context

The Applicant states that a key objective of the proposed development is to enhance the commercial focus within the campus whilst providing laboratory and collaboration spaces to facilitate integration in line with the objectives of the Concept Plan approval.

The proposal would improve use of this part of the campus and would deliver a contemporary, flexible and collaborative facility to support the role of the University as a research innovator and educator.

The Department considers that the proposal is appropriate for the site given it is consistent with the:

- *Greater Sydney Region Plan – A Metropolis of Three Cities*, as it seeks to enhance education land uses in collaboration with business investment at Macquarie Park, a strategic collaboration area and part of the Eastern Economic Corridor identified under the plan.
- relevant priorities of the Greater Sydney Commission's North District Plan, as it would as it would support the continuing growth of the Eastern Economic and the Macquarie Park Strategic Centre (Planning Priorities N6 and N8), provide education services and infrastructure to meet the needs of the community (Priorities N3 and N9) and grow investment, business opportunities and jobs in a strategic centre (Priority N10).
- *NSW Future Transport Strategy 2056* as it does not increase on-site parking and provides facilities to support active transport travel options, and therefore encourages the use of accessible public transport options; and
- it would provide direct investment in the region of approximately $258 million and support 250-350 construction jobs and 3,465 new operational jobs.

4 Statutory Context

4.1 State significance

The proposal is SSD under section 4.36 (development declared SSD) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as the development has a CIV in excess of $30 million ($258 million) and is for the purpose of a tertiary institution under clause 15 of Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

The Minister for Planning and Public Spaces is the consent authority under section 4.5 of the Act.

In accordance with the Minister's delegation to determine SSD applications signed on 9 March 2020, the Executive Director, Infrastructure Assessments may determine this application as:

- the relevant Council has not made an objection.
- there less than 25 public submissions in the nature of objection.
- a political disclosure statement has not been made.

4.2 Permissibility

The site is zoned B4 Mixed Use under Ryde Local Environmental Plan (RLEP) 2014. The proposed developments ('educational establishments' and 'commercial premises') are permitted with consent within the zone and therefore the Minister for Planning and Public Spaces or a delegate may determine the carrying out of the development.

4.3 Other approvals

Under section 4.41 of the EP&A Act, a number of other approvals are integrated into the State significant development approval process, and consequently are not required to be separately obtained for the proposal.

Under section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal (e.g. approvals for any works under the *Roads Act 1993*).

The Department has consulted with the relevant public authorities responsible for integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent (see **Appendix C**).

Environmental planning instruments

Under section 4.15 of the EP&A Act, the consent authority is required to take into consideration any environmental planning instrument (EPI) that is of relevance to the development the subject of the development application. Therefore, the assessment report must include a copy of, or reference to, the provisions of any EPIs that substantially govern the project and that have been considered in the assessment of the project.

The Department has undertaken a detailed assessment of these EPIs in **Appendix B** and is satisfied the application is consistent with the requirements of the EPIs.

Objects of the EP&A Act

The objects of the EP&A Act are the underpinning principles upon which the assessment is conducted. The statutory powers in the EP&A Act (such as the power to grant consent/ approval) are to be understood as powers to advance the objects of the legislation, and limits on those powers are set by reference to those objects. Therefore, in making an assessment, the objects should be considered to the extent they are relevant. A response to the objects of the EP&A Act is provided at **Table 2**.

Table 2 | Response to the objects of section 1.3 of the EP&A Act

Objects of the EP&A Act		Consideration
(a)	to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	The development would ensure the proper management and development of suitably zoned land for the social welfare of the community and State.
(b)	to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The proposal includes measures to deliver ecologically sustainable development as described below.
(c)	to promote the orderly and economic use and development of land,	The development would meet the objectives of the zone and deliver improved facilities for tertiary education infrastructure for the State. The development would economically serve the community through new jobs and infrastructure investment.
(d)	to promote the delivery and maintenance of affordable housing,	N/A.
(e)	to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	Tree removal does not form part of the proposal and the proposed development would not result in the loss of any threatened or vulnerable species, populations, communities or significant habitats.
(f)	to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	The proposed development is not anticipated to result in any unacceptable impacts upon built and cultural heritage, including Aboriginal cultural heritage (**Section 6.4**).
(g)	to promote good design and amenity of the built environment,	The proposal has been reviewed by Council's Urban Design Review Panel and the NSW Government Architect (GANSW) throughout the

		development of the proposed design. It has been designed in accordance with the Design Excellence Strategy and Urban Design Guidelines developed for the site under the Concept Plan approval. The Department considers the application would provide for good design and amenity of the built environment.
(h)	to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The Department has considered the proposed development and has recommended a number of conditions of consent to ensure the construction and maintenance is undertaken in accordance with legislation, guidelines, policies and procedures (**Appendix C**).
(i)	to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The Department publicly exhibited the proposal (**Section 5.1**), which included consultation with Council and other public authorities and consideration of their responses (**Sections 5** and **6**).
(j)	to provide increased opportunity for community participation in environmental planning and assessment.	The Department publicly exhibited the proposal as outlined in **Section 5.1**, which included notifying adjoining landowners, placing a notice in newspapers and displaying the proposal on the Department's website and at Council during the exhibition period.

Ecologically sustainable development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- the precautionary principle.
- inter-generational equity.
- conservation of biological diversity and ecological integrity.
- improved valuation, pricing and incentive mechanisms.

The Applicant is targeting a 5-Star Green Star rating and 5-Star NABERs rating and includes the following ESD initiatives and sustainability measures:

- passive design principles and a high-performance building envelope.
- double skin façade system to part of the building with internal solar control.
- installation of energy and water efficient fixtures and fittings.
- rainwater harvesting for reuse in landscape irrigation.
- sustainable building materials.
- support facilities for sustainable travel.

In this regard, the proposal will exceed the requirements of the Concept Plan approval, which requires a minimum 4-Star Green Star rating.

The Department has recommended conditions that evidence detailing that the final design targets and achieves the equivalent of the 5-Star Green Star rating be submitted at appropriate stages during the development process.

The development would not result in the loss of any threatened or vulnerable species, populations, communities or significant habitats. No trees are proposed for removal as part of the application as all tree removal has been previously approved under a separate process under Part 5 EP&A Act. New landscaping forms part of the proposal to offset the previously approved loss of vegetation on the site.

The Department has considered the proposed development in relation to the ESD principles. The precautionary and inter-generational equity principles have been applied in the decision-making process via a thorough and rigorous assessment of the environmental impacts of the proposed development. The proposed development is consistent with ESD principles as described in Appendix N of the EIS, which has been prepared in accordance with the requirements of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation).

Overall, the proposal is consistent with ESD principles and the Department is satisfied the proposed sustainability initiatives will encourage ESD, in accordance with the objects of the EP&A Act.

Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the EP&A Regulation cited in this report, the requirements for Notification (Part 6, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

Planning Secretary's Environmental Assessment Requirements

The EIS is compliant with the Planning Secretary's Environmental Assessment Requirements (SEARs) and is sufficient to enable an adequate consideration and assessment of the proposal for determination purposes.

Section 4.15(1) matters for consideration

Table 3 identifies the matters for consideration under section 4.15 of the EP&A Act that apply to SSD in accordance with section 4.40 of the EP&A Act. The table represents a summary for which additional information and consideration is provided for in **Section 6** (Assessment) and relevant appendices or other sections of this report and EIS, referenced in the table.

Table 3 | Section 4.15(1) matters for consideration

Section 4.15(1) Evaluation	Consideration
(a)(i) any environmental planning instrument	Satisfactorily complies. The Department's consideration of the relevant EPIs is provided in **Appendix B** of this report.
(a)(ii) any proposed instrument	Satisfactorily complies. The Department's consideration of relevant draft EPIs is provided in **Appendix B** of this report.

(a)(iii) any development control plan (DCP)	Under clause 11 of the SRD SEPP, DCPs do not apply to SSD. Notwithstanding, consideration has been given to relevant DCPs at **Appendix B**.
(a)(iiia) any planning agreement	The proposal is consistent with an existing Voluntary Planning Agreement between the University and Council. Refer to discussion in **Section 6.4**.
(a)(iv) the regulations Refer Division 8 of the EP&A Regulation	The application satisfactorily meets the relevant requirements of the EP&A Regulation, including the procedures relating to applications (Part 6 of the EP&A Regulation), public participation procedures for SSD and Schedule 2 of the EP&A Regulation relating to EIS.
(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	Appropriately mitigated or conditioned - refer to **Section 6** of this report.
(c) the suitability of the site for the development	The site is suitable for the development as discussed in **Sections 3** and **6** of this report.
(d) any submissions	Consideration has been given to the submissions received during the exhibition period. See **Sections 5** and **6** of this report.
(e) the public interest	Refer to **Section 6** of this report.

4.4 Biodiversity Development Assessment Report

Under section 7.9(2) of the *Biodiversity Conservation Act 2016* (BC Act), SSD applications are "to be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values".

The proposed works are not likely to have a significant impact on biodiversity values. The Department and OEH have determined (in letters dated 10 October 2018 and 9 October 2018, respectively) that the application for the New Office and Laboratory Building is not required to be accompanied by a BDAR.

