

URBIS

RESPONSE TO SUBMISSIONS – SSD-80814238

ROAD 1 DATA CENTRE, 1-5 KHARTOUM ROAD, MACQUARIE PARK

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director Stephen White
Associate Director Christopher Croucamp
Project Code P0054527
Report Number Final



The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

Acknowledgement of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.

We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

We pay our respects to First Nations Elders, past and present.

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1. INTRODUCTION

This Submissions Report has been prepared on behalf of Stockland to address the matters raised by government agencies, local Council, the community and relevant stakeholder groups during public exhibition of the proposed Road 1 Data Centre development at 1-5 Khartoum Road, Macquarie Park (**SSD-80814238**).

The State Significant Development Application (**SSDA**) was lodged with the Department of Planning, Housing and Infrastructure (**DPHI**) in accordance with clause 25, Schedule 1 of the *State Environmental Planning Policy (Planning Systems) 2021*.

This Submissions Report outlines the proposed refinements to the project and responds to all concerns raised within submissions.

This Submissions Report has been prepared in accordance with the DPHI *State Significant Development Guidelines – Preparing a Submissions Report (Appendix C) July 2021*.

The SSDA was publicly exhibited for a period of 28 days, concluding on 8 October 2025.

DPHI issued a letter to the Applicant on 9 October 2025 requesting the preparation of a Submissions Report to address issues raised during the public exhibition of the application. A further letter was issued on 13 November 2025 requesting responses to additional matters raised by DPHI.

In addition to DPHI's letter, a total of seven submissions were received from NSW government authorities/agencies, including:

- City of Ryde Council
- NSW Environmental Protection Authority (**EPA**)
- Conservation Programs, Heritage and Regulation Group (**CPHR**) of the NSW Department of Climate Change, Energy, the Environment and Water (**DCCEE**)
- Fire and Rescue NSW (**FRNSW**)
- Transport for NSW (**TfNSW**)
- Ausgrid
- Sydney Water

TfNSW and CPHR raised no issues and did not request any further information. FRNSW and Ausgrid provided draft conditions, and the EPA did not provide any project-specific comments.

Five public submissions were received from members of the community, including three objections, one submission in support, and one general comment.

Since only a small number of submissions were received, this Submissions Report provides a response to each individual submission within **Section 4**.

1.1. EXHIBITED PROJECT

The SSDA seeks consent for:

- Site preparation works including tree removal and earthworks.
- Construction and operation of a 10-storey data centre development, with a maximum height of 72.8 metres and a combined total gross floor area (**GFA**) of approximately 13,307sqm including:
 - Lobby and ancillary spaces: 5,857sqm
 - Offices: 878sqm
 - Four storeys of technical data floor space accommodating 8 data halls: 6,572sqm

- Vehicle access via Road 22 (Murrell Street) and Future Road 1 with 19 parking spaces to be located within the building footprint.
- Construction of part Road 1 and part of Road 23 as contained within the subject site.
- Landscaping and associated public domain works.
- Business identification signage zones.
- 19 diesel generators for back-up power.
- Extension and augmentation of physical infrastructure and utilities including extension of water link main from Road 22 (Murrell Street) to Waterloo Road and secondary water connections.

1.2. SUPPORTING DOCUMENTATION

This Submissions Report is supported by the following technical reports and documentation.

Table 1 Supporting Documentation

Attachment	Report	Prepared By
Attachment A	Cross Sectional Drawing_ASK144	Greenbox
Attachment B	Revised Architectural Design Report	Cox Architecture
Attachment C	Swept Path Diagrams	CBRK
Attachment D	Revised Landscape Design Report	Arcadia
Attachment E	Revised ESD Report	ARUP
Attachment F	Revised Draft Letter of Offer	Stockland
Attachment G	Air Quality Technical Memo	ARUP
Attachment H	Signage and Line Marking Diagram	CBRK

2. ANALYSIS OF SUBMISSIONS

This section provides a summary of the submissions received including a breakdown of respondent type, nature/ position and number of submissions received.

2.1. BREAKDOWN OF SUBMISSIONS

The SSDA was publicly exhibited between 10 September 2025 and 8 October 2025. It was also referred to other State government authorities/agencies, the City of Ryde Council and utility service providers for comment. In addition to DPHI, detailed submissions were received from the following State government authorities/agencies and utility service providers:

- City of Ryde Council
- NSW Environmental Protection Authority (**EPA**)
- Conservation Programs, Heritage and Regulation Group (**CPHR**) of the NSW Department of Climate Change, Energy, the Environment and Water (**DCCEEW**)
- Fire and Rescue NSW (**FRNSW**)
- Transport for NSW (**TfNSW**)
- Ausgrid
- Sydney Water

The above submissions identified matters which required further assessment and/or recommended imposition of consent conditions should the application be approved.

Five public submissions were received from members of the community, including three objections, one submission in support, and one general comment.

All submissions were managed by DPHI, which included registering and uploading the submissions onto the 'Major Projects website' (**SSD-80814238**).

2.2. CATEGORISING KEY ISSUES

In accordance with the DPHI *State Significant Development Guidelines*, the issues raised in the submissions have been categorised as outlined in **Table 2**.

Table 2 Categorising Issues Raised

Category of Issue	Summary of Matters Raised
The project	<ul style="list-style-type: none">▪ Road network and connectivity: Council raised concerns regarding the construction and dedication of Road 23, noting that the proposed road currently terminates without connection to Waterloo Road, provides limited interim connectivity, and may not deliver immediate public benefit. Concerns were also raised regarding dead-end road arrangements, interim manoeuvring, signage, gradients, and future tie-ins to Road 1, Road 22, Khartoum Road and Waterloo Road.▪ Public benefit and infrastructure delivery: Council questioned whether the early delivery and dedication of Road 23 provide sufficient public benefit to justify acceptance, including concerns about maintenance burden and timing of future connections.▪ Compliance with Ryde LEP Clause 6.7 and Clause 7.4(b): Council disputed whether car parking located at the lowest level constitutes basement parking under the LEP. DPHI raised concerns that predicted air quality impacts may reduce development potential on adjoining sites.

	<ul style="list-style-type: none"> ▪ Urban design and streetscape interface: Council and DPHI raised concerns regarding activation and visual interest along Road.1, treatment of car park and loading dock interfaces, façade permeability, passive surveillance, and consistency with the Macquarie Park Design Guide. ▪ Security fencing: DPHI and GANSW raised concerns regarding the visual dominance and public domain impacts of 2.4 metre palisade fencing. ▪ Tree canopy, deep soil and landscaping: DPHI and GANSW raised concerns that the proposal does not meet tree canopy and deep soil targets under the Macquarie Park Design Guide, including street tree provision, tree blisters, and consistency with prescribed street typologies. ▪ Traffic operations and access: Council raised concerns regarding servicing vehicle sizes and frequency, access arrangements for loading docks and car parking, impacts on kerbside parking and traffic safety, and the ability of surrounding roads and intersections to safely accommodate vehicle movements. ▪ Road design, connectivity and public domain: Council raised concerns regarding road grades, sight distances, kerb geometry, interim dead-end road arrangements, signage and manoeuvring, and the provision of safe pedestrian connections including crossings, through-site links and access to open space.
Procedural matters	<ul style="list-style-type: none"> ▪ Voluntary Planning Agreement and contributions: Council noted that the draft VPA has not yet been separately submitted or finalised and raised concerns regarding valuation methodology, offsets, and consistency with the Macquarie Park Infrastructure Delivery Plan and section 7.12 Contributions Plan. ▪ Future ownership and dedication of assets: Council requested clarity regarding future ownership of roads and drainage assets, extinguishment of easements prior to dedication, and processes for deferred or staged delivery of infrastructure. ▪ Conditions of consent: Council, DPHI and Sydney Water requested a range of conditions relating to road safety audits, stormwater infrastructure, raised pedestrian crossings, crane access, servicing approvals and certification requirements. ▪ Consistency with strategic controls: Council and DPHI sought confirmation that the proposal is consistent with the Macquarie Park Place Strategy, Design Guide and Government Architect NSW advice.
Economic, Environmental and Social Impacts	<ul style="list-style-type: none"> ▪ Air quality: DPHI raised concerns regarding predicted exceedances of nitrogen dioxide under maintenance and cumulative scenarios, potential impacts on neighbouring future residential development, and the need for additional at-source mitigation and updated dispersion modelling. ▪ Noise and vibration: DPHI queried whether all operational noise sources, including louvres and cooling systems, were adequately modelled, and requested confirmation regarding variable frequency drive impacts. ▪ Ecologically sustainable development and climate outcomes: DPHI raised concerns regarding Scope 2 emissions, lack of firm commitments in the ESD Report, energy and water efficiency measures, absence of rooftop solar, and alignment with climate-positive objectives in the Macquarie Park Design Guide. ▪ Urban heat: DPHI requested further analysis of urban heat impacts, including heat rejection from plant and backup generators.

