



Environmental Impact Statement Proposed Data Centre

1 Sirius Road, Lane Cove West
(Lot 1 in DP 1151370)

Prepared by Willowtree Planning Pty Ltd on behalf
of Greenbox Architecture

September 2019

Environmental Impact Statement

Proposed Data Centre

1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

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SECTION 4.12 CERTIFICATE

Declaration Form

Submission of Environmental Impact Statement (EIS)
prepared under the *Environmental Planning and Assessment Act 1979 – Part 4, Division 4.3, Section 4.12*

EIS Prepared By

Name	Travis Lythall
Qualifications	Bachelor of Science, UoN
Address	Suite 4, Level 7 100 Walker Street North Sydney, NSW, 2060

In Respect Of

Proposed Data Centre

Development Application

Applicant Name	Greenbox Architecture
Address	Level 25, 25 Bligh Street, Sydney, NSW, 2000

Land to be Developed

1 Sirius Road, Lane Cove West
▪ Lot 1 in Deposited Plan 1151370

EIS

An Environmental Impact Statement (EIS) is attached.

Certificate

I certify that I have prepared the contents of this EIS and to the best of my knowledge:

- it is in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*,
- contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and
- that the information contained in the statement is neither false nor misleading.

Signature



Name	Travis Lythall
Qualification	BSc, UoN
Date	10 September 2019

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GLOSSARY OF KEY TERMS

TERM	MEANING
Applicant / Proponent	Greenbox Architecture
AU\$	Australian Dollars
CIV	Capital Investment Value
Council	Lane Cove Council
DA	Development Application
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (as amended)
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
Greater Sydney Region Plan	<i>Greater Sydney Region Plan – A Metropolis of Three Cities</i>
LEP	Local Environmental Plan
OEH	NSW Office of Environment and Heritage
RMS	NSW Roads & Maritime Services
SEARs	Secretary's Environmental Assessment Requirements issued 21 December 2018 (SSD 9741)
SEPP	State Environmental Planning Policy
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
The Site / Subject Site	1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)
Sqm or m²	Square metres
SREP	Sydney Regional Environmental Plan
SSD	State Significant Development
SSDA	State Significant Development Application
Willowtree Planning	Willowtree Planning Pty Ltd

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared by Willowtree Planning Pty Ltd (Willowtree Planning) on behalf of Greenbox Architecture. The Proposed Development seeks consent for the construction and operational use of a Data Centre on the identified land portion – 1 Sirius Road, Lane Cove West (Lot 1 DP 1151370).

The Proposed Development is for the construction of a world-class Data Centre, that provides data storage facilities for the electronic information of large technology companies. The completed facility will deliver the infrastructure to support the growth of cloud services in the region. Unlike other types of warehouses, when operational the facility remains clean and secure, with minimal vehicle traffic and is staffed 24/7.

The Proposed Development will be a low impact addition to the existing Lane Cove West Business Park and will align with the development controls established by Lane Cove Council. It will provide positive social and economic benefits to the area and deliver an increasingly important cloud and data centre service to the broader community. With its light industrial aesthetic, it will complement the area and its adjoining neighbours. The steeply contoured site allows for the majority of the building to be tucked into the hill-side. The materials for the external cladding also ensure integration into the existing landscape.

The Data Centre's state-of-the-art design, equipment and technologies will provide industry-leading energy efficient solutions and the inherent building fabric performance will ensure a sustainable development.

The Subject Site is owned by Rove Estate and is currently an undeveloped land portion. The Subject Site is under the land application of the Lane Cove Local Government Area (LGA), for which it is zoned IN2 Light Industrial under the *Lane Cove Local Environmental Plan 2009* (LCLEP2009). The proposed development is consistent with surrounding land uses to which LCLEP2009 applies; and, would contribute to the efficient use of employment lands for warehousing and distribution purposes, i.e. the proposed Data Centre.

The process of applying for State Significant Development (SSD) requires that the Capital Investment Value (CIV) be greater than AU\$50 Million for proposed Warehouse or Distribution Centres pursuant to *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), Schedule 1, Part 12. The Proposed Development is considered SSD, for which it would be lodged to and determined by the NSW Department of Planning & Environment (DP&E).

Under the *Environmental Planning and Assessment Act 1979* (EP&A Act) it is required that a formal request for SEARs be made prior to lodgement of an Application seeking approval. SEARs were requested for the proposed SSD (Reference: SSD 9741) and later issued by the NSW DP&E on 21 December 2018 (refer to **Appendix 1** of this Submission).

In addition to the general requirements, the SEARs for the Proposed Development highlights a number of Key Issues, to be addressed as part of the EIS, including:

- Strategic and Statutory Context;
- Urban Design and Visual;
- Suitability of the Site;
- Community and Stakeholder Engagement;
- Soils and Water;
- Traffic and Transport;
- Noise and Vibration;
- Infrastructure Requirements;
- Heritage;

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- Waste;
- Air Quality;
- Hazards and Risks;
- Bushfire and Incident Management;
- Biodiversity; and,
- Social.

Other areas evaluated throughout this EIS (for added due diligence) include the following:

- Visual Impacts;
- Greenhouse Gas and Energy Efficiency; and,
- Ecologically Sustainable Development (ESD).

It is noted that following receipt of the SEARs in December 2018, the SSD Application was formally accepted in March 2019. The referral responses received from the agencies, Lane Cove Council and the public were subsequently considered and as a result the design was amended to respond to many of the issues identified. As such a formal request pursuant to Clause 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation 2000) has been with respect to the amendment scheme. In summary, the following changes are representative as shown on the amended plans:

- Reduced cut and fill;
- Increased retention of vegetation;
- Increased building height to minimise the extent of the building footprint; and
- Water Sensitive Urban Design (WSUD) measures to reduce the impact on the adjacent waterway and wetlands.

Accordingly, the findings of this EIS identify that the Proposed Development can be accommodated without generating impacts that are considered unacceptable, in line with the relevant legislation applicable to the Subject Site. Furthermore, the proposed Data Centre would be consistent with the objectives outlined within the LCLEP2009, *Greater Sydney Region Plan – A Metropolis of Three Cities*, the *North District Plan*; and, remains consistent with the principles of ESD, as part of the overall vision and integrated design.

Based on the findings of this EIS, the Proposed Development supports the development of a Data Centre, providing further employment-generating opportunities in the immediate local communities, as well as to the wider locale of the Metropolitan Sydney Region.

The Proposed Development is deemed suitable for its regional and local context and would not result in any significant environmental impacts, for which it satisfactorily addresses the SEARs (issued 21 December 2018). As such, it is recommended that the Proposed Development be supported by the NSW DP&E.

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PART A PRELIMINARY

1.1 INTRODUCTION

This EIS has been prepared by Willowtree Planning on behalf of the Proponent, Greenbox Architecture, and is submitted to the NSW DP&E in support of the Proposed Development on the land portion described as 1 Sirius Road, Lane Cove West (Lot 1 DP 1151370), for the purpose of a Data Centre.

This State Significant Development Application (SSDA) seeks development consent for the construction and operational use of a proposed Data Centre that would play a vital role in providing an advanced facility to support the growth and development of IT infrastructure across the Metropolitan Sydney region and would contribute to the enhanced promotion and creation of creating employment-generating opportunities. The Proposed Development is summarised below as follows:

- Bulk earthworks across the Site to establish the building pad for the proposed Data Centre building;
- Provision of infrastructure and services (includes provisions for an electrical substation);
- Construction of the Data Centre building (30.2 m in height – measured to the ridge of the roof top plant) as depicted on the proposed Section Plans (refer to **Appendix 5** of this Submission);
- Construction of the landscaped area.
- There are several stages to the works. Construction jobs generated by the Proposed Development works, is expected to be in the order of approximately 320 construction jobs, including civil works for the construction of the Data Centre building;
- Approximately, 80-100 full-time operational jobs, are estimated to be created as a result of the Proposed Development:
 - From the Proposed Development's operational commencement ('Day 1') there would be approximately 20-30 staff on-site during normal business hours;
 - At full capacity, approximately 50-70 staff would be on-site during normal business hours; and,
 - Overnight and on the weekends, there would be approximately 10-20 staff on-site.
- Car parking rates will be constructed in accordance with the:
 - One (1) space per 300 m² of warehouse GFA;
 - One (1) space per 60 m² of ancillary office GFA; and,
 - One (1) disabled space per 50 car parking spaces (minimum one (1) space).

The Subject Site is currently owned by Rove Estate Pty Ltd (ACN 159 553 652) and is characterized by an undeveloped land portion, zoned for such industrial-related purposes. The ongoing operational use of the Subject Site would be for the purpose of a Data Centre.

As discussed throughout this EIS, the Proposed Development seeks to establish an innovative operation that would benefit the end user on a National; State; Regional; and, Local scale as well as benefitting the immediate community and wider locale through the enhanced promotion of employment opportunities.

This EIS describes the Subject Site and Proposed Development, provides relevant information, responds to the SEARs; and, assesses the Proposed Development in terms of the relevant matters set out in relevant legislation, Environmental Planning Instruments (EPIs) and associated planning policies.

The structure of this EIS is as follows:

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- **Part A Preliminary**
- **Part B Site Analysis**
- **Part C Proposed Development**
- **Part D Legislative and Policy Framework**
- **Part E Consultation**
- **Part F Environmental Risk Assessment**
- **Part G Management and Mitigation Measures**
- **Part H Project Development Justification**
- **Part I Conclusion**

1.2 PROJECT TEAM

The Project Team involved in the preparation of this SSDA include:

- Greenbox Architecture (Proponent & Architect)
- Willowtree Planning (Planning Consultant)
- Linesight (Quantity Surveyor)
- S.P. Site Setout Pty Ltd (Surveyor)
- Geoscapes (Landscaping and Visual Impact Assessment)
- Van Der Meer (Water Quality & Civil Plans)
- GRC Hydro (Flood Assessment)
- Douglas Partners (Geotechnical)
- Senversa (Contamination)
- ARUP (Traffic, Noise, Air, Site Infrastructure, Energy)
- SLR Consulting (Waste Management, Hazards)
- AW Edwards (CNMP)
- Ecoplanning (Biodiversity)
- Travers Bushfire & Ecology (Tree Assessment and Bushfire)
- Biosis (Aboriginal and Historic Heritage)
- Mckenzie (BCA, Access)
- Scientific Fire Services (Fire Engineering)
- Dangerous Goods (Lote Consulting)

1.3 THE PROPONENT

The proponent is Greenbox Architecture. See **Table 1** for contact details.

Table 1: Proponent Contact Details	
Contact Name	Andrew Owens
Company Details	Greenbox Architecture
Contact Number	0425 354 703

1.4 CAPITAL INVESTMENT VALUE

The CIV of the proposed development is estimated at AU\$216,465,700.00 (including GST) subject to final costing and tender clarifications (**Appendix 3**).

1.5 EXISTING ZONING PROVISIONS

The Site is currently zoned IN2 Light Industrial under the provisions of LCLEP2009.

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1.6 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Prior to obtaining the SEARs, a meeting was held with the NSW DP&E on 11 November 2018, to discuss the Proposed Development and to confirm that the SEARs could be issued accordingly.

Accordingly, application to receive the SEARs was submitted (Reference: SSD 9741). The SEARs were subsequently issued by the NSW DP&E on 21 December 2018 and are satisfactorily addressed throughout the contents of this EIS and complete submission.

The full SEARs, as issued, are annexed in **Appendix 1** of this Submission. An overview of how the Secretary's Requirements have been satisfied by this EIS are also outlined in **Table 2** and further in **Section 5.1** of this EIS. This document is also consistent with the minimum requirements for Environmental Impact Statements, as set out in Clauses 6 & 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

Table 2: How SEARs have been Satisfied	
General Requirements	How Addressed
The EIS for the proposed development must meet the form and content requirements in Clauses 6 & 7 of Schedule 2 of the EP&A Regulation.	This EIS has been prepared in accordance with Clauses 6 & 7 of Schedule 2 of the EP&A Regulation. The structure of this EIS addresses all legislative requirements.
Key Issues	
The EIS must include an assessment of the potential impacts of the proposal (including cumulative impacts) and develop appropriate measures to avoid, mitigate, manage and/or offset these impacts. The EIS must address the following specific matters:	Part F
Statutory and Strategic Context – including: - detailed justification that the proposed land use is permissible with consent; - details of any proposed consolidation or subdivision of land; - demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to: - State Environmental Planning Policy (Infrastructure) 2007 - State Environmental Planning Policy (State and Regional Development) 2011 - State Environmental Planning Policy (Coastal Management) 2018 - Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005 - Greater Sydney Region Plan: A Metropolis of Three Cities - Our Greater Sydney 2056: North District Plan - Future Transport Strategy 2056.	Refer to Section 2.3 and Part D .

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Suitability of the Site – including: An analysis of site constraints, such as bushfire and flooding impacts.	Refer to Section 2.5, 6.5 & 6.15.
Community and Stakeholder Engagement – including: ▪ a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of consultation, including a justification for this approach; ▪ a report on the results of the implementation of the strategy including issues raised by the community and surrounding land owners and occupiers that may be impacted by the proposal; ▪ details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal; ▪ details of the proposed approach to future community and stakeholder engagement based on the results of consultation.	Refer to Part E and Appendix 34.
Noise and Vibration – including: ▪ a quantitative noise and vibration impact assessment undertaken by a suitably qualified person in accordance with the relevant Environment Protection Authority guidelines and including an assessment of nearby sensitive receivers; ▪ cumulative impacts of other developments ▪ details of proposed mitigation, management and monitoring measures.	Refer to Section 6.8 and Appendix 19 & 20.
Urban Design and Visual – including: ▪ a visual impact assessment (including photomontages and perspectives) of the development layout and design (buildings and storage areas), including staging, site coverage, setbacks, open space, landscaping, height, colour, scale, building materials and finishes, façade design, signage and lighting, particularly in terms of potential impacts on: ○ nearby public and private receivers; and ○ significant vantage points in the broader public domain including Magdala Park ▪ consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks; and, ▪ detailed plans showing suitable landscaping which incorporates endemic species.	Refer to Section 6.3 and Appendix 5, 8 & 35.
Contamination – including: ▪ a detailed assessment of the extent and nature of any contamination of the soil, groundwater and soil vapour, in accordance with State Environmental Planning Policy No. 55 – Remediation of Land; ▪ an assessment of potential risks to human health and the environmental receptors in the vicinity of the site;	Refer to Section 4.2.9, 6.5 and Appendix 13-16.

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▪ demonstration that the proposal is consistent with site's 'Maintenance of Remediation Order' (Notice No. 28027, dated 27/09/2005); ▪ a description and appraisal of any mitigation and monitoring measures; and, ▪ consideration of whether the site is suitable for the proposed development.	
Biodiversity – including: ▪ an assessment of the proposal's biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted; ▪ as assessment of the proposal's impact upon the adjacent coastal wetland area, in accordance with State Environmental Planning Policy (Coastal Management) 2018; ▪ as assessment of the proposal's impact upon the Lane Cove River and adjacent key fish habitat areas and riparian corridors, in accordance with the relevant Department of Primary Industries guidelines; ▪ describe how impacts upon critical vegetation and endangered species on-site will be avoided and minimised.	Refer to Section 4.2.3, 6.11 and Appendix 23 .
Infrastructure Requirements – including: ▪ a detailed written and/or graphical description of infrastructure required on the site, including the proposed electricity substation; ▪ identification of any infrastructure upgrades required off-site to facilitate the development, and describe any arrangements to ensure that the upgrades will be implemented in a timely manner and maintained; ▪ an infrastructure delivery and staging plan, including a description of how infrastructure on and off-site will be co-ordinated and funded to ensure it is in place prior to the commencement of construction; ▪ an assessment of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site, and describe how any potential impacts would be avoided and minimised.	Refer to Section 6.16 and Appendix 29 .
Sustainable Development – including: ▪ an assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions; ▪ a description of how the proposal will incorporate the principles of ecologically sustainable development in the design, construction and ongoing operation of the development; and, ▪ a description of the measures to be implemented to minimise consumption of resources, especially energy and water.	Refer to Section 6.17 & 6.18 and Appendix 30 .

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Traffic and Access – including: ▪ a quantitative Traffic Impact Assessment prepared in accordance with relevant Lane Cove Council, Austroads and Roads and Maritime Services guidelines using current traffic counts and cumulative traffic from surrounding existing and approved development and the proposed development; ▪ details of all daily and peak traffic and transport movements likely to be generated by the development during construction and indicative operation (vehicle type, public transport, pedestrian and bicycle trips) including the impact on the nearby intersections (using SIDRA or similar modelling); ▪ details of the likely arrival and departure times for vehicles for all components of the proposed development; ▪ details of the largest vehicle anticipated to access and move within the site, including swept path analysis; ▪ details and plans of the internal road network, loading dock servicing and provisions, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards; ▪ details of road upgrades, new roads or access points required for the development, if necessary.	Refer to Section 6.6 and Appendix 17.
Soils and Water – including: ▪ a description of the catchment and proximity of the site to waterways, including the Lane Cove River; ▪ consideration of potential local and mainstream flooding impacts; ▪ an assessment of potential surface and groundwater impacts associated with the development, including potential impacts on the Lane Cove River, other watercourses, riparian areas, groundwater, and groundwater-dependent communities nearby; ▪ an assessment in accordance with ASSMAC Guidelines for the presence and extent of acid sulfate soils (ASS) and potential acid sulfate soils (PASS) on the site and, where relevant, appropriate mitigation measures; ▪ a description of the surface, stormwater and wastewater management systems, including on site detention, and measures to treat or reuse water; ▪ a detailed water balance including a description of the water demands and breakdown of water supplies; and any water licensing requirements; ▪ description of the measures to minimise water use; and ▪ description of the proposed erosion and sediment controls during construction.	Refer to Section 3.2.2, & 6.5 and Appendix 9-11.
Hazards and Risks – including: a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should the preliminary risk screening indicate that the development is	Refer to Section 3.2.3, 4.2.8 & 6.10 and Appendix 22.

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"potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).	
Bushfire – including: ▪ details of the storage of any flammable materials; ▪ an assessment against the requirements of Planning for Bushfire Protection 2006; ▪ a description of measures to ensure the proposal will not increase the bushfire risk to adjoining lands.	Refer to Section 6.15 and Appendix 28.
Waste – including: ▪ details of the quantities and classification of all waste streams to be generated on site during the development; ▪ details of waste storage, handling and disposal during the development; ▪ details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.	Refer to Section 6.7 and Appendix 18.
Air Quality – including: ▪ an assessment of the air quality impacts (including dust and odour) during the development, in accordance with the relevant Environment Protection Authority guidelines; ▪ details of proposed mitigation, management and monitoring measures.	Refer to Section 6.9 and Appendix 21.
Heritage – including: an assessment of Aboriginal and non-Aboriginal cultural heritage items and values of the site and surrounding area in accordance with the relevant Office of Environment and Heritage guidelines.	Refer to Section 6.13 & 6.14 and Appendix 25-27.
Contributions – including: consideration of the Lane Cove Section 94 Contribution Plan 1996, revised 9 October 2013, and/or details of any Planning Agreement.	Refer to Section 6.12
Consultation	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: ▪ Lane Cove Council ▪ Environment Protection Authority ▪ Ausgrid ▪ Roads and Maritime Services ▪ Transport for NSW ▪ Department of Industry – Crown Lands and Water ▪ Department of Primary Industries – Fisheries ▪ Office of Environment and Heritage ▪ Fire and Rescue NSW ▪ Rural Fire Service ▪ Sydney Water ▪ City of Ryde Council ▪ surrounding local residents and stakeholders	Refer to Section 5.2.

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any other public transport, utilities or community service providers. The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	
Further Consultation After Two (2) Years	
If you do not lodge an application under Section 4.12(8) of the <i>Environmental Planning and Assessment Act 1979</i> within two (2) years of the issue date of these SEARs, you must consult with the Secretary in relation to any further requirements for lodgement.	Noted.

PART B SITE ANALYSIS

2.1 SITE LOCATION & EXISTING SITE CHARACTERISTICS

The identified land portion that is the subject of this SSDA is legally defined as 1 Sirius Road, Lane Cove West (Lot 1 DP 1151370).

The Subject Site comprises a total site area of approximately 3.59 ha and is subject to applicable provisions outlined within LCLEP2009. Access to the Site is currently obtained via Sirius Road along the eastern perimeter of the Subject Site, which contains proposed entry / exit points along the street interface as well as being accompanied by turning loops within the identified land portion that would control traffic volumes accordingly.

The Site's historical context is best described through its current undeveloped nature, typically interspersed with varied vegetative characteristics. Land surrounding the Site comprises the following land use zoning, including:

- IN2 Light Industrial;
- E2 Environmental Conservation;
- RE1 Public Recreation; and,
- SP2 Infrastructure.

The nearest sensitive land use is within the E2 Environmental Conservation zone (Lane Cove National Park), located to the west of the Subject Site containing bushfire prone land, Riparian Lands and Watercourses and Coastal Wetlands and Proximity Area for Coastal Wetlands, approximately 150 m away. Accordingly, mitigation and protection measures would be accurately and appropriately implemented throughout the Proposed Development of the Subject Site to preserve the natural and ecological amenity. The closest densely populated residential suburbs are approximately 450 m west (East Ryde) and 600 m east (Lane Cove West) of the Subject Site.

It should be further noted that an electricity transmission tower is located in close proximity to the Site, with overhead power lines potentially being over the western boundary of the Subject Site.

The identified land portion is subject to the provisions outlined in the LCLEP2009, as mentioned above. LCLEP2009 is the primary EPI and categorises the Subject Site within the IN2 Light Industrial zone as displayed in **Figure 1** below. The Subject Site and surrounding context are depicted and illustrated in **Figures 2 & 3** below.

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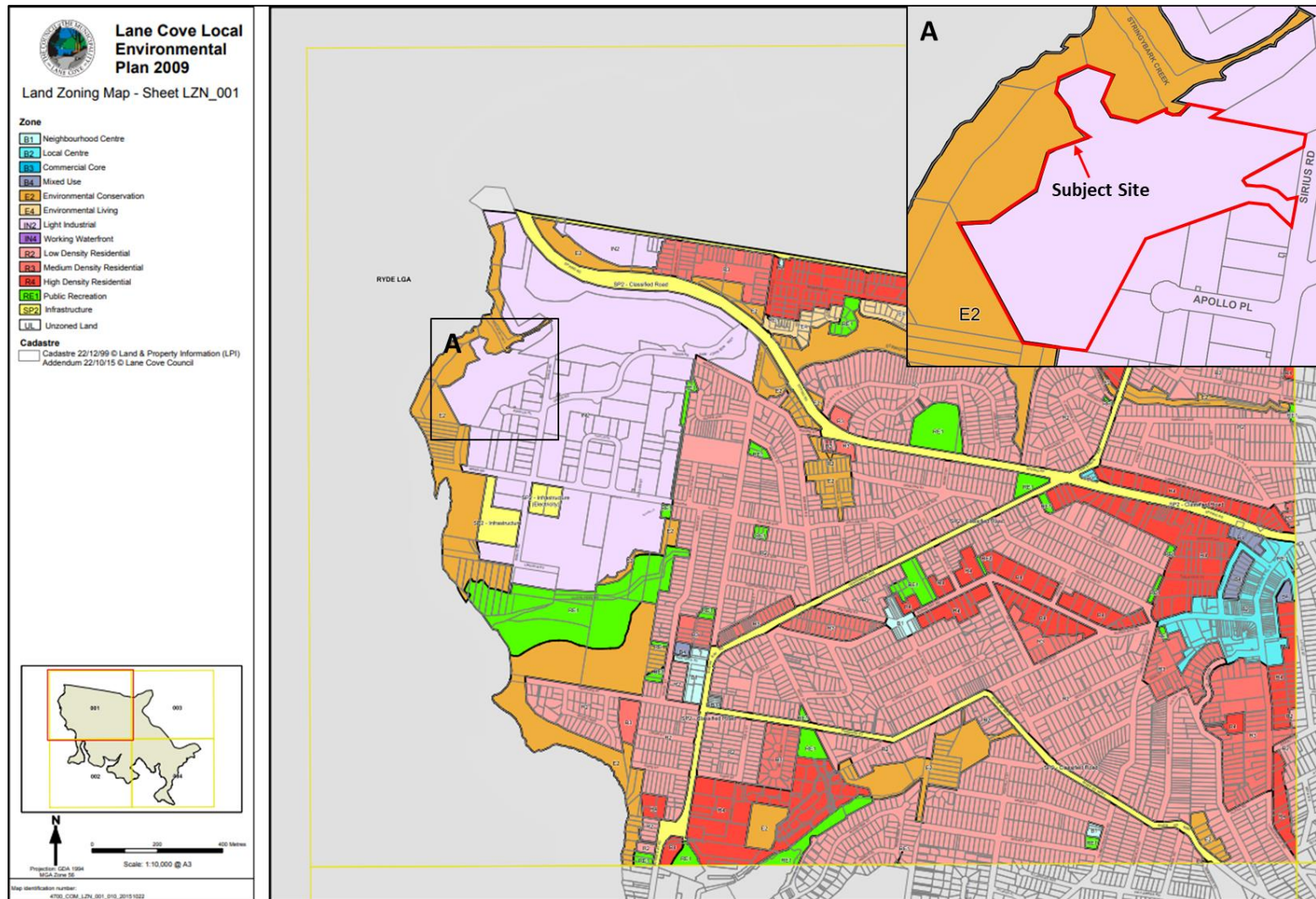


Figure 1 Land Zoning Applicable to the Subject Site under *Lane Cove Local Environmental Plan 2009* (Source: NSW Legislation, 2018)

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Figure 2 Existing Site Context and Surrounding Area (Source: NearMaps, 2018)

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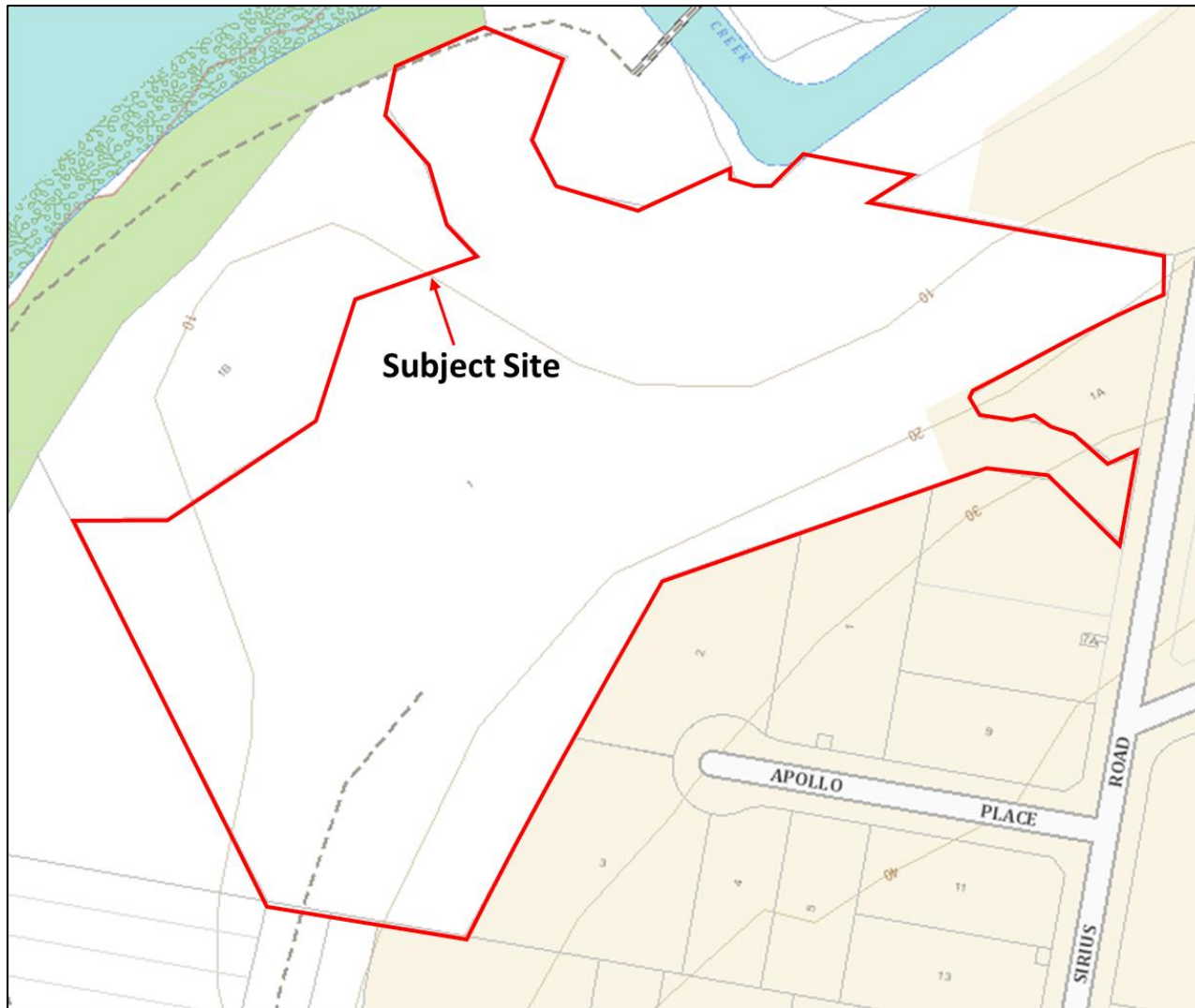


Figure 3 Cadastral Image of Subject Site and Surrounding Context (Source: SIX Maps, 2018)

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2.2 LAND OWNERSHIP

The land which is the subject of this SSDA is under ownership of Rove Estate Pty Ltd (ACN 159 553 652).

2.3 SITE CONTEXT

Key contextual attributes of the Subject Site are noted as follows:

- The Subject Site is located approximately 9.1 km northwest of the Sydney CBD and 12.4 km east of Parramatta;
- Sirius Road adjoins the Subject Site to the east, linking to the wider Lane Cove West Business Park further east and south;
- Directly to the west of the Subject Site is interspersed vegetation classed as bushfire prone land, whilst further west includes tributaries such as the Lane Cove River and Stringybark Creek, which meander to the north of the Subject Site;
- The Subject Site is wholly located within the Lane Cove LGA;
- LCLEP2009 remains the primary Environmental Planning Instrument (EPI) applicable to the Subject Site;
- Given the strategic location of the Subject Site being positioned within the Lane Cove West Business Park, which is designated for such industrial-related uses, the Proposed Development represents a logical outcome that would provide employment-generating opportunities close to where people live and nearby to available transport infrastructure routes; and,
- The surrounding regional road network is located in close proximity to the Subject Site, which includes the M2 Motorway and Epping Road, providing enhanced connectivity to the Subject Site and surrounding area.

2.4 STRATEGIC CONTEXT

As mentioned above, the Site is included within the Land Application for the Lane Cove LGA (refer to **Figure 4**) and is zoned under the LCLEP2009 (refer to **Figure 1** above). The proposed Data Centre responds accordingly as it seeks to provide an advanced facility to further support the growth and development of IT infrastructure across the wider Metropolitan Sydney area. Additionally, the Proposed Development seeks to provide employment-generating development opportunities that would ultimately contribute to the overall growth and development of the Metropolitan Sydney area.