5 Engagement

5.1 Department's engagement

In accordance with Schedule 1 of the EP&A Act, the Department publicly exhibited the application from 17 January 2019 until 22 February 2019. The application was exhibited at the Department and on its website, at NSW Service Centres and at the City of Ryde's office.

The Department placed a public exhibition notice in the Sydney Morning Herald, the Daily Telegraph and The Weekly Times on 16 January 2019. Adjoining landholders and relevant State and local government authorities were also notified in writing.

The Department received a total of seven submissions, all from public authorities. Copies of the submissions may be viewed at **Appendix A**.

The Department has considered the comments raised in the submissions during the assessment of the application (**Section 6**) and/or by way of recommended conditions in the instrument of consent at **Appendix C**.

5.2 Public Authority submissions

During the exhibition period, the Department received a total of 7 submissions on the proposal. Of the submissions received, six were from NSW Government agencies, and one was from the City of Ryde (Council). A summary of the issues raised in the submissions is provided **Table 4**. Copies of the submissions may be viewed at **Appendix B**.

Table 4 | Summary of Council and Agency submissions

City of Ryde (Council)
Council does not object to the proposal but provided the following comments and recommendations: • The traffic report needs to be updated to resolve inconsistencies and to provide additional information in relation to changes to roundabouts, road closures and construction traffic. • A condition should be included refencing the existing Voluntary Planning Agreement. • Further information or basement design amendments are required to demonstrate appropriate provision of deep soil areas to support mature tree planting as indicated. • Design amendments are recommended to improve solar access to the 'Cochlear Plaza'. • The large continuous roof is visually bulky and should be broken up to reflect the individual buildings and reduce the visual bulk of the proposal. • Recommends each building be given a recognizable identity through the incorporation of variation in the façade detailing.
Transport for NSW (TfNSW)

TfNSW does not object to the proposal and provided the following comments:

- Further information and clarification is required to address inconsistencies in the Transport assessment as to whether an adjacent roundabout is proposed to be removed or retained.
- Further information and clarification is required in relation to any proposed change to right turn movements from University Avenue onto Herring Road.
- Further information is requested in relation to satisfaction of a Concept Plan condition relating to setbacks from adjoining roads.
- The transport assessment should be revised and updated to reflect the non-car share mode established by MOD 1 to the Concept Plan and the Green Travel Plan updated accordingly.
- Consideration should be given to construction impacts to bus services and bus stops on University Avenue, including limiting peak hour construction movements and consulting with TFNSW in relation to bus stop closures or required service changes during construction.
- Conditions are recommended in relation to a road safety audit, development of a detailed Construction Pedestrian and Traffic Management Plan (CPTMP) and a detailed Workplace Travel Plan.

Environment, Energy, and Science Group of the Department of Planning, Industry and Environment (EESG)

EESG does not object to the proposal and made the following comments:

- Replacement tree planting should be at a ratio greater than 1:1 in order to mitigate urban heat island effects and improve biodiversity outcomes; should include a diversity of local species indigenous to the locality rather than exotic or non-local native species; and should be advanced plantings (at least 200L pot size).
- Nest boxes, bee hotels and re-use of tree trunks should be incorporated to improve habitat outcomes.
- The building should incorporate green roofs or cool roofs in the design.
- An Aboriginal Cultural Heritage Assessment Report is required and has not been provided.
- Further information in relation to flooding is required to confirm the extent of the probable maximum flood, implications for basement carparks and staging of an associated creek diversion.

Conditions were also recommended in relation to landscaping, biodiversity and roof design.

NSW Environment Protection Authority (EPA)

The EPA does not object to the proposal, and provided the following comments:

- Contamination: the Applicant is to:
  - develop an unexpected finds protocol for asbestos and PCBs.
  - undertake further detailed investigations following demolition of existing structures.
  - consider relevant guidance in relation to site assessment and validation.
  - ensure the proposed development does not result in a change of risk.
  - notify the EPA should contamination be identified.

- engage a site auditor to review assessments, unexpected finds protocol, asbestos management plan, provide a Site Audit Statement and Site Audit Report.
- ensure further details in relation to remediation, validation and asbestos management are provided to the Site Auditor for review.
- undertake asbestos waste removal in accordance with guidelines and in consultation with Safework NSW and an Asbestos Works Management Plan.

- PCB materials and waste are to be stored, handled and managed in accordance with relevant requirements.
- Noise:
  - further information is required to assess operational noise impacts to nearby receivers.
  - garbage collection and grounds maintenance hours should be restricted to minimise noise.
  - construction hours should be consistent with the EPA's Interim Construction Noise Guideline and should include intra-day respite periods.
  - measures to reduce noise from idling / queuing construction vehicles and reversing or movement alarms are recommended.
- Measures to reduce dust, sediment and waste from the site are recommended.
- Measures to manage waste on the site are recommended.
- The proposed ESD initiatives being delivered as part of the proposal are acknowledged.

Sydney Water
Sydney Water confirmed there is existing capacity to service the development and recommended standard conditions in relation to servicing and future approvals.
Sydney Metro
Sydney Metro confirmed the proposal is not within the Sydney Metro Northwest corridor and advised it has no further comments.

5.3 Response to submissions

Following the exhibition of the application the Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

On 27 July 2020, the Applicant provided a Response to Submissions (RtS) (**Appendix A**) on the issues raised during the exhibition of the proposal. The RtS included a minor amendment to the plans to clarify the size of the dangerous goods storage area in the basement. It also provided additional information including an Aboriginal Cultural Heritage Assessment, updated Traffic Impact Assessment, updated Acoustic Assessment, additional landscaping details, a draft Remediation Action Plan and further contamination advice.

The RtS was made publicly available on the Department website and was referred to the relevant public authorities. An additional five submissions were received from public authorities. A summary of the submissions is provided at **Table 5** and copies of the submissions may be viewed at **Appendix A**.

Table 5 | Summary of Council and Agency Submissions

Council
Council provided the following advice: • There is an inconsistency between the traffic report and architectural drawings as to whether Research Park Drive will be open or closed, with potential impacts for access to the site. • The Applicant's response is relation to deep soil is acceptable. • Council has no additional concerns with regard to the other matters of building design. • Notes Council's recommended condition refencing the existing Voluntary Planning Agreement is accepted by the Applicant.
TfNSW
TfNSW advised it had no further concerns and reiterated that conditions previously recommended should be included on the consent.
EESG
EESG advised it had no further comments regarding biodiversity and flooding and matters relating to Aboriginal Cultural Heritage are now the responsibility of Heritage NSW.
Heritage NSW
Heritage NSW advised matters of Aboriginal Cultural Heritage have been adequately assessed.
EPA
EPA advised that outstanding matters have now been adequately addressed and recommends conditions in relation to construction hours, construction noise management, contamination investigations, remediation and site audit.

6 Assessment

The Department has considered the EIS, issues raised in submissions and the Applicant's RtS in its assessment of the proposal. The Department considers key issues associated with the proposal are:

- urban design.
- traffic, transport and access.
- acoustic impacts.

6.1 Urban Design

Design Guidance and Design Excellence

The Macquarie University Design Excellence Strategy and Urban Design Guidelines (the Guidelines) were established in accordance with the terms of the Concept Plan and provide guidance on built form outcomes for all new buildings under the Concept Plan, including height controls, guidance on building articulation and expression, activation and landscaping. Some key parameters which apply to the site under the Guidelines are shown in **Figure 9**.

In addition to being designed to comply with the Guidelines, the design has been developed having regard to design excellence advice as follows:

- The development was originally conceived as a predominantly commercial development intended to be lodged with Council and therefore initial design excellence consultation was carried out with Council's Urban Design Review Panel and Council officers. The design was amended to respond to feedback during that process, including feedback on of landscape treatments, activation, articulation, ESD and clarification of disabled access.
- The scheme was also presented to Macquarie University's Internal Design Excellence review process and feedback from that process was also taken into consideration in the finalisation of the project design.
- Following a change to the development resulting in an SSD approval pathway, a meeting was held with GANSW and Department officers. GANSW advised that given the advanced state of design and prior review by Council's Urban Design Review Panel, it was appropriate to continue the design excellence process with Council.
- Accordingly, the updated design was presented to Council's Urban Design Review Panel prior to lodgement of the application, who advised it was highly supportive of the design and provided comments in relation in the built form and scale, sustainability, landscape, and aesthetics, which the Applicant subsequently addressed in its application. The Panel advised it did not need to see the proposal again.

Following submission of the application the Department referred the proposal to Council, who provided design feedback in relation to landscaping, overshadowing, roof form and architectural features. Following additional information provided by the Applicant with the RtS, Council advised that landscaping matters had been resolved and raised no further concerns about building design.

The proposal was also referred to the GANSW for review, who raised no issues with the design or layout of the development.

The Department considers the proposal has been through an extensive design review process and notes feedback through this process has been supportive of the proposed design. The Department has considered the proposal against the Guidelines and the feedback provided in relation to the current design.