- **Stormwater and drainage:** Council raised detailed requirements relating to drainage design standards, downstream capacity, easements, on-site detention failure modes, and long-term asset management.
- **Construction impacts and cumulative effects:** DPHI raised concerns regarding cumulative construction impacts, construction fatigue, and coordination with other nearby SSD projects.
- **Community amenity:** Individual submitters raised concerns regarding building height, visual impacts, noise, emissions, water and energy use, impacts on liveability, and proximity to sensitive land uses.

3. ACTIONS TAKEN SINCE EXHIBITION

This section summarises the changes that have been made to the project since its public exhibition. It also outlines the additional assessment undertaken to respond to the concerns raised with the public agency, organisation and public submissions outlined in **Section 2**.

3.1. FURTHER ENGAGEMENT

Since the public exhibition of the SSDA, the Applicant has undertaken further consultation with key authorities. This has included regular meetings with Ausgrid, Sydney Water, and TfNSW to discuss the proposal. Ongoing discussions have also been held with Council regarding the VPA letter of offer.

3.2. REFINEMENTS TO THE PROJECT

In response to a comment from GANSW, the design of the fence has been revised to introduce alternating natural tones, including dark greens, browns and maroon, to provide tonal variation and prevent the appearance of a singular solid black wall. Refer to the revised Landscape Design report provided at **Attachment D**. This approach reduces the visual prominence of the fencing when viewed from the public domain while maintaining the required level of perimeter security.

No other design changes have been made to the project.

4. RESPONSES TO SUBMISSIONS

Since only a small number of submissions were received during the public exhibition process, a response to each individual submission is included in **Table 3**.

Table 3 Response to Submissions

Summary of Issue Raised	Response	Supporting Document
CITY OF RYDE		
<p><u>Construction and Dedication of Road 23 on Subject Site</u></p> <p>It is noted that the site includes fine grain road, Road 23 and Road 1. The Traffic modelling for Macquarie Park rezoning had indicated that the fine grain road network would help alleviate traffic congestion from the key intersections in the precinct and would provide additional connectivity. This assertion was based on changes in land use to commercial / residential and other traffic generating developments in the locality.</p> <p>The site now proposes a third Data Centre in the vicinity. The adjoining site (17-23 Talavera Road) also contains a Data Centre. This has resulted in a significant shift from the traffic generating land uses envisaged in the Macquarie Park rezoning. Notwithstanding the Design Guide, any public benefit in providing another road extremely close and parallel to Khartoum Road is questionable. It is also important to note that the Key site planning controls do not prescribe or provide incentives for any new road traversing the site (Road 23).</p> <p>While Road 1 provides continuation of the road from eastern side (approved on adjoining sites) and will also provide vehicular access to the proposed data centre, the application lacks details to demonstrate how Road No. 23 which currently leads to nowhere under the proposal (as it terminates without connection to Waterloo Road), and there is no turning circle or pedestrian connection to Waterloo Road. The future use of the remaining part of the site is unknown yet (other than the open space required under the key sites</p>	<p>The proposed delivery of Road 23 is consistent with the DCP, and the Macquarie Park Guide Objectives and satisfies clause 7.7 of the Ryde LEP by providing finer grain street network enabling future connectivity within the precinct.</p> <p>Further, the inclusion of Road 23 will support future development potential consistent with Section 7.4(b) of the Ryde LEP 2014.</p> <p>The initial section of Road 23 will terminate within the subject site under this application, and this is typical in urban renewal areas where new streets are delivered to gradually reshape the urban fabric. The proposed road provides a meaningful public benefit for several reasons:</p> <ul style="list-style-type: none"> • It introduces a third new road within what was previously a landlocked four-hectare site, significantly improving accessibility and future connectivity. • It aligns with previous approvals in the surrounding area, including SSD-10467 (Macquarie Park Data Centre), where roads were delivered in stages and initially terminated within the subjected site. • It enables the future extension of Road 23 to connect Talavera Road with Waterloo Road and or Khartoum Road, as illustrated in the concept plan. This demonstrates the strategic intent and long-term value of the proposed road. 	

Summary of Issue Raised	Response	Supporting Document
<p>planning control). If road 23 were to be deleted from the current application, it is suggested that the section of road 23 be ‘reserved’ for future connectivity and in the interim could also be used as a pedestrian thoroughfare/active transport route until/if such time comes that the road will be completed.</p> <p>Council’s main concern is that road 23 does not provide any meaningful connection that would help alleviate traffic congestion. The dedication of the section of the road that does not connect to Waterloo Road does not provide any public benefit. However, it will impose an additional maintenance burden to Council of accepting a road.</p> <p>The construction and dedication of Road No.23 may be supported in the future if it can be demonstrated that the road will provide public benefit and required connectivity to support traffic flow. If the road were to be accepted at this stage then Council would require inclusion of a separate deed for the developer to accept maintenance burden of the constructed portion of Road No.23 until such time as the owner develops the residual portion of the site located to the south-west. At that time, the remainder of Road No.23 would be delivered which would connect the initial portion of the road to Waterloo Road. Upon the connection, Council could then assume the maintenance burden of the entirety of Road No.23.</p>	<p>Stockland’s view is that the dedication of Road 23 should not be viewed as a burden. From the outset, Stockland foregoes the opportunity to utilise this land for built form or open space and instead delivers infrastructure that will benefit the public and the wider precinct. This investment allows adjoining landowners, including Stockland, to extend the road in future and complete the connection to Waterloo Road. Notwithstanding the above, Stockland confirms that it would accept Council’s proposed approach whereby, a separate deed would be entered into to allocate responsibility for the maintenance of the constructed portion of Road 23 until such time as the residual land to the south west is developed and the road is extended.</p> <p>In summary, Road 23 is not an isolated or redundant piece of infrastructure. It is a planned and necessary component of a staged approach to achieving the vision for a connected and fine grain street network. Its delivery at this stage provides certainty for future development, supports coordinated urban outcomes, and enhances traffic flow, pedestrian movement and local amenity.</p>	
<p>Clause 6.7 of Ryde Local Environmental Plan 2014</p> <p>Clause 6.7 of the Ryde Local Environmental Plan 2014 states the following in relation to ground floor development in land on zone E3:</p>	<p>The definition of Basement under the Ryde LEP 2014 is noted as follows:</p> <p style="text-align: center;"><i>Basement means the space of a building where the floor level of that space is predominantly below</i></p>	<p>Attachment A</p>

Summary of Issue Raised	Response	Supporting Document
<p><i>(2) Development consent must not be granted for development on the ground floor of a building within Zone E3 Productivity Support if the development would result in any part of the ground floor not being used for business or employment activities, other than any part of that floor used for the purposes of— (a) lobbies for any commercial, residential, serviced apartment or hotel component of the development, or (b) access for fire services, or (c) vehicular access.</i></p> <p>The submitted architectural plans depict that car parking is proposed on the ground floor level, that is, the floor level that interfaces with proposed Road 1 (shown as upper ground floor on architectural plan with vehicular access shown). The Office floor level is located some 5.28m above the street level. Based on the details provided it is clear that the car parking is located on the ground floor level and not in the basement. This results in a major issue in terms of complying with Clause 6.7 of the RLEP2014.</p> <p>It is noted that the proposed development seeks to provide 19 car parking spaces at ground floor level. The exclusion for vehicular access in the Clause would only include access driveways or vehicle circulation areas and not car parking. The clause states that Consent must not be granted for development that contravenes its provisions. As a result, the applicant would need to explore other locations for the car parking such as a basement in order to satisfy the Clause.</p> <p>It is also requested that additional sections through the car parking area be submitted to demonstrate that the car parking is located in a</p>	<p><i>ground level (existing) and where the floor level of the storey immediately above is less than 1 metre above ground level (existing).</i></p> <p>As shown in drawing ASK144 (Attachment A), the sloping nature of the site results in the car parking level being predominantly below the existing ground level. This drawing clearly demonstrates that the ground floor slab sits below the natural ground level for the majority of its extent, and the level above sits less than 1 metre above existing ground level. On this basis, the car parking level satisfies the definition of Basement under the LEP.</p> <p>Given this, the car parking is correctly classified as basement parking and complies with Clause 6.7.</p>	

