

APPENDIX A

RIDBC CENTRE FOR EXCELLENCE (SSD 10451) CULLODEN ROAD, MACQUARIE UNIVERSITY RESPONSE TO SUBMISSIONS

RESPONSE TO DPIE KEY ISSUES AND AGENCY AND COUNCIL SUBMISSIONS

Department of Planning, Industry & Environment Key Issues

The following sets out our response to the Department's key issues as included in its letter dated 21 December 2020.

Issue	Response
Relationship of the components forming part of the State significant development	
The Department requires you to provide additional evidence that every component in the development sufficiently relates to the proposed use of the school for the entire proposal to qualify as a State significant development.	<p>To qualify for SSD status, a development need only, and can only, satisfy a single criterion under Schedule 1 of the <i>State Environmental Planning Policy (State and Regional Development) 2011</i>. In this instance the development qualifies as SSD by being <i>development for the purpose of a new school (regardless of the capital investment value)</i> under clause 15(1).</p> <p>Further due to other services RIDBC provides the development is able to satisfy clauses 14(b) or 14(c) of Schedule 1 as either a <i>medical centre</i> (based on its standard instrument definition) or a <i>health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute)</i>, respectively, with a CIV of more than \$30 million.</p> <p>The development cannot however qualify as SSD multiple-times over.</p> <p>Notwithstanding, the primary focus of the RIDBC is its school and educational functions and services it provides to children. It is for this reason the school provision at clause 15(1) was determined as the appropriate approach to determining the approval pathway and categorisation of development.</p> <p>This has been accepted by the Department from the SEARs Request phase onwards to now beyond exhibition of the application.</p> <p>Clause 8(2) of <i>State Environmental Planning Policy (State and Regional Development) 2011</i> in relation to the Declaration of SSD states, <i>if a single proposed development the subject of one development application comprises development that is only partly State significant development declared under subclause (1), the remainder of the development is also declared to be State significant</i></p>

	<p><i>development.</i> The Director-General may however exclude the remainder of a development that is determined not to sufficiently relate to the State significant development. This determination was not made at the issue of the development's SEARs, and the whole of the development was determined as SSD on the basis of the new school.</p> <p>To clarify, the long-standing and primary focus of RIDBC's organisational model is driven by the objects of the <i>Royal Institute for Deaf and Blind Children Act 1998</i> under which the principal object of the Institute is the advancement in life, to the greatest extent practicable, of deaf and blind children.</p> <p>All actions undertaken by RIDBC, whether research, treatment, educational, academic and ancillary administrative functions are all co-dependent and supportive in meeting this objective. Being focussed on deaf and blind children, the RIDBC organisation has historically been co-located with the school function.</p> <p>The RIDBC organisation would most readily be described as being school-focussed and school-oriented. More recently, RIDBC has been focussed on the teaching or education of academics, with a closer relationship to academia for research and other advances in the treatment of deaf and blind children, as well as adults.</p> <p>This link is made obvious with the decision to relocate all school, education, research-related, treatment and administrative functions to the same site and significantly invest in a consolidated development at Macquarie University.</p>
<p>In this regard, the Department recommends that a breakdown of the Capital Investment Value is provided, apportioning amounts to each component of the development to demonstrate that the school is the predominant component of the proposal.</p>	<p>We believe a breakdown of the CIV is not the relevant measure to determine whether the development of a new school is SSD or not. This is because any new school development, despite its CIV, is automatically SSD. This is also despite its size or the proportion of CIV of other uses associated with the school that then become part of the same SSD. There is no requirement that these be ancillary to the new school purpose or that the school be the predominant component.</p> <p>Notwithstanding, we presented the GFA breakdown (arguably a more relevant measure of the size or proportion of the mix of uses making up the RIDBC development in this instance) as part of the EIS. In summary, this showed the total GFA to be 10,475m2 of which academic uses (including the school) comprised 7,801m2 or 74.5% of the development. The school-related uses alone comprised about 42.5% of the academic component. The school-related uses alone are</p>

	about a third of the overall GFA, noting the external spaces related to the school are not calculated as GFA and area devoted to school uses would be significantly greater. As noted in the GFA table, commercial-oriented floor space provides for the smallest component of gross floor area in the development when compared to that of the school and other academic-related GFA when also considered individually.
Assessment against Part 3A Concept Plan approval	
The Department notes that an assessment against relevant requirements of the Macquarie University Concept Plan (MP 06_0016, as modified) has been provided at section 7.1.3 of the EIS. However, the Department requires you to provide an addendum compliance table with the Response to Submissions (RtS) report, that details an assessment against all Concept Plan terms of approval and demonstrates compliance of the proposal against each of those requirements.	See Appendix B . Appendix B adds all matters for consideration, including where these are otherwise 'N/A' or have already historically been addressed by Macquarie University for campus-wide matters.
Inconsistencies between EIS and supporting documentation	
The Department notes that the EIS and the Operational Waste Management Plan have different waste generation estimates. Consequently, you are requested to provide an amended Operational Waste Management Plan or additional documentation with the correct waste generation rates that are expected during the operational phase of the development, consistent with the EIS.	The Operational Waste Management Plan prepared by Elephant's Foot shall be referred to as providing the correct estimate of operational waste given the detailed nature of its assessment.
Updates to the architectural plans	
<p>The Department requires you to submit amended architectural plans including:</p> <ul style="list-style-type: none"> • appropriate height information on all elevations and sections to ensure an appropriate assessment of the proposed maximum building height. The building height (in meters) should be provided considering the greatest vertical distance between existing ground level and the highest point of the buildings. The relative levels (RLs) of the topmost parts of the building should also be included. • a line indicating existing ground level on all elevations and sections. • information on the height of the basement entrance level on elevations and sections to demonstrate the clearance height and that it can accommodate a medium rigid vehicle (MRV). The Department notes the Transport Impact Assessment outlines a "clearance height of up to 4 metres (m)" is provided, however this cannot be verified by the information available in the submitted plans. 	<p>WMK has prepared a revised architectural drawing set for consideration. A clean and marked-up set is provided for approval and assessment purposes, respectively. Please see Appendix C.</p> <p>As requested, these plans, elevations, and sections now show:</p> <ul style="list-style-type: none"> • maximum building heights in metres and RL; • existing ground level; and • the maximum clearance height of the basement entry. <p>The basement has been designed to provide a 3.8m clearance height at entry with a 4.0m height within the basement itself to service the on-site loading dock. This clearance height has the ability to accommodate a Medium Rigid Vehicle (MRV) and has been designed in accordance with Australian Standards, which notes that there is provision for a range of vehicle clearance heights when a facility is being designed specifically for a nominated vehicle type.</p> <p>RIDBC currently uses a contractor for waste collection and this would be maintained for its future site at Macquarie University. Therefore, RIDBC will not be reliant on a third party (e.g. City</p>