Building height

Under the Guidelines, a height control of 36 metres applies to the site and the indicative height storey control is 8 storeys. The proposal complies with these requirements, except for a small area of the roof which exceeds the 36-metre height plane as shown in **Figure 15**.

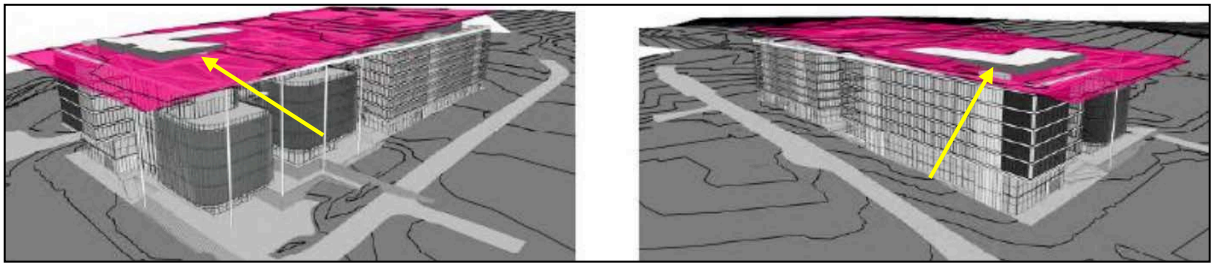

Figure 15 | 36 metre height plane study (Base source: EIS)

The Department notes Council's Urban Design Review Panel has advised that despite a minor increase in height beyond the 36m control, the scheme was deemed to be generally compliant with the campus controls.

The Department considers the exceedance is minor and would not result in any material impacts as the affected area is setback from the main roof line and therefore would not be readily discernible from most vantage points. Further, as the Guidelines allow for flexibility in the application of the controls, the Department considers the proposal would result in a built form that is consistent with the expectations for building height under the Guidelines and the intention of the Concept Plan approval.

Building articulation, expression and materials

Roof form and scale

Council's submission raised concern that the proposed roof span results in the presentation of the development as a single very large building mass, potentially out of scale when viewed in the context of other surrounding built forms. Council recommended the roof form be physically broken up to help articulate built form and result in the site presenting as a number of separate smaller buildings.

However, despite these comments, the Department notes that Council's Urban Design Review Panel is supportive of the roof form and previously provided advice that "the interesting architectural concept of 'five buildings under one roof' is developing positively". The Panel also provided positive feedback on the articulation of the building elements and facades (discussed below).

The Department notes the Guidelines do not provide specific advice with regard to roof design but advise that building articulation is to be generated though the expression of overall massing as well as separate parts of a building.

The Department considers that while the roof form would be a dominant visual element that will unify the building elements and result in them being read as a single entity, the site can support a development of this scale. The campus is characterised by a wide variety of contemporary built forms of varying scales and the proposed development would sit comfortably within the range of existing and proposed developments on the campus. The Department considers the roof form to be a signature architectural feature of the development, creating a clear building identity and contributing to the range of high-quality built forms on the campus. The Department notes that there is expression of individual elements below the roof form, would also ensure a good level of articulation at the building façade level.

Building façade treatment

The proposed building facades are generally typical for a commercial style development and are predominantly characterised by aluminium framed glass curtain walls separated by aluminium panels and spandrels. Variety in façade expression is achieved through the use of a range of sun shading devices, different treatment of spandrels and vertical expression of the building cores with off-form concrete panels. The 'Collaboration Drums' present as unique building elements, with curved facades that do not extend to the roof line (incorporating roof terraces). The drums incorporate a double skin of glazing which contains a series of rotating vertical louvres which will move to moderate solar heat gain whilst maintaining views to the public domain.

Figure 16 | Proposed building as viewed from the University Common (Base source: EIS)

Council advised that while the regular form of the laboratory and commercial buildings respond to the surrounding built forms, the typical building façade treatment does not create any individual character for each building. Council recommended maintaining a consistent design language in the façade system, but with the individuality of each building expressed through the details (e.g. sunshades) to give each building a recognisable identity.

In response, the Applicant advised that although the form and façade articulation of the eastern and western building is similar, there are also numerous differences which provide a subtlety different character and appearance for each building. These differences include floor to floor height, provision of full height glazing to one building, and a horizontal louvre band below transom to the other building, with expressed mullions.

In this regard, the Department notes that the Council's Urban Design Review Panel supports the building façade design and articulation, noting that:

> *"the design of the long southern façade has been further articulated by expressing the secondary cores as strong vertical elements which are elegantly detailed with vertical ribbons of various materials. The glass skin between the cores has also been refined by introducing a band of horizontal louvres at each level which reduces the height of the glazing to create a stronger horizontal expression. The resultant overall facade design is more dynamic and responds well to the original Panel comments."*

The Panel also advised that if the refinement in the selection of materials and finishes and architectural detailing continues along the lines established to date, the Panel considers that the project is capable of achieving a high degree of design quality.

The Department agrees with the Panel's assessment, and notes there are clear architectural differences in the façade design of the eastern and western buildings that will visually distinguish them as separate elements and there are a variety of treatment within the facades that will add visual interest to the appearance of the development. The Department also considers the proposed design would provide a good level of articulation and would be consistent with the Guidelines, which recommend that buildings demonstrate contemporary architectural expression, adopt a palette of light base colours, include predominantly glazing to northern facades with sun shading and make use smaller scale elements to create a sense of scale and rhythm and add to the richness of architectural expression.

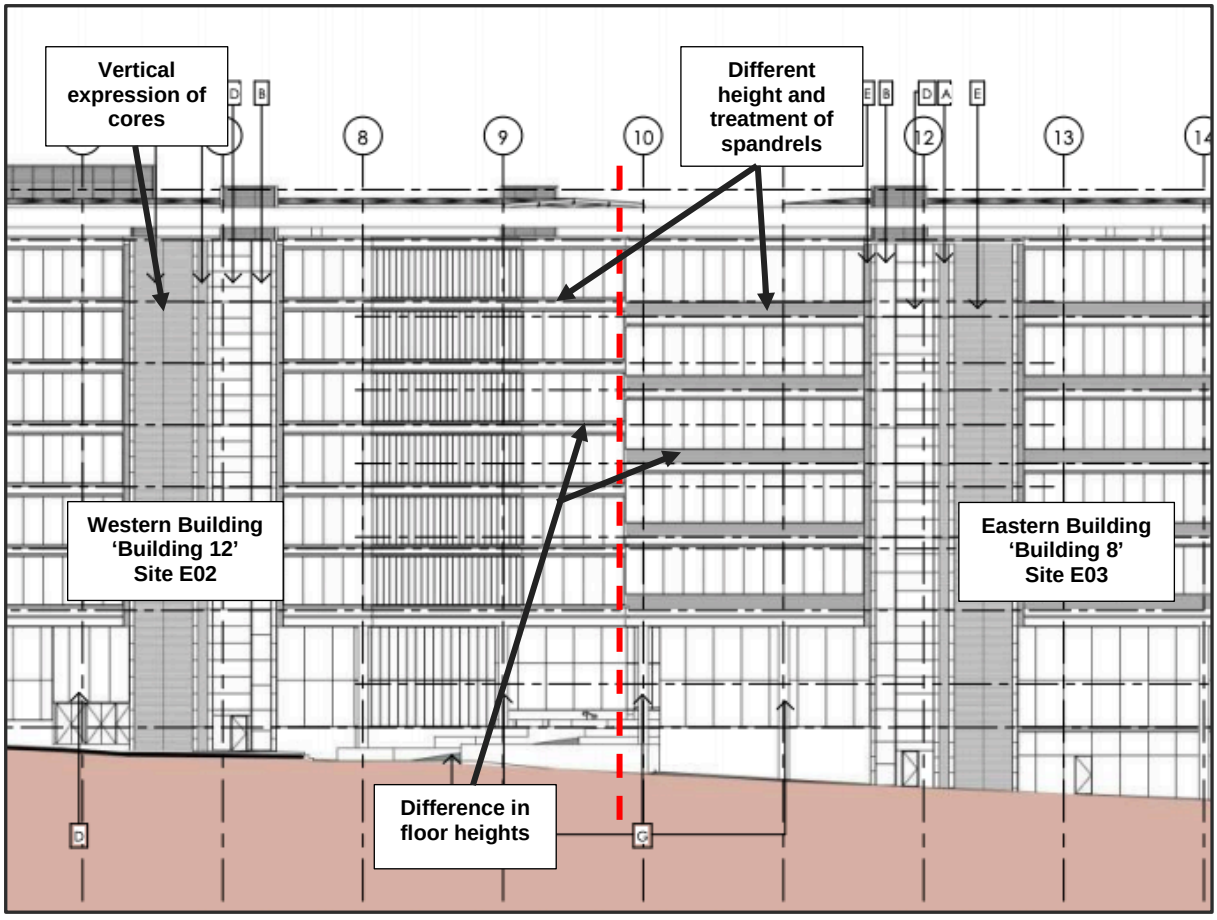

Figure 17 | Extract from part of Southern Elevation showing the difference between the façade treatment of each building (Base source: EIS)

Ground floor activation

Under the Guidelines, key areas for ground floor activation are along the northern interface with Macquarie Walk, recognised as a future primary pedestrian route though the campus, and the through site pedestrian link, a secondary pedestrian route. Activation is to be provided by building entries, windows and foyers as well as active uses such as student services and retail.