Summary of Issue Raised	Response	Supporting Document
<p>basement as per the definition and therefore that the proposal complies with Clause 6.7.</p>		
<p><u>Activation and Interface with Road No.1</u></p> <p>Under Section 5.4 of the Macquarie Park Design Guide, the subject site is identified as having a ‘contributory frontage’ to Road No.1.</p> <p>The Design Guide sets out the following expectations for contributory frontages:</p> <ul style="list-style-type: none"> <i>2. Contributory frontages in Macquarie Park may be a mix of office premises, business premises, retail premises and Small Office/Home Office (SOHO) frontages.</i> <ul style="list-style-type: none"> <i>a. Retail active frontages are to be provided on prominent corners and to provide amenity to public open spaces;</i> <i>b. Commercial active frontages are to be provided along all frontages facing public streets and public open spaces, except where retail active frontages are provided;</i> <i>c. Residential dwellings are generally not permitted along ground floor frontages, except for the limited use of Small Office/Home Office (SOHO) frontages.</i> <p>The proposed building has a limited extent of activation and visual interest to Road No.1 at the ground floor and first floor levels. It is considered that larger windows along this elevation would assist in</p>	<p>The proposal has been designed to balance functional requirements with the urban amenity objectives of the DCP and Design Guide. Key considerations are outlined below.</p> <p><u>Urban Design and Amenity</u></p> <p>The frontage to Road 1 responds to the building’s functional use while incorporating articulation, materiality and a consistent rhythm to maintain visual interest. The façade treatment provides an appropriate level of activation for the intended land use and ensures a high-quality streetscape with passive surveillance.</p> <p><u>Site Constraints and Functional Needs</u></p> <p>The car park and loading dock are located within a natural topographical depression, which creates a logical separation between service functions and pedestrian areas. This arrangement improves traffic flow, reduces visual bulk at street level and limits operational impacts on the public domain.</p> <p><u>Amalgamation Feasibility</u></p> <p>The design team explored the option of consolidating the loading dock and car park entries. This was found to be unworkable due to distinct security controls, vehicle types and circulation paths for each function. A single access point would also reduce operational efficiency and create safety risks.</p> <p><u>Enhanced Streetscape Treatment</u></p>	

Summary of Issue Raised	Response	Supporting Document
<p>street level activation, improving the passive surveillance of streets and enhance the overall commercial character of the precinct.</p> <p>The amalgamation of the loading dock and carpark entry is suggested (if feasible) as it would assist in the activation of this frontage.</p>	<p>Larger ground level windows were considered; however, was not practical and the current design meets the intent of the Design Guide through façade articulation, varied materials and integrated landscaping. Planting and open space elements soften the interface with Road1, break down the built form and establish a clear visual rhythm at the intersection.</p>	
<p><u>Contributions and Public Benefit</u></p> <p>The EIS contains a draft letter of offer to enter into a VPA. To date, the offer has not been separately submitted to Council. An assessment of the offer will occur concurrent to the assessment of the SSD. Council staff have reached out to the applicant to discuss the next steps.</p> <p>The issues discussed under item 1 above should also be included in the VPA.</p> <p>Generally, the proposed dedication of land and the construction of roads may be supported in principle. However, the proposed value of the offsets cannot be supported and needs further justification. Additionally, the offer seeks to offset the value of land/works against the required 7.12 contributions. This is inconsistent with the Macquarie Park Infrastructure Delivery Plan and the adopted 7.12 Contributions Plan (both prepared by DPHI) and is not supported.</p>	<p>A revised draft Letter of Offer has been submitted to Council for further consideration and is provided at Attachement F.</p>	Attachment F
<p><u>Urban Design and Architecture</u></p> <p><u>North-East Elevation</u></p> <p>Carpark entry: In the SSDA Design Report there appears to be landscaping depicted between the loading dock and carpark entries,</p>	<p>The Architectural Drawings submitted with the EIS correctly illustrate that no soft landscaping sits between the carpark and loading dock entry. This has been intentionally left clear to prioritise safe vehicle access and circulation. Introducing planting in this location would compromise manoeuvrability and</p>	Attachment B

Summary of Issue Raised	Response	Supporting Document
<p>however, on the north-east elevation in the architectural plans there is not. Landscaping this space would reduce visual impact and improve the organic landscape design approach.</p>	<p>operational safety for service vehicles. The Architectural Design Report (Attachment B) has been updated to avoid confusion.</p>	
<p><u>South-west elevation</u></p> <p>Although the future through site link is located on the adjoining site, the design of the building should still facilitate passive surveillance of this area. This can be achieved by incorporating greater visual permeability.</p>	<p>The proposed design maximises glazing between load-bearing walls to achieve visual permeability and passive surveillance of the adjoining area. In addition, the south-west elevation incorporates a well-considered mix of glazing and façade articulation, ensuring visual interest and clear sightlines. This approach supports safety, activation, and the intent of the Macquarie Park Design Guide for future through-site links.</p>	
<p><u>Traffic and Parking</u></p> <p>Clarification is required as to why this proposed data centre does not require 19m/20m long trucks, which are typically proposed for each of other data centres in Macquarie Park. This clarification is requested to address potential future challenges related to operating 19m/20m long trucks at the site.</p> <p>It is requested that an estimate of truck trips be provided based on the site's operational and maintenance requirements and assess their impact on the local road network. Specify the largest truck size and include swept path analyses for inbound and outbound movements at the intersections of Talavera Rd/Road 22, Road 22/Road 1, ensuring a MRV can safely pass a B99 car, and at the site access driveway.</p>	<p>The proposed development comprises a data centre with four floors of technical data floor space (accommodating eight data houses) with a data hall GFA of approximately 6,572sqm. It is substantially smaller in scale compared to other neighbouring data centres in Macquarie Park. For this reason, the operational servicing requirements differ, and the data centre use does not necessitate regular 19m/20m truck movements.</p> <p>Day-to-day servicing will be undertaken by small to medium rigid vehicles up to 8.8m in length. The loading dock access driveway and on-site manoeuvring areas have been designed to ensure these service vehicles can enter and exit the site in a forward direction and without the need to queue or dwell on the adjacent road network. Based on the nature of the use, the proposed data centre is expected to generate low service vehicle volumes, typically two to three vehicle trips per day.</p>	Attachment C

Summary of Issue Raised	Response	Supporting Document
	<p>General maintenance activities, including delivery or replacement of diesel generators, will be very rare and infrequent. These activities may require large rigid trucks or 19m articulated vehicles. When such works are required, deliveries will occur under traffic management control, with a mobile crane positioned within the kerbside and northbound traffic lanes of Road 1 across the loading dock and car park access driveways. The crane will lift generators directly into the generator racking area within the building. These works will be subject to a standard application to City of Ryde and supported by a detailed traffic management plan.</p> <p>Regarding intersection performance, the Talavera Road and Road 22 intersection was designed and constructed as part of the completed data centre at 8 Murrell Street, Macquarie Park. Council approved this intersection on 16 May 2022 in conjunction with the endorsed design for Road 22. Swept path analyses for an MRV, B99 car, and relevant design vehicles at Talavera Road/Road 22, Road 22/Road 1, and the site driveway have been prepared and are included in Attachment C.</p>	
<p>The submitted Public Domain Civil Engineering Package provides the longitudinal alignment for Road 1 and Road 23. However, the alignment of Road 1 at its intersection with Road 22 (Murrell St) shows around 4% gradient within the intersection area. Given that the existing Road 22 is nearly level, therefore, the gradient of Road 1 at its intersection with Road 22 should be reduced to a maximum 3% and minimised where possible to improve connectivity with Road 22 and ensure adequate sight distance within the intersection area.</p>	<p>The proposed 4% grade at the Road 1 / Road 22 intersection is a direct result of the site's steep topography and fixed boundary constraints. Reducing the grade further would require extensive reconfiguration of adjoining developments and property boundaries, which is not practical or possible. To address these challenges, the design incorporates vertical curves to ensure smooth transitions and has been rigorously assessed for sight distance compliance with relevant standards. This approach delivers a safe, functional, and efficient outcome while respecting</p>	<p>Attachment C</p>