	<p>of Ryde) for waste collection and have the ability to provide direction to their nominated contractor as to the size of vehicle that can be brought onto the site.</p> <p>A 3.8m height clearance provides flexibility for a large range of Medium Rigid Vehicle's including waste collection vehicles from RIDBC's existing contractor Suez. The Suez rear collection vehicle has an operational height of 3.4m with a total payload of 9.5t, suitable for use in offices, restaurants and retail outlets. Numerous other waste contractors also have a range of vehicles with an operational height of 3.8m or less which could potentially be available to RIDBC.</p> <p>There are numerous examples of large commercial buildings in the Sydney CBD which accommodate MRV's which have loading dock clearance heights of 3.6m or less, as shown in the table below.</p> <table><tr><th>CBD Building</th><th>GFA (m²)</th><th>Loading dock clearance height (m)</th></tr><tr><td>420 George Street</td><td>60,000</td><td>3.2</td></tr><tr><td>1 Shelley Street</td><td>35,000</td><td>3.2</td></tr><tr><td>Chifley Tower</td><td>85,000</td><td>3.4</td></tr><tr><td>MLC Centre</td><td>94,000</td><td>3.4</td></tr><tr><td>201 Kent Street</td><td>66,000</td><td>3.4</td></tr><tr><td>161 Castlereagh Street</td><td>64,000</td><td>3.4</td></tr><tr><td>1 O'Connell Street</td><td>42,000</td><td>3.4</td></tr><tr><td>383 George Street</td><td>23,000</td><td>3.4</td></tr><tr><td>50 Bridge Street</td><td>97,000</td><td>3.4</td></tr><tr><td>275 Kent Street</td><td>77,000</td><td>3.5</td></tr><tr><td>Darling Park</td><td>44,000</td><td>3.6</td></tr><tr><td>60 Martin Place</td><td>42,000</td><td>3.6</td></tr><tr><td>Darling Quarter</td><td>67,000</td><td>3.6</td></tr><tr><td>8 Chifley Square</td><td>22,000</td><td>3.6</td></tr><tr><td>33 Alfred Street</td><td>35,000</td><td>3.6</td></tr></table>	CBD Building	GFA (m ²)	Loading dock clearance height (m)	420 George Street	60,000	3.2	1 Shelley Street	35,000	3.2	Chifley Tower	85,000	3.4	MLC Centre	94,000	3.4	201 Kent Street	66,000	3.4	161 Castlereagh Street	64,000	3.4	1 O'Connell Street	42,000	3.4	383 George Street	23,000	3.4	50 Bridge Street	97,000	3.4	275 Kent Street	77,000	3.5	Darling Park	44,000	3.6	60 Martin Place	42,000	3.6	Darling Quarter	67,000	3.6	8 Chifley Square	22,000	3.6	33 Alfred Street	35,000	3.6
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<p>The Department notes that the architectural plan set references each room with a specific notation (e.g. D3:1, A2:4 etc.), with the corresponding room schedule detailing the use of each room held separately in the architectural design statement package.</p> <p>The Department requests that you provide a corresponding room schedule in the architectural plan set. This is to ensure that the architectural package clearly demonstrates the use of each room. The corresponding room schedule is to be included as an additional drawing sheet in the architectural plan set.</p>	<p>Following careful consideration of this request, we have concluded that updating the architectural plans to incorporate this level of detail is both unwarranted and unnecessary from an assessment perspective.</p> <p>Our reasoning is that this information is essentially only required to confirm the use of the rooms, their size relative to compliance with relevant standards or minimum area requirements of guidelines, and serve an assessment purpose only. A significant project and program risk arises in the event these plans and schedules form part of the approved stamped drawing set. This would likely (and unnecessarily) have the effect of triggering modifications to the consent through construction certification and prior to occupancy certification, and beyond. This should be avoided.</p>																																																

	<p>Alternatively, the architectural design statement has been refined to provide additional clarity by providing the requested schedule for assessment. We believe this would suffice for the Department's needs without unnecessarily imposing the later risk of modifications. See pages 38-41 and pages 70-75 of the revised Architectural Design Statement</p>
<p>The Department notes that the architectural plan set shows awnings overhanging the boundaries. You must provide additional information, clarifying whether the development includes any works within the public domain (whether there are any awning overhangs).</p>	<p>This is correct. The architectural plan set does show the porte cochere awning overhanging the property boundary to Culloden Road's road reservation. The reason for this is articulated in responses to other matters further below.</p> <p>The plans, sections, elevations now include the dimensions of this overhang.</p> <p>Additionally, a range of public domain works (including footpath, kerb and gutter, tree planting and landscaping) are also included along the frontage of the site and within the road reservation as shown on the architectural and landscape plans.</p>
Earthworks and retaining walls	
<p>The Department notes that the development includes substantial earthworks, in the form of both cut and fill. The EIS outlines the development seeks consent for earthworks, and the Geotechnical Investigation outlines a maximum cut of about 5m and a maximum fill of about 6m. Given this, the Department requests that you submit:</p> <ul style="list-style-type: none"> a separate earthworks plan that accurately shows the extent, depth, volume and balance of cut and fill proposed. details of retaining walls (including top-of-wall heights, bottom-of-wall heights, construction materials and finishes). 	<p>BG&E, the project's structural engineers, have provided a set of drawings to address this matter. Please see these attached as Appendix D.</p>
Traffic and Transport	
<p>The Department notes that City of Ryde Council (Council), in its submission to the EIS, raised significant concerns regarding the impacts of the proposed porte-cochere from Culloden Road. Council's concerns relate to the extent of hardstand surface, dominance of vehicular access and circulation, limited soft landscape planting and lack of definition of the main entry. The Department agrees with these concerns and recommends that you investigate alternative access arrangements to introduce more soft landscaping along this frontage. Otherwise, you should provide sufficient additional justification detailing the unique circumstances of the school and the specific need for the porte-cochere in this configuration.</p>	<p>The porte cochere for the school is designed to consider the additional or unique needs of students attending the facilities and the specific constraints present in the site for the development.</p> <p>During concept design many different options were developed to consider the needs for the new centre and the site's unique constraints. The current design maintains a suitable outcome engineered to provide the necessary safety; required vehicular and pedestrian, and disabled access dimensions and clearances; as well as retention of as many existing trees as possible.</p> <p>These design challenges and need for a balanced outcome was broadly recognised in presentations to, and commentary from, both the Macquarie University Design Review Panel and the State Design Review Panel.</p> <p>Direct access from Culloden Road is necessitated due to emergency vehicle access, if required, to the</p>

	<p>school. The division of access for the school and workplace pavilions aims to reduce potential access conflicts that may arise at some peak times. It also simplifies the corresponding addresses of these components for the different uses of the pavilions and provides an address for each.</p> <p>The entry pathway for vehicles to the school was engineered to best-respond to the existing topography across the Culloden Road streetscape, maintaining or reinforcing a street address and a character responsive to the local area.</p> <p>Central to the design of the entry sequence is the inclusion of eight (8) dedicated specialist taxi spaces. These vehicles are maintained as part of a private fleet dedicated to the students at the school. The spaces are positioned to enable angled reverse parking to support the waiting, alighting and disembarkation of students from these vehicles, noting students are to use the back door of these vehicles and a hydraulic lift.</p> <p>This design sequence acts to position students with the highest needs closest to the front entrance of the school, and furthest away from the path of vehicular travel.</p> <p>The kiss and drop area on the northern-side of the drop-off pathway is intended for more able-bodied students. It is intended that these children disembark from the vehicles and cross the pedestrian crossing under the guidance of dedicated chaperones during peak arrival times.</p> <p>For best-practice safety in design to be achieved, all of the drop-off zone must remain completely column free, with structural elements to be maintained away from areas where children disembark and cross into the safety of the school. The extent of the drop-off area for the school must be covered and protected from the elements, due to the additional needs by students attending the specialist schools.</p> <p>The location of the block and stack of the programme across the site places the protection of the natural amenity (trees and experience of the landscape) as a first priority for the new precinct. The school and workplace pavilions each respond to the existing placement of trees across the site and avoid these areas where possible to enable maximum tree retention.</p> <p>The school programme is situated close to Culloden Road to avoid a grove of existing trees to the south side of the precinct.</p>
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	<p>The metrics relating to the vehicular arrival and drop-off sequence have been engineered to minimise the extent of the development. For this reason, structural columns are positioned at the boundary line, with the architectural response for the canopy causing a 1395mm overhang beyond the existing boundary line. This overhang is designed to further shelter students from the elements and acts to reinforce the Culloden Road streetscape and experience of the new centre through the architecture and definition of the element.</p> <p>The overhang is a direct response of the architectural and functional approaches and cannot be adjusted or moved without significant consequential impact to the streetscape, other parts of the development, or substantive preservation of the pre-existing natural amenity.</p> <p>See also pages 43-47 of the revised Architectural Design Statement which addresses the Culloden Road frontage and canopy, and design designs taken with respect to the canopy, porte cochere, and the public domain interface.</p>
<p>The Department notes that Transport for NSW (TfNSW) and Council have both raised concerns around pedestrian safety, and potential conflicts that may arise between pedestrians and vehicles within basement and porte-cochere areas. In this regard, you should provide additional information to demonstrate that pedestrian safety and connectivity have been prioritised throughout the development.</p>	<p>Pedestrian safety and priority has been at the forefront of thinking in the design of the proposed RIDBC facility, specifically the ground plane and public domain. Measures that have been incorporated in the proposal to address this issue are as follows:</p> <ul style="list-style-type: none"> • Construction of new driveway access points on Culloden Road are to be consistent with City of Ryde Council standards, including the prioritisation of pedestrian movements over vehicle activity. The driveways will be an area which is designed for pedestrians, across which vehicles can pass slowly. Drivers of vehicles will be guided and encouraged to give way to pedestrians on the footpath as required by law. • Driveway access points are to be angled at 90 degrees to the roadway to maximise the sight distances for drivers to view pedestrians walking along Culloden Road • The design includes the provision of a zebra crossing within the school porte-cochere to provide for safe pedestrian access • The design has been closely worked through with Macquarie University (MQU) to ensure integration of the building and public domain with the broader MQU campus pedestrian network, including provision of connections to nearby public transport