No concerns were raised in submissions or through recent design review with respect to activation.

The Department considers the proposal would deliver good levels of activation, incorporating extensive glazing to the ground floor levels which would express the internal activities and ensure visual interaction with the public domain (seen in **Figure 16**). Retail is included in the proposed uses fronting Macquarie Walk and the through site link, which is also activated by the main foyers to each building and the design of the space itself which would promote use of the space for meeting and gathering. The north-eastern part of the site has been designed as highly activated, acknowledging its prominent location facing onto the southern boundary of the University Common and signifying a key pedestrian node at the juncture of Macquarie Walk and the University Common.

Sustainability

As discussed in **Section 4**, the proposal integrates ESD measures into its design, such as environmentally responsive measures to improve the energy efficiency of the building's functions.

With regard to sustainability matters, EESG advised that the building should incorporate green roofs or cool roofs in the design. Council's Urban Design Review Panel commended the 'double skin' concept for the north facades, recommends the inclusion of solar electric panels on the roof and the adoption of current sustainable best-design practice.

In relation to sustainability, the Applicant advises:

- the building orientation is set out to reduce the heat loadings from the east and west, whilst maximising the north facing facades that allow for greater solar control opportunities through the use of horizontal shading devices.
- the Collaboration Drums are a double skin system with a fully customised internal solar control vertical louvre system that automatically responds to solar orientation throughout the day. This unique approach will create low energy spaces that will be naturally lit and comfortable to use at all times of the year.
- the building is surmounted with a large and generous shade canopy roof that provides effective solar control and weather protection over the central public domain spaces.
- the roof is designed as a 'cool roof', with cladding that is light in colour to reflect heat, and incorporation of roof overhang and roof louvres that provide shade and maximise the 'cool roof' effect.
- the roof design incorporates provision for photovoltaic panels to generate energy for battery storage in the future.
- the project will install responsibly sourced materials (i.e. steel, concrete, PVC, timber) that minimise the environmental impacts associated with material extraction, product manufacture and transportation. The incorporation of materials with recycled content can support the diversion from landfill, reduce the demand for virgin materials as well as potentially reduce their embodied carbon.

The Department considers the proposal has appropriately integrated ESD measures into its design, and, noting it is designed to achieve a 5-star Green Star Rating and 5-star NABERs rating, the proposal would result in sustainability outcomes that exceed the expectations of the Concept Plan approval and the Guidelines which both recommend the achievement of a 4-star Green Star Rating and 4.5 star NABERs rating,

Solar access

The Guidelines provide that the design of buildings should be considerate of impacts upon access to sunlight and designed to minimise overshadowing to public open spaces.

Council raised a concern that the proposal will cause overshadowing impacts upon the future Cochlear Plaza located to the south of the site.

In response, the Applicant notes that the proposed building height and envelope is consistent with the Concept Plan and Guidelines, and while the building would overshadow the proposed Cochlear Plaza by slightly more than 50 per cent in mid-winter, for most of the year, there is little overshadowing.

The Department agrees with the Applicant that shadowing impacts are consistent with expectations under the Concept Plan and the Guidelines and is satisfied that overall, the future Cochlear Plaza would retain acceptable levels solar access at mid-winter, having regard to its location immediately to the south of the site, and very good levels of solar access for most of the remainder of the year.

Landscaping

Public domain and landscape works are shown in **Figure 18** and include:

- creation of a 'Linear Park' to the north of the building, contributing to the upgrade of Macquarie Walk, identified as a future primary pedestrian route though the campus. The linear Park will include a series of landscape spaces including a variety of planting and spaces for gathering and sitting.
- landscaping of the through site link and atrium areas with a variety of trees, climbers and understorey plantings in conjunction with scaled inhabitable zones for meeting and gathering
- new street tree plantings on University Avenue.
- landscaping to the eastern entry and western entries to the site.

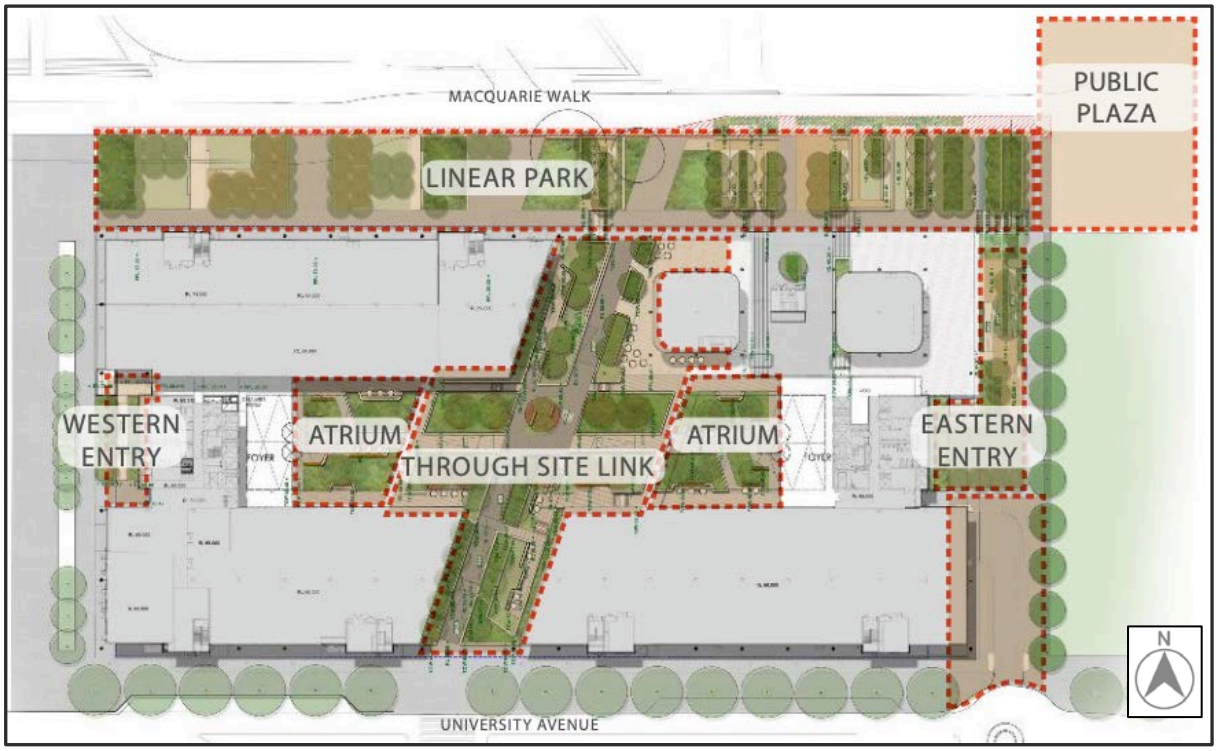

Figure 18 | Extract from Landscape Plan showing key landscape areas (Base source: EIS)

The landscape plans have been designed having regard to the Guidelines, which provide detailed guidance on the design of public domain areas and for the pedestrian link through the site.

Tree removal does not form part of the application, but the application includes retention and protection of up to 84 trees surrounding the site. New plantings of 174 trees is required under the Part 5 approval to offset those removed. Plantings include a mix of native and exotic species.

Council initially raised some concerns with planting over the basement levels, but following further information submitted with the RtS to demonstrate appropriate provision of deep soil areas to support mature tree planting, Council advised its concerns had been resolved.

EESG recommended replacement tree planting should be at a ratio greater than 1:1 to mitigate urban heat island effects and improve biodiversity outcomes; should include a diversity of local species indigenous to the locality rather than exotic or non-local native species; and should be advanced plantings (at least 200L pot size). It also recommended the use of nest boxes, bee hotels and the re-use of tree trunks where possible to improve habitat outcomes.

Council's Urban Design Review Panel provided feedback on the design of the Linear Park, particularly the accommodation of equitable access over the significant level change whilst also ensuring appropriate design outcomes.

In response to EESG, the Applicant confirmed 174 replacement trees would be provided on the site, exceeding the 1:1 ratio and all trees would have a pot size of 200L. Although species would include a mix of local natives and exotics, tree plantings would be consistent with the University's planting strategy and contribute to biodiversity on the campus. The Applicant confirmed it was agreeable to the use of nest boxes, bee hotels and re-use of tree trunks.

The Applicant has demonstrated it has considered equitable access in the design of the Linear Park, providing both north-south and east-west access while retaining a high-quality landscaped outcome.

The Department is satisfied that a high standard of landscape design has been incorporated into the proposal that would make a significant contribution to the quality and amenity of the public domain and would more than offset the impacts the approved tree removal on the site.

Conditions have been recommended to ensure minimum pot sizes, incorporation of bee hotels and nest boxes and reuse of salvaged tree trucks as recommended by EESG.