Summary of Issue Raised	Response	Supporting Document
<p>Similarly, the intersection of Road 1 with Road 23 should have a maximum gradient of 3% to facilitate future connection with its western leg.</p> <p>A raised pedestrian crossing is required to be installed on Road 22 to facilitate pedestrian crossing along northern side of Road 1 to access the leisure space (small park), the through-site link and retail spaces at 11-17 Khartoum Road. The final location of the raised pedestrian crossing is subject to further investigation, and detailed surveys will be required.</p>	<p>the physical limitations of the site. The same principles apply to the Road 1 / Road 23 intersection, ensuring future connectivity is maintained without compromising safety.</p> <p>A raised pedestrian crossing on Road 22 is supported and can be integrated into the project. It is requested that this be included as a condition of consent, with its location and detailed design to be confirmed during the detailed design phase. This will ensure the crossing optimally serves pedestrian movements to the open space, through-site link, and retail areas, aligning with broader connectivity and accessibility objectives.</p>	
<p>The proponent is to consider appropriate ameliorative measures to minimise the impact of the proposed development on traffic safety and efficiency within the surrounding public road network. The location and the design of site access driveway is recommended to be optimised to minimise the loss of kerbside parking bays without compromising the road safety at vicinal intersections. For example, merging the site truck and car access driveways could be considered, given the low likelihood of conflicts between car and truck movements due to limited basement car parking spaces and a low turnover rate for car parking.</p>	<p>Both the loading dock and car park access driveways have been designed to allow all vehicles to enter and exit the site in a forward direction, without queuing or waiting on the adjacent road network. The driveway geometry has been designed in accordance with the requirements of AS2890.1 Off-street car parking and AS2890.2 Off-street commercial vehicle facilities. Appropriate sight lines are provided to ensure vehicles can safely observe pedestrians on the footpath and approaching traffic along Road 1. On this basis, the access arrangement is considered safe, efficient and suitable for the proposed development.</p> <p>In relation to Council's suggestion to merge the loading dock and car park access points into a single driveway, this is not feasible for the following reasons.</p> <ul style="list-style-type: none"> The internal floor levels and height clearances for the car park and loading dock differ. Adjusting these would require 	<p>Attachment C</p>

Summary of Issue Raised	Response	Supporting Document
	<p>substantial structural redesign and could increase the overall building height.</p> <ul style="list-style-type: none"> • Combining the access points would compromise both the loading dock and car park layouts and may introduce new vehicle conflict points. • The loading dock and car park require different security and access controls. These areas must remain separated to ensure service delivery drivers remain contained within the loading area and do not have access to the remainder of the data centre. <p>For these reasons, the proposed arrangement of two separate driveways remains the most appropriate and functional solution.</p>	
<p>The design for all roads and intersections, pedestrian crossing, kerbside parking, internal parking and other traffic facilities are required to comply with Austroads Guidelines, Australian Standards AS 1742 and AS 2890, TfNSW supplements to Road Design Guides and other relevant guidelines.</p>	<p>Northrop confirms that the road, intersection and parking design complies with all appropriate Road Standards and other applicable requirements. Full design certification will be provided at the completion of the detailed design phase and prior to lodgement of the relevant Construction Certificate.</p>	
<p>A road safety audit is required for the new roads, the intersections of Road 1/Road 22 and Road 1/Road 23, raised pedestrian crossing, site access and other new traffic facilities prior to the issuance of the construction certificate and occupation certificate.</p>	<p>It is requested that the requirement to prepare a road safety audit is included as a condition of consent. The road safety audit will be undertaken during the detailed design stage to ensure all new roads, intersections, pedestrian facilities, and site access comply with safety standards prior to the issuance of the relevant Construction Certificate and Occupation Certificate.</p>	
<p><u>Public Domain</u></p>	<p>Only one tree planter has been provided along Road 23 at this stage because the current works deliver only a partial section of</p>	

Summary of Issue Raised	Response	Supporting Document
<p>DWG No. C04.01 of the Public Domain Civil Engineering Package generally details correct arrangements, however, it is noted that on Road 23 only one separating tree planter is proposed which does not achieve the arrangement requirements in this capacity.</p>	<p>the road. The interim line marking has been designed to accommodate larger vehicle movements and avoid abortive works ahead of the future connection with Road 1. This ensures the road operates safely and efficiently now while preserving flexibility for the final design.</p> <p>Additional tree planters will be incorporated when Road 23 is extended through to Waterloo Road, consistent with the City of Ryde's Public Domain Technical Guidelines.</p>	
<p>DWG No. C05.01 of the Public Domain Civil Engineering Package provides a longitudinal section – MC23- for Road 23, which shows longitudinal grades from the future Waterloo Road connection to Road No.1 ranging from 3.12% to 5.02% which is considered acceptable.</p>	<p>Noted, no response required.</p>	
<p>DWG No. C05.02 of the Public Domain Civil Engineering Package provides a longitudinal section – MC01- for Road 1, shows proposed longitudinal grades for the extent of the development works only. It is critical that the design considers the future connections to Khartoum Road and existing sections of Road 1. Failure to consider these future connections will result in a less than optimal overall road design. It is requested that an updated design considering and demonstrating adequate connection to, Khartoum Road and the existing sections of Road No.1 be provided.</p>	<p>The proposed levels for Road 1 have been carefully coordinated with the City of Ryde's approved Road Masterplan, the adopted design levels for Road 22, and the development application documentation for adjoining landholdings. This ensures that future extensions to Khartoum Road and the existing sections of Road 1 have been fully considered and can be delivered without compromising the functionality of the wider road network or the intended design outcomes.</p> <p>This coordinated approach provides for seamless integration with future works while maintaining full compliance with the relevant standards and guidelines.</p>	

Summary of Issue Raised	Response	Supporting Document
<p>The applicant is requested to provide kerb return sections to demonstrate adequate connection between Road No.1 and Road 22.</p>	<p>Stockland is agreeable to this being addressed as a condition of consent. Kerb return sections will be provided during the detailed design phase to demonstrate the appropriate connection between Road 1 and Road 22.</p>	
<p>Section A on DWG No. C09.01 of the Public Domain Civil Engineering Package shows an extremely high retaining wall at the road reserve interface with Lots A and B. This is not an optimal interface between a road reserve and private lot. Notation on the plan shows a boundary line amendment – is it possible to utilise this 4.1m to provide a better interface in the interim before Lots A and B are developed.</p>	<p>The 4.1 metre buffer has been deliberately maintained to retain existing trees on the adjoining land and to provide a generous open space area that enhances urban amenity in a highly visible and publicly accessible location. This delivers an immediate public benefit and supports a stronger landscape framework.</p> <p>The road position and alignment also need to accommodate the required levels and connections for future extensions toward Waterloo Road and Khartoum Road. These works involve careful coordination of topography, boundary conditions and ultimate road tie-ins to ensure the future network functions efficiently. The current design represents a balanced and considered response to these constraints and provides a high-quality outcome for both the interim and ultimate road configuration.</p>	
<p>The new roads to be delivered will result in two dead ends. There needs to be provision for signage and manoeuvring at points where the roads will terminate, to manage traffic during the interim period before the through road connections are constructed.</p>	<p>Access to the development will be provided via Road 1 and Road 22, with all vehicles entering and exiting the site from Talavera Road. Road 22 has already been constructed in association with the neighbouring data centre at 8 Murrell Street and currently operates as a No Through Road, terminating adjacent to the future Road 1 and Road 22 intersection.</p> <p>Consistent with Council’s future road layout and finer grain street network for the Macquarie Park precinct, Road 22 will ultimately connect to Road 1 and Road 23. As part of this development,</p>	<p>Attachment C and Attachment H</p>