	<ul style="list-style-type: none"> A Green Travel Plan has been developed to encourage sustainable transport modes to reduce the number of vehicle movements associated with the development.
A Green Travel Plan has not been submitted with the application. Whilst the Department acknowledges the development is wholly within the Macquarie University campus, the facility is a separate entity and requires its own Green Travel Plan, which should form part of the RtS.	A Green Travel Plan was submitted as part of the exhibited TIA.
The Department notes that Council has requested a queueing analysis to determine whether the length of the pick-up/drop-off areas is sufficient to support the maximum vehicle queues generated during the peak periods, without spilling over onto Culloden Road. The Department requires you to consider Council's comments and provide a queueing analysis as an addendum to the Transport Impact Assessment.	A queueing analysis has been undertaken and confirms that even under an absolute worst case scenario where the maximum queue in the busiest hour of the day occurs at the entry to the first car parking space, there is sufficient storage within the porte-cochere such that vehicle queues will not extend back onto Culloden Road. Further details are provided in the responses to City of Ryde Council submission.
Tree Removal and Landscaping	
The Department notes that Council has raised significant concerns regarding the environmental and visual impacts of the proposed tree removal, with particular concern regarding lack of a tree canopy along the Culloden Road frontage. The Department agrees with these concerns and requires you to investigate opportunities for further tree retention within the site.	<p>Alterations to the design of the entry driveway off Culloden Road has enabled the retention of two additional mature trees along this frontage, namely T2394 and T2395 - both Lemon-scented Gums. T2394 is a large sized tree with a height and spread of approximately 20m whose retention should have a significantly positive impact on the Culloden Road frontage. Also, adjustments to the design of the outdoor play area to the west of the school have enabled the retention of T2457, a Tallowwood of 20m in height.</p> <p>See Appendix E which includes updated landscape plans, landscape statement and cover letter by Oculus.</p> <p>Appendix F is a statement by Australis Tree Management with respect to the positive contribution the retention of these three trees will make in relation to the green buffer and edge to the development and the retention of tree canopy.</p>
The proposed landscape strategy includes trees planted over underground structures. For example, the courtyard in the consulting building includes a feature tree (<i>Acer palmatum</i> 'Senkaki' 'Coral Bark Maple', mature size 6m x 5m) above the on-site detention tank. There are no details as to the depths of the soil for trees planted on structures. The Department requires you to provide additional information by including additional sections in the landscape plans for any planting on structures (including appropriate dimensions) to ensure soil depths are suitable for successful planting.	To address this matter, additional detail has been provided in relation to all planting on structure. This includes the CSB courtyard where an OSD tank is located underneath. The top of the tank has been shown on the relevant section and an additional drawing provided with detailed sections (L-208) showing how the top of the tank is set down 1.2m below the finished surface level of the courtyard to enable tree planting on top. Two additional drawings (L-209 & 210) have been added to show how the planters on the edge of the CSB level 1 terraces work and the soil depth provided. See Appendix E .
The Department notes that the civil drawing set shows two swales proposed as part of the stormwater strategy to assist in the management of overland flow.	The proposed swale located in the southern part of the site to capture overland flow has been shown on the landscape plans. This has been aligned to

<p>The Infrastructure Management Plan further outlines that they are 40 square meters (sqm) and 8sqm in size, approximately 0.15m deep with a 100mm vegetation height and a 1% slope. The swales are to be vegetated but are not shown on landscape or architectural plans. The Department requires you to submit amended landscape plans and architectural plans to accurately show the location, extent and details of vegetation for the swales to ensure consistency across documentation.</p>	<p>minimise impacts on existing trees and will be constructed based on the arborist's advice with shallow excavation of the upslope side and minor filling to create a berm on the downslope side of the swale. The two temporary basins proposed in the southern part of the site have also been shown on the landscape plans and located to avoid major impacts on existing trees. Refer also to civil engineer's details for the swale and temporary basin details. See both Appendix E and Appendix G for the landscape and engineering plan sets, respectively.</p>
Child Care Planning Guideline	
<p>The Department notes that the EIS includes an assessment against State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the Child Care Planning Guideline 2017. In this assessment, it is outlined that compliance is achieved with regards to unencumbered indoor and outdoor play space. However, there are no figures or plans verifying the unencumbered play areas.</p>	<p>The assessment in the EIS was based on the dimensions shown on the submitted architectural plan set and architectural design statement.</p> <p>Notwithstanding, WMK has further provided drawings and schedules to confirm compliance is achieved.</p> <p>See page 112 of the refined Architectural Design Statement as part of Appendix C as well as drawing A960 A.</p>
<p>Consequently, the Department requires you to provide an addendum to the EIS that shows the entire floor plan for the pre-school, with the unencumbered spaces hatched to demonstrate compliance.</p>	<p>As above, see the refined Architectural Plans (in particular A960 A) and a refined Architectural Design Statement – Appendix C.</p>
Playing Field	
<p>The Department notes that the school does not include any playing/sport field, with the primary outdoor play area including hardstand surfaces (handball court, accessible netting and multi-purpose half court). The Department requires you to provide additional justification as to why there is no requirement for a formal playing field with a grass surface.</p>	<p>No playing field is proposed, as the per the submitted documentation.</p> <p>Whilst there are playing fields at the existing North Rocks school campus, these are only sporadically used and for special purposes tied to teaching activities rather than any formal or informal sports.</p> <p>There is ample formal play space for sports or larger formal games located nearby, including at Marsfield Park across Culloden Road from the site, and at the Macquarie University Sports Precinct over the M2 Motorway further to the north along Culloden Road. This precinct contains five playing fields of various sizes and which are available at various times of the day, week and year.</p> <p>Duplication of sports fields is not considered relevant in these circumstances.</p>

Agency and Council Submissions

The following sets out our response to the Agency and Council submissions received by the Department.

Ausgrid	
Issue	Response
Ausgrid notes the requirement for additional load to the development by installation of a new substation and recommends the proponent make the necessary connection application to Ausgrid as soon as practical.	Noted.
Fire and Rescue NSW	
Issue	Response
FRNSW have reviewed the documentation that was provided in support of the development and provide the following comments and recommendations for consideration:	See below.
FRNSW are satisfied with the risk and hazard aspect of the proposal.	Noted.
That a comprehensive Emergency Response Plan (ERP) is developed for the site.	Noted. This is expected to be conditioned.
That the ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents or potential hazmat incidents.	Noted.
That the ERP details the appropriate risk control measures that would need to be implemented to safely mitigate potential risks to the health and safety of firefighters and other first responders. Such measures will include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures to be instigated and minimum evacuation zone distances.	Noted.
Other risk control measures that may need to be implemented in a fire emergency (due to any unique hazards specific to the site) should also be included in the ERP.	Noted.
That two copies of the ERP (detailed in recommendation 1 above) be stored in a prominent 'Emergency Information Cabinet' located in a position directly adjacent to the site's main entry point/s.	Noted.
Once constructed and prior to operation, that the operator of the facility contacts the relevant local emergency management committee (LEMC). The LEMC is a committee established by Section 28 of the State Emergency and Rescue Management Act 1989. LEMCs are required to be established so that emergency services organisations and other government and non-government agencies can proactively develop comprehensive inter agency local emergency procedures for significant hazardous sites within their local government area. The contact details of members of the LEMC can be obtained from the relevant local council.	Noted.
It is recommended that an emergency services information package (ESIP) be developed for the site and access to this document be provided to emergency service organisations.	Noted.