6.2 Traffic, Transport and Access

Construction traffic

The Applicant's construction management plan identifies that the primary construction vehicle routes and access points will be via University Avenue and Macquarie Walk, connecting either to Epping Road (via Epping / Balaclava Road intersection) or the SQM (via Herring Road / Waterloo Road intersection). Access routes and vehicle numbers will vary depending on the stage of construction, but overall traffic construction vehicle movements would be significantly lower than the traffic movements associated with the current use of the site as a carpark.

TfNSW advised that a CPTMP should be developed in consultation with their Sydney Coordination Office to ensure that construction traffic impacts are minimised and appropriately managed, including cumulative construction impacts and access arrangements. TfNSW also recommended consideration be given to restricting traffic movements during peak hours and restricting movements on University Avenue to minimise impacts to bus operations.

The Department considers that given construction traffic would be less than existing traffic movements from the site, construction traffic should not result in significant impacts to safety, traffic, or public transport and it is therefore not necessary to prohibit traffic movements during peak hours or on University Avenue. However, the Department has recommended conditions of consent requiring the Applicant to prepare and implement a CPTMP, in consultation with TfNSW (Sydney Coordination Office) which would be required to minimise impacts to bus services, among other things. Subject to approval and implementation of the CPTMP, the Department is satisfied that construction traffic impacts will be appropriately managed.

Car parking

To minimise traffic impacts and improve non-car mode share, the Concept Plan caps car parking spaces across the University to 5,000 parking spaces for commercial uses and 5,800 spaces for

academic use. It also provides that commercial parking is not to exceed a rate of 1 space per 80sqm of GFA.

The proposal results in the removal of 1,096 existing on-site academic car parking spaces and construction of new basement parking for 619 vehicles, comprising 322 academic spaces and 297 commercial spaces. The resulting total parking on the campus would be 3,991 academic spaces and 3,063 commercial spaces, complying with the maximums set by the Concept Plan, including the maximum rate for commercial parking.

The Applicant advises that the reduction in academic spaces on the site has already been offset by new academic spaces in a recently constructed temporary carpark in the northern part of the site (under separate approval from Council), specifically provided to offset the loss of the spaces from the subject site and other nearby development sites, so that overall academic spaces would remain generally consistent across the campus. The Applicant also advises that car parking across the campus would continue to be managed to meet the Concept Plan car parking caps as development across the campus progresses.

No concerns were raised in submission in relation to parking. The Department is satisfied appropriate levels of parking would be provided on site and across the campus to meet demand while also ensuring compliance with the Concept Plan and meeting traffic impact and mode share objectives.

Non-car mode share

The Concept Plan sets non-car mode share targets of 40 per cent for commercial uses and 62 per cent for academic uses. The Transport Impact Assessment (TIA) originally referenced a 40 per cent mode share target for all uses but was updated in the RtS to respond to concerns raised by TfNSW. The updated TIA estimates that 73 per cent of people accessing the site would use non-car modes of travel. This is achieved by limiting on-site parking, providing good levels of bike parking and facilities (140 bicycle parking spaces, dedicated bicycle access and associated end-of-trip facilities) and improvements to the public transport network including opening of the Sydney Metro north-west. The application was accompanied by a draft Workplace Travel Plan (WTP) for commercial uses within the building to further encourage non-car modes of transport as required by the Concept Plan (academic uses are otherwise already captured by a campus-wide University travel plan, which is separately updated). The WTP was also updated in the RtS to reflect the required 62 per cent mode share.

Following provision of the additional information, TfNSW did not raise any further concerns with mode share but recommended a more detailed WTP be provided prior to occupancy.

The Department considers the proposal would encourage non-car forms of transport, noting that bicycle parking and facilities exceed Council requirements (140 spaces provided, while only 62 bicycle spaces are required under Council's DCP), parking has been limited in accordance with the Concept Plan and overall pedestrian links though and around the site would be improved by the proposal. The Department is satisfied that the site would be capable of achieving the mode share targets for both commercial and academic uses set by the Concept Plan. As recommended by TfNSW, a condition requiring a detailed WTP prior to occupation has been recommended to maximise encouragement on non-car modes of travel.

Traffic generation and impacts to road network

The Concept Plan provides that where an application generates the need for road intersection upgrades (at six key intersections adjoining the University), details of the upgrades must be included with the application.

The TIA estimates that the development would generate 295 vehicle trips (two way) during the AM peak and 246 trips during the PM peak with vehicle movements split equally between the key intersections of Herring Road / Waterloo Road and Epping Road / Balaclava Road. However, as the number of parking spaces would be reduced on the site, the TIA finds that there would be a net reduction of traffic movements from this site and at the key intersections as a result of the proposal.

The application does not propose any changes to existing intersections but notes a number of upgrades are being separately proposed through Voluntary Planning Agreement (VPA) negotiations with Council and the Department.

TfNSW noted the application referred to changes at the Herring Road / Waterloo Road intersection. It requested that if any further changes are proposed to the intersection, these would need TfNSW approval. TfNSW also sought confirmation that condition C5 of the Concept Plan (relating to Council endorsements of setbacks at this intersection) had been complied with, but otherwise did not raise any concerns with traffic generation or road upgrades. The Applicant confirmed that setbacks had been endorsed by Council and that any changes to the intersection are subject to a separate application / negotiation and unrelated to this approval.

The Department is satisfied the proposal would not result in adverse traffic impacts and would not generate the need for any additional upgrades to surrounding road intersections.

Access and internal road network

The only upgrades proposed under this application are to the internal road network, replacing two existing roundabouts on University Avenue with one roundabout, at the main vehicular entry to the building opposite the main entry to the Cochlear Building, and a new pedestrian crossing at the pedestrian link on University Avenue (**Figures 19** and **20**).

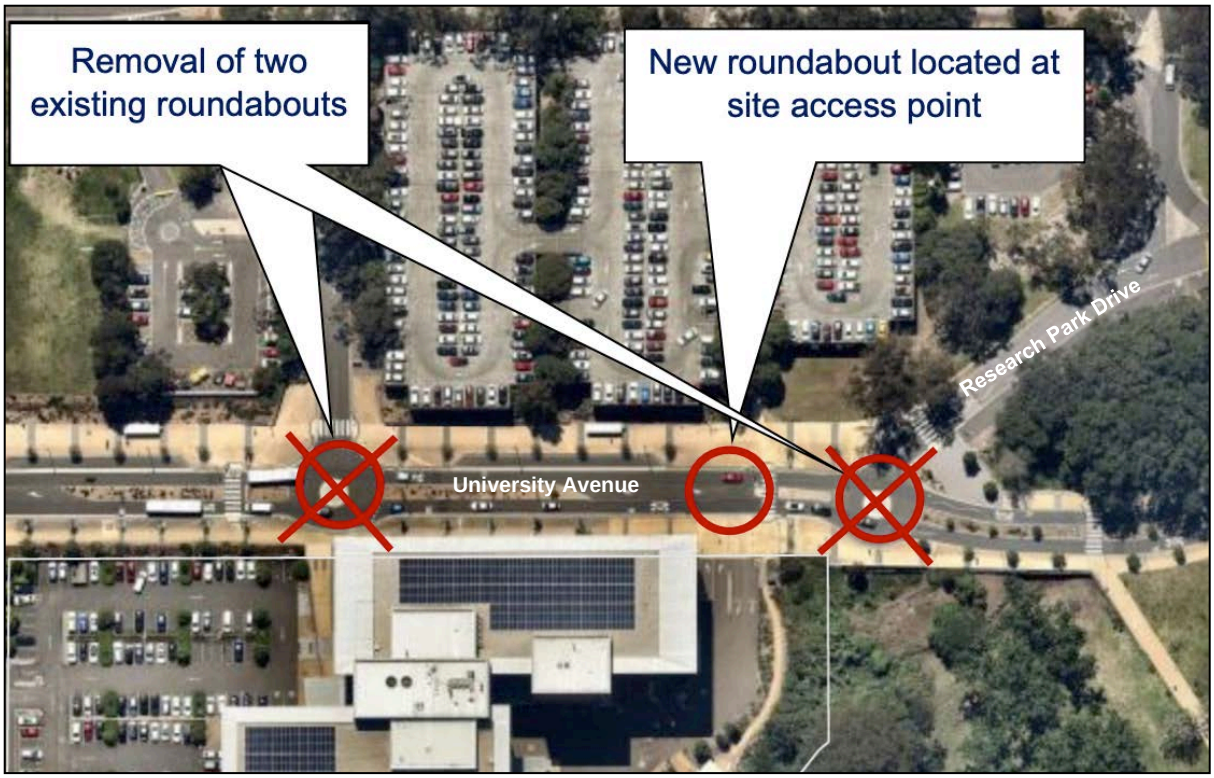

Figure 19: Proposed changes to roundabouts / site access on University Avenue (Base source: RtS TIA)