Summary of Issue Raised	Response	Supporting Document
	<p>portions of Road 1 and Road 23 will be delivered along the site frontage. In the ultimate configuration, Road 1 will extend between Lane Cove Road and Khartoum Road, and Road 23 will continue through to Waterloo Road.</p> <p>During the interim period, Road 1 and Road 23 will function as No Through Roads. Each will include appropriate vehicle manoeuvring areas to allow safe turning movements at the temporary termination points.</p> <p>A signage and line marking plan for these interim arrangements is included in Attachment H. The signage and line marking have been designed in accordance with Council's DCP requirements for on-street parking and follow the established approach used on Road 22. Swept path analyses demonstrating adequate manoeuvring for turning vehicles are also included in Attachment C.</p>	
<p>Previous comments to the applicant requested further information in regards to ongoing requirements for crane lifts, to enable Council to properly assess the potential impact upon its road pavement assets:</p> <p>Will there be an operational requirement including maintenance, replacement, upgrades, to complete heavy lifts utilising future Council roads to support the lifts. If there will be a requirement, what will be the maximum mass of the crane lifts. Will crane lifts, supported by future Council roads be limited to one crane set up location or will this vary along the road reserves fronting the site. If the crane set up area will be limited, please specify the area that it will impact.</p>	<p>Future maintenance or upgrade works may require periodic crane access; however, the specific crane types, masses and lift arrangements are not yet known and will ultimately be determined by the future operator.</p> <p>Based on the neighbouring site, crane setup points are likely to occur at various locations along the road frontage.</p> <p>Any use of Council roads would be managed through an operator prepared access plan, including temporary pavement protection (e.g., steel plates) and traffic control.</p>	

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	<p>Major lifts are typically infrequent (approximately every five years). Final crane loads, locations, and operational requirements can only be confirmed at the time of maintenance.</p> <p>Any road damage resulting from these activities would ordinarily be the responsibility of the operator to rectify under standard conditions of approval.</p>	
<p>Swept path analysis should be provided demonstrating that the proposed roads can accommodate Heavy Rigid Vehicle turning manoeuvres without encroachment across the centre lines.</p>	<p>Vehicle swept paths for the proposed development and for the surrounding roads are provided in Attachment C.</p>	<p>Attachment C</p>
<p><u>Drainage/Stormwater</u></p> <p>The future ownership of the proposed roads must be indicated on the Civil/stormwater plans. For roads that are being dedicated to Council, please see general requirements below for drainage assets:</p> <p>The design is to be in accordance with the Ryde DCP 2014 – Part 8.2 - Stormwater Management Technical Manual.</p> <p>New pipes proposed in Council Land, including the connection from the boundary pit to the proposed pit shall be steel reinforced concrete pipe, class 4, of minimum diameter ≥ 375mm.</p> <p>A Longitudinal Section to be provided and shall be cover compliance as per the Ryde DCP 2014 – Part 8.2 - Stormwater Management Technical Manual, Table 5.4. Please indicate the cover of the proposed pipe within Council land on the long section, and the type of RCP pipe (steel reinforced Class IV)</p>	<p>Road 1 and Road 23, as shown on Northrop Drawing C04.01 Rev 02 (Appendix B of the Water Management Plan Report submitted with the EIS), indicate the roads proposed for dedication to Council. The proponent acknowledges and will comply with Council’s requirements for drainage infrastructure to be owned and maintained by Council. Detailed designs of these assets, including pipe specifications, pit details, and connections, will be submitted to Council for approval as part of the Construction Certificate application.</p> <p>A longitudinal section will be provided to demonstrate compliance with Ryde DCP 2014 – Part 8.2 Stormwater Management Technical Manual, including Table 5.4 requirements. This will indicate the cover of proposed pipes within Council land and confirm the use of steel-reinforced concrete pipes (Class IV) with a minimum diameter of 375 mm, rubber ring joints, and a minimum slope of 1%. Junction pits will</p>	

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<p>Details of the connection to Council pits/pipe shall be included in the Stormwater Management Plan.</p> <p>A minimum 1% slope to be proposed for new drainage lines in Council land.</p> <p>Existing Council drainage infrastructure details including, diameter, etc. shall be shown on the plans, including details of the connection with the proposed stormwater system.</p> <p>Council Details shall be incorporated from Council Standard Drawings.</p> <p>Pipes to include Rubber ring joints.</p> <p>Any proposed junction pit to be constructed with concrete lid.</p> <p>Drainage network capacity analysis must be demonstrated to ensure the proposed development can be effectively drained and managed via the downstream drainage network.</p>	<p>be constructed with concrete lids, and Council Standard Drawings will be incorporated.</p> <p>The Stormwater Management Plan will include:</p> <ul style="list-style-type: none"> • Details of connections to Council pits/pipes. • Existing Council drainage infrastructure (including diameters and connection points). • Drainage network capacity analysis to confirm the proposed development can be effectively drained and managed via the downstream network. <p>Stockland accepts these requirements, and compliance will be achieved through the detailed design process. These measures will ensure long term asset durability and maintainability and align with Council's stormwater management strategy, supporting a resilient and sustainable drainage network.</p> <p>It is requested that these matters be addressed by way of conditions of consent, with detailed resolution at the relevant Construction Certificate stage.</p>	
<p>The proposed stormwater management system within the site does not present any significant issues or areas of concern. A review of the plans and documentation note the following points.</p> <p>The on-site detention system is located on the high side of the site, contrary to typical design objectives, however the design still achieves the majority of hardstand area (i.e. roof) to discharge to the system.</p>	<p>Noted, no further response.</p>	

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<p>The internal stormwater plans are very conceptual and do not detail the exact configuration of the onsite detention system. It would appear that the volume of the system can be accommodated as the architectural plans have accommodated a considerable void in this region, however there are no details concerning the failure mode of the OSD system. By "failure mode", this refers to the ability to safely convey any surcharging water from the OSD system which may result if the downstream drainage system blocks or the system is subject to an extreme event, safely to public domain drainage without impacting on habitable areas on the subject site or neighbouring properties. It is crucial that the OSD system make provision for the system to have an exposed overflow vent / weir allowing for the tank to surcharge to an external area should the downstream system be blocked. This is a crucial requirement and should be addressed by condition.</p>	<p>The combined OSD/rainwater tank discharge control is proposed to be achieved through an orifice plate positioned at the top of the rainwater tank level, as shown in Figure 11 of the Water Management Plan report. The orifice plate has been sized to restrict flows to the compliant rate prior to discharging into the external stormwater network. In the event of blockage, an overflow will be provided to convey flows from the tank directly into the stormwater network. Building Management System (BMS) monitoring is also proposed to track water levels within the tank and detect leaks, with alerts for any issues. As an additional safeguard, the OSD/rainwater tank room is bunded and designed at a lower level compared to electrical rooms to protect against potential damage from tank failure or leakage. The exact configuration will be documented during future design stages. Please refer to Section 6.3.5 of the Water Management Plan report submitted with the EIS.</p>	
<p>Further to the above, the storage will require a number of manholes to ensure that access to the tank is readily attainable for the purpose of maintenance.</p>	<p>The combined OSD/rainwater harvesting tank is located within the building and is above ground, allowing direct access from within the building. Therefore, additional manholes are not required for maintenance access.</p>	
<p>The stormwater management plan is noted to accommodate stormwater runoff from the upstream lot, along the trunk drainage system adjoining the eastern boundary. This will require the registration of an Easement for Drainage of Water.</p>	<p>Noted, no response required.</p>	
<p>The stormwater system on the subject site is to discharge to the new public drainage service in Road 1 and will not require an easement.</p>	<p>Noted, no response required.</p>	

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<p>The discharge from Road 1 will require a public drainage easement over downstream land and will require the consent and agreement of the downstream land owner(s). Should this easement not be in place prior to consent, it is prudently advised that any planning consent be configured as a deferred commencement as the process of formalising the easement may require a great period of time to resolve, being that the process is at the discretion of neighbouring land owners.</p>	<p>Noted, no response required.</p>	
<p>The land to be dedicated as public road must be free of burdens (i.e. all easements/ covenants are to be extinguished from the land). This process may require liaison with the beneficiaries of the instruments. It would be recommended that the applicant commence these investigations / actions as soon as possible.</p>	<p>The requirement for land to be dedicated as public road to be free of any easements or covenants is acknowledged. Any instruments burdening the land will be identified and addressed as part of the road dedication process, including liaison with relevant beneficiaries where required. This matter will be progressed in parallel with the detailed design and delivery of the road works.</p>	
SYDNEY WATER		
<p>The proponent should continue to engage with Sydney Water through their Water Servicing Coordinator and their Sydney Water Case Manager to determine potential servicing options and opportunities.</p>	<p>Noted, Stockland will continue to engage with Sydney Water during the assessment of the application.</p>	
<p>Should the Department of Planning, Housing and Infrastructure (the Department) decide to progress with the subject development application, Sydney Water would require the following conditions be included in the development consent.</p>	<p>Noted, accepted as conditions of consent.</p>	