FRNSW notes that a number of performance solutions are identified in the BCA report (prepared by Blackett, Maguire & Goldsmith, 8th October, 2020). The identified performance solutions are required to be addressed and approved through consultation with FRNSW and the submission of a fire engineering brief questionnaire (FEBQ).	Noted.
Heritage NSW	
Issue	Response
I have reviewed the Aboriginal cultural heritage report prepared by Extent Heritage, dated November 2020 (the report). I note that no Aboriginal objects were located in the proposal area through the assessment that has been undertaken by Extent. I also note that the assessment identified cultural significance of the nearby Lane Cove River and the importance of early Aboriginal and settler interaction at the Field of Mars Common.	Noted. No Aboriginal objects were found within the development site.
An Aboriginal Cultural Heritage Interpretation Strategy Plan should be developed and implemented for the project in consultation with the registered Aboriginal parties. This plan should recognise and acknowledge the continued Aboriginal connection to the project area. The plan should also facilitate ongoing Aboriginal community involvement and engagement in the conservation and celebration of Aboriginal heritage values associated with the area.	<p>It is not clear why an Aboriginal Cultural Heritage Interpretation Strategy Plan would need to be developed and implemented given there is no identified tangible or intangible continued Aboriginal connection to the development site.</p> <p>We do however note Recommendation 4 of the Extent ACHAR states: <i>Based on the intangible cultural values assessment made during the Macquarie University Campus-Wide ACHAR (Extent, 2020), it is recommended that interpretation be considered for the study area. Suggestions for interpretation from the RAPs consulted included the planting of more native plants and engravings and placards to highlight the Aboriginal history of the area.</i></p> <p>This and Heritage NSW's commentary however appears to seek that RIDBC (and the RIDBC site) accommodates (the beginnings of) a MQU campus-wide Aboriginal interpretation strategy for the area, despite no prior SSD by or for Macquarie University identifying any Aboriginal cultural heritage link or similar interpretation strategy requirement. This is the first SSD (of many recent SSDs) at Macquarie University to receive commentary of this type from Heritage NSW (and its predecessors) despite the findings of the subject ACHAR being consistent with the ACHARs for these other recent SSD projects of no tangible or intangible continued Aboriginal connection.</p> <p>RIDBC is not the landowner of the site and has no further jurisdiction over the campus for an Aboriginal Cultural Heritage Interpretation Strategy Plan. The appropriate vehicle for a proportionate and holistic response to the interpretation of Aboriginal culture at the campus would be through Macquarie University at some future point and in</p>

	<p>the context of any finds that may result in the further update to the campus-wide ACHAR.</p> <p>In response to Recommendation 4 of Extent's ACHAR, at a project-based scale RIDBC is willing to provide further native planting and art or other interpretive elements within the landscape and design. The preference is for this response to be approved as part of the DA without the development of any strategy or other ancillary plans. It is felt this is an appropriate site and project-based scaled response in the context of the results of the ACHAR and the minimal response received from RAPs during its preparation.</p> <p>Oculus has further considered the type or nature of this project-based response in its covering letter under Appendix E. The following is an extract of text on the recommended approach:</p> <p><i>Suggestions for interpretation from the RAPs consulted included the planting of more native plants and engravings and placards to highlight the Aboriginal history of the area</i></p> <p><i>Our response to Indigenous Cultural Heritage is outlined in section 1.5 of the Landscape Design Report. This is based around six key pillars:</i></p> <ul style="list-style-type: none"> • <i>Acknowledging the traditional custodians of the land;</i> • <i>Indigenous engagement (through the ACHAR process);</i> • <i>Utilising Biophillic and Passive Design principles;</i> • <i>Creating outdoor gathering spaces as part of the landscape design;</i> • <i>Providing opportunities for Indigenous gardens; and</i> • <i>Providing opportunities for Indigenous artwork.</i> <p><i>In addition to creating a number of outdoor gathering spaces as part of the landscape design, there will be opportunities for further responses to Indigenous Cultural Heritage by means of use of colours, forms, patterns and naming of the key external spaces associated with the school and CSB. These will be further explored as part of the detailed design.</i></p> <p><i>In relation to use of Indigenous plants, we are adopting a number of approaches including:</i></p> <ul style="list-style-type: none"> • <i>Use of locally endemic vegetation within the landscape design, particularly with the tree replacement strategy in the landscape areas around the buildings; and</i> • <i>Use of culturally significant, edible and medicinal plants within the landscape design, particularly in the landscape</i>
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	<p><i>courtyards within both buildings and the other external spaces immediately adjacent to the buildings. The use of such plans within the school environment will provide opportunities for education and learning associated with Indigenous plants.</i></p> <p><i>In terms of artwork that might reference Indigenous Cultural Heritage, it is proposed to integrate this with the architecture of the building by incorporating a relief or imagery into one of the external concrete walls at the base of the building.</i></p> <p>Accordingly, it is our intention to provide additional material documenting the approach to the above via an appropriately worded condition of consent. The relevant landscape and architectural drawings would need to be provided prior to the relevant construction certificate (in this instance related to the landscaping works phase of the development).</p>
NSW Department of Planning, Industry & Environment (Biodiversity & Conservation Division)	
Issue	Response
<u>Biodiversity</u> A Biodiversity Development Assessment Report (BDAR) waiver was approved on 24 April 2020.	Noted.
<u>Flooding</u> EES has reviewed the relevant flood risk management report and all issues have been adequately addressed, therefore, there are no outstanding requirements in terms of flood risk management.	Noted.
NSW EPA	
Issue	Response
Based on the information provided, the proposal does not appear to require an environment protection licence under the Protection of the Environment Operations Act 1997. Furthermore, the EPA understands that the proposal is not being undertaken by or on behalf of a NSW Public Authority nor are the proposed activities other activities for which the EPA is the appropriate regulatory authority. <p>While the EPA does not have regulatory involvement in the projects, we recommend that the Environmental Impact Statement (EIS) should address the following:</p>	Noted. See below.
<u>Waste management</u> The EIS should estimate volumes of waste generated on the site and identify waste streams and disposal options for all waste including liquid waste, wastes classified as hazardous and wastes containing radiation. Waste management should consider the prevention of pollution, minimising resource use, improving the recovery of materials from the waste stream and ensuring the appropriate disposal of waste.	This has been completed and lodged – see the Elephant Foot’s Operational Waste Management Plan included in the exhibition version of the EIS at Appendix P.
<u>Land contamination</u> An assessment in accordance with State Environmental Planning Policy 55 (Remediation of Land) of land contamination resulting from past land-use activities	This has been completed in various places within the EIS package. See sections 2.7, 3.2.7 and 7.7 of the EIS (as set out in the SEARs Checklist) as well