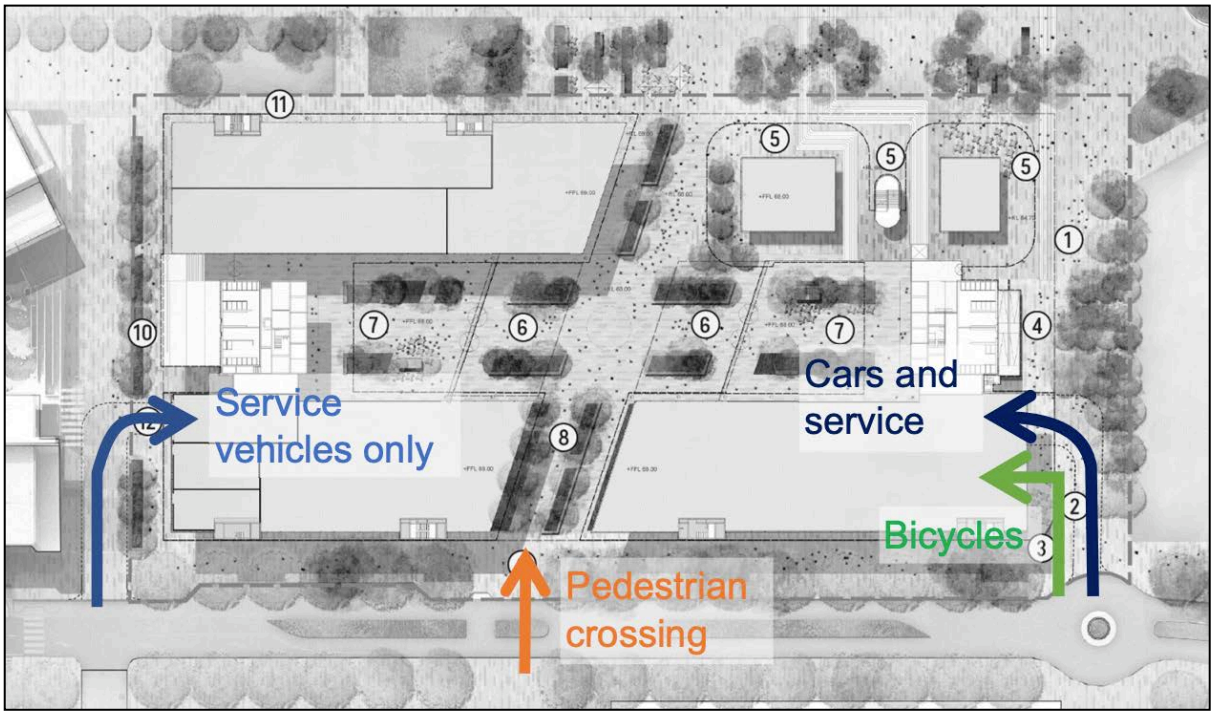

Figure 20: Site access arrangements on University Avenue (Base source: RtS)

Council and TfNSW requested further information on the proposed changes to the roundabouts and associated vehicle access, noting some inconsistencies in the submitted documentation.

TfNSW also recommended a condition requiring a Road Safety Audit to be undertaken for the proposed modified access points and the pedestrian crossing, to resolve any potential safety issues

prior to construction. Additional information was provided to respond to clarify the proposed changes to the roundabouts and site access arrangements as demonstrated in **Figures 19** and **20** and confirmed access to Research Park Drive adjacent to the site would remain open.

The Department is satisfied the proposed changes to the road design and internal access arrangements would provide appropriate and safe access to the site. To further ensure safety of vehicles and pedestrians, a condition requiring a Road Safety Audit has been included.

6.3 Acoustic Impacts

An Acoustic Report was submitted with the EIS and updated with the RtS to provide additional background noise monitoring. It assessed the potential construction and operational noise and vibration impacts on nearby sensitive land receivers, including an aged care facility and residential apartment building (outside of the University campus but in proximity to the subject site) (**Figure 20**).

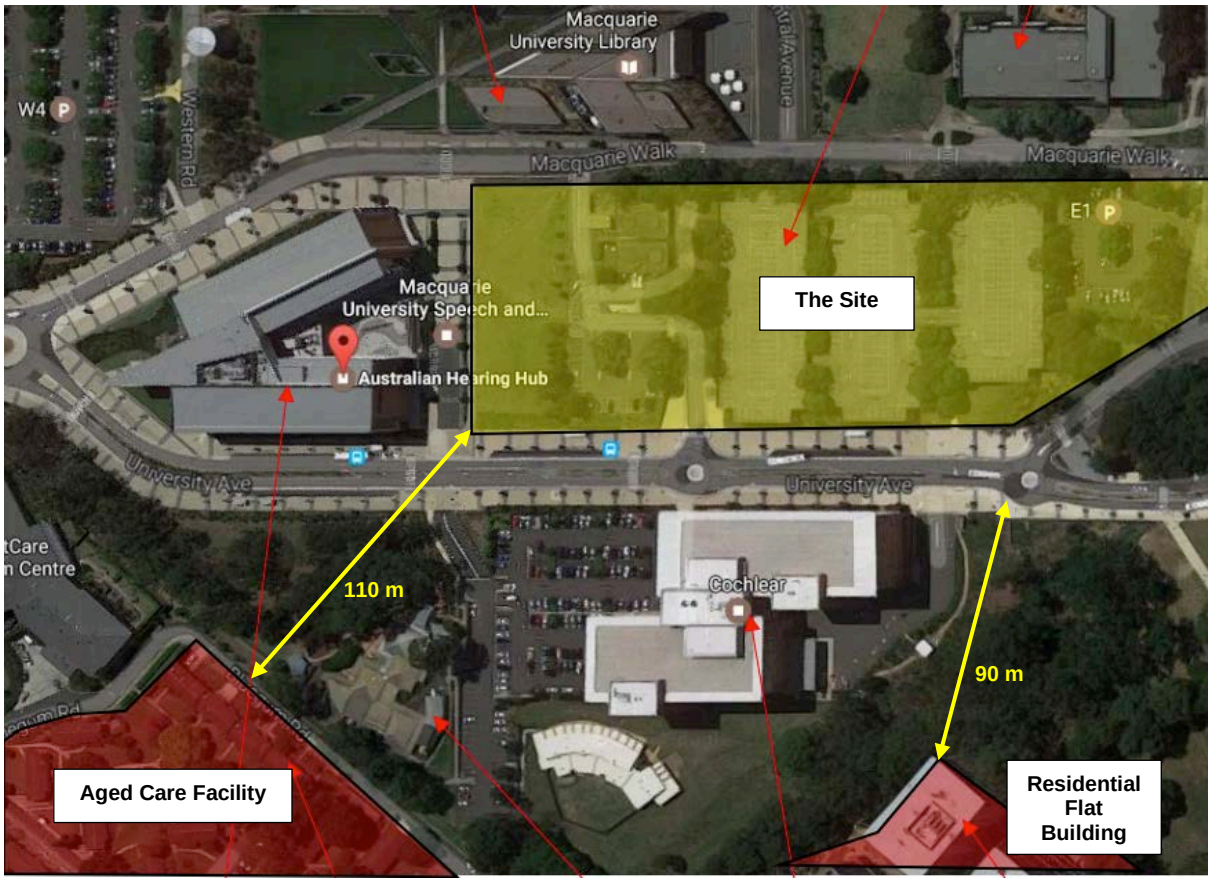

Figure 21: Location of sensitive receivers (Base source: RtS Acoustic Report)

Construction impacts

The EPA's *Interim Construction Noise Guideline* (ICNG) outlines the process of establishing construction noise management levels for surrounding sensitive receivers. Based on the established background noise levels, construction noise management levels of 59dB(a)L_{eq} were established for standard construction hours at the nearest residential receivers.

The Acoustic Assessment found that the affected neighbours would experience noise levels above the recommended level of 59dB(a)L_{eq} when using hydraulic hammers and rock saws. To mitigate

impacts, the assessment recommends consideration should be given to use of dozers with bucket and rock rippers as they have reduced noise impacts compared to hydraulic hammers.

The assessment identified construction vibration was expected to comply with criteria for the surrounding sensitive receivers.

The EIS, Acoustic Assessment and Construction Management Plan all identified that works would be carried out in accordance with the standard construction hours of the ICNG. However, the RtS subsequently requested construction hours as follows:

- 7am to 7pm Monday to Friday.
- 8am to 4pm Saturday.
- no works on Sunday or NSW Public Holidays.

The proposed hours exceed the standard construction hours recommended by the ICNG for one hour on weekday evenings (6pm to 7pm) and three hours on Saturdays (1pm to 4pm). The Applicant has requested the hours on the basis that other recent approvals on the campus, such as the Central Courtyard Precinct (SSD 8755) permitted the same extended hours.

The EPA has advised that standard construction hours should be consistent with the ICNG. It also recommends intra-day respite periods and measures to reduce noise from vehicles on the site.

The Department considers the proposed extension to the Saturday construction hours is acceptable, noting that activities likely to exceed recommended noise levels at this time would be limited and mitigation measures have been recommended in the Acoustic assessment. To address potential impacts, the Department supports the mitigation measures identified by the Applicant and the recommendations for respite periods and measures to control noise provided by the EPA.