In addition to the above, the Site is identified within the North District Plan. The Productivity Priorities identified under the Plan, relevant to the Proposed Development, include:

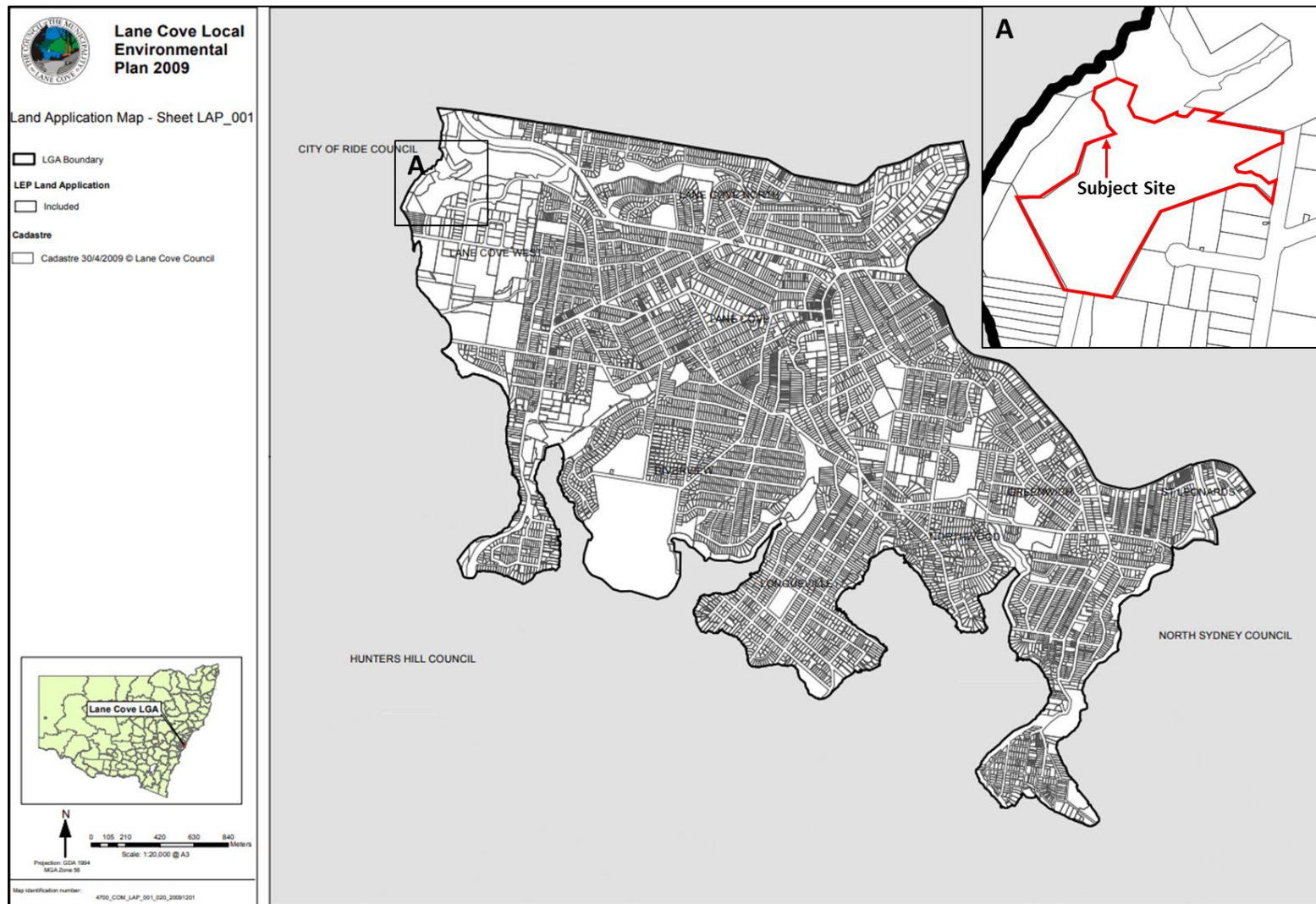
- Planning Priority N1 – Planning for a city supported by infrastructure;
- Planning Priority N10 – Growing investment, business opportunities and jobs in strategic centres;
- Planning Priority N11 – Retaining and managing industrial and urban services land;
- Planning Priority N13 – Supporting growth of targeted industry sectors; and,
- Planning Priority N16 – Protecting and enhancing bushland and biodiversity.

The Proposed Development is considered consistent with and responsive to the above priorities, making a valuable contribution to the Eastern Harbour City, which is earmarked for development and higher and better uses with regard to the Site.

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2.5 DEVELOPMENT AND PLANNING HISTORY

The Subject Site comprises an undeveloped land portion in its existing state.

2.6 SITE SUITABILITY

The Proposed Development provides for a Data Centre in a location that is suitably located away from sensitive environments. The Site has an obvious advantage, as it represents an undeveloped land portion, providing an unconstrained platform for development. The topography is highly suitable for the intended use. The Site has been identified as bushfire prone land, for which mitigation and management measures would be implemented accordingly, based on the recommendations provided in the Bushfire Assessment report summarised in **Part F** of this EIS. Additionally, as mentioned in **Section 2.1**, to the Site's west lies Riparian Lands and Watercourses and Coastal Wetlands and Proximity Area for Coastal Wetlands, for which the Proposed Development has taken into account accordingly.

Notwithstanding, the Subject Site is deemed highly-suited to accommodate the intended use, for the purposed of a Data Centre, due to the following factors:

- LCLEP2009 allows for the Proposed Development;
- Access to the regional road network;
- Compatibility with surrounding development and the local context;
- The Site represents orderly and sequential development having regard to the proximity to surrounding developments within the Lane Cove West Business Park;
- The Site can be serviced immediately and at no cost to the Government;
- Minimal impact on the environment; and,
- Implementation of suitable mitigation measures where required.

Furthermore, the suitability of the Site is further reinforced in **Part D** of this EIS with regard to the Proposed Developments overall consistency with applicable Regional and Local Strategies; and, in **Part F** of this EIS, via a comprehensive Environmental Assessment, which includes an analysis of the potential impacts as a result of the Proposed Development. Accordingly, the Environmental Assessment prescribes recommendations and mitigation measures (where necessary) to account for any identified potential impacts as a result of the Proposed Development. As mentioned above, the suitability of the Subject Site with regard to the Proposed Development is partially attributed to the minimal impact on the environment it would impose.

PART C PROPOSED DEVELOPMENT

3.1 OBJECTIVES OF THE PROPOSAL

The aim of the proposed development is to provide a Data Centre that is facilitated by applicable objectives, including:

- Design the Site to achieve a viable economic return;
- Ensure minimal environmental and amenity impact;
- Ensure ongoing compliance with all operational legislative requirements;
- Provide for an employment-generating land use; and,
- Ensure development is compatible with surrounding development and the regional and local context.

The Site and proposed design are considered to meet the objectives of the project, as it allows for development on a land portion that has is currently undeveloped in its state, as well as being zoned for such industrial-related purposes.

3.2 DESCRIPTION OF THE PROPOSAL

3.2.1 Data Centre

Consent is sought to develop the Site for the purpose of a Data Centre. Operational use of the Data Centre would be undertaken on a 24-hour, 7-day basis, consistent with surrounding operations. Furthermore, the design for the Site, illustrates the emphasis of the urban design to produce a greater and more pleasant working environment in line with the vision outlined in the *Greater Sydney Region Plan – A Metropolis of Three Cities* and the *North District Plan*.

The Proposed Development relates to earthworks and site infrastructure works across the entire site, in which the building pads and services to the Site could be appropriately constructed and managed. With regard to the built-form, bulk earthworks and infrastructure works, the Proposed Development sets out a series of constructive stages, that develop the 3.95 ha Site into an aesthetically pleasing, state-of-the-art facility as set out below in **Table 3** and **Figure 5** below. The particulars are outlined as follows:

Table 3: Proposed State Significant Development Particulars	
Project Element	Development Particular
Site Area	- 39,453 m ²
Data Centre Building	Level 2: 8,039 m ² ; Level 3: 8,039 m ² . Level 3: 8,321 m ² . Level 4: 5,133 m ² . Level 5: 8,039 m ² . Total GFA: 34,429 m ²
Car Parking	- Cars Parking Spaces Provided: 67
Building Height	- 30.3 m
Floor Space Ratio	- 0.82:1
Primary Land Use	Light Industrial Activities: - The Proposed Development would utilise the IN2 Light Industrial zoned land for a proposed Data Centre, which provides secure, reliable and scalable solutions for cloud, content and large enterprise customers to house their high and rapidly growing volumes of data and information.
Bulk Earthworks	Earthworks are proposed on the Site as follows:

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	- Bulk earthworks are proposed to be carried out to establish building pads through cut and fill. - These works are to be carried out in stages upon issue of Development Consent.
Site Access	- Access to the Site would be obtained via Sirius Road via a proposed entry / exit point accompanied by turning loops within the Subject Site.
Infrastructure and Services	- Services to the Site are able to be successfully augmented where necessary, including potable water, electricity, gas, wastewater and telecommunications.
Subdivision	- No subdivision is proposed.
Operational & Construction Jobs	- Construction jobs are anticipated to be in the order of approximately 320; and, - Operational jobs are expected to be in the order of 80-100.
Hours of Operation	- 24/7 operational basis.

The Proposed Development Plans are illustrated further in **Figures 5-7**.

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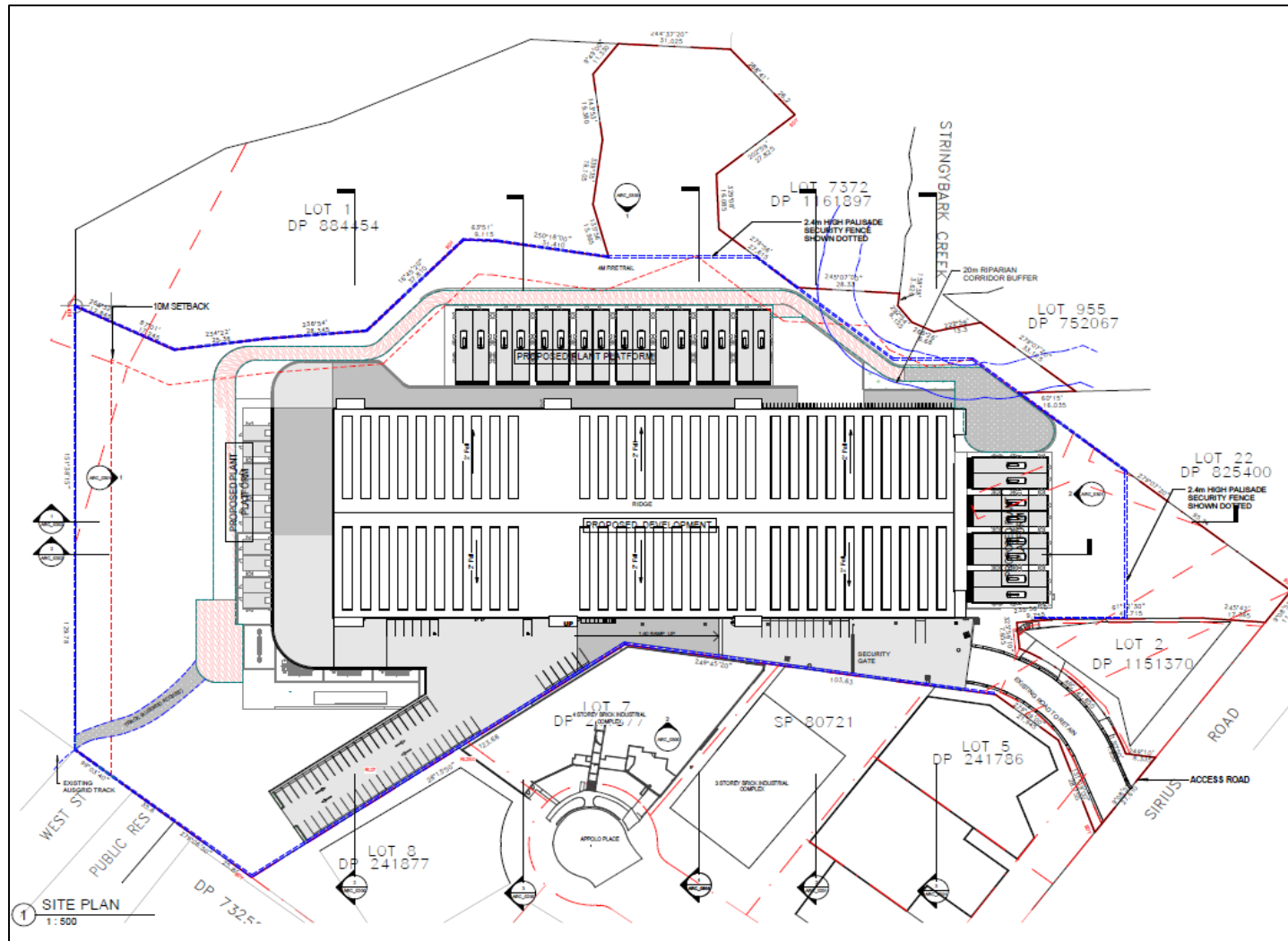


Figure 5 Proposed Development Site Plan (Source: Greenbox Architecture, 2019)

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Figure 6 Proposed Northern and Southern Elevation Plans (Source: Greenbox Architecture, 2019)

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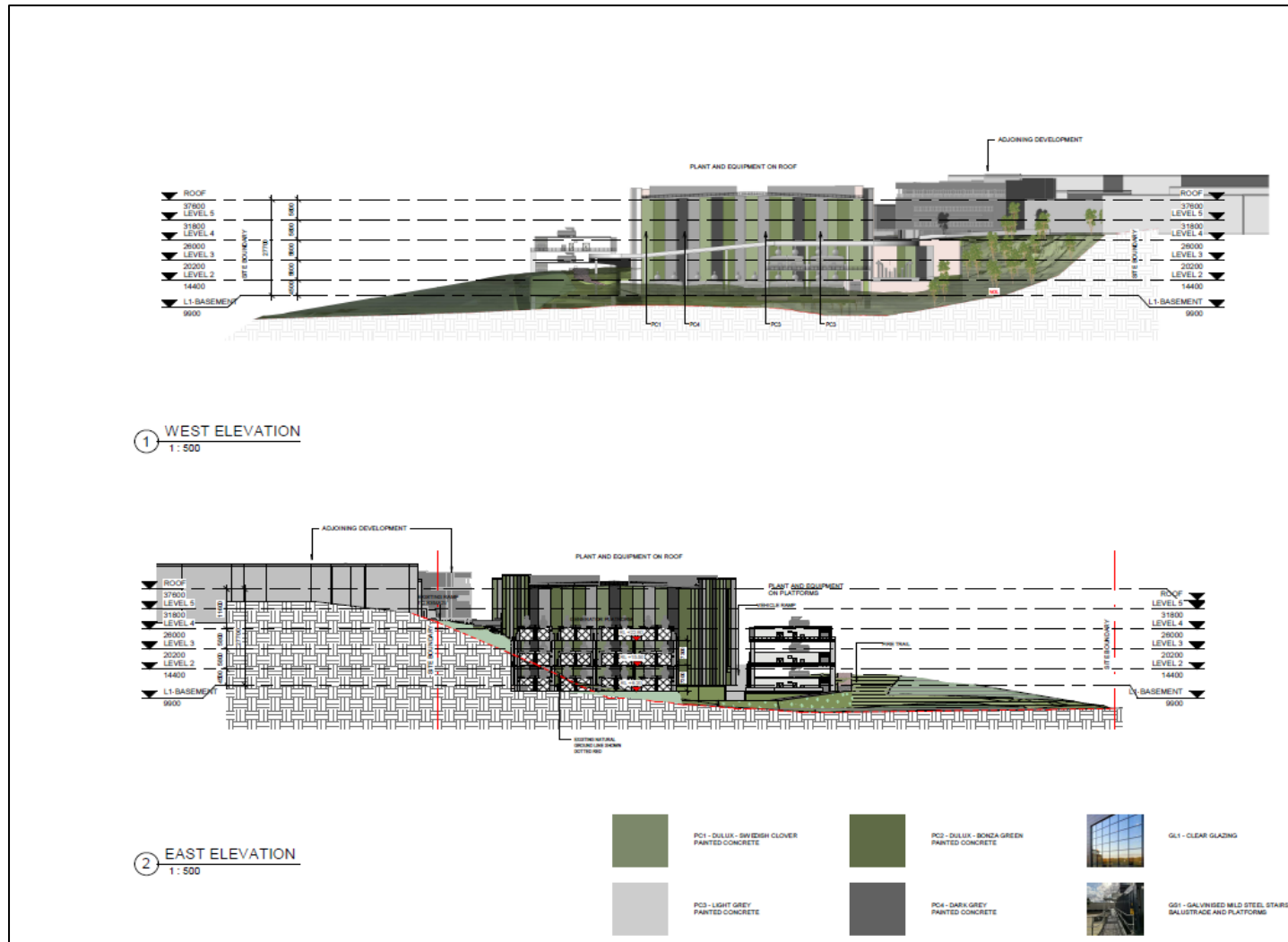


Figure 7 Proposed Eastern and Western Elevation Plans (Source: Greenbox Architecture, 2019)

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3.2.2 Site Preparation

Earthworks are proposed across the Site to facilitate development of the developable site area (refer to **Appendix 11**). Cut and fill works are required on-site to facilitate the development. The proposed building Finished Floor Level (FFL), pavement grading and finished levels aim to provide a relatively balanced cut and fill for the Proposed Development, minimising the need to import material and negate the enhanced requirement for retaining walls. A bulk earthwork cut and fill plan has been prepared, that demonstrates the depths of cut and fill across the Site. Detailed analysis is provided of the cut and fill is shown in **Figure 8** below and **Table 4** below. The total quantum of cut and fill proposed, is as follows:

Table 4: Cut/Fill Balance	
Topsoil Volume	
Quantities are to stripped surface (100 mm top soil)	
Earthworks Volume	
Cut	93,900 m ³
Fill	24,800 m ³
Balance	-69,100 m ³

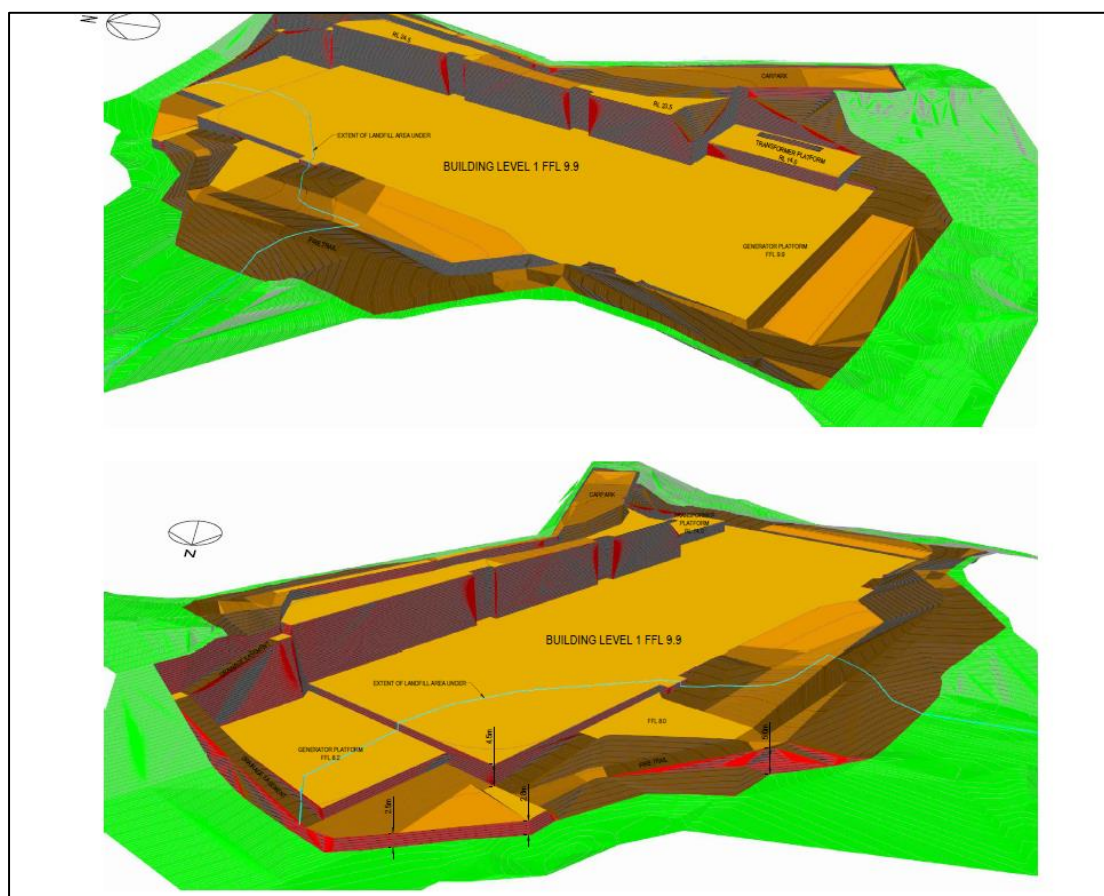


Figure 8 Proposed Bulk Earthworks Plan (Source: Van Der Meer, 2019)

3.2.3 Dangerous Goods

No Dangerous Goods are proposed to be stored on-site which trigger the thresholds of *State Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33). Should the Proposed Development ever require the need to store Dangerous Goods on-site, a SEPP 33 Preliminary Hazard Analysis would be undertaken by a suitably qualified specialist,

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with any recommendations on further approvals required (if any), following all statutory requirements.

3.2.4 Project Documentation

Documents provided in support of the proposal are outlined in **Table 5**.

Table 5: Document Schedule and Consultant Team		
Appendix No.	Description	Author
Appendix 1	Secretary's Environmental Assessment Requirements	NSW Department of Planning & Environment
Appendix 2	Pre-DA (Pre-SEARs) Meeting Minutes	Lane Cove Council
Appendix 3	Quantity Surveyors Report	Linesight
Appendix 4	Survey Plan	S.P. Site Setout Pty Ltd
Appendix 5	Architectural Plans	Greenbox
Appendix 6	Landscape Plans	Geoscapes
Appendix 7	Landscape Design Report	Geoscapes
Appendix 8	Landscape and Visual Impact Assessment	Geoscapes
Appendix 9	Water Quality Report	Van Der Meer
Appendix 10	Flood Assessment Report	GRC Hydro
Appendix 11	Civil Engineering Drawings and Plans	Van Der Meer
Appendix 12	Geotechnical Report	Douglas Partners
Appendix 13	Phase 1 Due Diligence Assessment	Senversa
Appendix 14	Phase 2 Acquisition Environmental Due Diligence Assessment	Senversa
Appendix 15	Sampling and Analytical Quality Plan	Senversa
Appendix 16	Remedial Action Plan	Senversa
Appendix 17	Traffic Impact Assessment	ARUP
Appendix 18	Waste Management Plan	SLR Consulting
Appendix 19	Noise Impact Assessment	ARUP
Appendix 20	Construction Noise Management Plan	AW Edwards
Appendix 21	Air Quality Impact Assessment	ARUP
Appendix 22	SEPP 33 Report	SLR Consulting
Appendix 23	Biodiversity Development Assessment Report	Ecoplanning
Appendix 24	Tree Impact Assessment Report	Travers Bushfire & Ecology
Appendix 25	Archaeological Report	Biosis
Appendix 26	Aboriginal Cultural Heritage Assessment Report	Biosis
Appendix 27	Historic Heritage Impact Statment	Biosis
Appendix 28	Bushfire Report	Travers Bushfire & Ecology
Appendix 29	Site Infrastructure Report	ARUP
Appendix 30	Energy Efficiency Report	ARUP
Appendix 31	BCA Report	Mckenzie Consulting
Appendix 32	Fire Engineering Report	Scientific Fire Services
Appendix 33	Access Report	Mckenzie Consulting
Appendix 34	Community Consultation Report	Willowtree Planning
Appendix 35	Clause 4.6 Variation – Height	Willowtree Planning
Appendix 36	Lane Cove Development Control Plan 2009 Compliance Table	Willowtree Planning
Appendix 37	Options Analysis	Greenbox
Appendix 38	Vegetation Management Plan	Travers Bushfire & Ecology
Appendix 39	Dangerous Goods Report	Lote Consulting

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Appendix 40	Ausgrid Letter of Support	Augrid
Appendix 41	STrAP & TAG	ARUP
Appendix 42	Urban Heat Island Effect Letter of Support	ARUP
Appendix 43	Construction Management Plan	AW Edwards
Appendix 44	Watercourse Assessment Report	Travers Bushfire & Ecology
Appendix 45	Lane Cove Tunnel Assessment	AW Edwards

3.3 PROJECT NEED

The way data and records are stored is considered to be continually evolving. The storage of cloud and electronic data is now a fundamental piece of infrastructure and services for both business and consumer transactions. Data Centres are considered to be critical infrastructure, that not only provide employment-generating opportunities to the Information, Communication and Technology (ICT) sector, but also support the operation of business to business and business to consumer services.

The Proposed Development would assist in providing new employment opportunities and promoting industry diversification (i.e. ICT sector). The SSDA would not alter the quantity or configuration of land currently zoned for light industrial uses.

The Proposed Development, for the purposes of a Data Centre is considered consistent with the strategic direction of both the North District Plan (Greater Sydney Commission, 2018) and Lane Cove Council's – *Lane Cove Community Strategic Plan 2035* (2018) and Delivery Program and Operational Plan 2018-2021 (2018). Additionally, the Proposed Development will further contribute to the growth of knowledge and professional service jobs within the North District; hence, contributing to the North District's economic growth.

Further, the Proposed Development could support the existing Lane Cove West Business Park by maintaining industrial land stocks and employment objectives, whilst promoting industry diversification (and generate new employment sources); and, can generate more employment throughout the planning, construction and maintenance stages.

Additionally, the Proposed Development at the Subject Site would generate a range of community need drivers, in particular the following:

- Reduced travel distances, leading to savings in time and fuel for local working residents, due to a much better access to the employment hub (i.e. Lane Cove West Business Park) at the local level. It is noted, that a reduction in travel times and distances generates related benefits, including reduced vehicle wear and tear, reduced fuel costs, reduced pollution, reduced traffic congestion, reduced risks of car accidents, and more time which can be spent either working, socializing or undertaking other activities;
- New employment opportunities from other industries, such as ICT businesses to operate in Lane Cove; and,
- Providing jobs near people's homes and consequent economic multiplier impacts, which will boost the local economy.

3.4 CONSIDERATION OF ALTERNATIVES

The intention of the Proposed Development is to construct and operate a Data Centre, which provides secure, reliable and scalable solutions for cloud, content and large enterprise customers to house their high and rapidly growing volumes of data and information. The Proposed Development seeks to ensure it:

- Is compatible with surrounding development and the local context;

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- Would provide increased operational efficiencies for storage and distribution of data;
- Would result in minimal impact on the environment; and
- Would allow for the implementation of suitable mitigation measures, where required.

Overall, the scale of development proposed is considered suitable, and the built-form changes would enhance and the renew the Site completely, given its undeveloped state. Furthermore, this would be achieved by the resultant built-form that would reinforce the working character of the land.

The options considered, and subsequently dismissed, in arriving to the current proposal included:

(a) 'Do Nothing' Scenario

This option was dismissed as the objectives of the project would not be met. If the Proposed Development was not to proceed, the Site would continue to remain vacant. The topography of the Site is such that it is not suitable for a conventional warehousing and distribution operation, whereas the proposed Data Centre can utilise the gradual slope of the land portion accordingly, resulting in minimal environmental impact. Additionally, if the Proposed Development was not to proceed, the Subject Site would remain vacant and not fulfill its employment generating potential.

(b) Development on an Alternative Site

Consideration was given to carrying out development on alternate sites; however, these were dismissed as the Site resulted in the most beneficial outcomes for the Proposed Development as:

- The Site is suitably located with respect to sensitive land activities including residential development;
- All potential environmental impacts concerning the Proposed Development are able to be suitably mitigated, in particular air and noise;
- The proximity to the regional road network provides accessibility and linkages to the broader metropolitan area and regional areas of NSW;
- The Proposed Development demonstrates the capability for continued employment-generating opportunities, during both the construction and operational phases of development;
- The Proposed Development would not adversely affect any area of heritage or archaeological significance; and,
- The Proposed Development could be developed with the appropriate visual amenity achieved given its surrounding context.

The Proposed Development is justified on the basis it is compatible with the locality in which it is proposed, resulting in economic benefits, while managing and mitigating environmental impacts.

3.5 PROPOSED DATA CENTRE

From an operational perspective (as an owner / operator / landlord), the business (Data Centre) provides a similar service to its tenants as any commercial landlord would. Notwithstanding, the point of difference is, that the tenants of the facilities are focused on the housing and delivery of cloud-based internet to service the global market.

The Data Centre proposed, commits to maintaining high levels of reliability through the provision of the Site's infrastructure, ultimately supporting the tenant's environment. This is accomplished through industry leading redundancy of mechanical cooling and power systems (including emergency backup power generators) serving the Data Centre along with the

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necessary and vital telecommunications links required for the Site to carry out an efficient and effective operation (refer to **Figure 9** below).



Figure 9 Data Centre Operations (Source: Greenbox, 2018)

In addition to deploying reliable infrastructure in secure facilities the business invests in high performing 24x7 operational teams, whose sole focus is to ensure that the Site is never at risk.

From a locational perspective, 1 Sirius Road, Lane Cove West was chosen as it would be able to accommodate the Proposed Development accordingly. The Site's locality is considered satisfactory from a geotechnical standpoint, pursuant to the relevant recommendations adopted and appropriate cut and fill measures taking place. Additionally, the Site's locality is reinforced by its close proximity to nearby regional road networks such as Epping Road and the M2 Motorway as well as available bus networks in close proximity to the Site, which is considered critical for overall operation. An operational flow diagram is provided below in **Figure 10**.

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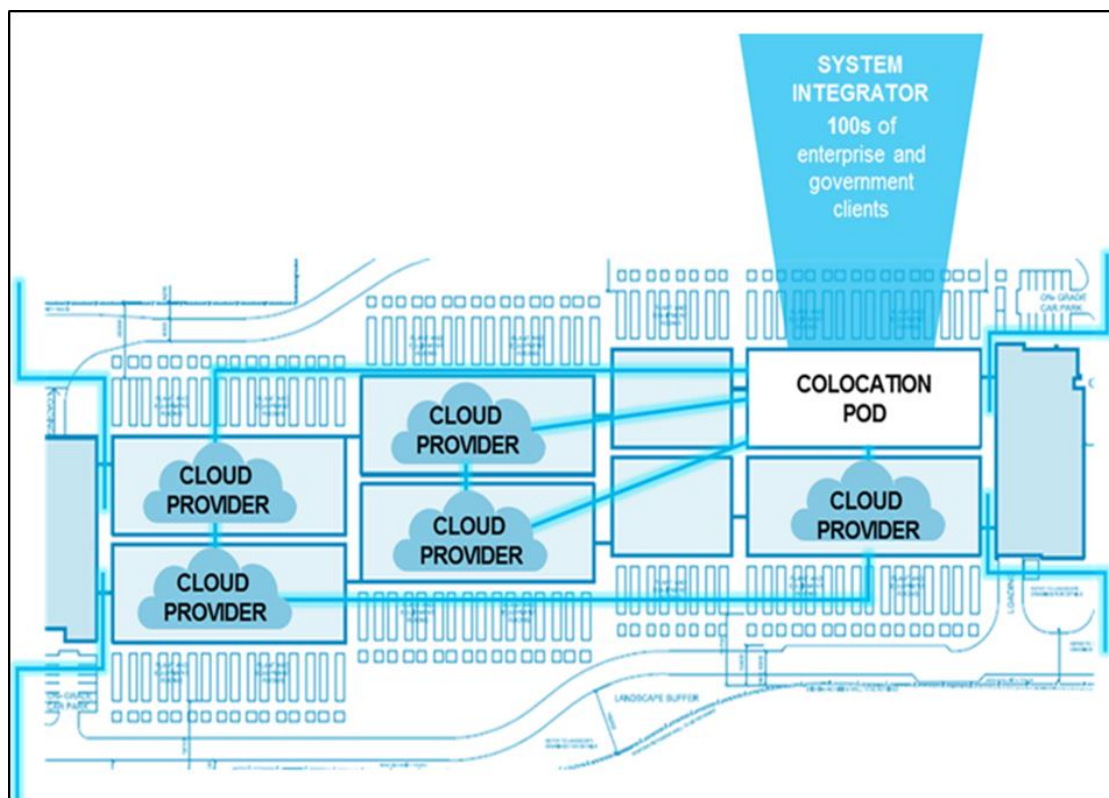


Figure 10 Proposed Development Operational Flow Chart (Source: Greenbox, 2018)

It is noted, that if the Proposed Development did not proceed, the Site would not provide employment opportunities for an employment sector, which is currently in decline. Additionally, it would not provide local employment opportunities, including achieving the 30-minute city (as outlined in the Regional and District Plans) or generate construction jobs.