must determine, whether the land is suitable for the proposal or will require remediation. The EPA should be notified under section 60 of the Contaminated Land Management Act 1997 of any contamination identified that meets the triggers in the Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997.	as at Appendix H – the Detailed Site Investigation prepared by JBS&G.
NSW Rural Fire Service	
Issue	Response
The New South Wales Rural Fire Service has reviewed the Environment Impact Statement and supporting documentation and advise that there are no specific concerns with the proposal relating to bush fire protection.	Noted.
Sydney Metro Corridor Protection	
Issue	Response
Sydney Metro has reviewed the application. The proposed development site is not in proximity to the Metro North West Line rail corridor. It will be situated within the western portion of the MQU campus near the junction of Culloden Road and Gymnasium Road. As such, Sydney Metro has no comments.	Noted.
Sydney Water	
Issue	Response
<u>Water Servicing</u> <ul style="list-style-type: none"> • Site has frontage to 150mm (closest to site boundary) and 250mm main in the opposite side of Culloden Rd. • The 150mm main is primarily supplied from a 375mm water main located 870m south west of the site in Agincourt Rd (Mobbs Hill Supply zone). • Existing pressures and flows on the 150mm water main are adequate to service the proposed development. • Any connection request to the 250mm water main will require further justification by the developer at the section 73 application phase. 	Noted.
<u>Wastewater Servicing</u> <ul style="list-style-type: none"> • The immediate 225mm sewer should have adequate capacity to service the development. • Extensions may be required. <p>The developer is to provide supporting detailed hydraulic calculations at the section 73 applications phase.</p>	Noted.
Transport for NSW / RMS	
Issue	Response
The proposed development will generate additional pedestrian movements in the area. Pedestrian safety is to be considered in the vicinity.	<p>Pedestrian safety and priority has been at the forefront of thinking in the design of the proposed RIDBC facility, specifically the ground plane and public domain. Measures that have been incorporated in the proposal to address this issue are as follows:</p> <ul style="list-style-type: none"> • Construction of new driveway access points on Culloden Road are to be consistent with City of Ryde Council standards, including the prioritisation of pedestrian movements over vehicle activity. The driveways will be an area

	<p>which is designed for pedestrians, across which vehicles can pass slowly. Drivers of vehicles will be guided and encouraged to give way to pedestrians on the footpath as required by law.</p> <ul style="list-style-type: none"> • Driveway access points are to be angled at 90 degrees to the roadway to maximise the sight distances for drivers to view pedestrians walking along Culloden Road • The design includes the provision of a zebra crossing within the school porte-cochere to provide for safe pedestrian access • The design has been closely worked through with Macquarie University (MQU) to ensure integration of the building and public domain with the broader MQU campus pedestrian network, including provision of connections to nearby public transport • A Green Travel Plan has been developed to encourage sustainable transport modes to reduce the number of vehicle movements associated with the development.
<p>It is noted that a Green Travel Plan has been prepared as part of the development application, It is requested that the applicant updates the Green Travel Plan to increase the mode share of public transport and active transport for all staff, students and visitors. The plan should be prepared in consultation with TfNSW. This plan should include a mechanism to monitor the effectiveness of the measures of the plan. The applicant shall submit a copy of the updated Green Travel Plan for the endorsement of TfNSW via sco@transport.nsw.gov.au, prior to the issue of the Occupation Certificate.</p> <p>The plan should be reviewed and updated annually in consultation with the aforementioned stakeholders and provide an Implementation Strategy that commits to specific management actions, including operational procedures to be implemented along with timeframes. The plan (as reviewed and updated annually) should be implemented by the applicant for the life of the development.</p>	<p>As requested, a more detailed Green Travel Plan can be prepared prior to the occupation of the RIDBC building detailing the items noted in the TfNSW response. Accordingly, no objection is raised to the imposition of an appropriately worded condition of consent.</p>
<p>A Construction Pedestrian Traffic Management Plan (CPTMP) detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council for approval prior to the issue of a Construction Certificate.</p>	<p>Noted. As requested, a detailed Construction Pedestrian Traffic Management Plan (CPTMP) can be prepared prior to the construction of the RIDBC building detailing the items noted in the TfNSW response. Accordingly, no objection is raised to the imposition of an appropriately worded condition of consent.</p>

City of Ryde Council	
Issue	Response
Strategic Planning / Urban Design	
It is noted that the only interface that the proposal has to a public street is the Culloden Road frontage. The other street interfaces of the proposal (e.g. West Precinct Road and Gymnasium Road) are internal roads within the university campus. Therefore, the comments below focus on the impacts of the proposal on the Culloden Road public domain interface:	
Strategic Planning / Urban Design - Tree Removal	
<p>Culloden Road is currently characterised by large canopy trees which contribute significantly to the streetscape character and landscape value of Culloden Road. Aerial images in the Architectural Design Statement indicate that these trees were already well established back in the 1980s. The proposal seeks to remove a large number of the existing trees along the Culloden Road frontage and replace them with medium-size trees. The scale of tree loss near the Culloden Road frontage is detrimental to the leafy character of the street and will adversely impact on the local neighbourhood character. It does not follow the design consideration in the 'Design Guide for Schools' by Government Architect NSW:</p> <p><u>1. Context, built form and landscape</u> Respect and respond to its physical context, neighbourhood character, streetscape quality and heritage.</p> <p>Respond to its natural environment including scenic value, local landscape setting and orientation.</p> <p>Retain existing built form and vegetation where significant.</p>	<p>As a general comment in relation to this and other comments made by Council, direct consultation with Council with respect to the design rationale (and other aspects of the proposed development) was sought and the opportunity given to discuss the development ahead of lodgement of the DA. Council unfortunately opted to await the receipt of the DA package as part of exhibition process. Note, a separate meeting with Council's traffic engineers was undertaken, as noted in the EIS.</p> <p>Discussion, consistent with that had with the Macquarie University Design Review Panel, as well as the State Design Review Panel, would have facilitated a better understanding of the functional and design objectives of the development, including a strong desire to retain as many existing and mature canopy trees as possible to 'borrow' the existing landscape and amenity with which to enhance the development.</p> <p>In fact, Macquarie University in recognising the value and merits of tree and canopy retention provided for a larger site in order to concurrently facilitate a development in keeping with the development opportunity provided for under the approved Part 3A Concept Plan whilst retaining as many trees as possible.</p> <p>Through comments made by Council and the Department in particular, a further three mature trees have been able to be retained as part of the development – now 169 trees with 118 to be removed. These serve to maintain a higher degree of green canopy, a strong characteristic of this part of Culloden Road, noting also that Culloden Road is a long roadway with a mixed and inconsistent character. Australis Tree Management has provided comment (at Appendix F of this response package) to confirm the benefits of this revision to the scheme and added canopy retention.</p> <p>The existing trees and canopy cover of the site when viewed from Culloden Road frontage is somewhat sparse in the majority of the area for the proposed works. The retention of these three additional trees, the retained trees, the proposed planting by Oculus (whether addressing Culloden Road or within the wider site), and the general</p>

	<p>Macquarie University policy of replacement planting at a rate of greater than 1:1 collectively has the potential benefit of contributing to canopy replacement over time. Increased canopy cover will further aid in the reduction of land surface temperatures and enhance the visual amenity of the site when viewed from the public domain.</p> <p>Further, and notwithstanding, Macquarie University is exempt from Council permits under Part 9.5 of the Ryde DCP. No trees at the university are listed by Council as significant or requiring protection or preservation. Trees in this part of the campus and at this site are planted native trees and not remnant with any biodiversity or ecological significance. Macquarie University's policy for tree removal includes offsetting and replacement planting of no less than 1:1.</p> <p>The site is a long-standing approved development site under the Part 3A Concept Plan and tree loss of some form is inevitable. Tree replacement as part of the proposed landscape plan (see revision at Appendix E of this package) will result in a suitable green edge and canopy retention and replacement to Culloden Road.</p> <p>In addition to the green canopy character in this part of Culloden Road, it fair to also indicate that the existing character is also one of unformed verges, and discontinuous and incomplete access along the road reserve which will also be addressed by the development consistent with the 'Design Guide for Schools'. The proposed development will resolve these matters and result in a development that addresses the street with a proportionately-scaled development, formalises access and landscaping at the Culloden Road edge and interface, and improves safety, security, and territorial reinforcement through design.</p>
Strategic Planning / Urban Design - Vehicle Access	
<p>The proposed interface to Culloden Road is dominated by vehicle access, circulation and parking areas with a 95m long drop-off zone running parallel to the street in front of the school entry. The amount of at-grade car parking in front of the school building results in a large extent of hardstand surface and limits the opportunity for soft landscape planting. The school entry is setback by approximately 18m from the public footpath and located behind the drop-off zone in an undercroft area.</p> <p>It is a poor outcome for the public domain interface as the design will adversely impact on the amenity of the public domain with a large extent of hardstand area for vehicles, reduce the legibility and visibility of the school entry and compromise the wayfinding for first-time visitors. The configuration of the drop-off zone and car</p>	<p>As noted above in the response to the Department's shared concern about the location and design of the porte cochere is designed to consider the additional or unique needs of students attending the facilities and the specific constraints present in the site for the development.</p> <p>During concept design many different options were developed to consider the needs for the new centre and the site's unique constraints. The current design maintains an suitable outcome engineered to provide the necessary safety, required vehicular and pedestrian, and disabled access dimensions and clearances, as well as retention of as many existing trees as possible.</p>