However, the Department does not support any extension of construction works into the evening period (after 6pm) as:

- evening impacts would be greater than the assessed daytime impacts, noting that background noise levels are lower and the ICNG applies stricter criteria for the establishment of noise management levels after 6pm.
- the Acoustic Assessment did not consider evening construction noise management goals, did not consider likely impacts during this time and did not consider any mitigation measures.
- development in the Central Courtyard Precinct was located much further from the residential receivers (420m for the aged care facility) and therefore resulted in no acoustic impacts to these receivers, justifying the additional construction hours.
- other development approvals, including approval in this part of the campus, such as the Australian Hearing Hub and the Cochlear Building, which would have similar noise impacts, did not permit extended construction hours.

However, the Department notes that a standard condition has been recommended that would permit out of hours construction works, providing they were not audible at nearby sensitive receivers. The Department considers this provides considerable scope for the Applicant to carry out quieter activities in the evenings to reduce its construction timeframe without resulting in any adverse consequences for the amenity of its neighbours.

Operational impacts

Operational noise generated by the proposal would be associated with the operation of mechanical plant, loading dock activities and traffic noise associated with cars accessing the site.

Compared to the existing use of the site as a carpark, the proposal would result in reduced traffic movements and therefore reduced associated noise impacts. Noise associated with the loading docks was assessed and it was demonstrated that the proposal would comply with the requirements under the NSW Industrial Noise Policy (INP).

However, a numerical assessment of the likely impacts of mechanical plant on adjoining premises was not provided. The EPA requested a quantitative assessment be provided but the Applicant responded that detailed layout and equipment selections have not yet been determined to enable assessment. Nevertheless, given the distance to the residential receivers, the acoustic consultant advises the compliance with noise emission goals will be able to be achieved, subject to typical acoustic treatments. On this basis, the EPA subsequently recommended that a detailed acoustic review be undertaken once selection and layout design have been determined and incorporation of measures as necessary.

The Department has recommended conditions requiring a detailed acoustic review to confirm any selected plant and mitigation measures would ensure compliance with noise goals and post-construction monitoring to further ensure noise goals have been achieved.

The EPA recommended conditions restricting waste collection services and grounds maintenance activities due to noise impacts. The Department has included a condition restricting the hours of noisy grounds maintenance works but does not consider it necessary to restrict waste collection, noting the acoustic assessment demonstrated that loading dock activities are predicated to comply with the requirements of the INP at all times of the day and night and given the University's advice that night-time collections are necessary to avoid conflicts with students and day time activities and for operational efficiencies.

The Department is satisfied that, subject to recommended conditions, the potential noise generated from operation of the proposal can be managed to comply with the relevant criteria.

6.4 Other issues

Issue	Findings	Recommendation
Compliance with Concept Plan	The Macquarie University Concept Plan (MP06_0016) sets the parameters for future development on the site and provides conditions that are to be met in future applications (**Section 1.2**). Key parameters include building envelope controls in the Design Excellence guidelines and GFA requirements. As discussed in **Section 6.1**, the proposal is considered to be consistent with the building envelopes envisaged by the Concept Plan. The proposed additional GFA on the site would comply with the maximum additional floor space permitted by the approval, providing:	No conditions required.

	• 25,825sqm of academic floor space, resulting in a cumulative total of 49,754sqm (157,000sqm permitted for academic use). • 23,620 sqm of commercial floor space, resulting in a cumulative total of 61,945sqm (400,000sqm permitted). Other requirements and conditions relevant to this application relate to urban design and design excellence; landscaping; parking, transport, traffic and roadworks; biodiversity; sustainability; Aboriginal heritage; stormwater and flooding, contamination, construction management, and planning agreements. Consideration has been given to the requirements of MP06_0016 where relevant under the corresponding headings throughout this report. Section 7 of the EIS provides a comprehensive assessment against the requirements of MP06_0016, and the Department is satisfied the proposal is consistent with the requirements of the Concept Plan.	
European heritage	A Statement of Heritage Impact (SHI) was prepared to assess the potential heritage impacts of the proposed development upon historic heritage. The site is listed as a heritage item on the RLEP 2014, but the listing relates to the Macquarie University Ruins, located in a different part of the campus approximately 430m from the subject site. The SHI concludes the proposed development is well removed from the heritage item and has no architectural or historical relationship with this item. Therefore, any potential adverse impact is considered low and no additional measures are necessary. The Department supports the conclusions of the SHI and considers that potential impacts upon the Ruins would be negligible.	No conditions required.
Aboriginal cultural heritage	The RtS was accompanied by an Aboriginal Cultural Heritage Assessment Report (ACHAR) following EESG's submission which identified the need for an ACHAR. The assessment concluded that the site, having been subject to significant disturbance, had very low to nil archaeological potential. Community consultation also identified no specific area of Aboriginal cultural heritage value on the site. The ACHAR recommends works proceed on site with caution, in accordance with an unexpected finds protocol. Heritage NSW reviewed the ACHAR and advised Aboriginal cultural heritage has now been adequately assessed and it had no outstanding concerns.	A condition ensure to implementation of an unexpected finds protocol is recommended.

Contamination	The EIS includes a contamination assessment for the site which found asbestos in fill on the site. The assessment concludes that the site can be made suitable for the proposed development, subject to a number of recommendations, remediation and validation. The Application was accompanied by an asbestos management plan. EPA raised concerns with the contamination assessment including the extent of sampling and data gaps, as well as the category of the remediation works, and recommended a site auditor should provide a site audit statement and site audit report. The Applicant subsequently engaged a site auditor to review the contamination assessment and then provided additional information and responses to address outstanding concerns raised by the auditor. A draft Remediation Action Plan (RAP) was also prepared for the proposal. The Applicant proposes to undertake additional soil sampling during the earthworks phase, update the RAP as necessary, remediate the site (the preferred remediation is to remove contaminated soils) and carry out validation. EPA reviewed the updated information and did not have any outstanding concerns subject to the imposition of conditions that would ensure additional site investigations and update to the RAP as necessary, engagement of a site auditor to oversee the process and a Site Audit Statement to certify the site is suitable for the proposed use prior to occupation. The Department is satisfied that subject to conditions, contamination would be appropriately addressed, and the site would be made suitable for the proposed use.	Conditions to ensure engagement of a site auditor, appropriate investigations, remediation, and validation on the site are recommended.
Stormwater and flooding	As required by the Concept Plan approval, the application was accompanied by a stormwater management plan (SMP), which includes water sensitive urban design measures to improve stormwater runoff discharge. The proposal also makes provision for capture and reuse of rainwater in accordance with the requirements of the Concept Plan approval. The SMP demonstrates that the site will not be affected by the 1 in 100-year flood but advises that modelling of the probable maximum flood (PMF) will need to be undertaken noting a Council requirement for the entrance to basement parking to be above the PMF level. EESG requested the extent of the PMF be confirmed having regard to the basement carparks, noted that the flood mitigation strategy for the site requires a creek diversion and requested further information addressing the staging of the creek diversion relative to construction of the building.	Standard conditions requiring detailed design of the operational stormwater management system to meet appropriate standards and ensure the stormwater quality measures are maintained are recommended.

	The Applicant confirmed in the RtS that the creek diversion works have been approved and completed and confirmed that the site is outside of the PMF. EESG subsequently advised it had no further comments in relation to flooding. The Department is satisfied stormwater would be appropriately managed and the proposal does not result in any flooding concerns.	
Construction impacts	As required by the Concept Plan, a Construction Management Plan and an Erosion and Sedimentation Plan were submitted with the application. Construction traffic was considered in **Section 6.2** and construction noise considered in **Section 6.3**. The EPA reviewed the details provided and recommended standard conditions to ensure dust control and management, sediment control, and waste control and management during the construction phase.	Standard conditions to mitigate construction impacts including dust and sediment control and waste management have been recommended.
Contributions	Development of the campus under the Concept Plan is subject to a Voluntary Planning Agreement (VPA) between the University and Council, executed February 2013. In accordance with the terms of the VPA, the proposed development is subject to development contributions as it includes commercial uses. Council recommended a condition which confirms the VPA applies to the approval	The Department has recommended inclusion of Council's condition which confirms the VPA applies to the consent.

7 Evaluation

The application seeks approval for an integrated education and commercial facility at Macquarie University. The Department has reviewed the EIS and RtS and assessed the merits of the proposal, taking into consideration advice from the public authorities including Council, and all environmental issues associated with the proposal have been addressed. Consequently, the Department recommends that the application be approved, subject to recommended conditions of consent.

The Department's assessment of the project concluded that:

- the built form and urban design is suitable for the site and consistent with urban design controls and principles established for the site under the approved Concept Plan for the University campus.
- the proposal would not result in any adverse traffic impacts and includes measures to reduce reliance on private vehicle use.
- noise impacts can be satisfactorily mitigated during construction and operation, subject to development of a construction noise management plan, and further acoustic review of plant and monitoring to verify noise levels.
- contamination impacts can be satisfactorily mitigated subject to further environmental investigations, remediated in accordance with a Remediation Action Plan and site validation, as overseen by a site auditor.

The proposal is consistent with key government strategic plans and policies, including the Greater Sydney Region Plan, North District Plan, State Infrastructure Strategy 2018-2038 and Future Transport Strategy 2056.