Upon the Subject Site exhibiting its maximum capacity, the Proposed Development would generate approximately 80-100 full-time operational jobs, including data centre management staff, data centre engineers, maintenance technicians and security personnel. The estimated figure (80-100 operational jobs) also includes customer staff, that are anticipated to be permanently based on-site. Further, it is noted, that the positioned generated by the Proposed Development are all considered to be highly skilled, for which they accrue 'above-average wages'.

Additionally, when the Subject Site is at its maximum capacity, the Site would be staffed 24 hours, 7 days per week, 365 days a year. It is noted, that the peak amount of staff on-site at any given time, during business hours (7am – 7pm), would be approximately 50-70 employees. During the off-peak hours (7pm – 7am & weekends), it is anticipated, that approximately 10-20 personnel would remain on-site.

In light of the above information, which promotes a high-tech industry development, for the purposes of a Data Centre at Lane Cove West Business Park, this would allow for the delivery of more employment space and promotes the supply and competitiveness of the existing employment land floorspace within the precinct.

PART D LEGISLATIVE AND POLICY FRAMEWORK

Controls and Policies

The following current and draft Commonwealth, State, Regional and Local planning controls and policies have been considered in the preparation of this State Significant Development Application:

Commonwealth Planning Context

- *Environment Protection and Biodiversity Conservation Act 1999*

State Planning Context

- *Environmental Planning and Assessment Act 1979*
- *Environmental Planning and Assessment Regulation 2000*
- *Protection of the Environment Operations Act 1979*
- *Biodiversity Conservation Act 2016*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No 19 – Bushland in Urban Areas*
- *State Environmental Planning Policy No 33 – Hazardous and Offensive Development*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *State Environmental Planning Policy (Coastal Management) 2018*

Regional Planning Context

- *A Metropolis of Three Cities – Greater Sydney Region Plan*
- *North District Plan*
- *Future Transport Strategy 2056*

Local Planning Context

- *Lane Cove Local Environmental Plan 2009*
- *Lane Cove Development Control Plan 2009*
- *Lane Cove Development Contribution Plan*

This planning framework is considered in detail in the following sections:

4.1 COMMONWEALTH PLANNING CONTEXT

4.1.1 Environment Protection and Biodiversity Conservation Act 1999

Under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any action (which includes a development, project or activity) that is considered likely to have a significant impact on Matters of National Environmental Significance (MNES) (including nationally threatened ecological communities and species and listed migratory species) must be referred to the Commonwealth Minister for the Environment. The purpose of the referral is to allow a decision to be made about whether an action requires approval on a Commonwealth level. If an action is considered likely to have significant impact on MNES, it is declared a “controlled action” and formal Commonwealth approval is required.

Based on preliminary investigations carried out, the proposal does not warrant referral to the Commonwealth Minister for Environment.

4.2 STATE PLANNING CONTEXT

4.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the overarching governing statute for all development in NSW and pursuant to Section 4.36(2) provides that:

A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.

The proposed development has been identified as State Significant Development under the SRD SEPP as outlined below in **Section 4.2.5**.

4.2.2 Environmental Planning and Assessment Regulation 2000

In accordance with the EP&A Regulation, the Proposed Development is not classified as Designated Development.

Section 4(1) – Designated Development

Section 4(1) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) states that development described in Part 1 of Schedule 3 is declared to be Designated Development for the purposes of the Act.

Therefore, the Proposed Development being for a proposed Data Centre, does not trigger the Designated Development thresholds under Part 1 of Schedule 3 of the EP&A Regulation.

4.2.3 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) is the key piece of legislation in NSW relating to the protection and management of biodiversity and threatened species. The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. The BC Act is supported by a number of regulations, including the Biodiversity Conservation Regulation 2017 (BC Regulation).

The BC Act requires consideration of whether a development or an activity is likely to significantly affect threatened species. Preliminary studies have been undertaken to assess the overall ecological context of the Subject Site; however, further studies would be undertaken and addressed within the EIS regarding potential impacts to flora and fauna species.

Prescribed biodiversity impacts are defined under Clause 6.1 of the BC Reg and include impacts on biodiversity values in addition to, or instead of, impacts from clearing vegetation and / or loss of habitat. Prescribed biodiversity impacts are outlined within **Table 6** below, including their relevance to the Proposed Development, for the purposes of a Data Centre.

Table 6: Prescribed Biodiversity Impacts		
Prescribed Biodiversity Impacts	Presence within the Subject Site	Additional Comments
(a) the impacts of development on the following habitat of threatened species or ecological communities: i. karst, caves, crevices, cliffs	The subject land contains areas of cliffs, crevices, rocks and other geological areas of significance.	The subject land contains exposed Hawkesbury Sandstone outcropping, boulders and minor cliff development in the south east and north east of the subject land. These features

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and other geological features of significance, ii. rocks, iii. human made structures, iv. non-native vegetation,		do not support threatened species or ecological communities, hence do not constitute a prescribed biodiversity impact.
(b) the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range,	The subject land has not been identified as providing connectivity between areas of habitat for threatened species that facilitates the movement of that threatened species across its range.	The native vegetation in the subject land provides some connectivity between Lane Cove National Park and land to the south. However, the areas of habitat in the subject land are confined to the south western and north eastern portions of the subject land, hence occur at the edge of a larger expanse of bushland. The patches of vegetation in the subject land are poorly connected and are separated by a large expanse of cleared land.
(c) the impacts of development on movement of threatened species that maintains their lifecycle,	The subject land has not been identified as providing movement of threatened species that maintains their lifecycle.	
(d) the impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development),	Potential Impacts.	Stringybark Creek is situated to the north of the subject land and flows in a north easterly direction, where it subsequently joins with the Lane Cove River. Stringybark Creek and the Lane Cove River sustain threatened species and threatened ecological communities. Consequently, impacts to water quality and hydrological process of Stringybark Creek and Lane Cove River could constitute a prescribed impact. However, these impacts would be mitigated through the implementation of a Construction Environmental Plan (CEMP) to avoid potential indirect offsite impacts during construction.
(e) the impacts of wind turbine strikes on protected animals,	N/A	-
(f) the impacts of vehicle strikes on threatened species of animals or on animals that are part of a	N/A	-

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threatened community.	ecological		

Accordingly, no such prescribed biodiversity impacts are anticipated from the Proposed Development.

4.2.4 Protection of the Environment Operations Act 1979

Schedule 1 of the *Protection of the Environment Operations Act 1979* (POEO Act) contains a core list of activities that require a licence before they may be undertaken or carried out. The definition of an 'activity' for the purposes of the POEO Act is:

"an industrial, agricultural or commercial activity or an activity of any other nature whatever (including the keeping of a substance or an animal)."

The Proposed Development as submitted to the NSW DP&E does not trigger any thresholds in respect of this legislation, for which an Environmental Protection Licence would be required. Therefore, further consideration with regard to the POEO Act is not considered warranted.

4.2.5 State Environmental Planning Policy (State and Regional Development) 2011

Proposed developments involving activities that are listed in Schedule 1 of SRD SEPP are identified as being State Significant Development. Clause 12 of Schedule 1 states:

12 Warehouses or Distribution Centres

- (1) Development that has a capital investment value of more than \$50 million for the purpose of warehouses or distribution centres (including container storage facilities) at one location and related to the same operation.*
- (2) This clause does not apply to development for the purposes of warehouses or distribution centres to which clause 18 or 19 applies.*

The proposed development relates to the development of a Data Centre. The proposed development has a CIV over \$50M, thus the SSD provisions apply. This EIS has been prepared based on the SEARs issued on 21 December 2018.

4.2.6 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) repeals the former *State Environmental Planning Policy No. 11 – Traffic Generating Development* and, pursuant to Clause 104 and provides for certain proposed developments known as Traffic Generating Development, to be referred to NSW Roads and Maritime Services (RMS) for concurrence.

Schedule 3 lists the types of development that are defined as Traffic Generating Development. The referral thresholds for 'Industry' development include:

- *20,000m² or more in area with site access to any road; or*
- *5,000m² or more in area where the site has access to a classified road or to a road that connects to a classified road (if access is within 90 metres of connection, measured along the alignment of the connecting road).*

As the proposed development seeks consent for more than 20,000 m² (34,429 m²) GFA, referral to RMS is required under the SEPP.

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4.2.7 State Environmental Planning Policy No 19 – Bushland in Urban Areas

The Subject Site does not contain land zoned or reserved for public open spaces purposes, rather has been designated for light industrial purposes, similar to the surrounding Lane Cove West Business Park, which serves an employment-generating function to the Lane Cove LGA. It is noted, that the northern boundary of the Subject Site is traversed by identified Bushland; therefore, the provisions of *State Environmental Planning Policy No 19 – Bushland in Urban Areas* (SEPP 19) are relevant to the Proposed Development.

The implications of SEPP 19 are considered further in **Section 6.15** of this EIS, which assesses the potential impacts of the Proposed Development on surrounding bushland as well as bushfire hazards.

4.2.8 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

To facilitate the intended operation of the Data Centre, there will be some small portions of diesel fuel stored on-site to service the back-up generators; however, there are no combustibles proposed to be stored, thus *State Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33) is not triggered. The *SEPP 33 – Preliminary Risk Screen* (SLR Consulting, 2018) notes, that diesel fuel to be stored on-site, is not classed as Dangerous Goods, but is classed as a C1 Combustible Liquid (refer to **Appendix 22**).

The proposed inventory of diesel (and classification), is provided in **Table 7** below.

Table 7: Classification of Diesel in Storage						
Substance	Hazardous Class	Packaging Group	Combustible Liquid Class	Total Storage On-Site	Threshold Quantity	SEPP 33 Threshold Level Findings
Diesel	N/A	-	C1	510,000 L	N/A	N/A

The Report notes, that the SEPP 33 screenings for storage of Dangerous Goods indicate, that the Proposed Development is not classified as a hazardous or offensive industry.

For consistency and completeness a further review of the proposed Data Centre was prepared by Lote Consulting (2019) based on the revised design, which includes an increase in the proposed diesel fuel storage, which confirms whether the Proposed Development was a 'Major Hazard Facility'; the required storage locations for the proposed products; the associated design requirements for each storage; and the studies required to obtain approval (refer to **Appendix 39**).

As noted above, diesel fuel is classified as a C1 combustible liquid and is subject to AS 1940-2017. The diesel will be stored in 42,504 L sub-tanks as part of a diesel genset combination, which are separated into three (3) individual tanks. The total volume for each storage is as follows:

- Storage A: 382,536 L;
- Storage B: 1,275,120 L; and
- Storage C: 765, 072 L.

A review of each storage indicates they would be classified as bulk storages under the relevant Standard. The following recommendations have been provided for the proposed Data Centre:

1. The tank fill points shall be provided with impact protection.

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2. Tank fill points shall be provided with signage clearly identifying the location of the fill points.
3. The tanks shall be provided with high level monitoring and alarms per Clause 5.3.3 of AS 1940-2017.
4. At least one (1) powder type extinguisher shall be accessible within 10 m of the diesel tanks.
5. The hydrant system shall be able to provide at least 20 L/s.

Provided that all the recommendations are complied with, the storages at the Subject Site would be compliant with the applicable Standards and thus the WHS Regulation 2017.

Lote Consulting (2019) conclude, that a review of the Site Dangerous Goods thresholds indicates the Data Centre would not be classified as a 'Major Hazard Facility' and is therefore not subject to a formal safety case assessment and review by SafeWork NSW.

4.2.9 State Environmental Planning Policy No. 55 – Remediation of Land

Under the provisions of *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55), where a Development Application is made concerning land that is contaminated, the consent authority must not grant consent unless:

- (a) *it has considered whether the land is contaminated, and*
- (b) *if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

A Phase 2 Acquisition Environmental Due Diligence Assessment was undertaken (Senversa, 2018) to assess the potential distribution / extent of contamination in soil and groundwater identified on-site (refer to **Appendix 13-16**).

Field observations made during investigation works identified fill materials within the following areas:

- Approximately 1,000 m³ of illegally dumped materials stockpiled within the central portion and northern portions of the Site.
- Fill materials were observed to a depth of 1 m Below Ground Level (BGL) in TP107, within the central portion of the Site. The Report notes, that natural sandstone outcrops were observed throughout the central portion of the Site and as such fill materials identified with TP107 are likely to be isolated in extent.
- The inferred capped area (subject to the NSW EPA maintenance order) is located in the northern portion of the Site and has an approximate total 12,000 m³ of fill material.
- Fill materials were also observed in the south-western portion of the Site in the vicinity of TP101 and TP102. Based on the topography and sandstone outcroppings within close proximity to this area, Senversa considers, that fill material within this portion of the Site is likely to be isolated in extent.

Field observations made during the works did not identify any areas of staining / odours with the exception of isolated fill materials that appeared to be crystallised molasses located at a depth of approximately 1.5 m BGL within SB05 in the north west of the Site near the former molasses tanks and at a depth of approximately 3.0 m BGL within SB03, located within the central portion of the capped area.

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Additionally, field screening for landfill gases did not detect significant concentrations of the ground gas methane; however, potentially significant concentrations of carbon dioxide were detected.

Sandstone was found to be outcropping naturally in the central and northern portions of the Subject Site, as bedrock underlying fill materials in the majority of test pit / drilling locations. Laboratory analysis of collected soil samples returned concentrations of contaminants of potential concern (CoPCs) less than the adopted assessment criteria with the exception of:

- Heavy metals (zinc, copper and nickel) exceeding ecological criteria in fill materials.
- Asbestos and hydrocarbons in fill materials located within illegally stockpiled surface materials and fill materials located within and adjacent to the inferred capped area.
- Laboratory analysis for Acid Sulfate Soils (ASS) indicated the potential for ASS to be present. An Acid Sulfate Soil Management Plan will be required for the Proposed Development.

Groundwater was identified at depths ranging from 4 m to 14 m below the surface and was inferred to be flowing in a north westerly direction towards the Lane Cove River, which meanders the northern boundary of the Subject Site. Furthermore, laboratory analysis of collected groundwater samples collected, reported concentrations of all CoPCs less than the adopted health assessment criteria, with the exception of the following:

- PFOS and sum of PFHxS and PFOS exceeded the ecological criteria in MW05 (in the central portion of the inferred capped area).
 - PFHxS concentrations also exceeded the adopted drinking water criteria in MW05. Senversa notes that the use of groundwater for drinking is unlikely.
- Heavy metals (copper, zinc and nickel) exceeded the adopted ecological assessment criteria in MW03, MW04 and MW05. Nickel exceeded the drinking water criteria in MW04.
- Ammonia exceeded the adopted ecological assessment criteria in MW03 and MW05 in the inferred capped area.

The Report notes, that fill materials were found to be contaminated with Asbestos Containing Materials (ACM) and require remediation prior to redevelopment of the Subject Site. If remediation requires fill material to be disposed of offsite it should be pre-classified as 'Special Waste (Asbestos)' unless further testing indicates otherwise.

Based on the results of the investigation undertaken, Senversa considers that the Subject Site can be made suitable for the Proposed Development and recommends that a Remedial Action Plan (RAP) be developed accordingly. Notwithstanding, the following requirements should be adopted during and / or prior to remediation, including:

- *Specific requirements for any works that impact the portion of the Site, subject to the 'NSW EPA Notice Maintaining Remediation' (No.28027, 27 September 2005).*
- *Additional groundwater monitoring to assess identified PFAS within fill and groundwater within the vicinity of the inferred capped area.*
- *Additional ground gas monitoring to assess whether carbon dioxide issues may have a potentially significant impact on the Proposed Development.*
- *An Acid Sulfate Soils Management Plan.*

4.2.10 State Environmental Planning Policy (Coastal Management) 2018

The Subject Site is positioned within an area mapped as containing 'Coastal Wetlands' and 'Proximity Areas for Coastal Wetlands' (refer to **Figure 11**). The aim of *State Environmental Planning Policy (Coastal Management) 2018* (Coastal Management SEPP) is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner

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consistent with the objects of the Coastal Management Act 2016, including the management objectives for each coastal management area, by:

- (a) managing development in the coastal zone and protecting the environmental assets of the coast, and*
- (b) establishing a framework for land use planning to guide decision-making in the coastal zone, and*
- (c) mapping the 4 coastal management areas that comprise the NSW coastal zone for the purpose of the definitions in the Coastal Management Act 2016.*

Under the Schedule 1, Part 2 of the *Coast Management Act 2016*, the Lane Cove River is identified as an estuary, for which Lane Cove Council has implemented the Coastal Zone Management Plan, that guides development on, or near an identified coastal zone. As mentioned above, the Subject Site is positioned adjacent to an identified coastal zone, identified as the Lane Cove River, for which coastal management and protection measures would be adhered to accordingly.

The Proposed Development would ensure that the following criterion are met, namely:

- The biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest; or
- The quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.

Furthermore, the land identified and mapped as wetland, would remain undisturbed; however, development would be carried out adjoining and adjacent to the identified portion of land. Additionally, the extent of setbacks achieved would ensure that impacts associated with the Proposed Development are suitably mitigated.

It is noted, that the Proposed Development would constitute Integrated Development requiring referral under Section 4.46 of the EP&A Act; however, it is important to note, that Integrated Development does not apply to State Significant Development. Notwithstanding, the corrective mitigation measures would be adopted and implemented into the proposed scheme accordingly, so as to not impose any adverse impacts on the areas identified as 'Coastal Wetlands' and 'Proximity Areas for Coastal Wetlands' traversing the Subject Site.

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Further, the Report suggests, that it is unlikely the Proposed Development will have a significant impact on groundwater dependent, aquatic and / or riparian ecosystems and improvement to these ecosystems will occur if the following recommendations are implemented, including:

- Develop a Stormwater Management Plan (SMP);
- Establish appropriate Vegetated Riparian Zones, which include a 40 m buffer from top of bank for Lane Cove River and 20 m from top of bank for Stringybark Creek;
- Develop a Construction Environmental Management Plan (CEMP); and,
- Consider an alternate stormwater management strategy.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour Catchment SREP) applies to land within the Sydney Harbour Catchment. As shown in **Figure 12**, the Site is located within the Sydney Harbour Catchment, and specifically within the Foreshores and Waterways Area.

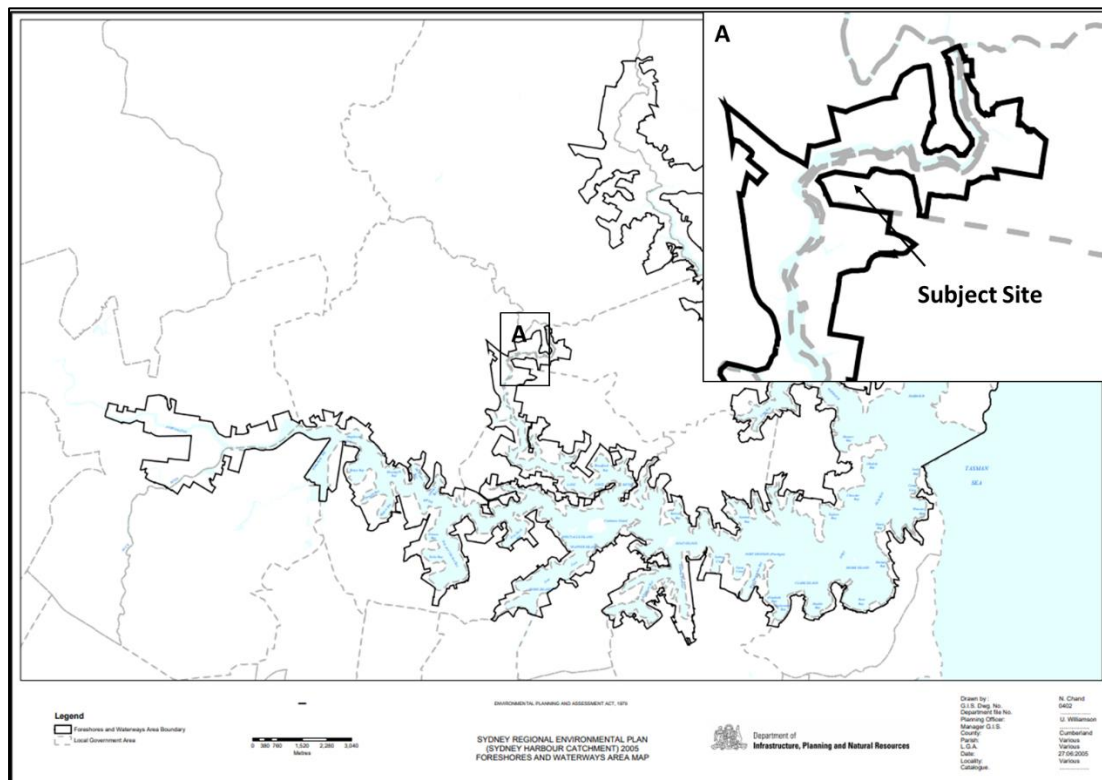


Figure 12 Foreshores and Waterways Area Map (Source: NSW DP&E, 2018)

For the purpose of the Sydney Harbour Catchment SREP, land adjacent to the north-western Site boundary is zoned W2 Environmental Protection (**Figure 13**).

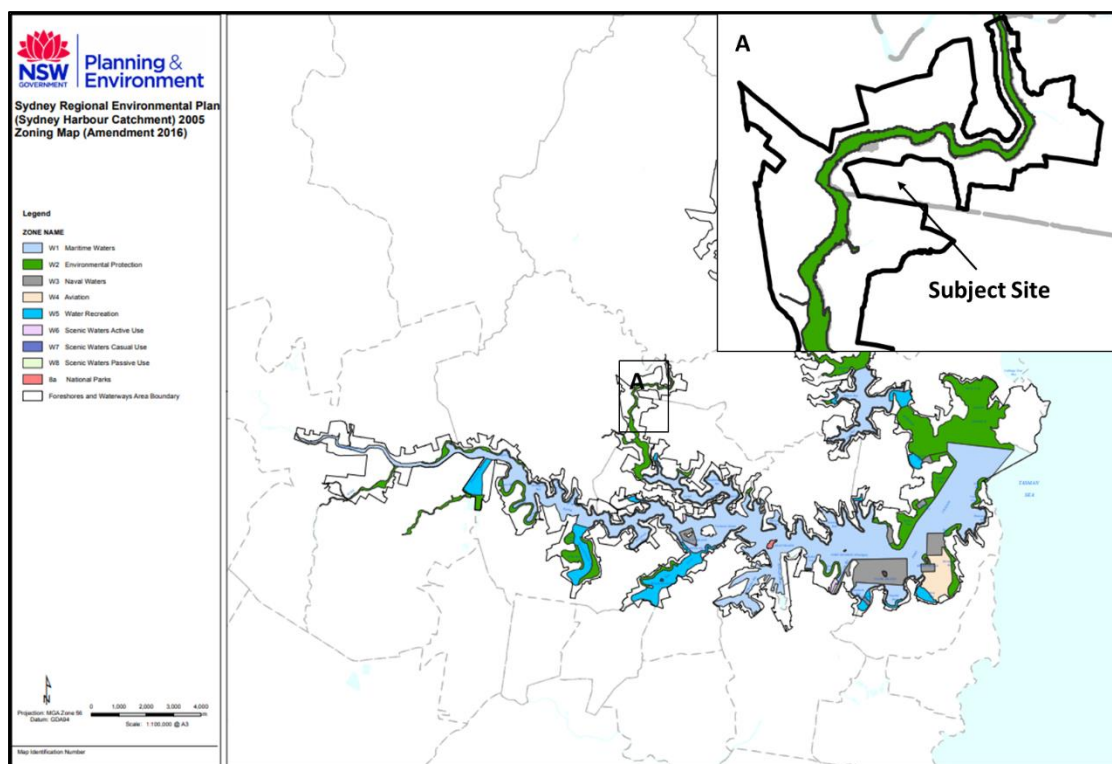


Figure 13 Sydney harbor Catchment SREP Zoning Map (Source: NSW DP&E, 2018)

The objectives of the W2 zone are as follows:

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- (a) to protect the natural and cultural values of waters in this zone,*
- (b) to prevent damage or the possibility of longer term detrimental impacts to the natural and cultural values of waters in this zone and adjoining foreshores,*
- (c) to give preference to enhancing and rehabilitating the natural and cultural values of waters in this zone and adjoining foreshores,*
- (d) to provide for the long-term management of the natural and cultural values of waters in this zone and adjoining foreshores.*

It should be formally noted, that the Subject Site is located only adjacent and not within the identified W2 zone; however, pursuant to Part 3 Division 2 of the SREP, matters to be taken into consideration by the consent authority before granting consent to development under Part 4 of the Act relate to:

- *Biodiversity, ecology and environment protection*
- *Public access to, and use of, foreshores and waterways*
- *Maintenance of a working harbor*
- *Interrelationship of waterway and foreshore uses*
- *Foreshore and waterways scenic quality*
- *Maintenance, protection and enhancement of views*
- *Boat storage facilities*

This EIS (particularly **Part F**) responds accordingly to the matters to be taken into consideration within the subsequent sections of this EIS and the relevant consultant reports. Additionally, it is not considered likely that the Proposed Development constitutes being referred to the Foreshores and Waterways Planning and Development Advisory Committee; therefore, further consideration in this respect is not considered warranted.

4.3 REGIONAL PLANNING CONTEXT

4.3.1 A Metropolis of Three Cities – Greater Sydney Region Plan

The *A Metropolis of Three Cities – Greater Sydney Region Plan* (Greater Sydney Commission, 2018) divides the Sydney Region into three (3) Cities, with a vision of growth until 2056 (refer to **Figure 14** below). The Plan aims to anticipate the housing and employment needs of a growing and vastly changing population. The overall vision pursues an objective of transforming 'Greater Sydney' into a Metropolis of Three Cities, including:

- The Western Parkland City;
- The Central River City; and,
- The Eastern Harbour City

The division into three (3) cities puts workers and the wider community closer to an array of characteristics such as, intensive jobs, 'city-scale' infrastructure & services, entertainment and cultural facilities. By managing and retaining industrial land close to city centres and transport, this will ensure critical and essential services are readily available to support local businesses and community members and residents. The Proposed Development would not only achieve economic growth and prosperity but would encourage employment-generating opportunities that are considered relatively close in conjunction with residential communities, for ease of commute.

The proposed development also contributes to the four (4) standardised elements communicated across for all three (3) cities, including:

- Infrastructure and collaboration – once in operation, the Proposed Development would be able to provide secure, reliable and scalable solutions for cloud, content and large

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enterprise customers to house their high and rapidly growing volumes of data and information;

- Liveability – the Proposed Development encourages employment-generating opportunities and economic prosperity, which would have positive influences on the wider locality;
- Productivity – the Proposed Development would be situated within the North District Plan (**section 4.3.2**); and,
- Sustainability – the Proposed Development would not cause any detrimental impacts to its wider ecological surroundings as identified in **Part F** of this EIS.

In summary, the Proposed Development would contribute to the objectives set out in the *A Metropolis of Three Cities – Greater Sydney Region Plan* by promoting minor environmental impacts and the further promotion of employment-generating opportunities to the wider locality and community, positioned within the Lane Cove LGA.

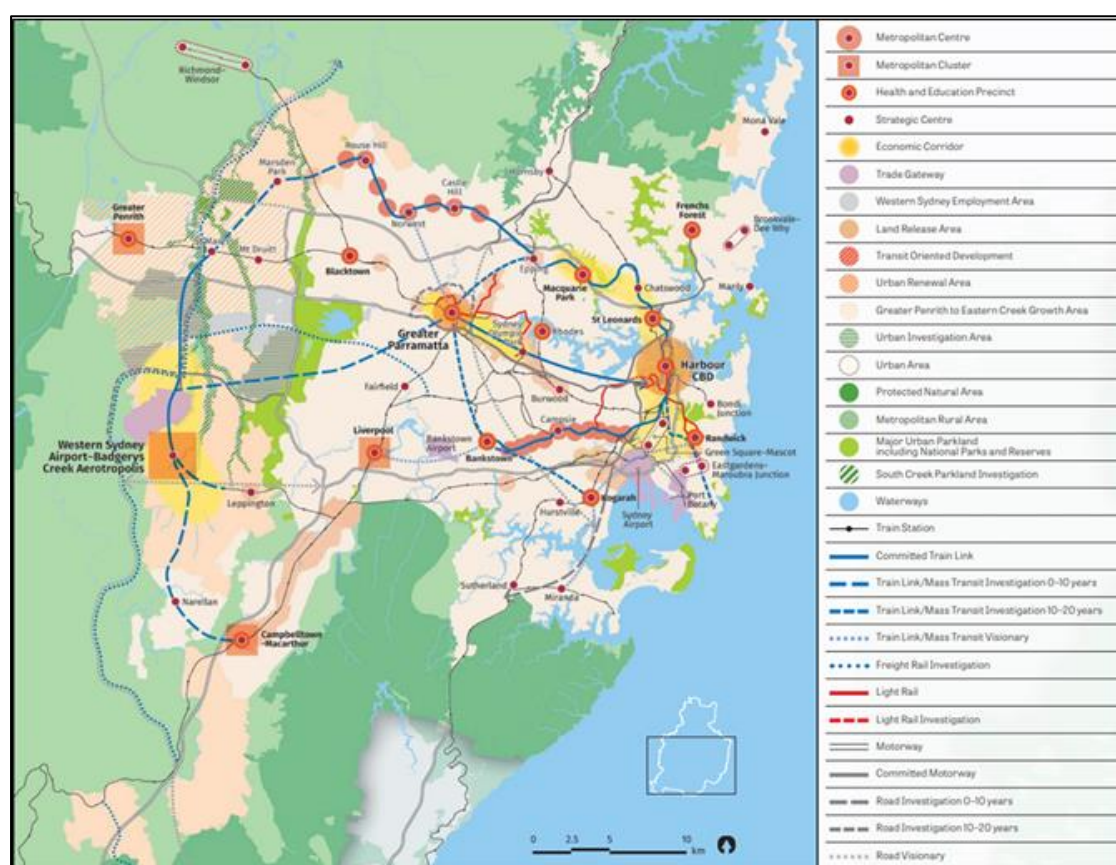


Figure 14 Metropolis of 3 Cities A Vision to 2056 (Greater Sydney Commission: Greater Sydney Region Plan, 2018)

4.3.2 North District Plan

The *North District Plan* covers the Lane Cove LGA. The Plan encourages a twenty-year plan to help encourage and establish goals set out in the *Greater Sydney Region Plan – A Metropolis of Three Cities*, mentioned above. The Plan is considered a 'bridge' between Regional and Local planning.

The Subject Site – 1 Sirius Road, Lane Cove West, is situated within the *North District Plan*, which falls within the Eastern Harbour City (refer to **Figure 15** below).