Summary of Issue Raised	Response	Supporting Document
<ul style="list-style-type: none"> o Section 73 Compliance Certificate o Building Plan Approval 		
<p>The proponent should complete and return the enclosed Growth Data Form. The Growth Data Form should be updated promptly with Sydney Water in case of changes.</p>	Noted, no response required.	
<p>The Department is advised to forward the enclosed Sydney Water Development Application Information Sheet (for proponent) to assist the proponent in progressing their development. This Info Sheet contains details on how to make further applications to Sydney Water and provides more information on Infrastructure Contributions.</p>	Noted, no response required.	
DPHI		
<p>Section 7.4(b) of the Ryde Local Environmental Plan 2014 states that development consent must not be granted to development unless the consent authority is satisfied the development will not result in a neighbouring site becoming a site that has reduced development potential.</p> <p>The Department is currently not satisfied the development meets the requirements of Section 7.4(b) as the predicted exceedances to pollutant emissions criterion at adjoining future Build-To-Rent development sites (receivers R1 – R3) could result in reduced development potential of the site.</p>	<p>Since exhibition, further mitigate measures and refined dispersion modelling have been undertaken by ARUP which is documented in Attachment G.</p> <p>All back-up generators will be fitted with Selective Catalytic Reduction (SCR) systems, providing approximately an 85% reduction in nitrogen oxide emissions. These at-source mitigation measures were specifically incorporated to remove the previously predicted exceedances at neighbouring receivers and ensure compliance with relevant air quality criteria.</p> <p>A refined Computational Fluid Dynamics (CFD) model was then undertaken using updated building massing and realistic operational scenarios. The updated modelling demonstrates that predicted nitrogen dioxide concentrations at the adjoining future</p>	Attachment G

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	<p>residential receivers are below the applicable air quality criterion. The assessment also considered cumulative impacts with nearby data centres adopting similar emission reduction systems. Under these cumulative conditions, no exceedances are predicted.</p> <p>Accordingly, the updated technical assessment concludes that the project will not result in adverse air quality impacts and will not impose air quality constraints on neighbouring development potential. On this basis, the proposal satisfies the requirements of Clause 7.4(b) of the Ryde Local Environmental Plan 2014, as the development will not result in neighbouring land becoming a site with reduced development potential.</p>	
<p>Section 2.3 of the Macquarie Park Design Guide (MPDG) sets out the design principles for the desired future character of Macquarie Park. Principle 18 stipulates that development foster climate positive outcomes in operations and be industry-leading in resource efficiency.</p> <p>Having regard to the predicted Scope 2 emissions associated with electricity consumption, the Department is not currently satisfied that the proposed development adequately addresses Principle 18 of the Macquarie Park Place Strategy – Urban Design Guide. Further consideration and incorporation of measures to reduce Scope 2 emissions are required to demonstrate that the operational phase of the development can support climate-positive outcomes in line with the Guide’s objectives.</p>	<p>Scope 2 emissions associated with electricity consumption will ultimately be attributable to and purchased by future tenants of the building. While Stockland cannot commit to specific operational measures at this stage, the development is designed to achieve industry-leading energy efficiency and support climate-positive outcomes in line with Principle 18 of the Macquarie Park Design Guide. The building will target a NABERS rating of 5 Stars and a Power Usage Effectiveness (PUE) of approximately 1.35, exceeding market benchmarks for data centres. Stockland will also evaluate and facilitate access to renewable energy options such as GreenPower, renewable energy certificates, and power purchase agreements during tenant engagement. In addition, Scope 2 emissions are expected to decline over time as the NSW electricity grid transitions to renewable energy. These measures ensure sustainability</p>	<p>Attachment E</p>

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	<p>remains a priority and provide clear pathways for reducing emissions in collaboration with tenants.</p> <p>The intent is to ensure that sustainability considerations remain a priority and that feasible pathways for reducing emissions are assessed in collaboration with tenants as part of the building's ongoing energy strategy.</p> <p>The ESD Report has been updated (refer Attachment E) to highlight which opportunities noted in Section 3.1.1 are included in the development. Further opportunities will be explored as part of the detailed design phase.</p>	
<p>Section 6.5 of the MPDG sets out objectives and provisions for canopy coverage and biodiversity in the Macquarie Park area, including tree canopy and deep soil targets for development.</p> <p>The Department notes that the proposed development does not meet the tree canopy and deep soil targets outlined in Provisions 9 and 11 of Section 6.5 of the Macquarie Park Place Strategy – Urban Design Guide, which require 25% tree canopy coverage and 20% deep soil zones, respectively. The current proposal achieves only approximately 11.48% of the site area for these combined elements.</p> <p>The Department requires the design of the development to be amended to incorporate additional landscaping, including increased deep soil zones and tree planting, to meet the provisions of Section 6.5 of the MPDG.</p>	<p>The proposal will remove 19 trees, while retaining and protecting 27 existing trees during construction. A re-greening program will deliver 36 new trees, approximately 929sqm of deep soil planting, and increase tree canopy coverage from 10.9% to 27.7% at maturity, achieving the MPDG tree canopy target.</p> <p>The proposal does not achieve full compliance with the 20% deep soil target due to site-specific and operational constraints associated with the data centre as well as the restricted site area which was limited by the State rezoning. The functional requirements of the facility, including cooling systems, ventilation infrastructure and emergency backup power, necessitate a large building footprint and areas of unobstructed hardstand, which limit opportunities for additional deep soil provision.</p> <p>Notwithstanding these constraints, the landscape strategy maximises greening opportunities across the site. This includes retention of existing boundary trees, new street tree planting</p>	

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	<p>along Road 1 and Road 23, and provision of approximately 929sqm of deep soil zones located primarily along street frontages to support long-term canopy establishment. Deep soil provision equates to approximately 11.48% of the total site area and increases to approximately 15.82% when land required for the dedication of Roads 1 and 23 is excluded. While some areas do not meet the prescriptive 3 m by 3 m dimension, the proposed zones provide adequate soil volumes to support healthy tree growth, therefore addressing the MPDG's objectives.</p> <p>The landscape design integrates native groundcovers, shrubs and tree planting within building setbacks, entry forecourts and pedestrian interfaces to improve amenity, soften the built form and contribute to microclimate improvement and urban heat mitigation, overall improving exiting conditions.</p> <p>The development forms part of a larger lot also known as MPark Stage 2, where a coordinated precinct-wide approach to landscape and open space delivery has been adopted. The broader precinct will deliver substantial publicly accessible open space, including a minimum 7,310sqm park, an approximately 2,000sqm linear park along Waterloo Road, and additional landscaped areas across the wider site. When considered collectively, these precinct-scale outcomes achieve the 25% tree canopy and 20% deep soil targets sought by the MPDG.</p> <p>On this basis, the proposal is considered consistent with the objectives and strategic intent of the MPDG and makes an appropriate contribution to landscape and urban greening outcomes within the Macquarie Park precinct.</p>	