<p>parking will also increase the conflict between vehicles and pedestrians as the current design clearly prioritises vehicle circulation and car parking over pedestrian movements and amenity.</p> <p>The current design of Culloden Road interface does not align with the following design consideration in the 'Design Guide for Schools' by Government Architect NSW:</p> <p>3. Accessible and inclusive Provide school frontages and entrances that are visible, engaging and welcoming.</p> <p>4. Health and Safety Prioritise pedestrians and avoid conflicts between vehicles and people.</p> <p>7. Aesthetics Create engaging and attractive environments. Provide an engaging environment for pedestrians visually and materially along public street frontages.</p>	<p>Without repeating the previous response to this matter, the design response from an architectural and landscape standpoint is one which seeks to provide both a legible address and visible school entry with a landscaped edge and tree canopy buffer, despite Council's assertions. The layout of the porte cochere has been carefully designed in consultation with RIDBC and the traffic engineer to avoid conflicts and the ensure DDA compliance, traffic and parking-related compliance, whilst providing for a safe and efficient drop-off and pick-up point.</p> <p>Given the special needs requirements for the school's student population, the layout, design and configuration provides the minimum necessary hard stand area possible to accommodate the school's population.</p> <p>The revised landscape plans (see Appendix E) demonstrate that a landscaped edge (coupled with retained canopy and new trees) is able to be achieved.</p> <p>The overall frontage of the school to Culloden Road does provide for a welcoming, functionally compliant, and landscaped edge and interface which formalises a street frontage (including footpaths and access) not presently available at the site.</p>
Strategic Planning / Urban Design - Recommendations	
<p>Relocate the drop-off zone to either side of the school building, so that its visual impact can be mitigated by existing clusters of trees to the north or south of the development.</p>	<p>As above set out above, a complete redesign of the development is both impractical at this point and would not likely resolve the amount of tree loss. To reorient the design would have significant consequential impacts upon the balance of the development and its spatial organisation. There is no guarantee that this course of action would definitively result in any greater levels of tree or canopy retention than presently able to be achieved. Note, the current design has achieved a further retention of three trees - now 169 retained trees.</p>
<p>Orient the drop-off zone to be perpendicular to Culloden Road instead of being parallel to the frontage. By reconfiguring and reorienting the drop-off zone, it will significantly reduce its impact to Culloden Road, increase the presence of the school building and potentially allow more existing trees along the frontage to be retained.</p>	<p>As above.</p>
<p>Reduce the number of vehicle access point off Culloden Road to a single access point combining entry and exit.</p>	<p>It is critical for the effective function of the RIDBC school that an on-site vehicle pick up / drop off facility is provided. The most space efficient way of facilitating this is to provide separate entry and exit driveways from the adjacent street so that vehicles can travel in a single direction through the porte-cochere without having to turn around.</p>

	<p>Should a single vehicle access point be provided off Culloden Road, combining entry and exit, the extent of road pavement required would increase significantly to allow for vehicles to turn around within the site. This would then in turn significantly compromise the design.</p> <p>A single driveway entry/exit would also significantly increase the width of the driveway crossover required on Culloden Road when compared to a single entry or exit driveway. This increased crossover width would be required to facilitate the simultaneous entry and exit of vehicles into the site, and therefore detract from the pedestrian environment along Culloden Road.</p>
Where large existing trees are presented, maintain a minimum street setback of approximately 15m to assist with the retention of some trees; where significant trees are unaffected, it is encouraged to reduce the street setbacks, increase the presence of the school and allow the building to address the street.	<p>This comment in part appears contradictory, given earlier comments about the school's presentation to Culloden Road.</p> <p>In response, this appears to imply that a staggered and stepped setback arrangement is encouraged. This would, as per comments above, result in either a dysfunctional layout for the porte cochere, or its equivalent, or a redesign which would be impractical at this point in time and be unlikely to significantly improve the development's interface with Culloden Road, nor enhance tree retention or tree canopy retention.</p>
Retain existing trees in the street setback zone and maximise deep soil landscape planting to soften the building mass.	<p>The building mass is modest in the context of the approved Part 3A Concept Plan's development parameters of 6-storeys. The building's scale is consistent with other development's along Culloden Road and those anticipated within the institutional realm of the university, including at this edge of the campus, which is also highlighted as a key entry point and place for entry statement from an architectural sense. The mix of tree and canopy character with that of the built-form at this gateway provides for an appropriate response in scale, massing, and landscaping.</p>
Provide a forecourt fronting Culloden Road with seating and public art installation to provide a welcoming arrival experience and increase the street activation.	<p>The porte cochere provides a forecourt with a welcoming arrival experience which activates Culloden Road. It is felt that this objective has been achieved with the form and functionality at this edge to Culloden Road.</p>
Voluntary Planning Agreement (VPA)	
<p>The RIDBC is part of the Concept Plan, and under the VPA is Category 3 development, which does not pay developer contributions.</p> <p>7.2 of the EIS, p.99 discusses the VPA and Developer Contributions. The only outstanding matter is the intersection works, that are triggered by an 'average of 7,000 vehicle movements per day' measure.</p> <p>The EIS states the RIDBC will not trigger the 7,000 vehicle threshold. The last count pre-COVID was around 5,000 according to the EIS.</p>	<p>Noted.</p> <p>Traffic counts are to be undertaken by Macquarie University on Gymnasium Road every two years as part of their obligations under the Planning Agreement signed between MQU and City of Ryde Council. As per the agreement, the traffic counts (and associated report) are to be provided to the Planning Authority for review.</p>