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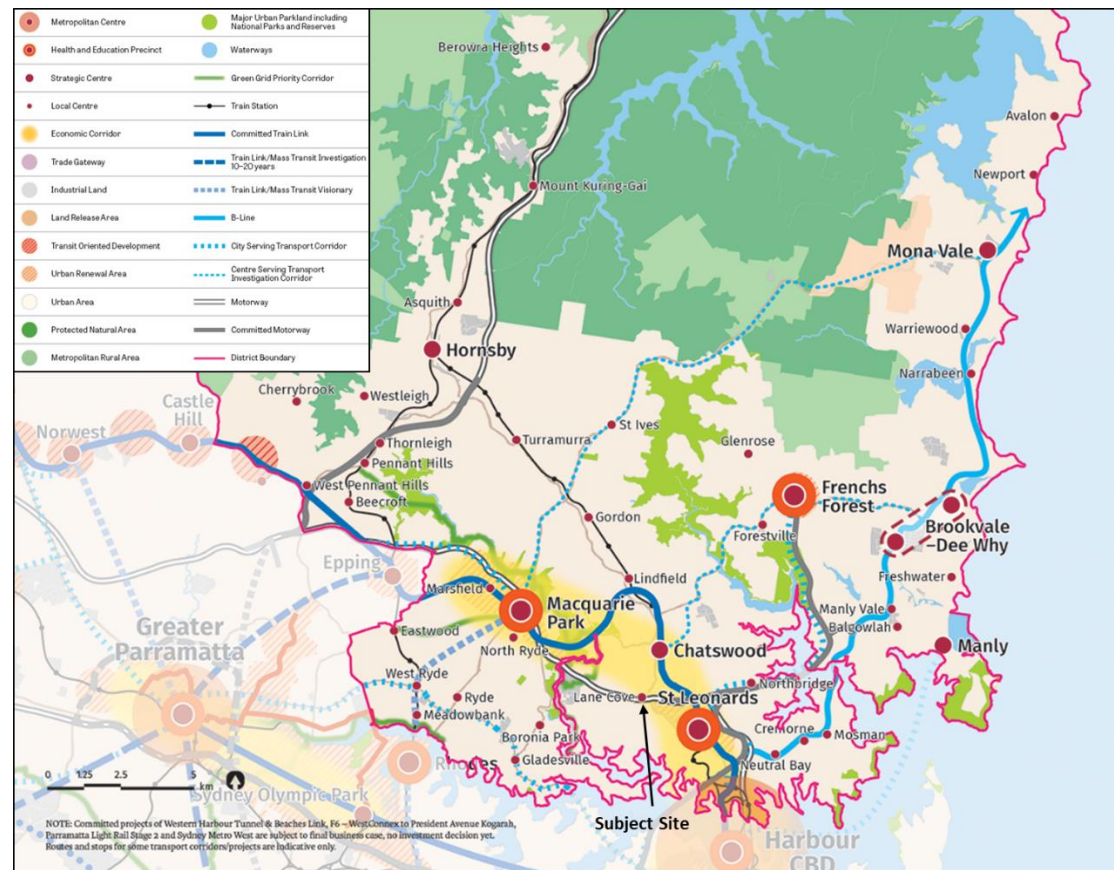


Figure 15 North District Plan Structure Plan (Source: Greater Sydney Region Plan, 2018)

The *North District Plan* reinforces the four (4) planning priorities of the GSC. The Plan establishes a number of priorities and actions to guide growth, development and change, relating to infrastructure & collaboration, liveability, productivity and sustainability.

The Greater Sydney Commission's mission statement further reinforces the Plan's concentrated aims by outlining its main strategies, namely:

- *Enhancing the role of the Eastern Economic Corridor, including North Sydney as part of the Harbour CBD;*
- *Supporting jobs growth in strategic centres, including health and education precincts and facilitating innovation;*
- *Sustaining local centres to provide jobs, services and amenity;*
- *Providing fast and efficient transport connections to achieve a 30-minute city;*
- *Retaining and managing industrial and urban services land;*
- *Creating and renewing great places while protecting heritage and local character and improving places for people;*
- *Improving walking and safe cycling ways;*
- *Enhancing foreshore access to Sydney Harbour and the District's waterways;*
- *Enhancing the quality and improving access to open space, and increasing urban tree canopy;*
- *Retaining the environmental, social and economic values of the Metropolitan Rural Areas; and*
- *Protecting and enhancing the District's unique natural assets including waterways, coastlines and bushland.*

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The Proposed Development would contribute to the objectives set out in the *North District Plan* by promoting a greater range of land uses of benefit to the community including the proposed Data Centre and other commensurate land uses; facilitating the provision of greater and improved infrastructure; and, promoting additional employment-generating opportunities (relevant to the proposed development) to the wider locality and community closer to home, whilst supporting an economically and environmentally sustainable proposed development.

4.3.3 NSW Future Transport Strategy 2056

Future Transport 2056 presents an integrated 40-year vision and guide for transport investment in NSW. As an update of NSW's *Long Term Transport Master Plan*, *Future Transport 2056* has been developed in concert with the Greater Sydney Commissions, *Greater Sydney Region Plan*, Infrastructure NSW's State Infrastructure Strategy and the NSW DP&E's Regional Plans. The Strategy is underpinned by a suite of supporting plans.

The Strategy seeks to support a productive economy, through the delivery of transport that enables business to reach new markets, attract new investment, while presenting more jobs and training opportunities. Transport is also recognised as a significant importance in the creation of liveable communities in association with its ability to transform the public domain, activate centres and unlock new commercial and housing developments, renewing existing neighbourhoods and spaces. Ensuring the efficiency of transport investments, both with respect to environmental performance and budget, is key to obtaining sustainability objectives. Additionally, productivity, liveability and sustainability are sought to be achieved by the Strategy through the mobilisation of emerging technologies and innovation, for which the Proposed Development, for the purposes of a Data Centre will facilitate accordingly.

Representing the efficient use of existing and planned transport networks, the strategic siting of a Data Centre, with respect to the Sydney Metropolitan Region, is considered conducive with regard to the supply and demand for IT infrastructure, such as cloud storage, ultimately enabling the Data Centre to be accessed via sustainable and active modes of travel.

4.4 LOCAL PLANNING CONTEXT

4.4.1 Lane Cove Local Environmental Plan 2009

LCLEP2009 is the principal EPI applicable to the Site. The Site is zoned as follows:

- IN2 Light Industrial.

Table 8 outlines the relevant planning controls applicable to the Site, as stated within LCLEP2009.

Table 8: Lane Cove Local Environmental Plan 2009 (LCLEP2009) – General LEP Clauses	
Requirement	Application to Proposed Development
Clause 2.3 – Zone Objectives and Land Use Table	(2) <i>The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone.</i>
IN2 Light Industrial Zone	
IN2 Light Industrial – Objectives of Zone	- <i>To provide a wide range of light industrial, warehouse and related land uses.</i> - <i>To encourage employment opportunities and to support the viability of centres.</i> - <i>To minimise any adverse effect of industry on other land uses.</i>

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	- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area. - To support and protect industrial land for industrial uses. - To ensure that landscaping is a significant element in development viewed from the public domain and neighbouring properties. - To recognise the close proximity of this zone to adjoining residential areas and seek to mitigate potential conflict between industrial and residential uses.
Permitted without Consent	<i>Nil.</i>
Permitted with Consent	<i>Car parks; Centre-based child care facilities; Community facilities; Depots; Food and drink premises; Garden centres; Hardware and building supplies; Industrial training facilities; Light industries; Medical centres; Neighbourhood shops; Places of public worship; Recreation areas; Recreation facilities (indoor); Respite day care centres; Roads; Self-storage units; Sex services premises; Signage; Vehicle body repair workshops; Vehicle repair stations; Vehicle sales or hire premises; Warehouse or distribution centres.</i>
Prohibited	<i>Any development not specified in item 2 or 3.</i>
LEP Clauses	
Clause 4.1 – Minimum Subdivisions Lot Size	The Site is not subject to a minimum lot size pursuant to LCLEP2009.
Clause 4.3 – Height of Buildings	The Site is subject to a maximum building height of approximately 18 m under Clause 4.3 of LCLEP2009 (refer to Figure 16). A Clause 4.6 variation is proposed to be submitted as part of this SSDA (refer to Appendix 34).
Clause 4.4 – Floor Space Ratio	The Site is subject to a maximum Floor Space Ratio (FSR) of 1:1 under Clause 4.4 of LCLEP2009 (refer to Figure 17). The Proposed Development entails an FSR of approximately 0.82:1 complying with Clause 4.4.
Clause 4.6 – Exceptions to Development Standards	The proposed Data Centre would exhibit a proposed maximum height of approximately 30.2 m. This is a 12.2 m exceedance with regard to compliance concerning the maximum building height (18 m) permitted under LCLEP2009. For further information, refer to the Clause 4.6 variation provided within Appendix 34 .
Clause 5.10 – Heritage Conservation	The Subject Site has not been identified as containing any Heritage items of significance. Additionally, there are no impacts anticipated to Aboriginal and / or Historic Heritage items in close proximity to the Subject Site as confirmed within Appendix 25 & 26 .
Clause 6.1 – Acid Sulfate Soils	The Site is subject to Acid Sulfate Soils under LCLEP2009 categorised as Class 2 & 5 potential for Acid Sulfate Soils to occur (refer to Figure 18). Further analysis is provided within the Contamination Report summarised in Part F of this EIS.
Clause 6.1A – Earthworks	Bulk earthworks are proposed to be carried out, to establish the building pads on the Subject Site for the relevant components of the Proposed Development. Additionally, proposed earthworks would balance any cut and fill accordingly.
Clause 6.2 – Foreshore Building Line	The Site is not mapped as being part of the foreshore building line.

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Clause 6.3 – Riparian Land	The northern boundary of the Subject Site is intersected by Riparian Land, mapped under Clause 6.3 of LCLEP2009 (refer to Figure 19). The Ecological Report identified in Part F of this EIS considers the Proposed Development's potential ecological impacts on identified riparian vegetation intersecting the Subject Site.

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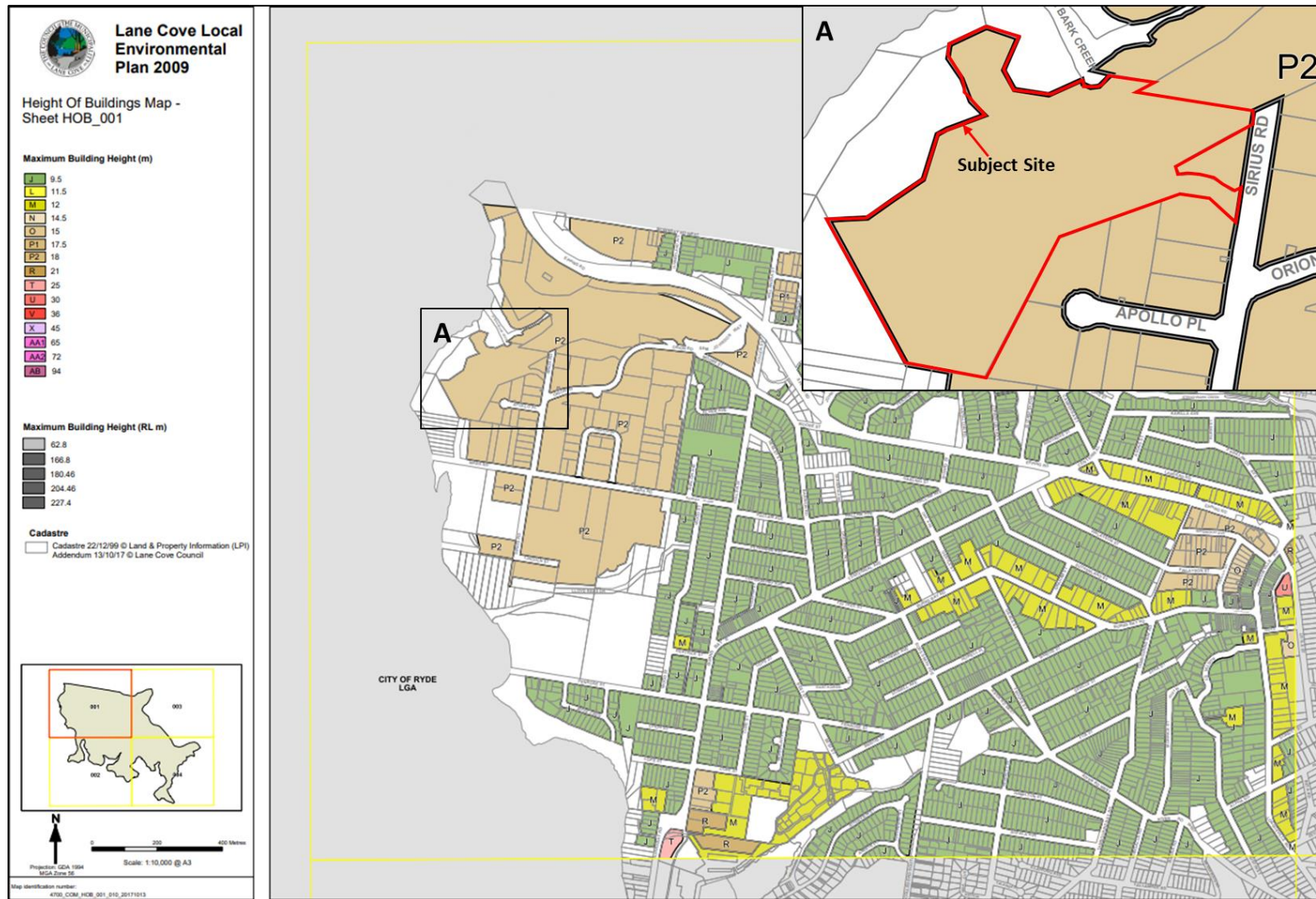
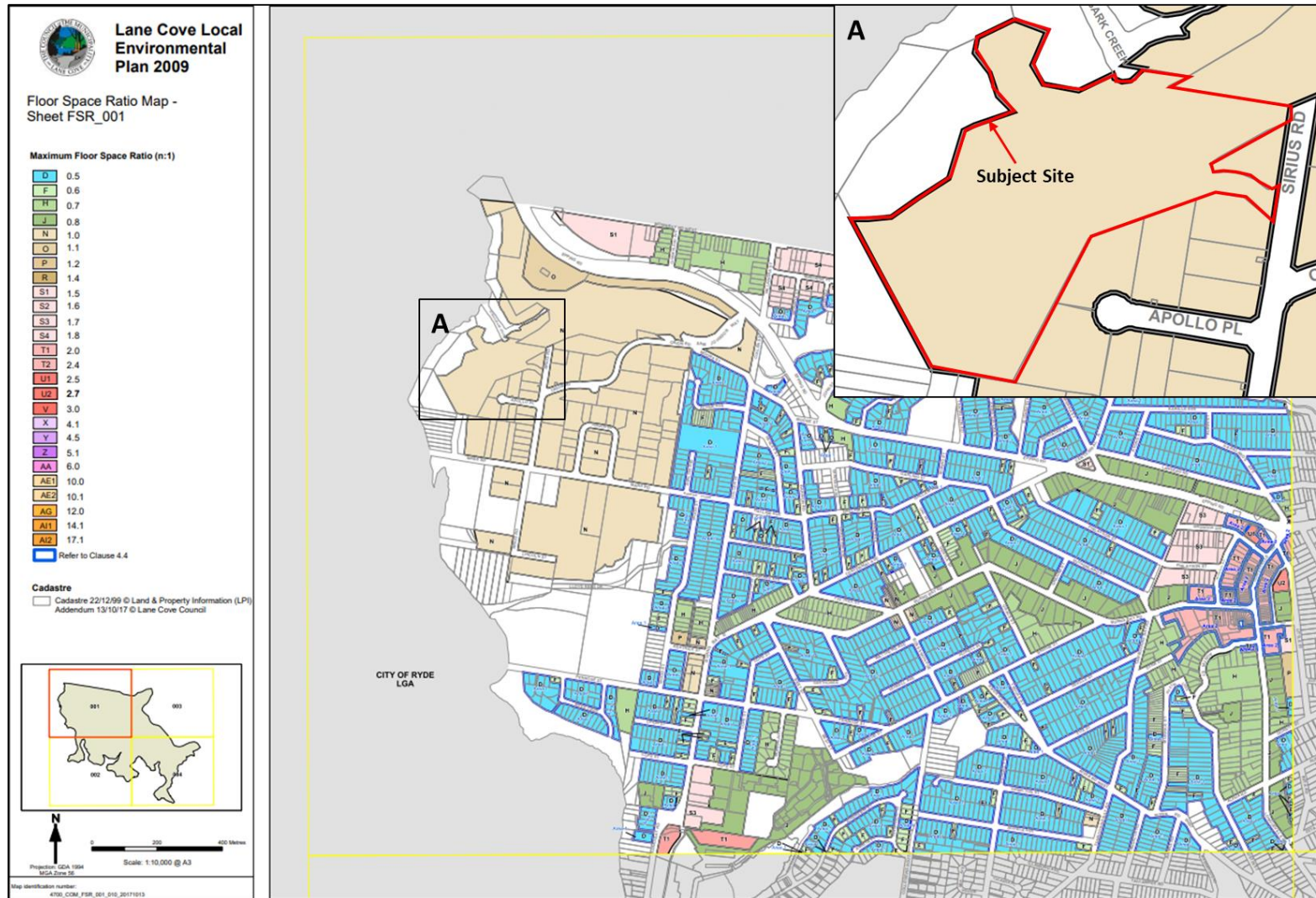


Figure 16 Maximum Building Height of Subject Site and Surrounding Area (Source: NSW Legislation, 2018)

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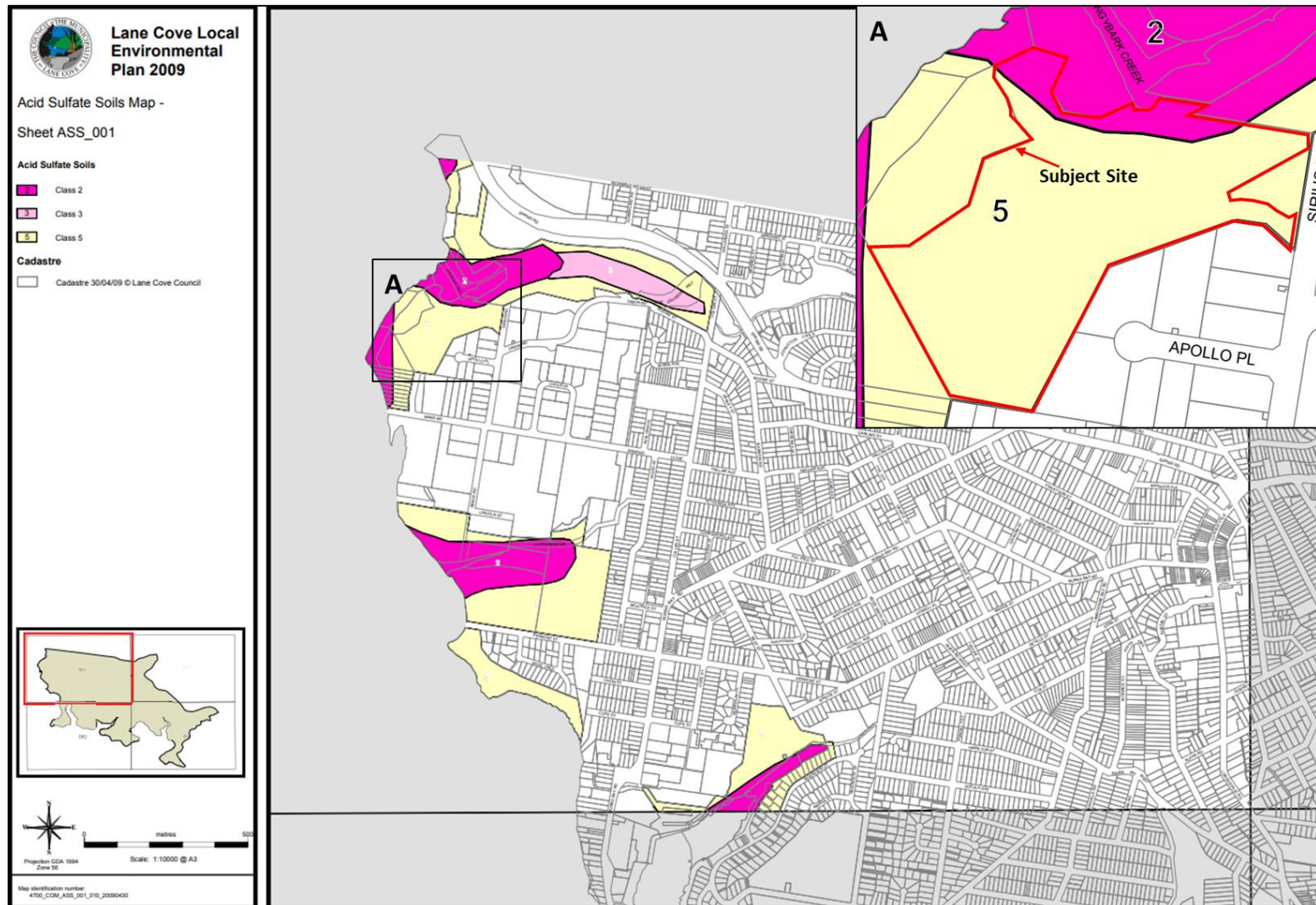
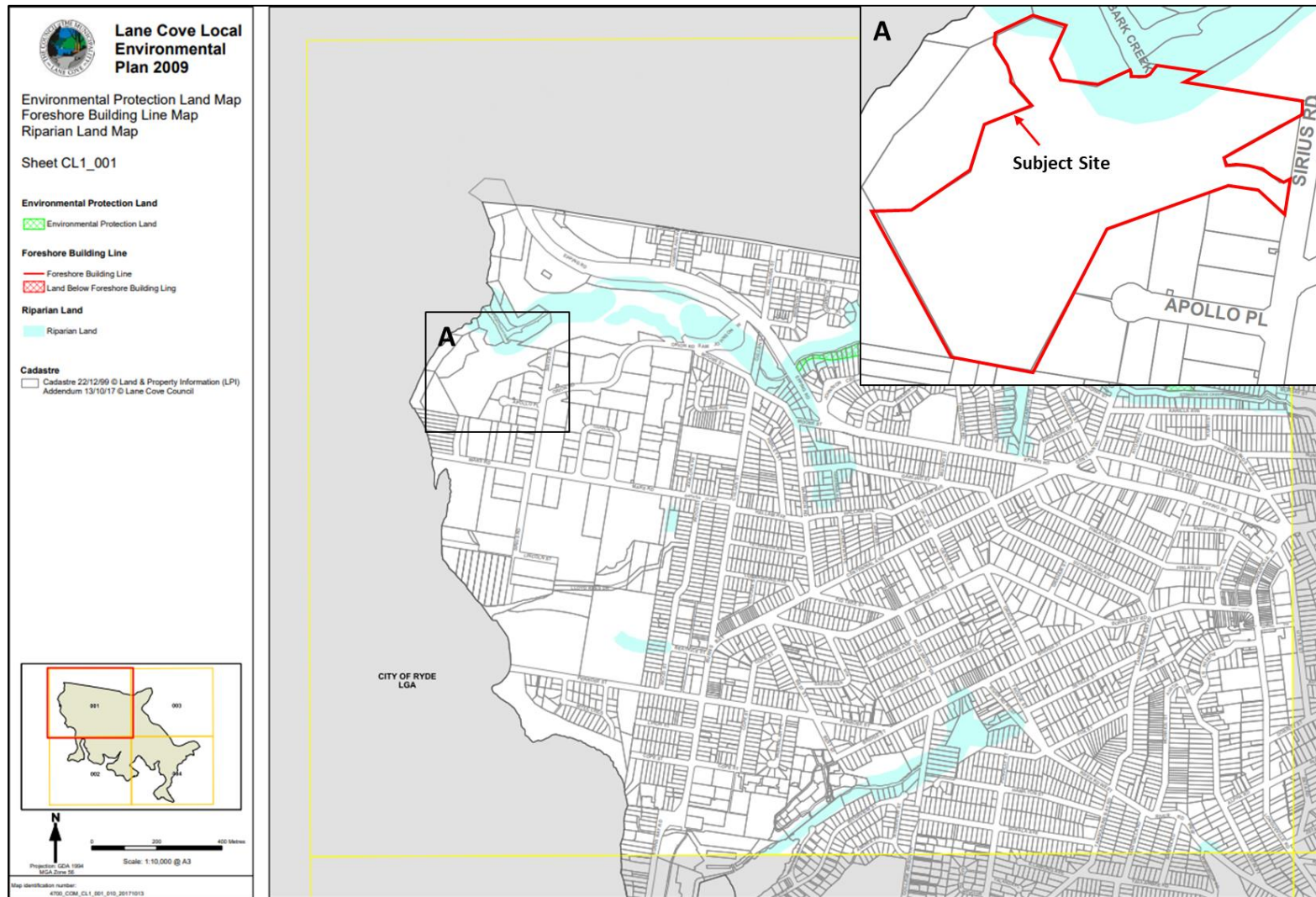


Figure 18 Potential of Acid Sulfate Soils Occurring to the Subject Site and Surrounding Area (Source: NSW Legislation, 2018)

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4.4.2 Draft Environmental Planning Instruments

No Draft Environmental Planning Instruments apply to the Proposed Development.

4.4.3 Lane Cove Development Control Plan 2009

The *Lane Cove Development Control Plan 2009* (LCDCP2009) was formally adopted by Council on 19 October 2009 and came into regulatory effect as of 22 February 2010. The LCDCP2009 is to be read and applied in retrospect to the LCLEP2009, for which, if there is an inconsistency between the two (2), the LEP would prevail over the DCP.

The aims and objectives of the LCDCP2009 are as follows:

- *Provide detailed planning provisions supplementing the Lane Cove LEP 2009.*
- *Support the locality's sustainability in environmental, social and economic terms.*
- *Conserve, protect and enhance the environmental and built heritage of Lane Cove.*
- *Contribute to effective management of biodiversity.*
- *To protect the quality of water catchments, encourage the use of water sensitive urban design and promote the adoption of whole of water cycle management principles.*
- *Minimise any impacts of transition to higher residential and employment density zones.*
- *Minimise any impacts of the redevelopment of uses not conforming to the zone they are in, by having regard to the scale and character of the surrounding neighbourhood.*
- *Balance individual and community interests to preserve and, where appropriate, improve the existing character and amenity of the municipality.*
- *Enhance the visual quality and functionality of the public and private domain interrelationship.*
- *Achieve an overall character for neighbourhoods that enhance s their sense of identity and place.*
- *Provide a context for the economic vitality of centres.*
- *To promote use of public transport, walking and cycling as the main forms of access, particularly within commercial centres.*
- *Regulate the visual impact of all development within foreshore areas.*
- *Further the goal of equal access for all residents and visitors.*
- *Enhance opportunities for cultural experiences throughout the natural and built environment by promoting public art.*

It is noted, that DCPs do not apply to State Significant Development Applications under the SRD SEPP. Notwithstanding, a review of the core controls applicable to the proposed industrial development, for the purposes of a proposed Data Centre with regard to the Subject Site can be found in **Appendix 35**.

4.4.4 Lane Cove Development Contributions Plan

Lane Cove Council has adopted the Lane Cove Section 94 Contribution Plan (Section 7.11 as per the EP&A Act amendments). The Section 7.11 Contribution Plans would be applicable to the Proposed Development made under Part 4 of the EP&A Act.

The Proposed Development would incur a contribution rate of approximately \$42 per m². Accordingly, as the Proposed Development is not proposed to be staged, the payment would be required for the Proposed Development at the issue of the first Construction Certificate, as confirmed within the Pre-DA Meeting Minutes (refer to **Appendix 2**).

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PART E CONSULTATION

5.1 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

An application to receive SEARs was submitted to the NSW DP&E (Reference No. SSD 9429). The SEARs were subsequently issued on 2 August 2018.

The SEARs are annexed as **Appendix 1**. An overview of how the requirements have been satisfied within the EIS is outline further in **Table 9** below. This document is also consistent with the minimum requirements for an EIS in Clauses 6 & 7 of Schedule 2 of the EP&A Regulation.

Table 9: How SEARs have been Satisfied	
General Requirements	How Addressed
The EIS for the proposed development must meet the form and content requirements in Clauses 6 & 7 of Schedule 2 of the EP&A Regulation.	This EIS has been prepared in accordance with Clauses 6 & 7 of Schedule 2 of the EP&A Regulation. The structure of this EIS addresses all legislative requirements.
Key Issues	
The EIS must include an assessment of the potential impacts of the proposal (including cumulative impacts) and develop appropriate measures to avoid, mitigate, manage and/or offset these impacts. The EIS must address the following specific matters:	Part F
Statutory and Strategic Context – including: - detailed justification that the proposed land use is permissible with consent; - details of any proposed consolidation or subdivision of land; - demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to: - State Environmental Planning Policy (Infrastructure) 2007 - State Environmental Planning Policy (State and Regional Development) 2011 - State Environmental Planning Policy (Coastal Management) 2018 - Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005 - Greater Sydney Region Plan: A Metropolis of Three Cities - Our Greater Sydney 2056: North District Plan - Future Transport Strategy 2056.	Refer to Section 2.3 and Part D .
Suitability of the Site – including: An analysis of site constraints, such as bushfire and flooding impacts.	Refer to Section 2.5, 6.5 & 6.15 .

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Community and Stakeholder Engagement – including: ▪ a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of consultation, including a justification for this approach; ▪ a report on the results of the implementation of the strategy including issues raised by the community and surrounding land owners and occupiers that may be impacted by the proposal; ▪ details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal; ▪ details of the proposed approach to future community and stakeholder engagement based on the results of consultation.	Refer to Part E and Appendix 33 .
Noise and Vibration – including: ▪ a quantitative noise and vibration impact assessment undertaken by a suitably qualified person in accordance with the relevant Environment Protection Authority guidelines and including an assessment of nearby sensitive receivers; ▪ cumulative impacts of other developments ▪ details of proposed mitigation, management and monitoring measures.	Refer to Section 6.8 and Appendix 19 & 20 .
Urban Design and Visual – including: ▪ a visual impact assessment (including photomontages and perspectives) of the development layout and design (buildings and storage areas), including staging, site coverage, setbacks, open space, landscaping, height, colour, scale, building materials and finishes, façade design, signage and lighting, particularly in terms of potential impacts on: ○ nearby public and private receivers; and ○ significant vantage points in the broader public domain including Magdala Park ▪ consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks; and, ▪ detailed plans showing suitable landscaping which incorporates endemic species.	Refer to Section 6.3 and Appendix 6, 8 & 34 .
Contamination – including: ▪ a detailed assessment of the extent and nature of any contamination of the soil, groundwater and soil vapour, in accordance with State Environmental Planning Policy No. 55 – Remediation of Land; ▪ an assessment of potential risks to human health and the environmental receptors in the vicinity of the site; ▪ demonstration that the proposal is consistent with site's 'Maintenance of Remediation Order' (Notice No. 28027, dated 27/09/2005);	Refer to Section 4.2.9, 6.5 and Appendix 13-16 .