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<p>As previously outlined in advice from the Government Architect NSW (GANSW), the current black palisade fence design (FN01 2.4m High Security Fencing, Appendix E, Drawing No. MPARK2-GBA-BH-01-DR-A-0151) is not visually recessive particularly when viewed by pedestrians at an oblique angle, as the spacing and width of the vertical rails create the appearance of a solid black wall that visually dominates the streetscape.</p>	<p>The fence design has been revised to introduce alternating natural tones, including dark greens, browns and maroon, to provide tonal variation. Refer to the revised Landscape Design Report (page 31) provided at Attachment D. This approach reduces further the visual prominence of the fencing when viewed from the public domain while maintaining the required level of perimeter security. The overall extent of fencing has also already been minimised wherever operationally feasible, ensuring an appropriate balance between security requirements and streetscape integration.</p>	<p>Attachment D</p>
<p>The Noise and Vibration Impact Assessment (NVIA) in Appendix K of the EIS does not appear to have modelled noise emissions from the louvred façade of the development. The NVIA should be amended to include updated noise modelling which includes all operational noise sources of the development including the louvred façade.</p>	<p>Noise emissions from the louvres have been modelled for all relevant scenarios, including generator maintenance and emergency operating conditions. This information has been included in the NVIA submitted with the EIS.</p>	
<p>The cooling tower noise data provided in Appendix E of the NVIA noted that the use of variable frequency drives can increase sound levels. The Department requests confirmation that allowance for increased noise output has been made to the modelled sound power levels.</p>	<p>This matter is addressed in Appendix section E.2.4 of the NVIA submitted with the EIS, which confirms that the use of variable frequency drives presents a negligible risk of increased noise. The section of the NVIA also outlines mitigation measures should noise levels exhibit higher outputs than anticipated.</p>	
<p>The Air Quality Impact Assessment (AQIA) in Appendix J of the EIS predicts exceedances to both the incremental and cumulative criterion for Nitrogen Dioxide at future residential receivers (Receivers R1 – R3) during routine maintenance (Scenario 2) and cumulative modelling (Scenario 3) scenarios.</p>	<p>Since exhibition of the EIS, further at-source mitigation measures have been incorporated and refined dispersion modelling has been undertaken, as detailed in Attachment G.</p> <p>All back-up generators will be equipped with Selective Catalytic Reduction systems, providing approximately an 85% reduction in nitrogen oxide emissions and specifically addressing the</p>	<p>Attachment G</p>

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<p>The Department requires further consideration and implementation of at source mitigation measures be undertaken to reduce pollutant concentrations at residential receivers, including an analysis of all feasible and reasonable measures available. Any additional mitigation measures should be supported by update dispersion modelling to demonstrate compliance with the relevant pollutant criterion.</p>	<p>previously predicted exceedances at the future residential receivers.</p> <p>Updated Computational Fluid Dynamics modelling has been completed using these mitigation measures and realistic operational scenarios, including routine maintenance and cumulative conditions. The updated results demonstrate that predicted nitrogen dioxide concentrations comply with the applicable air quality criteria at all residential receivers.</p> <p>Accordingly, feasible and reasonable mitigation measures have been implemented and verified through updated modelling, confirming the development meets the relevant pollutant criteria.</p>	
<p>The location, configuration and amount of deep soil is unchanged from SDRP 02, at 10.55% of the residual site (excluding roads). It is appreciated that there are infrastructure constraints (such as underground utilities) that restrict deep soil provision. However, as no further work has been demonstrated to address the advice provided by GANSW in Advice Letter 02, Item 4a-d is still required to be addressed.</p>	<p>The proposal provides a total of 929sqm of deep soil, equating to 11.48% of the site area, which represents a marginal increase since the second SDRP meeting. The amount of deep soil provided increases to approximately 15.82% when land required for the dedication of Roads 1 and 23 is excluded.</p> <p>The location and configuration of deep soil areas have been retained as they reflect the most feasible outcome having regard to site constraints, including underground services, building footprint requirements and operational clearances associated with the data centre.</p> <p>Further investigation was undertaken following Advice Letter 02 to identify opportunities to increase deep soil provision and adjust its distribution. However, these investigations confirmed that additional deep soil areas cannot be achieved without compromising essential infrastructure, access, or servicing</p>	

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	<p>requirements. The proposal therefore focuses on maximising soil volumes, tree planting and canopy outcomes within the areas that can practically support deep soil, rather than redistributing or fragmenting planting zones.</p> <p>While the numeric deep soil target is not fully achieved, the proposal responds to Items 4a–d of Advice Letter 02 through a consolidated landscape strategy that prioritises meaningful planting areas, long-term canopy establishment and integration with the public domain. When considered in conjunction with the precinct-wide landscape and open space outcomes delivered as part of MPark Stage 2, the proposal is considered to appropriately address the intent of the GANSW advice and the objectives of the MPDG.</p>	
<p>The Department requests separate canopy cover calculations for the residual site and dedicated streets be provided in accordance with MPDG.</p>	<p>The landscape strategy includes replacement planting for all trees to be removed, along with additional new trees, resulting in a total canopy increase of 16.8%. The proposal delivers 27.7% tree canopy coverage across the site, exceeding the 25% target in the MPDG. A detailed breakdown of canopy percentages for the residual site area and dedicated road areas is included in page 38 of the revised Landscape Design Report provided as Attachment D.</p> <p>Tree placement has been carefully designed to balance shade, amenity and operational safety. Trees have been located away from building corners where clear sightlines are critical for data centre operations and security. While options to increase the southern setbacks were considered, site constraints prevent further adjustment including amount of solar access to this</p>	<p>Attachment D</p>

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	<p>space. Instead, the design strengthens the northern interface adjoining Kennards, providing increased setbacks, additional landscaping and improved public realm activation.</p>	
<p>Provision 12 of Section 4,1 of the MPDG (p.24) states the following: “Tree canopy coverage is to be prioritised over street parking, with tree blisters provided between every two-to-three on-street parking spaces.”</p> <p>The Department notes that Road 01 (ST8) of the MPDG (Figure 12, p.33) shows evenly spaced tree pits and 8-metre tree blisters within the parking lane. In contrast, the current proposal omits the tree blisters and includes a missing tree pit between the driveway and the eastern site boundary. Similarly, Road 23 (ST10) of the MPDG (Figure 14, p.34) indicates evenly spaced tree pits on one side and tree blisters projecting into the parking lane on the other, whereas the proposed plans include only a single tree blister on the opposite side of Road 23 and no tree pits along the adjoining footpath.</p> <p>Given that the proposed street layout appears to provide less tree planting and landscaping than specified in the MPDG, it is unclear how the proposal achieves the stated outcome that “street planting has been maximised” (Comment on Item 8, p.56, Appendix F). Accordingly, and in addition to addressing the previous GANSW advice (Advice Letter 02, Item 8), the Department requests that the plans for Road 01 and Road 23 be revised to either reflect the configurations shown in the MPDG (Figures 12 and 14) or present an alternative arrangement that delivers a comparable level of tree canopy and landscaping.</p>	<p>Street tree provision has been maximised within the scope of the current works. Only one tree planter is included on Road 23 at this stage because the proposal delivers only a partial section of the road. The interim line marking and kerbside layout have been designed to accommodate larger vehicle movements and avoid abortive works ahead of the future tie-in with Road 1. This ensures the road functions appropriately in the interim while preserving flexibility for the ultimate configuration.</p> <p>Additional tree planters will be incorporated when the remaining section of Road 23 is constructed and extended through to Waterloo Road, consistent with the City of Ryde’s Public Domain Technical Guidelines.</p>	

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<p>The Department notes that multiple State Significant Development (SSD) applications have been proposed along Khartoum Road, with several construction projects currently underway in the surrounding area, including works along Talavera Road. The Department raises concerns that multiple concurrent construction projects may lead to cumulative impacts and construction fatigue for nearby residents and businesses. In this regard, the Submissions Report must include a framework for managing cumulative construction impacts and construction fatigue. The framework should include outcomes of consultation with the surrounding community, details of likely construction duration and project-specific analysis of the mitigation measures identified in the EIS.</p>	<p>The potential for cumulative construction impacts associated with surrounding SSD projects is acknowledged. At this stage of the assessment process, detailed construction planning has not been finalised. A comprehensive Construction Environmental Management Plan (CEMP) will be prepared and submitted for approval prior to the commencement of construction in accordance with the conditions of consent.</p> <p>The CEMP will address cumulative impacts by:</p> <ul style="list-style-type: none"> • detailing construction staging and duration • incorporating tailored noise, vibration, traffic and access management measures • establishing clear communication protocols with nearby residents and businesses • coordinating with adjacent project teams where practicable to minimise overlapping disruptions <p>Given that construction timing and methodologies are subject to further refinement and dependent on the final determination, the CEMP is the appropriate mechanism to provide a robust, enforceable framework for managing cumulative impacts and construction fatigue. This ensures that the final approach is informed by up-to-date information and can be adapted to the actual construction landscape at the time works commence.</p>	
<p>Section 3 of the Ecologically Sustainable Development (ESD) Report in Appendix CC of the EIS identifies the ESD design initiative considered for the development. However, the ESD report only</p>	<p>All reasonable measures to reduce energy and water consumption have been carefully considered and incorporated into the Road 1 Data Centre design. The project targets a Power</p>	