The proposal is considered to be in the public interest as it would provide public benefits including:

- additional investment in educational infrastructure within a highly accessible location.
- support the continuing growth of the Eastern Economic and the Macquarie Park Strategic Centre.
- ensuring the State remains competitive in attracting students, staff and researchers in the tertiary education sector.
- delivery of approximately 250-350 new construction jobs and 3,465 operational jobs

Based on its assessment, the Department considers that the project is justified and in the public interest, and that the site is suitable for the proposed development. Recommended conditions and the implementation of measures detailed in the Applicant's EIS and RtS would ensure that the project would minimise and mitigate the residual environmental impacts of the project.

8 Recommendation

It is recommended that the Executive Director, Infrastructure Assessments as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report.
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application.
- **agrees** with the key reasons for approval listed in the notice of decision.
- **grants consent** for the application in respect of Macquarie University New Office and Laboratory Building (SSD 9313), subject to the conditions in the attached development consent.
- **signs** the attached development consent and recommended conditions of consent (**Appendix C**).

Recommended by:

David Gibson
Team Leader
Social Infrastructure

Recommended by:

Karen Harragon
Director
Social and Infrastructure Assessments

9 Determination

The recommendation is **adopted** by:

21/09/2020

David Gainsford
Executive Director
Infrastructure Assessments

Appendices

Appendix A – List of referenced documents

1. **Modification Report**

   https://www.planningportal.nsw.gov.au/major-projects/project/9976

2. **Submissions**

   https://www.planningportal.nsw.gov.au/major-projects/project/9976

3. **Response to Submissions**

   https://www.planningportal.nsw.gov.au/major-projects/project/9976

4. **Environmental Assessment**

   https://www.planningportal.nsw.gov.au/major-projects/project/9976

Appendix B – Statutory Consideration

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

Table 1 | SRD SEPP compliance table

Relevant Sections	Consideration and Comments	Complies
3 Aims of Policy The aims of this Policy are as follows: (a) to identify development that is State significant development	The proposed development is identified as SSD.	Yes
8 Declaration of State significant development: section 4.36 (1) Development is declared to be State significant development for the purposes of the Act if: (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and (b) the development is specified in Schedule 1 or 2.	The proposed development is permissible with development consent and the proposal is for the purpose of an educational establishment with a capital investment value (CIV) in excess of $30 million, under clause 15 (3) of Schedule 1.	Yes

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

The Education SEPP commenced on 1 September 2017 and aims to simplify and standardise the approval process for child care centres, schools, TAFEs and universities while minimising impacts on surrounding areas and improving the quality of the facilities. The Education SEPP includes planning rules for where these developments can be built, which development standards can apply and constructions requirements. The application has been assessed against the relevant provisions of the Education SEPP.

Clause 45(1) of the Education SEPP provides that development for the purpose of a university may be carried out by any person with development consent on land in a prescribed zone. The site is within land zoned B4 Mixed Use under RLEP 2014, which is identified as a prescribed zone in clause 43 of the Education SEPP. As the proposed development is part of the function of the university, it is therefore permissible with consent under the SEPP. Notwithstanding, the proposed development is consistent with the approved concept plan, which prevails to the extent of any inconsistency with any EPI.

Clause 57 requires traffic generating development that involve addition of 50 or more students to be referred to TfNSW (RMS). Although the proposal is unlikely to generate any significant traffic movements, the application was referred to TfNSW (RMS) in accordance with this Clause.

Environmental Planning Policy No. 55 - Remediation of Land

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. The EIS includes a contamination assessment for the site which concludes that the site can be made suitable for the proposed development, subject a number of

recommendations, remediation and validation. A Draft Remedial Action Plan (RAP) was also prepared with the preferred remediation method being to remove contaminated soils. However, there are data gaps as areas under existing buildings could not be accessed for investigation. The Applicant therefore proposes to undertake additional soil sampling following demolition, update the RAP as necessary, remediate the site and carry out validation.

The Department is satisfied that subject to the imposition of conditions, including additional investigations and updates to the RAP as necessary, remediation in accordance with the RAP, and validation, the site can be made suitable for the proposed use and will not result in unacceptable contamination risks.

The Department recommends conditions relating to additional site investigations, remediation and other associated conditions as recommended by the EPA.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

In accordance with the requirements of the SEARs, consideration has been given to SEPP 33. SEPP 33 aims to identify proposed developments for the purpose of industry or storage with the potential for significant off-site impacts, in terms of risk and or offence (odour, noise). A development is defined as potentially hazardous and / or potentially offensive, if, without mitigating measures in place, the development would have a significant risk and/ or offence impact on off-site receptors.

The information provided with the application as submitted indicted the quantities of dangerous goods to be stored on the site would result in the development being potentially hazardous under the provisions of SEPP 33.

However, in the RtS the Applicant subsequently revised the dangerous goods storage quantities to be below the screening threshold quantities in the Department's *Applying SEPP 33* and as such the proposed development is not potentially hazardous under SEPP 33 and the provisions of SEPP 33 do not apply.

Conditions have been recommended to ensure the development does increase the storage of dangerous goods and become potentially hazardous following approval and to ensure all chemical fuels and oils are appropriately stored in accordance with relevant standards.

Draft State Environmental Planning Policy (Remediation of Land)

The Draft Remediation SEPP will retain the overarching objective of SEPP 55 promoting the remediation of contaminated land to reduce the risk of potential harm to human health or the environment.

Additionally, the provisions of the Draft Remediation SEPP will require all remediation work that is to carried out without development consent, to be reviewed and certified by a certified contaminated land consultant, categorise remediation work based on the scale, risk and complexity of the work and require environmental management plans relating to post-remediation management of sites or ongoing operation, maintenance and management of on-site remediation measures (such as a containment cell) to be provided to council.

The Department is satisfied that the proposal will be consistent with the objectives of the Draft Remediation SEPP.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

SHC SREP provides planning principles for development within the Sydney Harbour catchment. The site is located within the Sydney Harbour Catchment area. The SHC SREP does not include any matters for consideration in the assessment of development applications within the Sydney Harbour Catchment. Nevertheless, the proposal is consistent with the Planning Principals for the Sydney Harbour Catchment and will not have any significant adverse impact on the catchment as does not result in any adverse ecological impacts and includes measures to improve stormwater management and runoff from the site.

Draft State Environmental Planning Policy (Environment)

The Draft Environment SEPP is a consolidated SEPP which proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property. Once adopted, the Draft Environment SEPP will replace seven existing SEPPs, including the Sydney Harbour Catchment REP. The proposed SEPP will provide a consistent level of environmental protection to that which is currently delivered under the existing SEPPs. Where existing provisions are outdated, no longer relevant or duplicated by other parts of the planning system, they will be repealed.

Given that the proposal is consistent with the provisions of the existing SEPP that is applicable, the Department concludes that the proposed development will generally be consistent with the provisions of the Draft Environment SEPP.

Ryde Local Environmental Plan (RLEP) 2014

The RLEP 2014 aims to encourage the development of housing, employment, infrastructure and community services to meet the needs of the existing and future residents of the Ryde LGA. The RLEP 2014 also aims to conserve and protect natural resources and foster economic, environmental and social well-being.

The Department has consulted with Council throughout the assessment process and has considered all relevant provisions of the RLEP 2014 and those matters raised by Council in its assessment of the development (**Section 5**). The Department concludes the development is consistent with the relevant provisions of the RLEP 2014. Consideration of the relevant clauses of the RLEP 2014 is provided in **Table 2**.

Table 2 | Consideration of the RLEP 2014

SLEP 2012	Department Comment / Assessment
Clause 2.1 Land Use Zones	The site is zoned B4 Mixed Use. The proposed development includes an educational establishment and commercial premises, both of which are permissible uses with consent, including “to ensure employment and educational activities within the Macquarie University campus are integrated with other businesses and activities”.
Clause 5.10 Heritage conservation	The Department has considered the potential heritage impacts in **Section 6.4** of the report and is satisfied the proposal would not result in any adverse outcomes for heritage conservation.

Clause 6.2 Earthworks	The Development includes bulk excavation. The Department is satisfied the earthworks will not result in adverse drainage or soil stability outcomes, will not affect the future use of the land or result in adverse impacts on any waterway, catchment or environmentally sensitive area. Conditions have been recommended to ensure appropriate remediation and disposal of excavated soil, minimise amenity impacts during the works, and avoid harm to relics.
Clause 6.4 Stormwater Management	The Department is satisfied that stormwater would be managed appropriately in accordance with this clause.
Clause 6.6 Environmental Sustainability	ESD measures are considered in **Sections 4 and 6.1**, initiatives to reduce car dependency are considered in **Section 6.2** and contamination is considered in **Section 6.4**. The Department is satisfied the proposal is consistent with the principles of best practice environmentally sensitive design having regard to the matters under the clause.

Other Policies

In accordance with Clause 11 of the SRD SEPP, Development Control Plans do not apply to State significant development. Further, the provisions ordinarily addressed in DCPs are addressed in the approved Concept Plan which prevails.

Appendix C – Recommended Instrument of Consent