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▪ a description and appraisal of any mitigation and monitoring measures; and, ▪ consideration of whether the site is suitable for the proposed development.	
Biodiversity – including: ▪ an assessment of the proposal's biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted; ▪ as assessment of the proposal's impact upon the adjacent coastal wetland area, in accordance with State Environmental Planning Policy (Coastal Management) 2018; ▪ as assessment of the proposal's impact upon the Lane Cove River and adjacent key fish habitat areas and riparian corridors, in accordance with the relevant Department of Primary Industries guidelines; ▪ describe how impacts upon critical vegetation and endangered species on-site will be avoided and minimised.	Refer to Section 4.2.3, 6.11 and Appendix 23 .
Infrastructure Requirements – including: ▪ a detailed written and/or graphical description of infrastructure required on the site, including the proposed electricity substation; ▪ identification of any infrastructure upgrades required off-site to facilitate the development, and describe any arrangements to ensure that the upgrades will be implemented in a timely manner and maintained; ▪ an infrastructure delivery and staging plan, including a description of how infrastructure on and off-site will be co-ordinated and funded to ensure it is in place prior to the commencement of construction; ▪ an assessment of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site, and describe how any potential impacts would be avoided and minimised.	Refer to Section 6.16 and Appendix 28 .
Sustainable Development – including: ▪ an assessment of the energy use of the proposal and all reasonable and feasible measures that would be implemented on site to minimise the proposal's greenhouse gas emissions; ▪ a description of how the proposal will incorporate the principles of ecologically sustainable development in the design, construction and ongoing operation of the development; and, ▪ a description of the measures to be implemented to minimise consumption of resources, especially energy and water.	Refer to Section 6.17 & 6.18 and Appendix 29 .
Traffic and Access – including:	Refer to Section 6.6 and Appendix 17 .

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▪ a quantitative Traffic Impact Assessment prepared in accordance with relevant Lane Cove Council, Austroads and Roads and Maritime Services guidelines using current traffic counts and cumulative traffic from surrounding existing and approved development and the proposed development; ▪ details of all daily and peak traffic and transport movements likely to be generated by the development during construction and indicative operation (vehicle type, public transport, pedestrian and bicycle trips) including the impact on the nearby intersections (using SIDRA or similar modelling); ▪ details of the likely arrival and departure times for vehicles for all components of the proposed development; ▪ details of the largest vehicle anticipated to access and move within the site, including swept path analysis; ▪ details and plans of the internal road network, loading dock servicing and provisions, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards; ▪ details of road upgrades, new roads or access points required for the development, if necessary.	
Soils and Water – including: ▪ a description of the catchment and proximity of the site to waterways, including the Lane Cove River; ▪ consideration of potential local and mainstream flooding impacts; ▪ an assessment of potential surface and groundwater impacts associated with the development, including potential impacts on the Lane Cove River, other watercourses, riparian areas, groundwater, and groundwater-dependent communities nearby; ▪ an assessment in accordance with ASSMAC Guidelines for the presence and extent of acid sulfate soils (ASS) and potential acid sulfate soils (PASS) on the site and, where relevant, appropriate mitigation measures; ▪ a description of the surface, stormwater and wastewater management systems, including on site detention, and measures to treat or reuse water; ▪ a detailed water balance including a description of the water demands and breakdown of water supplies; and any water licensing requirements; ▪ description of the measures to minimise water use; and ▪ description of the proposed erosion and sediment controls during construction.	Refer to Section 3.2.2, & 6.5 and Appendix 9-11.
Hazards and Risks – including: a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should the preliminary risk screening indicate that the development is "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning	Refer to Section 3.2.3, 4.2.8 & 6.10 and Appendix 22.

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Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011).	
Bushfire – including: ▪ details of the storage of any flammable materials; ▪ an assessment against the requirements of Planning for Bushfire Protection 2006; ▪ a description of measures to ensure the proposal will not increase the bushfire risk to adjoining lands.	Refer to Section 6.15 and Appendix 27 .
Waste – including: ▪ details of the quantities and classification of all waste streams to be generated on site during the development; ▪ details of waste storage, handling and disposal during the development; ▪ details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.	Refer to Section 6.7 and Appendix 18 .
Air Quality – including: ▪ an assessment of the air quality impacts (including dust and odour) during the development, in accordance with the relevant Environment Protection Authority guidelines; ▪ details of proposed mitigation, management and monitoring measures.	Refer to Section 6.9 and Appendix 21 .
Heritage – including: an assessment of Aboriginal and non-Aboriginal cultural heritage items and values of the site and surrounding area in accordance with the relevant Office of Environment and Heritage guidelines.	Refer to Section 6.13 & 6.14 and Appendix 25-27 .
Contributions – including: consideration of the Lane Cove Section 94 Contribution Plan 1996, revised 9 October 2013, and/or details of any Planning Agreement.	Refer to Section 6.12
Consultation	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: ▪ Lane Cove Council ▪ Environment Protection Authority ▪ Ausgrid ▪ Roads and Maritime Services ▪ Transport for NSW ▪ Department of Industry – Crown Lands and Water ▪ Department of Primary Industries – Fisheries ▪ Office of Environment and Heritage ▪ Fire and Rescue NSW ▪ Rural Fire Service ▪ Sydney Water ▪ City of Ryde Council ▪ surrounding local residents and stakeholders ▪ any other public transport, utilities or community service providers.	Refer to Section 5.2 .

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The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	
Further Consultation After Two (2) Years	
If you do not lodge an application under Section 4.12(8) of the <i>Environmental Planning and Assessment Act 1979</i> within two (2) years of the issue date of these SEARs, you must consult with the Secretary in relation to any further requirements for lodgement.	Noted.

During the preparation of the SEARs, the NSW DP&E also consulted with stakeholders, and in the process obtained a list of their Key Issues for the proponent to assess throughout this EIS. These Key Issues are contained in **Table 10 - 19** below. Please note, Consultation Letters have been sent to the parties listed above.

Table 10: Lane Cove Council's Key Issues for Assessment	
Key Issues	How Addressed
General Requirements	
Section 4.14 – Development on Bush Fire Prone Land The provisions of Section 4.14 apply to the development and are to be addressed. Any APZ is to have regard to ecology. It may be warranted to provide an RDA for bushland protection before the APZ starts within the subject site. Further, the APZ should be wholly contained within the subject site boundary and is not to extent onto public land. The bushfire consultant and ecologist should consult in this regard. Further, Planning for Bushfire Protection identifies that a "The public road system in a bush fire prone area should provide alternative access and egress for firefighters and residents during a bush fire emergency if part of the road system is cut off by fire." (p22). Only one access/egress route appears possible for the site, and as a consequence the site may not fulfil access requirements for emergency services.	Section 6.15
Section 4.15 – Evaluation The matters for consideration in Section 4.15(1)(a)(i)-(iii) are addressed in Part 3(b)-(j) of these notes (or highlighted in the preceding table of relevant legislation and codes where a draft EPI).	Noted. See contents of this EIS.
Section 7.11 – Local Infrastructure Contribution The site is subject to the Lane Cove Development Contributions Plan which requires a contribution on a square metre rate for industrial development. The current contribution rate can be found in Council's Fees and Charges (\$42 per m ² – 2018/2019). As the proposal is not proposed to be staged, the payment would be required on the development at the issue of the first Construction Certificate.	Refer to Section 4.4.4
Integrated Development	Section 4.2.10

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A control activity approval is considered to be required under the Water Management Act 2000 (with the exception being if the proposal is considered State Significant Development). This would result in the proposal being nominated integrated development.	
Biodiversity Conservation Act 2016 The applicant indicated during the pre-DA that a biodiversity development assessment report was being prepared. It is assumed this is being prepared to accompany a State Significant Development Application to the Minister of Planning for consideration of the proposals impacts on biodiversity values under Clause 7.14 of the Act. Any BDAR should have regard to the mapped biodiversity and ecological significance of the site and areas adjoining the site. While the mapping in some instances is historic, the site has been the subject of unauthorised activity and man-made (as opposed to natural) degradation, and may require rehabilitation. Consideration should be given to a better building design before offsetting is pursued in order to retain vegetation and provide for a suitable buffer between the built form and areas of importance in relation to biodiversity. Any offsetting should be in the vicinity of the site having regard to the objectives in promoting biodiversity, a buffer to bushland and rehabilitating the site within the other legislation/codes detailed in these notes. Further detailed discussion about the importance of this buffer and the mapped ecology is contained later within these notes in parts 3(d), (g), (h), (i) and (j).	Refer to Section 4.2.3
SEPP (State and Regional Development 2011) The proposal seeks classification under Schedule 1 Clause 13 of the SEPP. Consideration is to be given to whether proposal falls within the definition of a warehouse or distribution centre. The initial view is that a high technology industry is a more appropriate definition which would preclude the application being considered as state significant development as a high technology industry or light industry is not listed within Schedule 1. However, the ultimate definition of the use is at the discretion of those determining whether the proposal meets the criteria for SSD.	Refer to Section 4.2.5
SEPP No 19 (Bushland in Urban Areas) The subject site adjoins bushland (areas adjoining mapped in yellow) and accordingly the provisions Clause 9 of the SEPP apply to the proposal.	Refer to Section 4.2.7
SEPP No 33 (Hazardous and Offensive Development) A preliminary hazard analysis would be required given the likely volume (indicatively stated as 1 million litres) of fuel stored for back-up power supply to the data centre. Consideration should be given to the ecological impact of a fuel spill or overflow of firefighting waters in the marine environment. Measures should be employed to protect the environment in the event of a failure or fire event.	Refer to Section 4.2.8

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SEPP No 55 (Remediation of Land) Council's Environmental Health Manager indicated there is known contamination on the site subject to an EPA investigation. Any Development Application is to be accompanied by a contamination report satisfying the provisions of SEPP No. 55 and the EPA Guidelines.	Refer to Section 4.2.9
SEPP (Coastal Management) 2016 The subject site is subject to SEPP (Coastal Management) 2018. The SEPP aims to protect and improve the biophysical, hydrological and ecological integrity of coastal zones. As shown in Figure 4 below the site contains Coastal Wetlands (blue) and is within the proximity area for the wetlands (dashed). Detailed GIS/survey analysis needs to be undertaken as to whether the site contains coastal wetlands, or is only subject to the buffer under the Coastal Wetlands and Littoral Rainforests Maps. The following Clauses are of relevance depending on the outcome of the above analysis: ▪ Clause 10 – Development on certain land within coastal wetlands and littoral rainforests area; or ▪ Clause 11 – Development on land in proximity to coastal wetlands or littoral rainforest. An initial analysis considers there may be some Coastal Wetland within the north-eastern edge of the site at the mouth of Stringy Bark Creek. If this is the case the proposal may be classified as designated development and will require an EIS. In any event SEPP (Coastal Management) 2018 applies to the site and is to be addressed in detail with any application made.	Refer to Section 4.2.10
SREP (Sydney Harbour Catchment) 2005 The proposal is subject to SREP (Sydney Harbour Catchment) 2005 and Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005. Any application is to demonstrate compliance with the provisions of the SEPP and supporting DCP within a Statement of Environmental Effects. The site is mapped within Map 5 (Ecological Communities and Landscape Characters) and is adjacent to or contains: ▪ Mudflats and Mangroves; ▪ Open Forest (Type A); and ▪ Open Forest (Type B).	Noted.
SEPP (Infrastructure) 2007 The proposal is traffic-generating development under Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007. Written notice will be required to be given to the RMS under Clause 104 of the SEPP.	Refer to Section 4.2.6

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Consideration is to be given to as to whether Clause 45 of SEPP (Infrastructure) 2007 applies in this instance for works adjacent or near to electricity infrastructure.	

Table 11: NSW Office of Environment & Heritage Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
Biodiversity: 1. Biodiversity impacts related to the proposed development are to be assessed in accordance with Section 7.9 of the Biodiversity Conservation Act 2017 using the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the Biodiversity Conservation Act 2016 (s6.12), Biodiversity Conservation Regulation 2017 (s6.8) and Biodiversity Assessment Method, unless OEH and DPE determine that the proposed development is not likely to have any significant impacts on biodiversity values. 2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method. 3. The BDAR must include details of the measures proposed to address the offset obligation as follows: ▪ The total number and classes of biodiversity credits required to be retired for the development/project; ▪ The number and classes of like-for-like biodiversity credits proposed to be retired; ▪ The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; ▪ Any proposal to fund a biodiversity conservation action; ▪ Any proposal to conduct ecological rehabilitation (if a mining project); ▪ Any proposal to make a payment to the Biodiversity Conservation Fund. If seeking approval to use the variation rules, the BOAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits. 4. The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix 10 of the BAM. 5. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the <i>Biodiversity Conservation Act 2016</i>.	Refer to Section 4.2.3, 6.11 and Appendix 23.
Aboriginal Cultural Heritage: 6. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be	Refer to Section 6.13 & 6.14 and Appendix 25-27.

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conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (DECC 2010), and guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH. 2011). 7. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR. 8. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH. 9. The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the [development/project] to formulate appropriate measures to manage unforeseen impacts. Note that a due diligence report is not acceptable, an ACHAR must be prepared.	
Water and Soils: 10. The EIS must map the following features relevant to water and soils including: a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). c. Wetlands as described in s4.2 of the Biodiversity Assessment Method. d. Groundwater. e. Groundwater dependent ecosystems. f. Proposed intake and discharge locations. 11. The EIS must describe background conditions for any water resource likely to be affected by the development, including: a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government. e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-	Refer to Section 3.2.2, & 6.5 and Appendix 9-11.

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for-considering-waterway-health-outcomes-in-strategic-land-use-planning 12. The EIS must assess the impacts of the development on water quality, including: a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development/project protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality. c. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan) 13. The EIS must assess the impact of the development on hydrology, including: a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and flood plain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules - based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.	
Flooding and Coastal Hazards: 14. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: a. Flood prone land b. Flood planning area, the area below the flood planning level c. Hydraulic categorisation (floodways and flood storage areas) d. Flood hazard. 15. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event. 16. The EIS must model the effect of the proposed development (including fill) on the current flood behaviour for a range of design events as identified above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity	Refer to Section 3.2.2, & 6.5 and Appendix 9-11.

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to an increase in rainfall intensity of flood producing rainfall events due to climate change. 17. Modelling in the EIS must consider and document: ▪ Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies. ▪ The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood. ▪ Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories. ▪ Relevant provisions of the NSW Floodplain Development Manual 2005. 18. The EIS must assess the impacts on the proposed development on flood behaviour, including: a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure. b. Consistency with Council flood plain risk management plans. c. Consistency with any Rural Flood plain Management Plans. d. Compatibility with the flood hazard of the land. e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land. f. Whether there will be adverse effect to beneficial inundation of the flood plain environment, on, adjacent to or downstream of the site. g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council. i. Impacts the development may have upon managing risk to life, existing community emergency management arrangements, evacuation and access, and contingency measures for the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters must be discussed with the State Emergency Services and Council. j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.	
OEH Estate: 19. The EIS must identify: a. In the case of a development that adjoins, is in the immediate vicinity of a park or upstream, the assessment of impacts must address the matters to be considered outlined in the Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH 2013) and include:	Refer to Section 3.2.2, & 6.5 and Appendix 9-11.

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▪ The nature of the impacts, including direct and indirect impacts. ▪ The extent of the direct and indirect impacts. ▪ The duration of the direct and indirect impacts. ▪ The objectives of the reservation of the land. b. Measures proposed to prevent, control, abate, minimise and manage the direct and indirect impacts including an evaluation of the effectiveness and reliability of the proposed measures. c. Residual impacts.	

Table 12: Roads and Maritime Services (RMS) Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).	Refer to Section 6.6
Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (i.e.; turn paths, sight distance requirements, aisle widths, etc.).	Refer to Section 6.6
Proposed number of car parking spaces and compliance with the appropriate parking codes.	Refer to Section 6.6
Details of service vehicle movements (including vehicle type and likely arrival and departure times).	Refer to Section 6.6
Roads and Maritime requires the EA report to assess the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling); the potential for implementing a location-specific sustainable travel plan (e.g.; Green Travel Plan, 'Travelsmart' or other travel behaviour change initiative); and the provision of facilities to increase the non-car mode share for travel to and from the site. This will entail an assessment of the accessibility of the development site by public transport.	Refer to Section 6.6
Roads and Maritime requires an assessment of the likely toxicity levels of loads transported on arterial and local roads to / from the site and, consequently, the preparation of an incident management strategy for crashes involving such loads, if relevant.	Refer to Section 6.6
Roads and Maritime will require in due course the provision of a traffic management plan for all demolition/construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.	Refer to Section 6.6

Table 13: Transport for NSW Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
Details all daily and peak traffic and transport movements likely to be generated (light and heavy vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development.	Refer to Section 6.6
Details of the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development.	Refer to Section 6.6

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An assessment of the operation of existing and future transport networks including public transport, pedestrian and bicycle provisions and their ability to accommodate the forecast number of trips to and from the development.	Refer to Section 6.6
Details the type of heavy vehicles likely to be used (e.g. B-doubles) during the operation of the development and the impacts of heavy vehicles on nearby intersections.	Refer to Section 6.6
Details of access to, from and within the site to/from the local road and strategic (motorway) network including intersection location, design and sight distance (i.e. turning lanes, swept paths, sight distance requirements).	Refer to Section 6.6
Impact of the proposed development on existing and future public transport and walking and cycling infrastructure within and surrounding the site.	Refer to Section 6.3 & 6.6
An assessment of the existing and future performance of key intersections providing access to the site and any upgrades (road/intersections) required as a result of the development.	Refer to Section 6.6
An assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development.	Refer to Section 6.6
Demonstrate the measures to be implemented to encourage employees of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing.	Refer to Section 6.6
Appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network.	Refer to Section 6.6
Details of the proposed number of car parking spaces and compliance with appropriate parking codes and justify the level of car parking provided on the site.	Refer to Section 6.6
Details of access and parking arrangements for emergency vehicles.	Refer to Section 6.6
Detailed plans of the proposed layout of the internal road network and parking provision on-site in accordance with the relevant Australian Standards.	Refer to Section 6.6
The existing and proposed pedestrian and bicycle routes and end of trip facilities within the vicinity of and surrounding the site and to public transport facilities as well as measures to maintain road and personal safety in line with CPTED principles.	Refer to Section 6.3 & 6.6
Preparation of a draft Construction Traffic Management Plan which includes: ▪ details of vehicle routes, number of trucks, hours of operation, access management and traffic control measures for all stages of construction; ▪ assessment of cumulative impacts associated with other construction activities; ▪ an assessment of road safety at key intersections; ▪ details of anticipated peak hour and daily truck movements to and from the site; ▪ details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements; ▪ details of temporary cycling and pedestrian access during constructions; ▪ an assessment of traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrians, cyclists and public transport operations.	Refer to Section 6.6

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Relevant policies and guidelines that could assist with the preparation of the Traffic and Transport Impact Assessment include: ▪ Guide to Traffic Generating Development (Roads and Maritime Services) ▪ Road Design Guide (Roads and Maritime Services) ▪ Austroads Guide to Traffic Management – Part 12: Traffic Impacts of Development ▪ Austroads Guidelines for Planning and Assessment of Road Freight Access in Industrial Areas ▪ Cycling Aspects of Austroads Guides ▪ Australia Standards AS2890.3 (Bicycle Parking Facilities) ▪ Integrated Public Transport Service Planning Guidelines: Sydney Metropolitan Area 2013 (TfNSW)	Refer to Section 6.6
The EIS should detail how the proposed development will be consistent and align with the objectives, goals and directions of the following: ▪ Greater Sydney Region Plan ▪ Western City District Plan ▪ Future Transport Strategy 2056 ▪ Future Transport – Greater Sydney Services and Infrastructure Plan ▪ NSW Freight & Ports Plan 2018-2023	Noted throughout the EIS.

Table 14: Sydney Water Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
The proponent of development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and recycled water (if required) services have been made.	Refer to Section 6.16
The proponent must obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or other Sydney Water asset, including any easement or property. When determining landscaping options, the proponent should take into account that certain tree species can cause cracking or blockage of Sydney Water pipes and therefore should be avoided.	Refer to Section 6.16
Strict requirements for Sydney Water's stormwater assets (for certain types of development) may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets, such as avoiding building over and/or adjacent to stormwater assets and building bridges over stormwater assets. The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required.	Refer to Section 6.16
The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will	Refer to Section 6.16

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allow Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development.	

Table 15: AusGrid Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure.	Refer to Section 6.16
Identify any potential impacts of the proposed construction and operation on the existing utility infrastructure and service provider assets and demonstrate how these will be protected or impacts mitigated.	Refer to Section 6.16

Table 16: Fire & Rescue NSW Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
As additional details become available Fire & Rescue NSW requests to be consulted with respect to the proposed fire and life safety systems and their configuration at the project's preliminary and final design phases, particularly surrounding the on-site diesel storage.	Noted.
While there is currently no requirement for a fire safety study, FRNSW may request one be undertaken at a later stage should information be provided such it is deemed that the development poses unique challenges to the response to and management of an incident.	Noted.

Table 17: Department of Industry Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
<u>DoI – Water and Natural Resources Access Regulator</u> ▪ The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased. ▪ A detailed and consolidated site water balance. ▪ Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. ▪ Proposed surface and groundwater monitoring activities and methodologies. ▪ Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing	Refer to Section 6.16

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Plans (available at https://www.industry.nsw.gov.au/water).	
DPI – Fisheries - The Lane Cove River is important key fish habitat within Sydney. DPI Fisheries recommends that the project is designed to: - Protect a minimum 40m wide vegetated riparian buffer zone from the top of bank of the river. - Reduce impacts to water quality during construction and from stormwater flows from the proposal. The use of water sensitive urban design measures as part of the proposal is recommended to treat and reduce the quantity of stormwater flows from this site. - Avoid or minimise the harm of marine vegetation. - Proposed measures to avoid the impact to aquatic habitat are to be clearly outlined in the environmental assessment. These are to include the use of best practice erosion and sediment control measures. - Any offsets for the loss of marine vegetation are to be undertaken in accordance with Section 3.3.3 of DPI Fisheries Policy and Guidelines for Fish Habitat Conservation and Management.	Refer to Section 6.5& 6.16

Table 18: NSW Environment Protection Authority (EPA) Key Issues for Assessment

Key Issues	How Addressed
General Requirements	
Under the terms of the notice, written approval from the EPA must be obtained to undertake works at the site, including: - The approval to disturb the site surface is limited to the works proposed by the consultants. - All persons undertaking excavation works at the site must undergo a safety induction prior to commencement of works. - Site security must ensure all access to the site by unauthorised personnel during the investigation works is prevented. - All excavated material and wastewater generated during the investigation works must be classified, handled, transported and disposed of offsite at a licensed facility that is authorised to accept the material in accordance with the Protection of the Environment Operations (Waste) Regulation 2014. - A report of the works undertaken is to be provided to the EPA of the completion of the works. The report must identify any issues encountered during the works, including all waste disposal certificates for the excavated material and certificates for any material received as imported fill used in site surface reinstatement. - Where conditions of approval differ from the scope of works outlined in the development proposal, then additional approval from the EPA is required.	Refer to Section 4.2.4

Table 19: City of Ryde Council Key Issues for Assessment

Key Issues	How Addressed
General Requirements	

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Council has a concern regarding potential glare caused from the building to the Magdala Park. Could you please request that the façade details are provided and ensure that it is non-reflective or not white or reflective material.

Refer to **Section 6.3** and **Appendix 8**.

5.2 PRE-LODGEMENT STAKEHOLDER ENGAGEMENT AND CONSULTATION

Table 10 in **Section 5.1** lists the stakeholders which were required to be consulted with as per the SEARs issued by the NSW DP&E. These include:

- Lane Cove Council;
- Environment Protection Authority;
- Ausgrid;
- Roads and Maritime Services;
- Transport for NSW;
- Department of Industry – Crown Lands and Water;
- Department of Primary Industries – Fisheries;
- Office of Environment and Heritage;
- Fire and Rescue NSW;
- Rural Fire Service;
- Sydney Water;
- City of Ryde Council;
- Surrounding local residents and stakeholders; and
- Any other public transport, utilities or community service providers.

Ongoing consultation has occurred to date, forming part of the overall community and stakeholder participation strategy. The matters discussed are summarised below (refer to **Table 20**) and discussed further in the Community Consultation Report (Willowtree Planning) found in **Appendix 33**, which have been collated in accordance with the requirements of the SEARs. The information provided hereunder demonstrates that legitimate consultation has taken place to ensure that all stakeholders are informed, and the Proposed Development is considered with respect to their requirements.

Furthermore, consultation with adjoining landowners was chosen based on the proximity (750 m radius) to the Proposed Development, as well as the potential visual impact of the Proposed Development on nearby premises. **Figure 20** accurately illustrates a polygon determining whom was engaged with.

Additionally, stakeholders and adjoining landowners were issued with consultation letters, which summarise the Proposed Development from an informative perspective, allowing for any questions or issues that arose, to be dealt with respectively in an according manner. **Table 21** below details which landowners were liaised with.

The consultation letters provided to relevant agencies / stakeholders and adjoining landowners constituted a two (2) week turn around time for a response to be received from either an applicable agency and / or adjoining landowner. **Tables 20 & 21** below depict any responses received from various parties involved.

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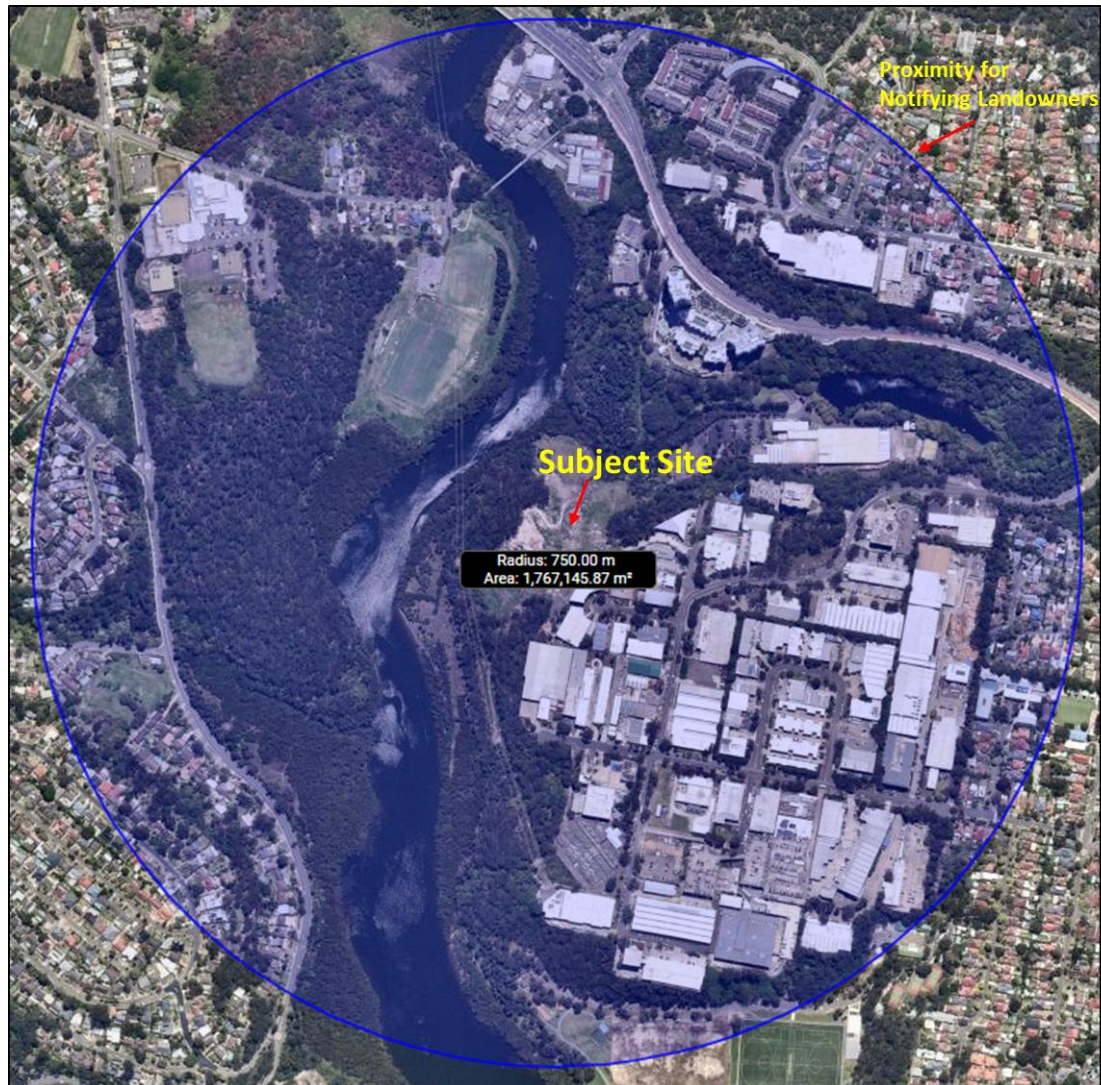


Figure 20 Proximity for which Landowners were Engaged for Consultation (NearMaps, 2018)

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Table 20: Consultation Undertaken with Adjoining Landowners		
Address	Letter Box Drop	Contact Date
Epping Road		
63 Epping Road, Lane Cove West, NSW, 2066	YES	30/11/2018
150 Epping Road, Lane Cove West, NSW, 2066	YES	30/11/2018
160 Epping Road, Lane Cove West, NSW, 2066	YES	30/11/2018
166 Epping Road, Lane Cove West, NSW, 2066	YES	30/11/2018
170 Epping Road, Lane Cove West, NSW, 2066	YES	30/11/2018
Mowbray Road West		
694 Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
696 Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
698 Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
700-704 Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
706 Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
706a Mowbray Road West, Lane Cove North, NSW, 2066	YES	30/11/2018
Magdala Road		
14 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
16 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
18 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
20 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
47 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
47a Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
49 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
51 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
53 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
55 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
57 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
59 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
61 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
63 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
65 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018
27-41 Magdala Road, North Ryde, NSW, 2113	YES	30/11/2018

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Apollo Place		
1 Apollo Place, Lane Cove West, NSW, 2066	YES	30/11/2018
2 Apollo Place, Lane Cove West, NSW, 2066	YES	30/11/2018
3 Apollo Place, Lane Cove West, NSW, 2066	YES	30/11/2018
4 Apollo Place, Lane Cove West, NSW, 2066	YES	30/11/2018
5 Apollo Place, Lane Cove West, NSW, 2066	YES	30/11/2018
Sirius Road		
1a Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
2 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
3 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
7d Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
9 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
11 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
13 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
15 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
17 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
19 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
21 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
23 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
25 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
27 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
29 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
31-33 Sirius Road, Lane Cove West, NSW, 2066	YES	30/11/2018
Mars Road		
12 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
14 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
16 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
19 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
20 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
21 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
23 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
23a Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018

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27 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
67 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
77 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
79-85 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
87 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
91 Mars Road, Lane Cove West, NSW, 2066	YES	30/11/2018
Orion Road		
5 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
5-7 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
9 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
11-13 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
15 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
17-19 Orion Road, Lane Cove West, NSW, 2066	YES	30/11/2018
Chaplin Drive		
1 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
1a Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
2 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
3 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
4-6 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
5 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
7 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
8 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
9-11 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
12 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
13 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
15-17 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
19 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
21 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
23-27 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
29 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018
31-33 Chaplin Drive, Lane Cove West, NSW, 2066	YES	30/11/2018

5.3 POST-LODGEMENT STAKEHOLDER ENGAGEMENT AND CONSULTATION

Following a review of the NSW DPIE's request for the Response to Submissions (RTS), dated 13 June 2019, the matters raised by the NSW DPIE and relevant State Agencies have been taken into consideration and are accurately addressed in the response matrix that is tabulated in **Table 21** below, which considers the revised scheme submitted to the NSW DPIE on 4 July 2019.