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<p>identifies measures and strategies currently under investigation and does not propose or commit to the implementation of any ESD design initiatives. The Department requests additional information be provided to detail and demonstrate all reasonable measures to reduce energy and water consumption have been considered and incorporated into the design of the development.</p>	<p>Use Efficiency (PUE) of 1.35 and a Water Use Efficiency (WUE) of 1.5, both of which exceed typical industry benchmarks.</p> <p>Key initiatives such as high-efficiency mechanical systems, advanced sub-metering, rainwater harvesting, water-efficient fixtures and an optimised building envelope have been integrated into the concept design and will be further refined and confirmed during detailed design. This approach ensures strong alignment with ESD principles and meets the Department's expectations that reasonable and feasible efficiency measures be incorporated into the development.</p>	
<p>Further to the above, the ESD Report states that solar photovoltaic (PV) generation are being investigated but also states that availability for PV panels is constrained. The ESD report should confirm the proposed number and capacity of any PV panels proposed to be implemented into the design of the development.</p>	<p>The roof areas have been designed to enable compliance with the NCC requirements for provision of space for solar photovoltaic (PV) panels. The design team will continue to refine the building design with the objective of exceeding the minimum NCC provision requirements where feasible.</p>	
<p>In addition, further measures to reduce Scope 2 emissions should be explored and implemented where practicable including but not limited to, renewable energy certificates and green power purchase agreements.</p>	<p>Scope 2 emissions associated with electricity consumption will ultimately be attributable to and purchased by future tenants of the building. Although specific measures cannot be committed to at this stage, opportunities to support the reduction of Scope 2 emissions will be explored where practicable. This may include evaluating options such as renewable energy certificates and green power purchase agreements during tenant engagement and operational planning phases. The intent is to ensure sustainability considerations remain a priority and that feasible pathways for reducing emissions are assessed in collaboration with tenants as part of the building's ongoing energy strategy.</p>	

Summary of Issue Raised	Response	Supporting Document
<p>The Ecologically Sustainable Development (ESD) Report in Appendix CC of the EIS should be updated to provide specific information on the development's urban heat effects. Further analysis is needed to substantiate the effectiveness of the proposed measures. The analysis must also address potential localised heat rejection impacts from rooftop cooling plant and equipment, and back-up generators on surrounding receivers.</p>	<p>Urban heat island impacts (UHI) are typically measured at a scale larger than a single building. That being noted, the proposed facility is designed to minimise its contribution to UHI through the following features:</p> <ul style="list-style-type: none"> ▪ The data centre operations (which accounts for the vast majority of the heat generated) is minimised through efficient design of the buildings HVAC systems, achieving a PUE that is significantly higher than industry averages, and ▪ The proposed data centre will use cooling towers to reject heat adiabatically, meaning without a dry bulb temperature change, by evaporating water and utilizing the heat of evaporation. In contrast, data centres with air-cooled chillers reject heat by altering the air temperature. <p>It should be noted that the most significant heat source in UHI assessment is the solar radiation incident on the site from the sun. Therefore, the design has looked to integrate planting to reduce the absorbed heat (plants use sunlight to photosynthesise) and incorporate high albedo (high reflectance) materials where possible to reflect heat from hard surfaces so that it is not absorbed and re-radiated to the local environment.</p> <p>Finally, it should also be noted that this is a positive change compared to the existing car park, which has exposed concrete and asphalt.</p>	
INDIVIDUAL SUBMITTERS		
<p>Objection (name withheld)</p>		

Summary of Issue Raised	Response	Supporting Document
<p>I am primarily concerned with the noise pollution that will be generated by the facility's 24/7 operation. The constant noise may severely impact my sleep and negatively affect my physical and mental health. To protect the health and well-being of local residents, I object to this project.</p>	<p>Noise from the operation of the data centre has been assessed by an independent Noise and Vibration Assessment prepared in accordance with relevant EPA guidelines. The assessment confirms that operational noise, including 24/7 plant, will comply with applicable noise criteria at nearby residential receivers. Acoustic treatments and conditions of consent will ensure noise impacts are acceptable and will not adversely affect residential amenity.</p>	
<p>Objection (name withheld)</p>		
<p>This data centre like any data centre will take up a considerable amount of resource from the residents living in the area in order to run. It's high electricity consumption straining the local grid and increasing energy costs, significant water use potentially leading to water shortages, constant noise from cooling systems and backup generators, increased traffic and construction disruption, and impacts on local ecosystems and biodiversity.</p> <p>As this data centre is being built so close to a residential area, the noise pollution alone is damning. The continuous operation of cooling fans and backup generators creates a constant, low-frequency hum or roar is disruptive and bothersome to residents.</p>	<p>The proposal has been subject to detailed technical assessment addressing electricity demand, water servicing, noise, traffic, construction impacts and biodiversity. Relevant authorities, including Sydney Water and electricity network providers, have confirmed servicing capacity strategies. Noise impacts from cooling systems and backup generators comply with regulatory criteria, traffic impacts are acceptable, and construction impacts will be managed through a Construction Environmental Management Plan. No unacceptable impacts on local ecosystems or biodiversity are anticipated.</p>	
<p>Objection (name withheld)</p>		
<p>The Macquarie Park location is perfect for apartments, office buildings, and mixed use development that can benefit a wide variety of people. It is close to public transport, shops at Macquarie centre and the University. Taking up such valuable space for a data centre</p>	<p>The proposed data centre is a permissible land use under the applicable planning controls and is consistent with the strategic planning framework for Macquarie Park, which specifically envisages data centres as part of the precinct's employment and</p>	

Summary of Issue Raised	Response	Supporting Document
<p>is a total waste, and almost any other use of the site would be of greater benefit to the public.</p>	<p>technology role. The development will deliver employment, infrastructure investment and economic benefits while operating within an established commercial and industrial context.</p>	
<p>Comment (name withheld)</p>		
<p>I think data centres are an important development in the current digital age and I'm not against the development of a data centre in this location. However, I feel as if the proposed development does not seriously consider the severe impacts of water consumption in data centres. Yes, it may be approved by Sydney Water that it is able to be serviced, but there is no consideration of the cumulative impacts encouraged by planning controls enabling data centre development across Macquarie Park, and the Greater Sydney water system as a whole. The project needs to consider measures for using recycled water in cooling systems. A due diligence assessment of the feasibility of an on-site treatment and recycling facility is the minimum encouraged. I understand that rainwater capture is proposed but this is not enough. An assessment of cumulative water consumption in the Macquarie Park's E3 zones under the maximum development uptake for the purposes of data centres under the existing planning controls should be undertaken to identify the overall level of water consumption that is inherently permissible and justify that the proposal will not place unreasonable strain on the water network in its current state. I suspect it will not. As such, on-site water recycling should be seriously considered to ensure sustainable outcomes both for the proposed development and for the future of Macquarie Park.</p>	<p>Water demand for the development requires rigorous assessments from various agencies including Sydney Water. The proposal will be assessed to ensure appropriate servicing. The proposal includes water efficiency measures and rainwater harvesting consistent with BASIX and relevant sustainability requirements. Cumulative water impacts across Macquarie Park are managed through the strategic planning framework and utility servicing strategies. On-site treatment and recycling facilities are not required to achieve compliance and are not mandated under current planning controls, however the proposal will operate within approved sustainable water use parameters.</p>	

Summary of Issue Raised	Response	Supporting Document
Support (name withheld)		
I fully support the building of the Road 1 Data Centre	The support for the proposal is noted.	

5. UPDATED PROJECT JUSTIFICATION

Having considered all relevant matters, there will be no additional environmental impacts as a result of the proposed refinements and clarifications. The refinements include additional measures to ensure any previously known and assessed impacts will be appropriately managed and mitigated where relevant.

On this basis, the proposed development is appropriate for the site and approval is recommended, subject to appropriate conditions of consent.

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