It is Council's request that another count be undertaken 6 months after the RIDBC is opened and fully operational in accordance with the VPA and the results are provided to Council.	
Engineering – Stormwater Management	
The subsoil line to the basement perimeter does not follow the basement extent and is to be updated to reflect the architectural drawings.	This has been addressed. Please the architectural plan set at Appendix C .
The Drains model has not been provided as part of the application and therefore a detailed review of the PSD and SSR was unable to be undertaken. Nevertheless, the Services Report by LP Consulting provides an extract of the drains results which shows general compliance with Council's DCP.	Noted.
The MUSIC model has not been provided as part of the application and therefore a detailed review of the WSUD strategy was unable to be undertaken. Nevertheless, the Services Report by LP Consulting provides an extract of the MUSIC results which shows general compliance with Council's DCP.	Noted.
Engineering – Vehicle Access and Parking	
The site falls within the Macquarie Park Corridor where maximum parking rates apply for commercial development in accordance with Part 9.3 of Council's DCP 2014. The total GFA's of the building are 3,306sq.m for the School / Pre-school and 7,169sq.m for the Workspace / Renwick Centre. This results in the following parking space requirements ... (table identifying full compliance)	For clarity Council's DCP does not apply to the site or development. The approved Part 3A Concept Plan and LEP parking rates (which are identical) apply. The proposal is compliant with those requirements as set out in the EIS and Traffic Impact Assessment. Notwithstanding, compliance is noted with controls that otherwise do not apply.
A review of the parking layouts and access points into the development has noted the following: Three doors open directly onto the basement ramp to the carpark. This is a safety issue with vehicles colliding with the opening doors as well as a safety issue for personnel not paying attention to oncoming traffic. Doors are to open inward to avoid potential hazards and signs or barriers provided to warn personnel to watch for oncoming traffic	The basement plan (drawing A110 B) has been prepared to address and resolve this matter. The proposed arrangement now brings the roller shutter forward towards the roadway within the building footprint, and thereby allows for access within the basement behind the door. This removes the need for internal doors onto the ramp conflicting with oncoming traffic. Instead, and to maintain and allow pedestrian access into the basement via the ramp and a separate doorway, the access door has been rotated to address the ramp and street and allow for a clear line of sight. An access path is provided to reinforce this edge and function.
Vehicle swept paths into the loading bay within the basement are required to be provided in order to demonstrate the relevant vehicle is able to enter and exit the basement in a forward direction once loading/unloading is complete.	This swept path was provided in Section 5.8 of the Transport Impact Assessment report for an 8.8m Medium Rigid Vehicle. An updated swept path demonstrating that a 9.9m long waste collection vehicle is able to enter and exit the basement in a forward direction is provided as part of this RTS package – See Appendix H
Pedestrian walkways or safe walk areas within the basement are to be line marked to ensure pedestrians utilise these designated paths as opposed to walking adjacent vehicular paths.	Noted. It is assumed that this will be conditioned.

It is unclear if the port cochere off Culloden Road is to have kerb running the full length of the port cochere or if the road pavement is to sit flush with the pedestrian forecourt. If kerb is not proposed, then bollards are required to be implemented to avoid the risk of collisions with vehicles and pedestrians.	It is proposed to have a kerb running the full length of the port cochere. Bollards are not necessitated.
Engineering – Flooding and Overland Flow	
A review of Ryde Maps suggests the site is not subject to flooding or overland flow.	Noted.
Engineering – Proposed subdivision	
No objections raised to the proposed sub-division plan. It is noted that easements for drainage and sewerage have not been shown far enough to connect to the public system.	Noted.
Engineering - Traffic	
Section 3.8 of the TIA – No date has been provided on which the traffic surveys were undertaken.	Surveys along Gymnasium Road were last undertaken by Macquarie University in April 2017. Since this time the roadway has been closed due to the Central Courtyard project's construction, significantly reducing traffic for the ensuing period.
Section 5.1 of the TIA – The transport assessment should consider the impact on the adjoining public road network associated with all (114 as noted in Table 2) staff arriving to the site during the morning peak hour period and departing the site during the evening peak hour period as a worst case scenario.	<p>Section 5.4 of the TIA describes the extensive traffic modelling that has already been undertaken to support future development on the Macquarie University campus. This modelling contemplated development on the RIDBC site with a similar level of traffic generation as that forecast by the current proposal.</p> <p>The modelling confirmed that, subject to the staged implementation of various road upgrade measures, the traffic impacts of future development on the Macquarie University road network would be acceptable. In particular the modelling indicated the future requirement to upgrade the Waterloo Road / Gymnasium Road / Culloden Road intersection once a threshold of 7,000 vehicles per day on Gymnasium Road was reached. This upgraded intersection (to be delivered separately) will support traffic movements to and from the RIDBC site.</p> <p>It should also be recognised that the traffic modelling considered a total of 400,000m2 of new non-academic GFA within the Macquarie University campus, with a maximum of 10,800 parking spaces allowed across the campus. The University is significantly below this level of development and less than half of the maximum 10,800 parking spaces are currently provided.</p> <p>In the above context no additional traffic modelling is required to support the proposal.</p>
Page 21 of the TIA - The swept path plans based on the template of a 12 seater minibus is required to be updated to show the other side of Culloden Road (including parked vehicles along the western kerb). The swept path assessment is to demonstrate that such	Updated swept path analysis has been undertaken which shows the full extent of Culloden Road. The swept path confirms that a 12 seater minibus can enter and exit the site without impacting opposing traffic flow, kerbside parking or adjoining public infrastructure. See Appendix H .

vehicles are capable of entering and exiting the internal student pick-up/drop-off zone without affecting the opposing traffic flow, kerbside parking and adjoining public infrastructure (e.g. kerbs).	
Clarification is required with respect to the largest vehicle that is to be serviced within the internal loading dock within the basement car park.	The loading dock can accommodate up to a 9.9m long waste collection vehicle or an 8.8m Medium Rigid Vehicle.
A queuing analysis is to be undertaken to determine whether the length of the internal student pick-up/drop-off area is adequate to support the maximum vehicle queue generated by the proposed development during peak periods, without spill-over onto Culloden Road. In particular, this assessment is to consider the impact of parking and un-parking manoeuvres to/from the angled and parallel parking spaces, which would require an approaching vehicle to wait within the adjoining internal roadway, potentially culminating in queues which extend onto Culloden Road.	<p>A queuing assessment has been undertaken using queuing theory (M/M/C) analysis using a Poisson distribution. The queuing analysis takes into consideration:</p> <ul style="list-style-type: none"> • The number of vehicles forecast to enter the porte-cochere during the busiest hour of the day (71 vehicles) • The expected length of stay of vehicles within the porte-cochere, taking into consideration the time taken to manoeuvre into and out of the spaces (8 minutes) • The number of parking spaces available within the porte-cochere (18 spaces) <p>A utilisation factor of 0.53 is calculated based on a vehicle arrival rate of 3.94 vehicles / hour / parking space and a service rate of 7.5 vehicles / hour.</p> <p>Based on the queuing theory models this utilisation factor forecasts the following queue lengths within the porte-cochere during the busiest hour of the day:</p> <ul style="list-style-type: none"> • Average queue length of 1 car (6m) • Maximum queue length of 4 cars (24m) <p>The porte-cochere has a total length of approximately 100m. The distance from the entry to the first car parking space is approximately 25m. Therefore, even under an absolute worst case scenario where the maximum queue in the busiest hour of the day occurs at the entry to the first car parking space, there is sufficient storage within the porte-cochere such that vehicle queues will not extend back onto Culloden Road.</p>
An assessment is to be undertaken of the existing pedestrian and active transport infrastructure in the surrounding area and whether it is adequate to support/encourage walk and cycle trips to/from the site.	<p>A detailed assessment of the existing pedestrian and cyclist network was undertaken as part of the transport assessment and included in sections 3.3 and 3.4 of the TIA.</p> <p>Section 5.7 of the TIA describes how the RIDBC site will provide connections to the future pedestrian and cycling network both within the Macquarie University campus as well as that being delivered by City of Ryde Council. The assessment concluded that the existing and planned infrastructure is suitable to accommodate the future needs of RIDBC users.</p>