It should be noted, that since the original submission, design reiterations through informed consultation with the relevant State Agencies were investigated and subsequently implemented into the overall proposed scheme. The revised scheme is considered to satisfactorily address concerns and any issues raised in the formal RTS phase by the relevant State Agencies, community groups and residents involved. The key issues raised and comprehensively addressed (as outlined in **Table 21** below) included:

1. Bulk and Scale.
2. Height and Visual Impacts.
3. Native Vegetation Removal.
4. Impervious Surfaces.
5. Earthworks – Cut and Fill Volumes.
6. Site and Historical Context.

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Table 21: Response Matrix	
Relevant Entities Response to Submissions	Formalised Response
NSW Department of Planning, Industry and Environment (Patrick Copas – Planning Officer)	
Clarification of the Details of the Proposed Development: 1. <i>The Department notes the development description provided in Section 3 of the EIS does not clearly delineate which elements of the data centre are included in the State significant development (SSD) application, and which elements are being sought through a separate approval process. The response to submissions (RTS) should include a clear description of the proposed development broken down into:</i> <i>i. those elements of the data centre which form part of the SSD application</i> <i>ii. those elements of the data centre which will be sought through a separate approval process.</i>	The scope for the Proposed Development is noted as follows: ▪ Bulk earthworks across the Site to establish the building pad for the proposed Data Centre building; ▪ Provision of infrastructure and services (includes provisions for an electrical substation); ▪ Construction of the Data Centre building (30.3 m in height) as depicted on the proposed Site Plan (refer to Appendix 5 of this EIS); ▪ Construction of the landscaped area; ▪ Construction of car parking area and associated hardstand area (including access road / driveway). The Proposed Development particulars are outlined within Table 3 of this EIS. There are no other elements sought under a Complying Development Certificate (CDC) or Part 4 Development Application to Lane Cove Council.
Bulk and Scale: 2. <i>Please provide further justification regarding the proposed bulk and scale of the development, given the concerns raised by Lane Cove Council, community organisations and the general public during the exhibition period. This justification should also clearly demonstrate that design variations have been considered with respect to the height and bulk of the development.</i>	The format of Data Centres across the board, typically require footprints similar to the scale (if not bigger), than what is proposed under this SSD Application. It is noted, that reductions in the building footprint would result in an ultimately inefficient operation. It is imperative, that the data halls proposed within the building are connected, which coincides with the indicative servicing requirements for the proposed operations. Therefore, reductions in the building footprint could jeopardise the intended operational outcomes of the Proposed Development. The height non-compliance proposed, which exceeds the height Development Standard by 12.3 m pursuant to Clause 4.3 of the <i>Lane Cove Local Environmental Plan 2009</i> (LCLEP2009), is considered to be warranted, as it would not result in any such adverse environmental or visual amenity impacts with regard to adjoining sites and nearby sensitive receivers. The height proposed is justified on the basis of the slope and topography of the Subject Site, as well as the operational requirements of the end-user.

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	Furthermore, if the Proposal was to include a compliant scheme in accordance with the Development Standard of LCLEP2009, the built-form potential of the Site would be significantly under-realised. Hypothetically, if a height compliant scheme for the Proposal was submitted, it would: ▪ Not contribute towards meeting the demand for employment-generating opportunities within the Lane Cove Local Government Area (LGA), as identified within <i>A Metropolis of Three Cities</i> and the <i>North District Plan</i>, by potentially resulting in a reduction in available building footprint and consequently future industrial land uses on the Site; ▪ Threaten the commercial viability of the Proposed Development by reducing the overall achievable maximum height across the Site, by which would impact on end-user operational requirements; ▪ Create fewer full-time equivalent jobs during the construction and operational phases of development due to a decrease in footprint and potential disinterest in the Site due to preferred end-user ceiling heights not being able to be achieved; and ▪ Fail to meet the Objects of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) by making orderly and economic use of the Site for its full planning potential. Notwithstanding, a Clause 4.6 Variation (refer to Appendix 35) request has been prepared in accordance with the aims and objectives contained within Clause 4.6 and the relevant Development Standards under LCLEP2009. It considers various planning controls, strategic planning objectives and existing characteristics of the Site, and concludes that the proposed non-compliance is the best means of achieving the objective, which encourages orderly and economic use and development of land under Section 1.3 of the EP&A Act. Compliance with the standard would be unreasonable and unnecessary given that the Proposed Development generally maintains the height permitted under Clause 4.3 of LCLEP2009 with regard to the Subject Site. As mentioned in the

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	Clause 4.6 Variation, the height standard is unreasonable and unnecessary in the circumstances of the case on the following basis: ▪ The Proposed Development, for the purposes of a Data Centre, would generally maintain the maximum permitted building height under LCLEP2009 with regard to the Subject Site (exceedance by 12.3 m). Accordingly, the density and scale of the built-form proposed, would remain generally consistent with the existing industrial buildings surrounding the Site, whilst responding to the Site conditions. Additionally, the Proposed Development would effectively integrate the streetscape and character of the area into the proposed scheme. ▪ By providing a transition between the existing industrial buildings in close proximity to the Subject Site, the built-form relationship of the Site contrasted to the surrounding built-form, would remain consistent with existing situation currently experienced within the IN2 Light Industrial zone. ▪ The built-form character of the surrounding industrial developments is generally consistent with the built-form proposed under this SSD Application, for which it is considered to respond to the local and regional context. ▪ The height is representative of market needs and demands for modernised industrial-related developments, which assists in improving operational efficiencies and reducing the amount of building footprint required for developments. ▪ The Proposed Development would respond to the existing industrial developments on the southern and eastern interfaces, for which the protection of amenity would be ensured accordingly. Furthermore, there are no sensitive receptors in close proximity to the Subject Site; however, consideration for solar access, privacy, overshadowing and view / outlook would be considered (where possible).

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- The Proposed Development's building height is considered a key attribute in creating an internal building environment that would ensure the delivery of space and amenity that is required to support the operations of the future tenant involved and thereby enabling the productive use of the Site.

Notwithstanding, reducing the height of the design to strictly meet the LCLEP2009 Development Standard is considered unreasonable, as this would result in a less efficient use of the Site and require additional GFA, as well as being operationally unsound for future end-users. Further, a reduced height may result in a building design that does not respond as well to the Site's prevailing topography, which the proposed heights have been so strategically based on, as confirmed by Greenbox Architecture (refer to **Appendix 5**), as well as the strategically incorporated engineered design, which includes suitable levels for the Site, through balanced cut and fill.

The abovementioned justifications are considered valid and, in this instance, the proposed Clause 4.6 Variation is considered to be acceptable. The objectives of the relevant clauses and the IN2 Light Industrial zone would be upheld as a result of the Proposed Development.

Furthermore, minor amendments to the Proposed Development have been made, which include:

- Upper office level has been removed, which complies with the applicable 18 m height Development Standard under the *Lane Cove Local Environmental Plan 2009* (LCLEP2009):
 - The Floor Space Ratio (FSR) was originally calculated at 0.87:1; however, removal of office space has resulted in a revised FSR

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	of approximately 0.82:1, further accommodating an improved bulk and scale than originally proposed. ▪ The slope and topography of the Site result in unavoidable development scenarios, for which breaches in the height cannot be avoided; ○ This results in the floor levels and building pads / plates to be precise, given the geotechnical conditions and flood parameters, that require due consideration to formulate a compliant design. ▪ The positioning of the proposed substation has been manoeuvred to be below deck adjoining the car parking area and out of sight from pedestrians and / or visitors; ▪ The two (2) level generator arrangement previously depicted as facing the Lane Cove River has been replanned and repositioned, with the upper level of generators being removed, including the steel support platform. Notwithstanding the abovementioned, Geoscapes have provided revised photomontages (refer to Appendix 8), which include line of sight images from the walking track at ground level. From review of the images provided, the existing industrial development at 2 Apollo Place would remain the dominant feature in terms of visual impacts to nearby sensitive receivers. Accordingly, the proposed bulk and scale intended for the Subject Site is considered to be warranted and justified for the Proposal, for which relevant recommendations and mitigation measures would be implemented accordingly for the Proposed Development.
Existing Native Vegetation: <i>3. Please provide further justification regarding the scale of native vegetation clearing required to facilitate the proposed development, given the concerns raised by Lane Cove Council, the Office of Environment and Heritage, community organisations and the general</i>	It is important to note, that all schemes investigated for the Site would require vegetation clearing across the Site, to enable a suitable and appropriate development footprint. This would be evident and the same unavoidable case for any such future development on the Site, which would aim to utilise and maximise the Site, to its best and highest use possible, to maximise the land

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public during the exhibition period. In a similar manner to point (2) above, this justification should clearly demonstrate that design variations have been considered with respect to the development's footprint and provision of additional landscaping.

value, for which acquisition was sought, further contributing to the orderly (sequential) and economic use and development of the Site in accordance with the Objects of the Act with regard to Section 1.3 of the EP&A Act.

As mentioned above, it is noted, that the format of Data Centres typically requires development footprints similar to what is proposed under this SSD Application. Reductions in the building footprint would result in an ultimately inefficient operation. Therefore, it is imperative, that the data halls proposed within the building are connected to one another, which coincides with the indicative servicing requirements for the proposed operations. Therefore, reductions in the building footprint could potentially jeopardise the intended operational outcomes of the Proposed Development.

Notwithstanding the above, there have been considerable improvements to the Site, with respect to the original scheme proposed. Revised Architectural Plans and Landscape Plans account for minor reductions in the overall building footprint, as well as increased and denser landscape planting proposed across the Site to the west and south (refer to **Appendix 5 & 6**).

The scale of native vegetation proposed to be cleared has been evaluated and will be retained where absolutely possible; however, as mentioned in the Environmental Impact Statement (EIS) in **Section 6.11**, impacts associated with vegetation zones PCT 1776 in an 'intact' and 'disturbed' condition for the Proposed Development will require offset under the Biodiversity Assessment Methodology (BAM) pursuant to the *Biodiversity Conservation Act 2016* (BC Act). The total cost of ecosystem credits, should the Biodiversity Conservation Trust (BCT) be used to offset the potential impacts, are currently (27 August 2019) estimated to be approximately \$23,127.78 (excluding GST). Additionally, no species credits are required for the potential impacts proposed on the Subject Site.

The Vegetation Management Plan (VMP) prepared by Travers Bushfire & Ecology (2019) takes into consideration, the existing site conditions, as well as the proposed landscaping treatment offered across the Site, which is influenced by

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	a selective and strategic dichotomous mix of native and endemic tree, plant, shrub and grass species, that will demonstrate an aesthetically pleasing architectural landscape design for the Site. The Landscape Plans prepared by Geoscapes (refer to Appendix 6) further reinforce the proposed landscape treatment offered for the Site.
Construction Staging: 4. <i>The Department notes construction of the data centre would be undertaken in three stages, being:</i> i. <i>Phase 1 – Bulk earthworks across the site, southern data halls and associated infrastructure, driveways and parking areas and the substation area</i> ii. <i>Phase 2 – Central data halls and associated infrastructure</i> iii. <i>Phase 3 – Northern data halls and associated infrastructure.</i> <i>Given the constrained nature of the site, please provide further detail regarding how construction would be staged to minimise potential conflicts between on-going construction works and the operation of completed data halls. Consideration should also be given to the provision of parking for both construction and operational staff during this period.</i>	Appendix A of the Construction and Site Management Plan, prepared by AW Edwards clearly delineates the proposed construction staging for the Proposed Development, in relation to the Subject Site (refer to Appendix 43).
Aboriginal Cultural Heritage: 5. <i>The following documents were provided to the Department on 2 May 2019:</i> i. <i>1 Sirius Road, Lane Cove: Aboriginal cultural heritage assessment report, prepared by Biosis Pty Ltd, dated 18 April 2019 (Final version 01)</i> ii. <i>1 Sirius Road, Lane Cove: Archaeological report, prepared by Biosis Pty Ltd, dated 18 April 2019 (Final 01).</i> <i>The Department notes these documents include the personal contact details of a number of Aboriginal stakeholders, as well as information marked 'Not to be made public'. Please provide an updated version of these documents as part of your Response to Submissions (RTS), which</i>	Biosis have provided revised Reports and a corresponding Cover Letter, which satisfactorily address the NSW DP&E's comments with regard to Aboriginal Cultural Heritage (refer to Appendix 25-27). Further consideration is not considered to be warranted in this respect.

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<i>has all personal and/or sensitive information redacted. These documents will then be made publicly available on the Department's Major Projects website.</i>	
Lane Cove Council: 6. Please provide additional information regarding the potential impacts of the proposed development upon the Lane Cove Tunnel's (LCT) Western Ventilation Shaft and the LCT Motorway Control Centre, given the comments provided by the Roads and Maritime Services in its submission dated 14 May 2019.	Reference should be made to the letter prepared by AW Edwards, dated 27 June 2019 (refer to Appendix 45), which satisfactorily addresses any potential impacts with regard to the Lane Cove Tunnel (LCT) and associated LCT assets. Specifically, the letter considers the following parameters: 1. Vibration Monitoring: Vibration monitoring will be implemented during the construction phase of the Proposed Development. The Construction Management Plan (CMP) prepared by AW Edwards satisfactorily addresses the construction procedures to be undertaken on-site, for which the finalised version will be made available prior to the issue of a Construction Certificate (CC). 2. Foundation Design: The proposed foundation system is provided in structural drawing, prepared by Van Der Meer (refer to Appendix 45). Given the depth of the ventilation shaft it is anticipated, that there will be no such impacts on the existing LCT asset. 3. Retention System: There will be no works extending beyond the boundaries of the Site. 4. Additional Boreholes: It is noted, that at present, the single borehole adjacent to the south-eastern boundary of the Site gives a reasonable level of certainty on the existing site conditions. During the construction phase, additional boreholes will be undertaken by qualified Geotechnical Engineer, to provide an accurate representation of the area adjoining the LCT ventilation tunnel, for which the data will be provided to the NSW RMS, when completed.

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	5. Proposed Landscape Treatment: Reference should be made to the revised Landscape Plans (refer to Appendix 6), specifically, drawings LDA 02 and LDA 07, which outline the proposed landscaping approach along the southern boundary. The initial planting selections have been amended to incorporate smaller species, which will not have any adverse impacts on existing infrastructure assets beyond the Site boundary. 6. Other Proposed Works: Refer should be made to the plans in Appendix A of Appendix 29, which identify the relationship of the proposed in-ground services zone to the LCT ventilation tunnel easement. The shaded area represents the zone, which will have new stormwater, and comms cables installed. It is understood, that the RL to the top of the stratum ranges from RL 6.5 to RL 10.0 within the zone, that crosses the Subject Site. The lowest services in this particular area will be located at an RL of 23.0, approximately 13.0 m above the stratum level, for which there will not be any impacts on the easement. 7. As-Built Drawings: The as-built drawings for the LCT could be assessed accordingly to further inform any potential impacts.
Fencing: 7. While some plans within the EIS refer to the installation of 2.7 metre (m) high perimeter fence, others (such as the landscape management plan) refer to 1.8 m high fencing. Please clarify the intended height of the proposed perimeter fencing and include indicative plans of its design. Where fencing traverses the transmission line easement, it must be designed in accordance with the requirements of Ausgrid (refer to Ausgrid's submission dated 20 May 2019).	It is noted, that fencing proposed around the Subject Site has been proposed at 2.4 m in height. This height requirement is consistent across the Site, which satisfies Ausgrid's requirements for the electrical easement traversing the southwest of the Site, as well as being consistent with the relevant principles of Crime Prevention Through Environmental Design.

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▪ The proposed development would potentially have a detrimental impact on the environmentally sensitive areas adjoining the site. These include Coastal Freshwater Swamp Forest, Estuarine Swamp Oak Forest, and Estuarine Saltmarsh;	Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970. Furthermore, Travers note, that the majority of trees present within the study area are commensurate with Plant Community Type (PCT) 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast, which is not commensurate with any Threatened Ecological Community (TEC) listed under both the EPBC Act and BC Act. A Construction Environmental Management Plan (CEMP) will be prepared and implemented, which will address matters such as the control of runoff during construction and post construction to prevent impacts to the adjoining sensitive vegetation types. The sediment control plan has been updated to better address the scale of the proposed development and to further avoid potential impacts to adjoining environmentally sensitive areas. An aquatic assessment was undertaken by CTENVIRONMENTAL (2019) which assessed the likely impacts of the proposal on aquatic habitats including the riparian vegetation. The following conclusions were drawn with regards to riparian vegetation communities: ▪ There is a slight chance that stormwater runoff and sediment during the construction phase may impact downstream seagrass beds.

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- The condition of the riparian vegetation and creek channel along the reach of Lane Cover River and Stringybark Creek ranges from 'excellent' – 'good'. It is unlikely the proposed development will impact these communities given the development footprint is located outside the required Vegetated Riparian Zones (VRZs). However, detail of stormwater management is limited and an adequate assessment of the potential impacts that the construction phase of a proposed rock headwall and ongoing discharge to Stringybark Creek could not be made.
- It is unlikely the proposed development will have significant impact on groundwater dependent, aquatic and/or riparian ecosystems and improvement to these ecosystems will occur if the listed recommendations are implemented (see CTENVIRONMENTAL 2019 report for details).

Further, the design will reduce Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorous (TP) and incorporates flow spreaders at discharge points to ensure distribution of discharge over a broad area. The controlled discharge of the stormwater will reduce the potential for scouring to occur during times of heavy rain, hence further mitigating the potential impact on adjoining environmentally sensitive areas.

Furthermore, Travers Bushfire and Ecology note, that riparian buffers have been applied and all stormwater works have been provided in accordance with the NSW DPI – Office of Water – Controlled Activities on Waterfront Land – Guidelines for Riparian Corridors on Waterfront Land (2012).

Additionally, Travers Bushfire and Ecology suggest, that non-riparian corridor works are permissible within the outer 50% of the required riparian buffer in accordance with the above guidelines, with respect to the riparian corridor offsetting provision. It is noted, that the built-form of the Proposal does not reduce any existing setbacks as currently afforded to *Coastal Freshwater Swamp Forest*, *Estuarine Swamp Oak Forest* and *Estuarine Saltmarsh*.

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▪ The proposal in its current form would result in approximately 74% of the site becoming impervious. This would dramatically affect the quantity and quality of groundwater flowing into Stringybark Creek, Lane Cove River and associated sensitive lands. The proposal should incorporate water sensitive urban design to ameliorate the impacts; ▪ The proposal in its current form would result in significant cut and fill of the site and should be reviewed. The total cut volume of 132,200	Van Der Meer note, that the reduction in the building footprint will result in a reduced impervious area and lower overall runoff across the Subject Site. They pay full cognisance of the infiltration trenches, which have been included to recharge the groundwater levels closer to that of the existing conditions experienced across the Site. It is noted, that the discharge areas to the north and to the west at existing low points include a scour and spreader arrangement to reduce the velocity of peak flows experienced across the Site, reduce concentration and prevent scour to downstream bushland. Accordingly, the proposed hardstand area would be appropriately treated, via the implementation of filter cartridges. Half of the roof is directed to a rainwater reuse tank, which will reduce overall runoff and improve water quality, in accordance with Council's DCP requirements for Water Sensitive Urban Design (WSUD). Van Der Meer note, that stormwater will be directed through a CDS and GPT. Additionally, points of discharge from the Site have been amended and now include a southwest outlet. On-site Stormwater Detention (OSD) previously proposed has been removed as part of the revised scheme. It is noted, that OSD is typically implemented to reduce the potential impacts on downstream drainage and downstream properties. Accordingly, infiltration trenches and the indicative scour protection arrangement have been proposed to be utilised, which will significantly reduce concentration to the downstream bushland and adjoining tributaries. Notwithstanding, the combination of infiltration trenches, a rainwater tank, GPT's and filter cartridges will improve water quality. Furthermore, the infiltration trenches will assist in hydrating the Coastal Freshwater Swamp. The earthworks proposed across the Site (with particular attention given to the cut volumes), were proposed to combat any adverse environmental impacts

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cubic metres, and total fill volume of 38,520 cubic metres would result in an excessive amount of disturbance. A revised design should better respond to the existing topography and reduce impacts on adjoining environmentally sensitive areas;

from occurring and to mitigate any further impacts from occurring across the Site on nearby sensitive visual receivers. This ultimately provides a suitable platform for the proposed Data Centre operations, which are considered to be imperative in achieving maximum operational efficiency across the Site.

It is noted, that the topography of the Site, for any such future development (and not just the Proposed Development) would require to be significantly altered to accommodate the appropriate levels and building pads to house a structurally sound development. This has been confirmed and reinforced within the Geotechnical Report, prepared by Douglas Partners. Further confirmation is provided within the Flood Assessment Report, prepared by grc Hydro, which analyses the pre and post-development scenarios associated with the Proposed Development during times of flood affectation across the Site.

Furthermore, the cut volumes proposed also respond to the footprint and scale of the Proposed Development, for which fewer cut volumes would have required a development much higher than originally proposed, increasing potential visual impacts on adjoining industrial sites and nearby sensitive receivers.

Notwithstanding, the cut volumes proposed are considered to be representative of any such industrial-related development proposed on the Subject Site, that would be required to comply with relevant Building Code of Australia (BCA) and Australian Standards, for which appropriate and compliant levels for building would be required to be adhered to. Therefore, further consideration with regard to the cut and fill volumes proposed are not considered to be warranted, as the revised design satisfactorily addresses the response from Council.

The revised earthworks quantities are considered to be significantly less than previously proposed, attaining volumes of approximately 93,900 m³ cut and 24,800 m³ of fill. Accordingly, the revised earthworks proposed would result in significantly less disturbance to the Site, as well as being considerably closer to matching the existing conditions where deemed possible, for areas such as the car parking area, on-grade roads and the fire trail.

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▪ The proposal exceeds Lane Cove LEP 2009 height controls by 33%, which is not sufficiently justified. As this proposal does not require access to natural light, the lowest level could be buried below ground to reduce the height of the building;	Furthermore, all design levels have been set to avoid the existing capped area towards the north of the Site and will not disturb this area in any such way. It is noted, that the adjacent line item forms a direct contradiction with the above-listed item; hence further excavation has not been proposed across the Site. The height non-compliance proposed, which exceeds the height Development Standard by 12.3 m pursuant to Clause 4.3 of the <i>Lane Cove Local Environmental Plan 2009</i> (LCLEP2009), is considered to be warranted, as it would not result in any such adverse environmental or visual amenity impacts with regard to adjoining sites and nearby sensitive receivers. The height proposed is justified on the basis of the slope and topography of the Subject Site, as well as the operational requirements of the end-user. Furthermore, if the Proposal was to include a compliant scheme in accordance with the Development Standard of LCLEP2009, the built-form potential of the Site would be significantly under-realised. Hypothetically, if a height compliant scheme for the Proposal was submitted, it would: ▪ Not contribute towards meeting the demand for employment-generating opportunities within the Lane Cove Local Government Area (LGA), as identified within <i>A Metropolis of Three Cities</i> and the <i>North District Plan</i>, by potentially resulting in a reduction in available building footprint and consequently future industrial land uses on the Site; ▪ Threaten the commercial viability of the Proposed Development by reducing the overall achievable maximum height across the Site, by which would impact on end-user operational requirements; ▪ Create fewer full-time equivalent jobs during the construction and operational phases of development due to a decrease in footprint and potential disinterest in the Site due to preferred end-user ceiling heights not being able to be achieved; and ▪ Fail to meet the Objects of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) by making orderly and economic use of the Site for its full planning potential.

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▪ Soft vegetated batters should be incorporated rather than hard retaining walls. In particular the retaining walls adjacent to the north road should be reconsidered to ensure the proposal better blends in with the natural setting of the site; ▪ The rooftop condensers should be screened to soften their visual impact; ▪ A relocation of the 3-storey plant building north of the lower access road to the southern end of the site would be less visually prominent; and ▪ A minimum of 123 vehicle spaces is required for a development with a workforce of 80 - 100 employees Part R of the DCP. The proposed number of vehicle spaces should be increased to comply with the DCP or justify the proposed spaces as being adequate.	Notwithstanding, a Clause 4.6 Variation (refer to Appendix 35) request has been prepared in accordance with the aims and objectives contained within Clause 4.6 and the relevant Development Standards under LCLEP2009. It considers various planning controls, strategic planning objectives and existing characteristics of the Site, and concludes that the proposed non-compliance is the best means of achieving the objective, which encourages orderly and economic use and development of land under Section 1.3 of the EP&A Act. To facilitate and complement the natural environment and reinforce the aesthetic of the Proposed Development, suspended decking has been proposed, with associated landscaping, rather than strict reliance on retaining walls and soft vegetated batters. It is noted, that implemented screening devices around the roof area of the proposed Data Centre would further increase the overall bulk and scale of the building. Additionally, screening would not allow for required servicing and maintenance to occur, due to access requirements by relevant servicing and maintenance technicians. Therefore, further consideration with regard to screening on the roof setting is not considered to be warranted. It is noted, that the layout of mechanical plant and associated equipment has been rationalised to reduce any further visual impacts from occurring across the Site. It is noted, that a whole level has been deduced from the northern aspect in response to the relevant submission item, for which further consideration is not considered warranted in this respect. The revised Architectural Plans are located within Appendix 5 of this EIS. As outlined within the Traffic Impact Assessment, prepared by ARUP (2019), car parking for the Proposed Development has been assessed in accordance with the requirements of the LDGP2009, Part R, which requires car parking to be provided in accordance with the relevant controls below: ▪ Light Industrial Area: Minimum of one (1) space per 77 m² GFA; plus ▪ Office: Minimum of one (1) space per 60 m² GFA; plus

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	▪ Warehouse Area: Minimum of one (1) space per 300 m²; plus ▪ One (1) disabled (accessible) space per 50 car parking spaces (minimum 1 disabled space). The LCDCP2009 recommends the Proposed Development provide approximately 98 car parking spaces, with the breakdown shown below: ▪ Warehouse Area: 22,594 m² = 76 car parking spaces required; and ▪ Office: 1,354 m² = 23 car parking spaces required. Notwithstanding the abovementioned, the LCDCP2009 controls assume, that the size of each component of a building is directly proportional to the number of employees; hence, the required car parking spaces. In accordance with the Proposed Development, it should be noted, that at full capacity during the operational phases, a total of 80-100 people per day will be generated by the Proposal, including management staff; Data Centre engineers; maintenance technicians; security personnel; and customer staff. The staff shift numbers and times are expected to be as follows: ▪ Day Shift Staff: 7:00am – 7:00pm, 70 staff on-site, of which 25 are customer staff; and ▪ Night Shift Staff: 7:00pm – 7:00am, 20 staff on-site, of which five (5) are customer staff. Therefore, as a worst-case scenario basis, the proposed Data Centre is anticipated to be accessed by no more than 100 people at any one time, for which the DCP controls are not considered appropriate for the Proposed Development, given the varied operational nature of the development, as opposed to other industrial-related developments within close proximity to the Site, which would be required to adhere to the relevant controls. In response to the existing mode share percentages outlined within the TIA (refer to Appendix 17), the Proposed Development proposes to provide 67 off-

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	street car parking spaces, which are deemed acceptable for the following reasons: ▪ A minibus is proposed outside of the front gate to drop-off / pick-up staff; ▪ A STrAP and TAG have been prepared by ARUP (refer to Appendix 41). This document is a package and plan to reduce car-based travel and include mode share targets; ▪ As a result of the measures to be implemented by the future development to encourage alternate modes of transport (active and public transport), as well as a reduction allowance for carpooling. It is assumed, that a 20% mode shift away from the private vehicle can be achieved compared to the current mode share for people working in the area. It is noted, that by applying this reduction factor to 84 parking spaces, 67 parking spaces will ultimately be required; and ▪ An annual travel survey can be conducted by the proposed Data Centre. Furthermore, in accordance with Council's DCP requirements a total of five (5) bicycle parking spaces and four (4) motorcycle parking spaces are required and will be provided accordingly. Notwithstanding, the revised parking provisions satisfactorily address Council's parking requirements.
Tree Removal: A large area of the site has already been cleared of canopy trees and contains only exotic grass species. The remaining areas with significant native vegetation are located around the perimeter, the north-east and southern corners of the site. The areas of remaining canopy trees are classified as of Smooth-barked Apple – Red Bloodwood open forest communities both disturbed and intact.	The proposed development area is currently defined by an existing fence with mesh on the lower portion to assist in trapping any sediment. Impact to trees outside this fence to the north and northwest were not assessed, as there are setbacks of greater than 10 m provided to all existing boundaries. An inspection on 2 July 2019 to each of these boundaries confirmed that any trees on the western boundaries consisted of dominant regrowth privet and bushland weeds, as this area was cleared for management of vegetation under the existing electrical easement and fill. The northern boundary works are sufficiently set back not to impact on any of the existing trees immediately located on the northern boundary. Likewise, the area immediately adjoining the

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The Tree Assessment Report used assessment methods such as Trees AZ and SULE (Safe Useful Life Expectancy) to determine the value of individual trees. Trees have been identified for retention or removal based on these values and whether they are located within the footprint of the development and require removing. The report listed a total of 171 trees within the site with a Diameter at Breast Height (DBH) of 15cm or greater. The proposed works would result in the removal of 43 trees assessed as being in poor condition, and removal of 82 trees which are located within the areas proposed for construction. Therefore 125 trees or 73.1% of all trees are proposed for removal. The documentation provided assesses two groups of trees, one located in the south east of the site and one in the south west of the site. The documentation does not take into consideration or assess any of the trees located around the north-east or the rest of the perimeter of the site. The documentation does not specify likely impacts during construction to trees proposed to be retained. AS-4970 Protection of Trees on Development Sites (2009) describes major and minor levels of encroachment expressed as percentages. Encroachment greater than 10% are required to be investigated and the trees viability demonstrated. It is expected that there would be a yet to be determined level of impact posed on the trees identified to be retained that required further investigation. The tree protection plan contained within the documentation provided is generic and while specific to the Australian Standards, lacks detail and is not considered site specific.	proposed fire trail on the north-eastern boundary consists mostly of weeds and some regrowth shrubs. Works in the eastern and southern portions of the Site abut existing stands of trees already assessed in the Tree Assessment Report (refer to Appendix 24). No further trees are required to be assessed on boundaries. Section 5 of the Tree Assessment Report, titled "Tree Protection Guidelines" (refer to Appendix 24), has been expanded to incorporate specific protection to nominated trees, particularly those at the fringe of development areas where the Tree Protection Zones (TPZ) may be compromised. The TPZ have been nominated for all assessed trees within Schedule 1 – Tree Assessment Data Table. The standard measures as contained in the Tree Assessment Report do apply to all trees to be retained abutting any proposed works. A figure has however been inserted containing the location of recommended tree protection fencing. As with the above response, further details have been added in the revised Tree Assessment Report (refer to Appendix 24) for relevant trees, particularly those that may be at greater risk due to proximity to construction areas and require additional protection or specific / individual protection measures.

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The volume of trees proposed to be removed would have unacceptable impacts on the local habitat and is also not in accordance with the objectives of the North District Plan, SEPP 19 Bushland in Urban Areas, and the Lane Cove DCP 2010. The submitted Tree Assessment Report also lacks sufficient Arboricultural assessment.	If tree protection zones are or are likely to be impacted by greater than 10%, they have been nominated for removal. All trees being retained will not have their TPZ's impacted. With regard to the Tree Assessment Report – the report has been prepared not as an Arboricultural Impact Assessment, rather as a preliminary Tree Assessment Report to provide indicative guidance as to the impacted trees of assessable size. However, a revised tree retention and removal plan and a landscaping plan has been prepared to retain additional trees where possible. The impact is commensurate with the scale of the proposed development and takes advantage of the disturbed lands consistent with the typical developments in this locality. As a mitigation measure to lessen the long-term impacts on trees, replacement landscaping will include species typically commensurate with plant community type 1776 - Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast. OEH recommends planting with species from this community with local provenance stock. The tree assessment recommendations have been updated to be consistent.
The creation of bio-banking credits to offset the significant tree removal on the site is good in theory. However, the credits must be utilised in the local area to account for, ameliorate and replace the localised loss of habitat and biodiversity.	Ecoplaning note, that the Proponent has amended the overall footprint to avoid vegetation loss in the southwest of the Site and minimise impacts where possible. The Biodiversity Offset Scheme is a legislated mechanism for offsets with a clear set of offsetting rules as outlined in <i>clause 6.2 of the Biodiversity Conservation Regulation 2017</i> (BC Regulation). <i>This clause relates to the offset rules that apply to the determination under the biodiversity offsets scheme of the biodiversity conservation measures to offset or compensate for the impacts on biodiversity values after the steps taken to avoid or minimise those impacts, being measures required by the conditions of the relevant planning approval, vegetation clearing approval or biodiversity certification of land.</i> <i>Clause 6.3</i> of the BC Regulation outlines what like-for-like biodiversity credits represent, and <i>Clause 6.4</i> outlines the variation rules, noting the cases in which the ordinary offset rules for the determination of the like-for-like biodiversity

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The site is subject to State Environmental Planning Policy (Coastal Management) 2018 and is classified as Land Adjacent to Bushland under the <i>State Environmental Planning Policy 19 Bushland in Urban Areas</i>. The southwest corner of the site adjoins a public reserve related to Stringybark Creek and the Lane Cove River. The site is located adjacent to multiple <u>Endangered Ecological Communities</u> (EEC) located between the western perimeter of the site and the Lane Cove	credits may be varied. This includes where <i>the proponent who is to retire the biodiversity credits has taken reasonable steps to obtain the requisite like-for-like biodiversity credits and requests the variation of the ordinary offset rules</i>. It is unlikely that credits for the vegetation type relevant for the Project would be present within the Lane Cove LGA (and potentially at all on the market). The credit report ran for the BDAR contained a note, from the tool, stating that <i>the relevant PCT has no trades recorded</i> and a more recent search of the credit registers (26 June 2019) provided the same result (i.e. no credits for this PCT available on the market). Should credits become available within the Lane Cove LGA by the time of Project completion, every effort will be made to purchase such credits to ensure impacts and offsets are within the same LGA. However, at this stage, the following offset mechanisms are likely to be the only option for the Proposal (as per the Regulations): ▪ Payment into the Biodiversity Conservation Fund; ▪ The retirement of the required biodiversity credits in accordance with the variation rules; and ▪ The funding of a conservation action that would benefit the relevant ecological community and that is the equivalent to the cost of acquiring the like-for-like biodiversity credits as determined by the offsets payment calculator. Ecoplaning note, that the proposed footprint has been modified to minimise impacts to the stand of vegetation in the southwest of the Subject Site. Whilst complete avoidance is not possible, efforts have been made to avoid tree clearance where possible. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of

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River. These include Coastal Freshwater Swamp Forest, Estuarine Swamp Oak Forest, and Estuarine Saltmarsh. The removal of 73.1% of trees, proposed earthworks, groundwater impacts are inconsistent with the relevant objectives of SEPP 19 and do not adequately consider impacts to these adjacent environmentally sensitive areas.	the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance. Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970. Furthermore, Travers note, that the majority of trees present within the study area are commensurate with Plant Community Type (PCT) 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast, which is not commensurate with any Threatened Ecological Community (TEC) listed under both the EPBC Act and BC Act. It is not possible for the Proposal (or for any development in which vegetation removal is required) to proceed if it is to comply with all the objectives and aims of SEPP 19. However, the importance of minimising impacts to remnant vegetation in the urban landscape is acknowledged and supported and this is evident through the footprint modification. Impacts to the adjoining public reserve are not anticipated provided a CEMP is prepared and implemented which details specific measures to protect this area

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In particular the proposal is inconsistent with: - <u>Greater Sydney Commission, North District Plan:</u> The North District Plan was developed by the Greater Sydney Commission as part of an integrated 20-year regional strategy to manage growth, and also enhance livability, productivity, and sustainability into the future. The sustainability section of the plan provides a framework to promote the lowering of carbon emissions and mitigate the impacts of climate change. Planning priority N19 of the North District Plan promotes <i>Increasing urban tree canopy cover and delivering green grid connections</i>. The NSW Government has set a target through the North District Plan to increase urban tree canopy cover across Greater Sydney to 40 percent. The removal of 73.1% of all trees is clearly contrary to the planning priority 19 of the Greater Sydney Commission. Council would ask the applicant and the assessing authority (The Minister) to seriously consider the environmental impacts likely to occur if this development is approved in the current form. <u>SEPP 19 Bushland in Urban Areas.</u> <i>Aims, objectives etc.</i> <i>The general aim of this policy is to protect and preserve bushland within urban areas</i>	from indirect impacts such as runoff, weed invasion and edge effects, accidental encroachment, sedimentation, siltation and erosion. The same would apply to areas along the western perimeter where Endangered Ecological Communities (EECs) and waterways are located. The new layout includes a stormwater treatment measures in the form of infiltration basins and reticulation systems, such as GPTs and a rainwater tank, which will mitigate the impact to adjoining environmentally sensitive areas, resulting from runoff from impervious surfaces and other water-related impacts. It is not possible for the Proposal (or for any development in which vegetation removal is required) to proceed if it is to comply completely with Planning Priority 19. However, the importance of minimising impacts to remnant vegetation in the North District is acknowledged and supported where practicable. This is evident through the footprint modification and retention of vegetation, where possible. The revegetation of the northern perimeter of the Subject Site in accordance with the Vegetation Management Plan (VMP) prepared by Travers Bushfire and Ecology (2019) will increase the vegetated buffer along Lane Cove River and Stringybark Creek and improve connectivity between the vegetation situated to the north and the south of the Subject Site. The Proposed Development footprint has been modified to minimise impacts to the patch of vegetation in the south west of the Site. Whilst complete avoidance is not possible, efforts have been made to avoid tree clearance where possible. The objective of this plan is to increase urban canopy cover across Greater Sydney to 40%. A reduction of impact on trees has been achieved through

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<i>The specific aims of this policy</i> <i>To protect existing landforms such as drainage lines, watercourses and foreshores.</i> The Lane Cove DCP 2010 also has site specific controls to protect the environmentally sensitive areas around the site. <u>DCP Part E Industrial Development:</u> <i>Part E Locality 1 Land off Sirius Road.</i> <i>Part E.13 Objectives.</i> <i>1. Provide for industrial development which is compatible with the environmentally sensitive nature of the area.</i> <i>2. Encourage the design of buildings which will maintain the bushland character of the site when viewed from surrounding public lands</i> <i>3. Protect, maintain and enhance those parts of the site which contain bushland</i> <i>4. provision of landscaping which supplements the surrounding bushland area</i> The key objectives and principles of the DCP have not been addressed by the applicant in the statement. In particular: - ○ Clause E14 (a) requires that all buildings be setback a minimum of 20m from Stringybark Creek. It is not clear in the documentation if the built form encroaches the 20m buffer area.	relocation of the proposed substation. In addition, overall canopy cover will be increased by replanting in landscape areas will also assist in lessening the impacts in the long term. A revised Landscape Plan (refer to Appendix 6) has been prepared showing more native trees being installed with a target over of greater than 45%. Notwithstanding, the Proposal meets the NSW Water Controlled Activity Guidelines for riparian protection. A revised stormwater management plan (refer to Appendix 6) has been prepared by Van Der Meer. Additionally, a watercourse assessment has been prepared demonstrating compliance with the NSW DPI – Office of Water Guidelines for Controlled Activities. Schedule 2 of the Vegetation Management Plan (refer to Appendix 38) clearly shows the 20 m buffer line and the edge of impact going to this line and not intruding the buffer. A watercourse assessment has been prepared demonstrating compliance with the NSW DPI – Office of Water Guidelines for Controlled Activities. The VMP prepared for the Subject Site (refer to Appendix 38) guides the revegetation of the retained native vegetation and the revegetation of disturbed land, cleared areas and contaminated land within the Subject Site. The primary objectives of the VMP include: ▪ To protect, restore and maintain retained native vegetation. ▪ To revegetate selected areas with appropriate native vegetation of local provenance. ▪ Maximise native vegetation cover and species diversity within the restoration areas. ▪ Minimise weed cover to ensure long term establishment of native vegetation. ▪ Undertake monitoring, auditing and maintenance activities to ensure an effective and a resilient restoration outcome. ▪ Ensure compliance with the development consent and this VMP.

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○ Clause E14 (d) requires that no buildings or works be undertaken on any area shown as 'bushland' in the site specific DCP Map. The proposed buildings and carparking areas both appear to significantly encroach into areas earmarked as bushland. Consideration of this environmental habitat needs to be a primary determinant of the building footprint. <u>Part H5 of the DCP – Protection of Bushland</u> This requires minimum setback buffer zones of 10 metres to ensure the development does not impact on the integrity of the adjoining bushland.	This VMP, together with the proposed vegetation avoidance and CEMP implementation are considered consistent with the objectives and principles of the LCDCP2009. It is stated in the CTENVIRONMENTAL (2019) Aquatic Report that for Stringybark Creek, although the subject land boundary falls slightly within the 20 m VRZ, the proposed footprint does not encroach into the VRZ (i.e. buffer). A site assessment to confirm Top of Bank (ToB) and the edge of wetlands has been conducted for Lane Cove River and Stringybark Creek (Travers Bushfire and Ecology 2019). The revised mapping and application of riparian buffers is in accordance with the Natural Resource Access Regulator (NRAR) (2018) Guidelines for controlled activities on Waterfront Land – Riparian Corridors. The revised ToB and wetland edge mapping has confirmed that all buildings will be setback a minimum of 20 m from Stringybark Creek, therefore outside of the Vegetated Riparian Zone (VRZ) for Stringybark Creek; demonstrating compliance with Clause E14 (a) of the LCDCP2009. The Asset Protection Zone (APZ) would also be situated outside of the VRZ for Stringybark Creek. It is acknowledged that the complete avoidance of all areas mapped as 'bushland' on the LCDCP2009 map has not been achieved although avoidance has been demonstrated where possible. The Proponent has advised that further avoidance of impacts to native vegetation is not economically viable, as the Project requires a large amount of services infrastructure, which only becomes economical with the 80-90 MW capacity currently proposed for the Data Centre. Further, the steep gradients in the Subject Site require a large amount of excavation to achieve the level floor planes required, resulting in substantial financial input. A minimum setback of 10 m in accordance with Part H5 of the DCP has been achieved for the Proposed Development. Details regarding the construction of the fire trail requires further consideration, which will take into account the gradient of the Site and the bushfire requirements.

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- *Clause H 5.2 Buffer Area - Objective to provide a transition area between the building and bushland as to reduce the impacts of development upon bushland*
- *Clause H 5.2.2 Buffer in Industrial and Commercial areas*

In this instance the site is located close to environmentally sensitive areas and the design solution and development should reflect this. The proposal is encouraged to consider and meet the requirements of part H5 of the Lane Cove DCP.

The proposed development provides a 10m wide buffer zone from bushland zone which includes a 4-metre-wide fire access trail.

Clause 5.2.2 (d) requires that hard surfaces within the buffer areas not exceed 25%.

Council does not have an objection to the fire access trail being constructed within the 10m wide buffer zone subject to the road not being constructed with a hard surface to allow penetration of rainwater/stormwater runoff into the ground. One recommended non-hard surface option includes polymer-based grass pavers, grids and geocell with inclusion of native grass species.

The proposed 4m wide fire access does not connect with the existing fire trail to the electricity pylons.

It is also noted that Ausgrid is yet to consider and nominate how power will be supplied to this significant site. Council would request that the method (underground or overhead) of supply minimize both visual and physical (particularly bushland) disturbance. It should not follow the existing high voltage route.

To this end Council would request that any power supply route to the site be along Sirius Road and preferably underground. Any disturbance of

As mentioned above, the proposed footprint has been modified to minimise impacts to the stand of vegetation in the south west of the Site. Whilst complete avoidance is not possible, efforts have been made to avoid tree clearance where possible and vegetation in the north of the Site has also been conserved where possible.

With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to **Appendix 24**), that the SULE assessment identifies that 95 of the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). Thirty five of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of trees rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance.

Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows:

- Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%.
- Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%.
- Retained trees – 49/171 = 28.65%.

Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970.

Furthermore, Travers note, that the majority of trees present within the study area are commensurate with Plant Community Type (PCT) 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast, which is not commensurate with any Threatened Ecological Community (TEC) listed under both the EPBC Act and BC Act.

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ecologically sensitive land should be avoided and be stated in the final Construction Management Plan. <u>It is recommended</u> that a new building footprint be explored that retains the bushland area and a larger proportion of the associated trees.	
Reduction of Porous Surfaces: The proposed development would significantly reduce the amount of porous surfaces on the site which would significantly affect groundwater flows. The application proposes that 26% of total site area be retained as landscaped area. Although the proposal complies with the minimum 20% landscape requirements of Part E9 of the Lane Cove DCP, the proposal is not considered acceptable in this instance given the local landscape and environmental constraints. The site is unique in terms of its close proximity to adjoining Endangered Ecological Communities including Coastal Freshwater Swamp, Estuarine Swamp Oak Forest, and Estuarine Saltmarsh. These areas are downhill of the proposed Data Centre development. The topography and the reduction	Van Der Meer note, that the reduction in the building footprint will result in a reduced impervious area and lower overall runoff across the Subject Site. They pay full cognisance of the infiltration trenches, which have been included to recharge the groundwater levels closer to that of the existing conditions experienced across the Site. It is noted, that the discharge areas to the north and to the west at existing low points include a scour and spreader arrangement to reduce the velocity of peak flows experienced across the Site, reduce concentration and prevent scour to downstream bushland. Accordingly, the proposed hardstand area would be appropriately treated, via the implementation of filter cartridges. Half of the roof is directed to a rainwater reuse tank, which will reduce overall runoff and improve water quality, in

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of approximately 74% of porous areas would result in significant increases of stormwater flowing directly into these sensitive areas.

There does not appear to be an adequate or completed study on the overall impacts of the collecting, piping and redirecting a large percentage of the catchment area. An in-depth study needs to be carried out to determine the potential risks to the Ecologically Endangered and Sensitive Vegetation in close proximity.

The proposal in its presentation is considered to be contrary to the objectives of Clause 6.3 Riparian Land in the Lane Cove LEP 2009 and Part H 4 (a) IV Bushland Protection of the Lane Cove DCP 2010. It would adversely impact the adjoining riparian land. The proposed drainage and hydraulics plan would see an unacceptable alteration to the water shed and the ground water recharge as well as putting a high volume of water into Stringybark Creek at times of heavy rains which would likely be detrimental to the local water quality and ecology.

At the moment rain falling on the site drains to the south and southwest feeding the wetland areas in Ventemans Reach Reserve. This must be preserved with any development. Some of the stormwater should continue to be directed towards south and southwest to the wetland areas in Ventemans Reach Reserve and controlled in its discharge by an Onsite Stormwater Detention (OSD) as well as subsurface drainage trenches so that the water is slowly released to the wetland and its vegetation. Stormwater directed to the north and Stringybark Creek must also be controlled by OSD and dissipation so that there is no scouring of the creek with the rush of large volumes of water in times of heavy rain.

It is recommended water sensitive urban design measures in the form of raingardens and other approved biofiltration measures be incorporated into the Hydraulic Engineering drawings to allow for enough volume of rainwater to continue to hydrate the Coastal Freshwater Swamp following best horticultural practices.

accordance with Council's DCP requirements for Water Sensitive Urban Design (WSUD). Van Der Meer note, that stormwater will be directed through a CDS and GPT.

Additionally, points of discharge from the Site have been amended and now include a southwest outlet.

On-site Stormwater Detention (OSD) previously proposed has been removed as part of the revised scheme. It is noted, that OSD is typically implemented to reduce the potential impacts on downstream drainage and downstream properties. Accordingly, infiltration trenches and the indicative scour protection arrangement have been proposed to be utilised, which will significantly reduce concentration to the downstream bushland and adjoining tributaries.

Notwithstanding, the combination of infiltration trenches, a rainwater tank, GPT's and filter cartridges will improve water quality. Furthermore, the infiltration trenches will assist in hydrating the Coastal Freshwater Swamp.

Furthermore, Travers (2019) note, that in response to the concerns raised by Council in the adjoining column, the Proposed Development has been reduced in size and the stormwater management system has been redesigned. This has resulted in a number of improvements, including:

- The setback in relation to the adjoining wetland to the west of the Subject Site has been increased to allow for an 88 m setback to the building wall and 57 m to the proposed fire trail. In the previous design iterations, there was only a 27 m setback to the building wall and 21 m to the fire trail.
- The northern stormwater basin has since been removed from the proposed design and incorporated internally within the design of the Data Centre building in accordance with Council's WSUD principles.
- A stormwater outlet has been provided to the western aspect of the Site to deliver stormwater from the Site, which will be conveyed through a level spreader stormwater outlet system.

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Council calls for a more considered approach which is more environmentally sophisticated and responsive to the collection and treatment of water. The environmentally sensitive areas such as the salt marsh, freshwater swamp forest and swamp oak forest and the riparian corridor require specialized treatment and design solutions that have not been demonstrated in the current submission.	▪ The northern outlet to Stringybark Creek has been retained, with an expected reduction in flows and two (2) outlets being delivered to Stringybark Creek at one specific point. The VMP prepared by Travers (2019) illustrates the concept stormwater outlets protruding into Stringybark Creek and the western wetland areas, such that the potential for erosion is minimised at the indicative discharge points. Accordingly, as a consequence of these design changes the porous area(s) within the Site have been increased to approximately 38%. In addition, stormwater is internally managed and delivered to both Stringybark Creek and the adjoining western wetland areas, subject to the detailed design of the outlet structures, as illustrated in the VMP, the impacts on both areas will be minimised. The northern outlet is placed in an existing disturbed area which is to be discharged at an appropriate invert level to minimise the risk of erosion within the adjoining mangrove areas. The western outlet is also to be designed to deliver stormwater at an appropriate invert level to the minimise the potential risk of channelisation and erosion from within the wetland occurring.
Earthworks – Cut and Fill: The Lane Cove DCP 2010 has specific provisions relating to minimise the impacts of cut and fill for industrial developments. ▪ <i>LCDCP 2010 Part E.6 Cut and Fill - Objectives 1. To minimise the impact of excavation on surrounding properties.</i> The proposed building footprint proposes significant cut and fill to accommodate the building design. The current level of earthworks result in significant land disturbance and would likely result in adverse impacts on surrounding bushland and Endangered Ecological Communities.	The earthworks proposed across the Site (with particular attention given to the cut volumes), were proposed to combat any adverse environmental impacts from occurring and to mitigate any further impacts from occurring across the Site on nearby sensitive visual receivers. This ultimately provides a suitable platform for the proposed Data Centre operations, which are considered to be imperative in achieving maximum operational efficiency across the Site. It is noted, that the topography of the Site, for any such future development (and not just the Proposed Development) would be required to be significantly altered to accommodate the appropriate levels and building pads to house a structurally sound development. This has been confirmed and reinforced within the Geotechnical Report, prepared by Douglas Partners. Further confirmation is provided within the Flood Assessment Report, prepared by grc Hydro, which

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Cut and fill could be considered acceptable in relation to lowering the height and visual profile of the development when viewed from Lane Cove River and the public domain. However, Council questions the necessity of the scale of earthworks and fill across the whole site. Primarily, Council is concerned that the scale of works would irreparably damage the environmentally sensitive areas within the public reserve surrounding the subject site. The proposal seeks excavation at the southern corner of the site to a depth of approximately 13m below existing surface level and filling up of the northeast part of the site to a height of approximately 6m above existing surface levels. This would result in a total cut volume of 132,200 cubic metres, and total fill volume of 38,520 cubic metres. A more considered approach which minimises disturbance of land form would be supported by Council. The proposal also includes at-grade vehicle area which is located excessively above existing ground level. The proposed vehicle parking further compounds the requirement for large scale excavation in the southern corner of the site. A revised parking design that requires less cut and fill would reduce unnecessary excavation and land form impacts. <u>It is recommended</u> that the use of cut and fill be reviewed to: - ▪ Reduce disturbance to the environmentally sensitive areas on the adjacent public land. ▪ Lower the height and visual profile of the development when viewed from Lane Cove River and the public domain.	analyses the pre and post-development scenarios associated with the Proposed Development during times of flood affectation across the Site. Furthermore, the cut volumes proposed also respond to the footprint and scale of the Proposed Development, for which fewer cut volumes would have required a development much higher than originally proposed, increasing potential visual impacts on adjoining industrial sites and nearby sensitive receivers. Notwithstanding, the cut volumes proposed are considered to be representative of any such industrial-related development proposed on the Subject Site, that would be required to comply with relevant Building Code of Australia (BCA) and Australian Standards, for which appropriate and compliant levels for building would be required to be adhered to. It should be further noted, that the cut and fill volumes have been considerably reduced across the Site. Particularly, the southwest corner of the Subject Site has been revised significantly, which has allowed for the retention of existing trees in this area. With respect to the car parking layout proposed for the Site, the car parking area is located at RL 27, where as the building's along Apollo Place are noted at RL 28, for which the car parking area would be screened by existing industrial development's and the Proposed Development.
Sediment Control Plan: The Sediment Control Plan provided is inadequate for the scale of the development proposed. The significance of the endangered wetland vegetation and other bushland vegetation within the adjacent public reserve	The proposed Erosion and Sediment Control Plan (ESCP) has been amended to incorporate sediment basins and diversion drains within the revised scheme (refer to Appendix 11). It is noted, that these temporary basins will be sized in accordance with the Landcom's Soil and Construction Revised Universal Soil Loss Equation (RUSLE) to accurately reflect the various construction activities and extent of stripped land.

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would be placed at risk of likely adverse impact unless adequate sedimentation controls form part of the consent conditions. <u>It is recommended that the applicant provide an appropriate Sediment Control Plan.</u>	
Traffic and Parking: The number of parking spaces provided on-site is inadequate. In accordance with Part R of the Lane Cove DCP, the development requires 123 spaces. The development currently provides 76 spaces plus an additional 21 spaces for future use. A Loading Management plan is required for the site. This would ensure that conflict with oncoming AVs/general traffic is minimised and managed accordingly in particular at the ramp locations. The Management Plan should include information regarding the number of AVs/day accessing the site and times at which the site would be serviced. Other additional information is also required including: ▪ Ramp 'A' is not in accordance with AS2890.2 as it is 5 metres in width; ▪ No cycling racks or motorcycle parking has been provided on site; and ▪ The applicant is required to clarify and justify their position for reduced parking on site, including initiatives to encourage the use of alternative modes of transport such as public transport and bicycle. <u>It is recommended that the applicant address the Traffic and Transport issues raised.</u>	A Loading Management Plan has been integrated into the Construction Management Plan prepared by AW Edwards (refer to Appendix 43).

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Height: Under Clause 4.3 Height of Buildings in the Lane Cove LEP 2009, the site is subject to a maximum building height of 18m. The development proposes a maximum building height of 24m which exceeds the control by 6m or a non-compliance of 33.3%. The applicant should explore alternative design solutions, for example, as this proposal does not require access to natural light, the lowest level could be buried below ground to reduce the height of the building. The mechanical plant on the roof and acoustic enclosures adds to the overall bulk of the development. The amount of plant may be necessary for the use but greater consideration should be given to how this plant can be minimised to reduce the overall scale and visual appearance. A clause 4.6 variation statement was lodged to justify the non-compliance with the height control. It does not adequately justify the non-compliance as it does not identify the basis that compliance is unreasonable or unnecessary in the circumstances and does not result in a better planning outcome. A Clause 4.6 assessment includes a requirement to comply with the relevant zoning objectives of the subject site. It is the position of Council that the proposed development does not meet all the objectives of the IN2 Light Industrial Zone in it's current form. In particular the proposal does not: <i>.....'minimise any adverse effect of industry on other land uses'</i> The site is in close proximity to land zoned E2 Environmental Conservation which contains several endangered ecological communities. As outlined in this submission the Council requests further consideration be given to the unique ecological constraints of the site.	It is noted, that the adjacent line item forms a direct contradiction with the above-listed item; hence further excavation has not been proposed across the Site. The height non-compliance proposed, which exceeds the height Development Standard by 12.3 m pursuant to Clause 4.3 of the LCLEP2009, is considered to be warranted, as it would not result in any such adverse environmental or visual amenity impacts with regard to adjoining sites and nearby sensitive receivers. The height proposed is justified on the basis of the slope and topography of the Subject Site, as well as the operational requirements of the end-user. Furthermore, if the Proposal was to include a compliant scheme in accordance with the Development Standard of LCLEP2009, the built-form potential of the Site would be significantly under-realised. Hypothetically, if a height compliant scheme for the Proposal was submitted, it would: ▪ Not contribute towards meeting the demand for employment-generating opportunities within the Lane Cove Local Government Area (LGA), as identified within <i>A Metropolis of Three Cities</i> and the <i>North District Plan</i>, by potentially resulting in a reduction in available building footprint and consequently future industrial land uses on the Site; ▪ Threaten the commercial viability of the Proposed Development by reducing the overall achievable maximum height across the Site, by which would impact on end-user operational requirements; ▪ Create fewer full-time equivalent jobs during the construction and operational phases of development due to a decrease in footprint and potential disinterest in the Site due to preferred end-user ceiling heights not being able to be achieved; and ▪ Fail to meet the Objects of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) by making orderly and economic use of the Site for its full planning potential. Notwithstanding, a Clause 4.6 Variation (refer to Appendix 35) request has been prepared in accordance with the aims and objectives contained within Clause 4.6 and the relevant Development Standards under LCLEP2009. It

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The proposal would result in a building envelope which is highly visible from surrounding public and scenic areas. The non-compliance with the height controls further exacerbate the visual impacts of the proposal. <u>It is recommended</u> to lessen the visual impacts of the development that: ▪ The applicant explore alternative design solutions to lower the height of the building; ▪ Soft vegetated batters be incorporated rather than hard retaining walls. In particular the retaining walls adjacent to the north road should be reconsidered to ensure the proposal better blends in with the natural setting of the site; ▪ The rooftop condensers be screened to soften their visual impact; ▪ Relocation of the 3-storey plant building north of the lower access road. There is ample space to move this building further south to an area which is less conspicuous from the public domain. One suggestion is to move the plant building adjacent to the vehicle parking area in the southern corner of the site; and ▪ Power supply to the site cause minimal impact to the existing landscape and bushland.	considers various planning controls, strategic planning objectives and existing characteristics of the Site, and concludes that the proposed non-compliance is the best means of achieving the objective, which encourages orderly and economic use and development of land under Section 1.3 of the EP&A Act. Compliance with the standard would be unreasonable and unnecessary given that the Proposed Development generally maintains the height permitted under Clause 4.3 of LCLEP2009 with regard to the Subject Site. As mentioned in the Clause 4.6 Variation, the height standard is unreasonable and unnecessary in the circumstances of the case on the following basis: ▪ The Proposed Development, for the purposes of a Data Centre, would generally maintain the maximum permitted building height under LCLEP2009 with regard to the Subject Site (exceedance by 12.3 m). Accordingly, the density and scale of the built-form proposed, would remain generally consistent with the existing industrial buildings surrounding the Site. Additionally, the Proposed Development would effectively integrate the streetscape and character of the area into the proposed scheme. ▪ By providing a transition between the existing industrial buildings in close proximity to the Subject Site, the built-form relationship of the Site contrasted to the surrounding built-form, would remain consistent with existing situation currently experienced within the IN2 Light Industrial zone. ▪ The built-form character of the surrounding industrial developments is generally consistent with the built-form proposed under this SSD Application, for which it is considered to respond to the local and regional context. ▪ The height is representative of market needs and demands for modernised industrial-related developments, which assists in improving

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	operational efficiencies and reducing the amount of building footprint required for developments. ▪ The Proposed Development would respond to the existing industrial developments on the southern and eastern interfaces, for which the protection of amenity would be ensured accordingly. Furthermore, there are no sensitive receptors in close proximity to the Subject Site; however, consideration for solar access, privacy, overshadowing and view / outlook would be considered (where possible). ▪ The Proposed Development's building height is considered a key attribute in creating an internal building environment that would ensure the delivery of space and amenity that is required to support the operations of the future tenant involved and thereby enabling the productive use of the Site. Notwithstanding, reducing the height of the design to strictly meet the LCLEP2009 Development Standard is considered unreasonable, as this would result in a less efficient use of the Site and require additional GFA, as well as being operationally unsound for future end-users. Further, a reduced height may result in a building design that does not respond as well to the Site's prevailing topography, which the proposed heights have been so strategically based on, as confirmed by Greenbox Architecture (refer to Appendix 5), as well as the strategically incorporated engineered design, which includes suitable levels for the Site, through balanced cut and fill. The abovementioned justifications are considered valid and, in this instance, the proposed Clause 4.6 Variation is considered to be acceptable. The objectives of the relevant clauses and the IN2 Light Industrial zone would be upheld as a result of the Proposed Development.
NSW Department of Industry (Liz Rogers – Manager, Assessment – Lands and Water – Strategy and Policy)	

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DPI Fisheries: DPI Fisheries notes that it is important that best practice erosion and sediment control measures are used during construction. The Erosion and Sediment Control Plan and Construction Environmental Management Plan should include a measure to monitor for obvious turbidity plumes leaving the site and to immediately put in place appropriate mitigation measures should such plumes be evident. No turbid plumes from the site, during the construction of this facility should reach the Lane Cove River.	The Construction Environmental Management Plan (CEMP) to be prepared will address the relevant requirements, with respect to DPI – Fisheries comments.
DoI – Water: DoI - Water recommends the following: 1. <u>Groundwater Assessment</u> - Within six months of development approval being granted, the applicant is to have demonstrated due diligence with respect to the Water Management Act 2000 and the NSW Aquifer Interference Policy in a comprehensive report to be provided to the department for review and concurrence that includes the results of all original and proposed supplementary intrusive investigations at the site as documented in the EIS. 2. <u>Water Licencing</u> - Once the above due diligence report has been approved by the department, and prior to the commencement of any excavation works, the applicant shall obtain, as required, any authorisations identified by the Natural Resources Access Regulator to account for the take of surface water or groundwater by the development (for both construction and occupation stages). 3. <u>Water Monitoring</u> – a. Water-related monitoring is to commence at the time of development approval being granted. This should continue throughout the duration of site works to identify any change to groundwater, surface water or discharge water with regard to: levels, quality, metered volumes, direct or indirect pollution, or flow behaviour. b. A project completion report collating all water-related monitoring data including detailed analysis of actual (as measured) and	Noted and Agreed. All conditions will be complied with. Noted and Agreed. All conditions will be complied with. Noted and Agreed. All conditions will be complied with. Noted and Agreed. All conditions will be complied with.