	<p>The RIDBC proposal complements these existing and planned networks by providing for improved pedestrian connections within the site including a new zebra crossing through the porte-cochere. Bicycle parking and end of trip facilities will also be provided to support cycling as a mode of transport to the site.</p> <p>The Green Travel Plan proposes a number of additional initiatives to support walking and cycling, including:</p> <ul style="list-style-type: none"> • Provide Sydney cycle maps to staff; • Participate in annual events such as 'Ride to Work Day' and 'Walk to Work' day; • Provide secure bicycle parking and end of trip facilities for staff; • Staff who cycle to work should be encouraged to form a Bicycle User Group in order to provide a body of regular cyclists who can discuss issues relating to the provision of on-site cycling facilities and the maintenance of off-site cycle routes; and • Provide pool bikes for staff to use during the day.
An operational traffic management plan is to be prepared detailing appropriate measures to effectively manage the safety and efficiency of the student pickup/drop-off traffic to ensure the impact on the adjoining public road (Culloden Road) is minimised.	<p>A number of operational traffic measures are already documented in the TIA that assist in managing traffic flow, particularly that students leave and arrive in shifts, with RIDBC allocating time-slots to drivers so as to stagger the arrival and departure periods. This has the effect of distributing traffic movements over a longer period of time when compared to a typical public school. RIDBC staff are on-site during pick up periods to manage traffic flow and ensure students are picked up and dropped off in a safe and efficient manner that doesn't impact the operation of the adjacent road network.</p> <p>These existing and future procedures can be formally documented in an operational plan of management closer to the opening of the school once further details are known. This can be confirmed through an appropriately worded condition of consent.</p>
The off-street parking and servicing areas (including the internal pick-up/dropoff zone) is to be designed in accordance with AS2890.1, AS2890.2 and AS2890.6.	<p>Noted. It is assumed that this will be conditioned.</p> <p>All areas of the car park, drop off and servicing areas have been designed in accordance with relevant Australian Standards (AS2890.1, AS2890.2 and AS2890.6). This can be confirmed through an appropriately worded condition of consent.</p>
Public Domain	
Following general comments and recommendations are provided for the consideration of the DPIE in the assessment and determination of the State Significant Development Application:	

Public Domain – General Comments	
The development is not subject to the standards and requirements of Macquarie Park Corridor and the City of Ryde Public Domain Technical Manual PDTM, Section 6 – Macquarie Park Corridor.	Noted. See also further below.
There is no kerb and gutter fronting the development site on Culloden Road. As such, the construction of the new kerb and gutter, and full reconstruction of half road pavement along Culloden Road frontage of the development site will be required. Proposed kerb profiles and road design details are to be provided to ensure proper connections to existing kerb and gutter are achieved.	RIDBC is willing to provide a kerb and gutter as shown on plans provided with the DA, however the reconstruction of half of the carriageway for the full frontage of the site is not reasonable and not supported. In lieu of this, RIDBC is open to providing a new footpath beyond the site boundary alignment, but only to the extent from between existing footpaths that already exist: i.e. “near” the corner of Gymnasium Road and the nearest University bus parking layback area (nearest to the western boundary of the development site. This would represent close to 200m of new footpath.
The development is located on the Culloden Road. As such, the access for the proposed development is to be designed in accordance with City of Ryde DCP 2014 Part 8.3 driveways, Part 8.5 - Public Civil Works, and DCP 2014 Part 8.2 - Stormwater Management.	Noted. It is assumed that this will be conditioned. LP Consulting has confirmed compliance.
All telecommunication and utility services are to be placed underground along full frontages of the site.	Noted. It is assumed that this will be conditioned.
All new/existing Councils drainage components, stormwater pipes, kerb inlet pits, overland flow paths for the new development and discharge points shall be shown on the engineering design plans.	Noted. It is assumed that this will be conditioned. LP Consulting advises that the stormwater connection will be to the internal Macquarie University system located in West Precinct Road.
In order to assess the susceptibility of vehicles to scraping as they pass over the proposed access the applicant shall submit longitudinal sections along each side of the proposed new access drawn at 1:20 Natural Scale. The section shall show the existing and proposed levels to AHD along the vehicle path from the centre of Culloden Road through the gutter/layback to the proposed new driveway. The driveway is to be designed using the B99 Ground Clearance Template from AS2890.1	Noted. It is assumed that this will be conditioned. LP Consulting has confirmed that the current design satisfies this requirement – see the longitudinal sections at DA-C-109 to 112 which include scraping and MRV templates.
The applicant is to provide suitably prepared engineering plans providing details that demonstrate the smooth connection of the proposed works with the remaining street scape. This will include relevant existing and design surface levels, drainage pit configurations, kerb returns and s-kerbs that would enable street sweepers to properly manoeuvre the indented section of the road pavement.	Noted. It is assumed that this will be conditioned.
The nature strip for the proposed development between the property boundary and the road, shall be landscaped with turf as per Councils’ standard turf profile PL7.1 and any landscape requirements from our Landscape team.	Noted. It is assumed that this will be conditioned, noting that the landscape plans submitted show landscaping between boundary and footpath instead. We have no objection to turf from the footpath to the kerb.
Public Domain - Recommendation	
Rather than duplicate all requested 32 draft conditions of Council we by exception set out those that require specific commentary or feedback. These are set out below.	
7. Public domain improvements - The public domain is to be upgraded in Culloden Road frontage of the development site in accordance with the City of	As noted by Council above, the development is not subject to the standards and requirements of Macquarie Park Corridor and the City of Ryde Public

<p>Ryde Public Manual. The work is to include paving, street furniture and plantings, and must be completed to Council's satisfaction at no cost to Council.</p> <p>A public domain plan for the following works shall be submitted to and approved by Council's City Works & Infrastructure.</p> <p>(a) Footpath paving as specified in the condition of consent for public infrastructure works.</p> <p>(b) Street trees to be provided</p> <p>Note: In designing the street tree layout, the consultant shall check and ensure that all new street trees are positioned such that there are no conflicts with the proposed streetlights, utilities and driveway accesses. The proposed streetlights will have priority over the street trees. All costs associated with the removal of existing street trees, where required, will be borne by the Developer.</p> <p>(c) All telecommunication and utility services are to be placed underground along the development site. The extent of works required in order to achieve this outcome may involve works beyond the frontages of the development site. Plans are to be prepared and certified by a suitably qualified Electrical Design Consultant for decommissioning the existing network and constructing the new network; and are to be submitted to and approved by Council and relevant utility authorities.</p> <p>(d) New street lighting using LED luminaires is to be designed and installed to Australian Standard AS1158:2010. The street lighting will remain on the Ausgrid street lighting network.</p> <p>Plans are to be prepared and certified by a suitably qualified Electrical Design Consultant and submitted to and approved by Council's City Works & Infrastructure.</p>	<p>Domain Technical Manual PDTM, Section 6 – Macquarie Park Corridor.</p> <p>The site sits outside of the requirements that apply to Macquarie Park. The Macquarie Park boundary is the subject site boundary at the university. The Culloden Road road reservation is excluded.</p>
<p>8. Public Infrastructure Works – Public infrastructure works shall be designed and constructed as outlined in this condition of consent. The approved works must be completed to Council's satisfaction at no cost to Council.</p> <p>Engineering drawings prepared by a Chartered Civil Engineer (registered on the NER of Engineers Australia) are to be submitted to, and approved by Council's City Works and Infrastructure. The works shall be in accordance with City of Ryde DCP 2014 Part 8.5 - Public Civil Works, and DCP 2014 Part 8.2 - Stormwater Management, where applicable.</p> <p>The drawings shall include plans, sections, existing and finished surface levels, drainage pit configurations, kerb returns and other relevant details for the new works and demonstrate the smooth connection to the existing kerb, gutter, footpath and road.</p>	<p>See comments below.</p>

(c) The full reconstruction of half road width for the Culloden Road frontage of the development site in accordance with the City of Ryde DCP 2014 Part 8.5 - Public Civil Works, Clause 1.1.4 – Constructing Half Road.	As set out earlier, the reconstruction of half of the carriageway for the full frontage of the site is not reasonable and not supported.
(a) The upgrade of minimum of 1.5 meter concrete footpath due to the major scope of the proposed buildings works between Gymnasium Road and Link Road in order to improve local accessibility and connections. The proposed civil works must be in accordance with Council's specification and Standard Drawing	The length of the footpath outlined in this requested condition is some 450m in length and seeks RIDBC to effectively complete the existing discontinuous extents of footpath from Gymnasium Road to Epping Road. This is entirely unreasonable. As set out earlier, RIDBC would instead be open to installing a new footpath beyond the RIDBC boundary alignment, but only to the extent from between existing footpaths that already exist: i.e. "near" the corner of Gymnasium Road and the nearest University bus parking layback area (nearest to the western boundary of the development site). This would represent close to 200m of new footpath and is a far more reasonable request.