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predicted (as conceptualised) impacts of the proposed excavation and construction is to be provided to the department for review and concurrence prior to building certification.	
General Comments: <u>Groundwater Assessment:</u> The EIS has data gaps which need to be fully reported prior to the commencement of the project. Proposed supplementary investigations into groundwater levels across the site and the rock mass permeability are considered necessary by the department and should be completed at the earliest opportunity. The investigations should be sufficiently comprehensive to appropriately characterise the hydraulic parameters of each of the different units identified (viz. alluvium, fill and sandstone) from at least three locations (separate to those existing monitoring wells and standpipe piezometers at the site) for each of these materials. Additional testing of the sandstone across three metre intervals from the surface to five metres below the base of the proposed excavation at the three locations selected for that formation is needed to provide sufficient data for the due diligence assessment of potential groundwater inflows. The results of those intrusive investigations must be reported to the department to demonstrate the nature of the shallow groundwater system being intersected by the works and to confirm the probable volumetric take during dewatering (both for the construction and occupation phases of the development). Proposed testing and assessment of the fill materials and alluvial soils occurring across part of the site is considered necessary by the department and should also be completed at the earliest opportunity. The results of those intrusive investigations must be reported to the department, in conjunction with a detailed acid sulphate soils management plan to demonstrate that adverse water quality effects from the oxidation of the sulphidic sediments can be avoided or mitigated.	It is noted, that AW Edwards have briefed Senversa to undertake supplementary groundwater investigations, for which are to be accurately recorded and reported as part of the overall Acid Sulfate Soils Management Plan, which will be implemented and adopted prior to the issue of a CC.

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The timing of the reporting of these additional investigations has not been indicated in any of the documentation provided. The department considers that a period of no more than six months should allow sufficient time for the required investigations to be completed, the results analysed and the findings comprehensively reported.

Notwithstanding the relatively small volumes involved, the development as it has been presented constitutes an aquifer interference activity in accordance with the definition in the Water Management Act 2000. The minimal impact considerations of the NSW Aquifer Interference Policy therefore apply to any individual or cumulative effects arising from the project works. Any predicted impacts must have regard to the considerations and provisions of that policy and must be comprehensively documented to demonstrate that appropriate due diligence with respect to water management legislation has been carried out.

Water Licencing:

Given the low volumes calculated for the designed excavation at the project site, licensing of the groundwater take does not appear to be warranted. Supplementary investigations are proposed which should determine if a license is required.

Office of Environment & Heritage (Dana Alderson – Senior Team Leader Planning)

Biodiversity:

BDAR:

From the aerial photo of the site (Figure 1.2 of the EcoPlanning report), there appears to be some native vegetation mapped as 'exotic vegetation' on the north-western boundary of the site. OEH is aware that this vegetation may only appear to be on site because the cadastral boundary shown on Figure 1.2 is not the actual boundary. OEH assumes that the mapping of the extent of native vegetation on site is correct.

Ecoplanning confirm the absence of native vegetation in this area and that the vegetation mapping is correct (refer to **Appendix 23**). Further, there is shadowing on aerial from the adjacent trees, that may suggest native trees are present on the map where they are not. Whilst a small amount of native canopy overhangs the north-western perimeter of the Subject Site, the midstorey and ground-layer are heavily modified and are consistent with the remaining cleared land 'exotic grassland' in the Subject Site (refer to Figures 4 & 5 of **Appendix 23**). The stems of the canopy trees are not situated within the Subject Site and are fully contained in the lot to the north.

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Section 5.1 of the report discusses how the proposal has avoided impacts on biodiversity, however the information on this section does not provide adequate detail as per the Biodiversity Assessment Method (BAM). In particular, information that specifically addresses sections 8.1.1.4, 8.1.1.5 and 8.1.2.1 of the BAM should have been included.	The BDAR has been updated by Ecoplanning (refer to Appendix 23) to address the relevant BAM sections and also to reflect the recent footprint modification to provide further avoidance of impacts to native vegetation. As mentioned above, the proposed footprint has been modified to minimise impacts to the stand of vegetation in the south west of the site. Whilst complete avoidance is not possible, efforts have been made to avoid tree clearance where possible and vegetation in the north of the site has also been conserved where possible. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance. Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970.
<u>Avoid and Minimise the Impacts to Native Vegetation:</u>	As mentioned above, the revised layout has further avoided impacts to native vegetation in the Subject Site from 0.79 ha to 0.63 ha. The avoidance measures have resulted in the retention of approximately 26% of the native vegetation in

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The BDAR indicates a total of 0.91 ha of native vegetation occurs on the site and that the proposal would involve the clearing of approximately 0.79 ha of native vegetation (see sections 4.3.3 and section 5.1, page 36 and 38). This means 87% of the existing native vegetation on the site is proposed to be cleared and according to Figure 6.1 of the BDAR, all of the intact native vegetation would be impacted by the development / Asset Protection Zones (see page 42 of BDAR). The development should first avoid impacts to native vegetation on the site. This is consistent with the <i>Biodiversity Conservation Act 2016</i> (BC Act) and the NSW Government Biodiversity Assessment Method 2017 (BAM) which is established under section 6.7 of the BC Act: ▪ The purpose of the BC Act requires impacts to biodiversity to be first avoided: (k) to establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity. ▪ The BAM includes the guidelines and requirements that apply and avoid, minimise and offset hierarchy for assessing direct and indirect impacts. It is recommended the footprint of the development is modified to avoid / minimise the clearing of native vegetation. The TAR notes the proposed works will remove 82 trees within the impact area and the majority of the trees within the study area are commensurate with Plant Community Type (PCT) 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast. In terms of assisting to mitigate the urban heat island effect at the site, impacts on biodiversity / habitat etc, it is recommended any trees that are to be removed from the site are replaced at a ration greater than 1:1.	the Subject Site, which will not be subject to either complete clearing from the footprint of the proposed Data Centre and associated management, or reduction in vegetation quality within the APZ. The revised layout has been designed to avoid impacts to native vegetation with a higher Vegetation Integrity Score (VIS), specifically Smooth-barked Apple - Red Bloodwood open forest in an 'intact' condition. These avoidance measures have resulted in the retention of 0.29 ha of Smooth-barked Apple - Red Bloodwood open forest in an 'intact' condition, which would not be impacted by the building footprint or proposed APZ. The footprint has avoided impacts to the vegetation in an 'intact' condition where possible and reduced the clearing of native vegetation impacted by the building footprint and APZ extent. As mentioned above, the BDAR has been updated to address relevant sections of the BAM, including sections 8.1.1.4, 8.1.1.5 and 8.1.2.1. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance.

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The TAR recommends using tree species for replanting at the site that are derived from PCT 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast but notes the landscape plantings also need to be species suitable for the intended use of the site (section 6.4, page 19). The EIS notes the Landscape Plan and the Landscape Design Report include a range of endemic and exotic species (page 85). Rather than plant exotic species, it is recommended that only local provenance native plant species are utilised to mitigate the impacts on biodiversity / habitat.

Figure 3.3 in the BDAR shows there is an existing tree canopy on the site which is mapped as “cleared land / exotic grassland”. The Survey Plan (sheet 1 of 9) shows these areas as existing tree canopy line over site. Clarification is required as to whether the tree canopy is native vegetation or exotic.

Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows:

- Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%.
- Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%.
- Retained trees – 49/171 = 28.65%.

Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970.

The VMP was recommending only shrubs and groundcover planting in the contaminated area to avoid the actions of deeper tree roots which may compromise the existing clay capping installed over the existing capped contamination area.

The revised landscape plan from Geoscapes Landscape Architects dated 3rd July 2019, specifies that a total of 41 Canopy and sub-canopy trees are to be planted (refer to **Appendix 6**).

The Tree Assessment Report and VMP make the same recommendations to include locally sourced plants that would naturally occur in PCT 1776 and compliment the remnant bushland without the potential for exotic or garden escapes entering adjoining bushland reserves to the west (refer to **Appendix 24**).

The Landscape Plans have been amended to achieve a better balance in planting of local flora species (refer to **Appendix 6**).

The mapped extent of native vegetation in Figure 3.3 of the BDAR is indicative of all mapped vegetation in the study area investigated by Ecoplanning. The vegetation overhanging the northern perimeter of the Subject Site consists of

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	native canopy species. However, the stems of the canopy species are not contained within the Subject Site, and merely overhang parts of the northern perimeter of the Subject Site; therefore, these trees would not be impacted. The midstorey and ground-layer are both highly degraded and are consistent with the remaining cleared land 'exotic grassland' in the Subject Site (refer to Figures 4 & 5 of Appendix 23).
<u>Cliffs, Crevices and other Geological Areas:</u> The EIS notes the site contains areas of cliffs, crevices, rocks and other geological areas of significance (see Table 6, page 39 and Figure 5.1 and Figure 5.2 of the BDAR, page 40). The Geotechnical Report indicates there is a north-east trending cliff line on the south and south-eastern parts of the site (including adjacent to the main access track) which has exposed rock outcrops and overhangs / caves (section 2. Page 1 and Photos 5, 6 and 9). It indicates excavation is proposed near the cliff lines both above and below the cliff (sections 8.2.1 and 8.5, pages 11 and 14). The BDAR notes these features do not support threatened species (Table 5.1, page 39) but they are likely to provide habitat for native fauna and it is unclear if these features will be impacted by the proposed development (see Site and Test Location Plan, Appendix C of Geotechnical Report). Further details need to be provided on this including a scaled map which locates: ▪ The site boundary; ▪ The cliff line, crevices, rocks and other geological areas of significance; ▪ The development footprint.	As stated in the BDAR (refer to Appendix 23), prepared by Ecoplaning, the Subject Site contains exposed Hawkesbury Sandstone outcropping, boulders and minor cliff development in the southeast and northeast of the Subject Site. These features do not support threatened species or ecological communities; hence, do not constitute a prescribed biodiversity impact. Nevertheless, the BDAR has been updated to include a Figure depicting the following: ▪ The Site boundary; ▪ The cliff line, crevices, rocks and other geological areas of significance; and ▪ The Proposed Development footprint. The revised BDAR has taken into consideration relevant components of Section 6.7.1.1 and Section 6.7.1.2 of the BAM and included these features on the Site Map and additional text explaining these features where necessary (refer to Appendix 23).
<u>Coastal Wetlands:</u> The EIS notes the site is adjacent to an area mapped as containing 'Coastal Wetlands'. It indicates the wetland would remain undisturbed and that setbacks would mitigate impacts associated with the adjoining development (see pages 44 and 45). A scaled map needs to be provided which clearly locates:	The revised BDAR includes additions to Figure 1.2 (Site Map), which depicts the requested information (refer to Appendix 23).

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▪ The site boundary; ▪ The development footprint; ▪ The Lane Cove River, Stringybark Creek; ▪ The wetlands; and ▪ The proposed setback widths between the wetlands and the development.	
<u>Lane Cover River and Stringybark Creek:</u> The reports accompanying the EIS provide conflicting information in relation to the riparian corridors along the Lane Cove River and Stringybark Creek, for example: ▪ The BDAR shows that part of the riparian corridors of the Lane Cove River and Stringybark Creek are located within the site (see section 2.1.3, page 6 and Figure 1.2). ▪ The Landscape Masterplan shows a larger area of the riparian corridor along Stringybark Creek occurs within the site than shown in the BDAR (Figure 1.2). ▪ Schedule 1 (Bushfire Protection Measures) in the BPA shows a larger area of the riparian corridors along the Lane Cove River and Stringybark Creek occurs within the site than shown in the BDAR. ▪ The BDAR indicates the riparian corridor along Stringybark Creek within the site is proposed to be used as an Asset Protection Zone (APZ) (see Figure 1.3 and pages 4, 5 and 6). ▪ Schedule 1 (Bushfire Protection Measures) in the BPA shows the APZ and fire trail are located outside the riparian corridor of Stringybark Creek. ▪ The Architectural Plan – Master Plan – Hydrant Point and the Landscape Masterplan show part of the fire trail is proposed to be located within the riparian corridor along Stringybark Creek. ▪ Schedule 1 (Bushfire Protection Measures) in the BPA shows the riparian buffer of Lane Cove River within the site as an APZ. ▪ Schedule 1 (Vegetation Management Works Plan) in the VMP shows the riparian buffer of Lane Cove River within the site is to be planted	As previously mentioned above and confirmed by Ecoplaning, a site assessment to confirm ToB and the edge of wetlands has been conducted for Lane Cove River and Stringybark Creek (Travers Bushfire and Ecology 2019). The revised BDAR has been amended to reflect the amended mapping, which has been used consistently through all other reports accompanying the EIS. Furthermore, the VMP Schedule has correctly mapped the riparian corridor of Stringybark Creek. Additional lands nominated under the LEP as riparian protection have been updated in the VMP schedules (refer to Appendix 38). The riparian zone as mapped by Travers bushfire & ecology is to be issued to other consultants as a CAD (.dwg) file to ensure consistency on its location and extent. This mapping will be derived from on-ground plotting of the Top of Bank (ToB) in accordance with NSW DPI-Water guidelines. All plans are being amended to be consistent with the VMP. APZs are not proposed within any confirmed riparian corridors

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with fully structured revegetation Smooth-barked Apple-Red Bloodwood Open Forest.

It is recommended the inconsistencies are amended and the proponent clarifies if APZs are proposed to be located within the riparian corridors as it is unclear.

The Natural Resource Access Regulator (2018) Guidelines for controlled activities on Waterfront Land – Riparian Corridors allow non-riparian corridor uses (including APZs) within the outer riparian corridor so long as the average width of the vegetated riparian zone can be achieved over the length of the watercourse within the development site. Where appropriate, 50 per cent of the outer vegetated riparian zone width may be used for APZ uses but an equivalent area connected to the riparian corridor must be offset on the site and the inner 50 per cent of the vegetated riparian zone must be fully protected and vegetated with native, endemic, riparian plant species.

The proposal should provide an equivalent area connected to the riparian corridor to offset any encroachment of the APZ. Figure 1.3 in the BDAR does not indicate an equivalent offset area connected to the riparian corridor has been provided (page 5).

The VMP indicates the revegetation of the riparian corridor along Stringybark Creek only involves the planting of small shrubs and groundcovers due to it being contaminated land (see Schedule 1 Vegetation Management Works Plan). However, OEH notes that the Phase 2 Acquisition Environmental Due Diligence Assessment recommends remediation of contamination in this area via a Remediation Action Plan (RAP). Therefore, OEH considers there may be opportunity to revegetate the riparian corridor with plantings other than shrubs and groundcovers. OEH recommends the VMP be updated once the RAP has been finalised, to ensure revegetation opportunities of the riparian corridor are maximised.

For clarity, the proponent needs to provide a scaled plan which locates:

The revised mapping and application of riparian buffers (Travers Bushfire and Ecology 2019) is in accordance with NRAR (2018). The revised ToB and wetland edge mapping has confirmed that all buildings will be setback a minimum of 20 m from Stringybark Creek; therefore, outside of the VRZ for Stringybark Creek; demonstrating compliance with Clause E14 (a) of the LCDCP2009.

Travers suggest, that the proposed strategy in the RAP is to avoid disturbance of the existing capped contaminated area the existing capped area. Therefore, replanting within the contaminated area is to avoid using trees whose root systems may compromise the capping layer.

Shallow rooted species are acceptable for use in revegetating the contaminated area which along with riparian planting adjacent to assist in connectivity from the remaining remnant bushland on-site, along the riparian zone of Stringybark Creek, through to remnant bushland to the west of the Site.

The revised BDAR includes the adjacent information throughout several figures (refer to **Appendix 23**). Additionally, the Site Plan prepared by Greenbox Architecture accounts for several of the identified features (refer to **Appendix 5**).

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▪ The site boundary; ▪ The development footprint; ▪ The top of highest bank of Lane Cove River and Stringybark Creek; ▪ The boundary of the inner riparian protection zone and the outer riparian protection zone; ▪ The riparian corridor width along Lane Cove River and Stringybark Creek (measured from the top of the highest bank); ▪ Asset Protection Zones; and ▪ Existing Native Vegetation.	
<u>Asset Protection Zones:</u> The BPA indicates the APZ encroaches on land with slopes greater than 18 degrees and it recommends a geotechnical report is prepared for the steep APZ areas to ensure site stability (section 3.1, page 23). A scaled map needs to be provided which shows the location of the steep APZ areas and an assessment should be undertaken as to whether locating APZs on land with slopes greater than 18 degrees has the potential to erode and impact / degrade native vegetation / habitat downslope of the APZ. Clarification is required as to when the geotechnical report is proposed to be prepared. As native vegetation surrounds the western and northern boundaries of the site, it is recommended the geotechnical report is prepared prior to approving the proposal to ensure there are no stability issues with clearing the steep slopes and the potential impacts on adjoining native vegetation can be adequately mitigated.	The revised scheme has result in a decrease to the building footprint and therefore provides for a larger 36 m APZ to the west (previously 10 m). This coupled with a BAL FZ construction to the western building façade will reduce the bushfire risk posed to the building and generators on this aspect. It is noted, that there are no substantial changes to the APZ in the north, east or southwest. Additionally, the revised scheme has reduced the extent of tree removal by amending the location of the substation to below the roadway deck, reconfiguring the fire trail and rearrangement of the car parking layout. The amended Data Centre location has resulted in the retention of a 10 m strip of land along the western boundary (i.e. outside of the APZ). This will allow for the retention / replanting of further trees along this boundary. A Geotechnical Report was prepared by Douglas Partners, as part of this SSD Application (refer to Appendix 12). The Report provides recommendations for achieving structural integrity across the Subject Site and does not suggest that the Proposed Development would include any such stability issues. Further consideration is not considered to be required in this respect.
<u>Hollow Bearing Trees:</u> The BDAR notes the subject land contains 11 hollow bearing trees (section 4.3.3, page 36) while the TAR states, "twelve hollow-bearing trees were observed within the study area" and that ten of these trees are required to be removed (section 4.3, page 9). The TAR recommends retaining hollow	The quality of any salvaged hollows won't be known until they are sectionally removed from the trees. If they are of good quality, they will be reattached to trunks in retained bushland on-site, or within the immediately adjoining reserve. If the quality of salvaged hollows is poor, then these will be used as ground refugia.

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bearing trees of good condition wherever possible (section 6.2, page 18) but the proposal only proposes to retain one hollow bearing tree. To compensate for the removal of the hollow bearing trees, the VMP proposes to install 10 nest boxes. It also proposes relocating the existing hollows but it is unclear if all of the 10 existing hollows to be removed will be suitable for relocation (see Section 3.5, page 20). It is recommended the tree hollows are replaced at a ratio greater than 1:1.	As a primary mitigation measure the replacement ratio is nominated at 1:1 as a combination of relocated hollows and artificial nest boxes.
<u>Mitigation Measures:</u> The EIS includes mitigation measure (18) for the protection of native vegetation. OEH recommends it is amended to include the text in italicised bold: (18) Greenbox would mark on site with temporary fencing, the clearance boundaries prior to commencement of any construction to ensure that there is no unnecessary removal of vegetation. The fencing must be regularly checked and maintained throughout construction. OEH recommends the Mitigation Measures are amended to include the following: ▪ The revegetation areas of contaminated land including the riparian corridor of Stringybark Creek; the fire trail and the vegetated areas of the APZ are to be planted with a diversity of appropriate local native plant species from the native vegetation community (or communities) that occur, or once occurred, on the site; ▪ The revegetation areas and landscaped areas must use a diversity of local provenance species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that occurs, or once occurred, on the site; ▪ Any native trees that are required to be cleared from the site shall be salvaged (for example tree hollows and tree trunks which are	The identified mitigation measures have been included and addressed where possible within the revised BDAR (refer to Appendix 23) and necessary consideration has been provided within the revised VMP for the Site (refer to Appendix 38). Revegetation of the contaminated lands with canopy species will not be possible and will be limited to the installation of shrub and groundcovers that are shallow rooted and will not disturb the contaminated soil below. Agreed. The revised Landscape Plans prepared by Geoscapes considers and addresses the recommended mitigation measures where possible (refer to Appendix 6). Noted and agreed. Trees will be salvaged wherever possible across the Site.

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greater than approximately 25-30 cm in diameter and 3 m in length) and placed in the revegetation and regeneration areas to enhance habitat; ▪ Remnant native vegetation that is required to be removed from the site, especially juvenile plants shall be translocated to the revegetation and regeneration and landscape areas; ▪ The topsoil from areas of native vegetation that are to be cleared for the development shall be collected and used in the revegetation and regeneration areas on the site; ▪ Seed from any native plants to be removed shall be collected and used in the revegetation and regeneration areas and landscape areas; ▪ Any trees that are to be planted at the site shall use advanced and established local native species from the relevant vegetation communities which occur on the site, preferably with a minimum tree height of 2-2.5 metres and / or plant container pot size of 50-75 litres to mitigate the removal of trees and the habitat they provide; ▪ Any trees that are to be removed from the site are replaced at a ratio greater than 1:1; ▪ Any tree hollows to be removed are to be replaced at a ratio greater than 1:1.	Noted and agreed. Trees will be salvaged wherever possible across the Site. Topsoil will be treated and remediated into stockpiles in accordance with the recommendations provided by Senversa in their Remedial Action Plan (RAP) for the Site. Not agreed. The installation of 50-75 L pot sizes for canopy species is not necessary to achieve successful restoration of the Site. Further, sourcing this type of advanced stock in a timely manner is impractical and would place a substantial limitation on the revegetation of the Site. Not agreed. Given the APZ and contaminated land constraints, it would not be possible to replace all trees proposed for removal at a ratio equal or greater than 1:1. Agreed. A ratio of 1:1 is recommended using a mix of relocated hollows and nest boxes.
Flooding: OEH has previously provided Secretary's Environmental Assessment Requirements (SEARs) for this development dated 14 December 2018. The floodplain management Assessment requirements are addressed in Attachment (A) items 14 to 18.	GRC Hydro suggest, that in regard to flooding impacts, the Subject Site is located adjacent to, but higher than, the banks of Stringybark Creek as it flows into the Lane Cove River and wider Sydney Harbour. The post-development case was not addressed in the report as the Proposed Development is clearly positioned on higher ground than the design flood levels estimated (1% AEP level adjacent to the Site is 2.11 m AHD).

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The site is impacted by flooding in its existing condition. The consultant, grc Hydro, provides a brief flood report dated 10 December 2018, which indicates the use of WBNM hydrologic modelling and TUFLOW hydraulic modelling to identify existing flood extent and level in the vicinity of the project. However, grc's assessment is limited to the existing condition of the site. Accordingly, the flood study should address the following issues for post development scenario: ▪ The effect of the development incorporating proposed bulk earthworks, on the current flood behaviour and on adjacent, upstream and downstream properties. ▪ The impact of climate change due to an increase of rainfall intensity by modelling the 0.5% and 0.2% AEP flood events as proxies. ▪ The impact of Sea Level Rise on the development.	Irrespective of the above, grc Hydro have undertaken a further assessment of the Site, with respect to the Proposed Development, which included: 1. Impact Assessment – the results from the 1% AEP event are compared (existing vs. proposed) in order to assess what impact the works have on design flood behaviour. No impacts were observed on the Stringybark Creek flood levels. This is due to none of the proposed works impacting on conveyance, and where the proposed works do interact with flood levels, they do so in areas backwatered and where receiving water levels dominate. Levels for both the pre and post development scenarios were calculated to be 2.11 m AHD. 2. Climate Change – a 2050 condition was assessed via the 0.5% AEP event combined with a tailwater level equal to the 20-year ARI Sydney Harbour level plus 0.51 m as well as a 0.2% AEP event in conjunction with Sydney Harbour equal to the 20-year ARI plus 0.9 m. The results indicated, that at the Site, the flood levels are dominated by receiving water levels. Resultant flood levels are 2.26 m AHD for 2050 climate change run (0.5% AEP event with tailwater level of 1.89 m AHD and 3.18 m AHD) and for the 2100 climate change run (0.2% AEP event combined with tailwater of 2.28 m AHD). Accordingly, the Proposed Development is positioned adjacent to Stringybark Creek, and is all but unaffected by Stringybark Creek, even in the event of a 0.2% AEP event, combined with a 20-year ARI receiving water level plus 0.9 m.
Sustainable Building Design: OEH recommends the development incorporates Green Roofs and Cool Roofs into the design of the buildings where possible. The numerous benefits of Green Roofs and Cool Roofs are outlined in the OEH (2015) Urban Green Cover in NSW Technical Guidelines which can be found at the following link: http://climatechange.environment.nsw.gov.au//Adapting-to-climate-change/Green-Cover	Provisions for green roofs and cool roofs to be integrated into the proposed design was considered to be impractical and unfeasible, given the requirement for mechanical plant to be located on the roof area of the proposed Data Centre. Additionally, ARUP note, that by replacing existing vegetation with a building (and heat rejected by the cooling systems associated with this building) will impact on the microclimate in the general area of the Site in a way that is commonly known as the "Heat Island Effect". It is noted, that any such development proposed on the Subject Site would exhibit similar traits, with

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In addition to regulating the temperature of roofs and building interiors, reducing the energy needed for cooling and the impact of the UHI effect, the provision of Intensive Green Roofs would provide additional recreational areas at the site for staff.	respect to direct and indirect impacts to the microclimate, given the Site's IN2 Light Industrial zoning (refer to Appendix 42). Notwithstanding, ARUP suggest, that further studies or investigations are not needed to satisfy relevant planning controls or legislation and such further studies are not considered to be warranted in this respect.
NSW Rural Fire Service (Kalpana Varghese – Team Leader, Development Assessment and Planning)	
Asset Protection Zones: The intent of the measure is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this the following conditions shall apply: 1. At the commencement of building works, and in perpetuity, the area around the proposed buildings shall be managed as outlined within section 4.1.3 and Appendix 5 of the Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones as follows: ▪ North east: Inner Protection Area (IPA) for a distance of 25 metres (residue of site located towards the north east to be revegetated to a Riparian Corridor); and ▪ All other directions: IPA to the property boundaries.	Travers Bushfire & Ecology (Travers) note, that this condition is generally consistent with the bushfire protection assessment report prepared. The NSW Rural Fire Service (RFS) require the entire site (apart from the revegetated riparian corridor) to be managed as an Inner Protection Area (IPA). This would include the residual portion of land on the peninsula (northern extrusion). This area currently consists of grassland vegetation only with the APZ identified in the bushfire assessment report being restricted to a distance of approximately 15 m only and confined to the southern side of a 2.4 m high security fence. Travers assume, that the management of the peninsula as an IPA is not required based on the additional bushfire protection measures incorporated into the building design (i.e. flame zone construction). Travers suggest, that the NSW RFS letter should be amended to reflect this. Furthermore, Travers have undertaken a review of the revised scheme (refer to Appendix 28) in accordance with Lane Cove Council's concerns and issues raised in their Submission. Notwithstanding, the revised scheme has reduced the extent of tree removal proposed across the Site, by amending the location of the substation to below the roadway deck; reconfiguring the fire trail; and rearrangement of the car parking layout. Travers note, that the amendment to the substation will result in the retention of further trees in the south-western corner of the Site. Additionally, the Asset Protection Zone (APZ) has been amended to retain a 10-26 m defendable space from the new substation location and to reduce the impact of the APZ on the

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	existing trees adjacent to the south-western boundary, whilst providing for adequate and compliant bushfire protection measures for the Proposed Development. Accordingly, Travers suggest, that the NSW RFS submission should be amended to reflect the new layout and changes to the APZ proposed.
Water and Utilities: The intent of the measure is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this the following conditions shall apply: 2. The provisions of water, electricity and gas shall comply with section 4.1.3 of Planning for Bush Fire Protection 2006.	Travers note, that as outlined within the Bushfire Assessment Report (and within the revised scheme – refer to Appendix 28), the Proposal will comply with this condition.
Access: The intent of measures for property access is to provide safe access to / from the public road system for fire fighters providing property protection during a bush fire and for occupants faced with evacuation. To achieve this, the following conditions shall apply: 3. The proposed property access road (driveway) shall comply with section 4.1.3(2) of Planning for Bush Fire Protection 2006. The intent of measures for fire trails is to provide suitable access for fire management purposes and maintenance of APZs. To achieve this, the following conditions shall apply: 4. Fire trails shall comply with section 4.1.3(3) of Planning for Bush Fire Protection 2006.	Travers note, that as outlined within the Bushfire Assessment Report (and within the revised scheme – refer to Appendix 28), the Proposal will comply with this condition. Additionally, as outlined within the Bushfire Assessment Report (and within the revised scheme – refer to Appendix 28), the Proposal will comply with this condition to include the following: ▪ A minimum vertical clearance of four (4) metres is provided to any overhanging obstructions (tree branches or the building itself).

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	▪ A passing bay will be provided every 200 m (20 m long by 3 m wide), making a minimum trafficable width of seven (7) m. ▪ Turning heads will be designed to ensure Category 1 fire tankers can undertake a three (3) point manoeuvre. Travers note, that in Council's submission, they did not have an objection to the fire trail being constructed within the 10 m wide buffer zone, subject to the road <u>not</u> being constructed with a hard surface to allow penetration of rainwater / stormwater runoff into the ground. Rather, Council suggest and recommend a non-hard surface option to include polymer-based grass pavers, grids and geocell with the inclusion of native grass species. These options will be considered in conjunction with final road grades and will take into account fire tanker capacity (15 tonnes) in order to comply with this condition and to take into consideration Council's request.
Evacuation and Emergency Management: The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purposes developments. To achieve this, the following conditions shall apply: 5. Arrangements for emergency and evacuation are to comply with section 4.2.7 of Planning for Bush Fire Protection 2006, including the preparation of an emergency / evacuation plan consistent with the NSW Rural Fire Service document titled Guidelines for the Preparation of Emergency / Evacuation Plan.	As outlined in the Bushfire Assessment Report, a bushfire evacuation plan will be prepared in compliance with the relevant conditions. It is noted, that the bushfire evacuation plan will be prepared prior to the issue of an Occupation Certificate.
Design and Construction: The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this the following conditions shall apply: 6. Construction on the proposed Data Hall and Office buildings north western, south western and south eastern elevations and roofing shall	The revised scheme (refer to Appendix 28) will comply with this condition. It is noted, that the Bushfire Assessment Report recommended a BAL 29

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comply with Sections 3 and 9 (BAL FZ) of Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber.	construction for the office component of the Proposed Development. The NSW RFS recommends a higher BAL FZ construction to improve the overall safety of the Proposed Development, with greater emphasis on construction standards. Schedule 1 attached (refer to Appendix 28) depicts the new BAL ratings with regard to the revised scheme in compliance with the relevant condition.
7. Construction on the proposed Data Hall and Office Building north eastern elevation shall comply with Sections 3 and 8 (BAL 40) Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.	The revised scheme (refer to Appendix 28) can comply with this condition. The Bushfire Assessment Report recommended a BAL 29 construction for the north-eastern elevation of the building. The NSW RFS recommends a higher BAL 40 construction to improve the overall safety of the Proposed Development with greater emphasis on construction standards. Schedule 1 attached (refer to Appendix 28) depicts the new BAL ratings with regard to the revised scheme in compliance with the relevant condition.
8. Construction on the proposed Plant Platforms north western, south wester and north eastern elevations shall comply with Sections 3 and 8 (BAL 40) Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there be no exposed timber.	The revised scheme (refer to Appendix 28) can comply with this condition. Schedule 1 attached (refer to Appendix 28) depicts the new BAL ratings with regard to the revised scheme in compliance with the relevant condition. It is noted, that the location of the proposed generators and diesel fuel tanks have been amended in the new scheme. The previous scheme allowed for this infrastructure to be located on the roof. The proposed new scheme provides for three (3) separated generator platforms located on the outer extremities of the building (north, east and west). Based on the new locations these platforms will be constructed using non-combustible materials and will be housed within a non-combustible structure. In addition, radiant heat shields will be provided to prevent flame contact and reduce radiant heat exposure on the structures / machinery.
9. Construction on the proposed Plant Platforms south eastern shall comply with Sections 3 and 8 (BAL 40) Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.	The revised scheme (refer to Appendix 28) can comply with this condition. Schedule 1 attached (refer to Appendix 28) depicts the new BAL ratings with regard to the revised scheme in compliance with the relevant condition. It is noted, that the location of the proposed generators and diesel fuel tanks have been amended in the new scheme. The previous scheme allowed for this infrastructure to be located on the roof. The proposed new scheme provides for

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10. Construction on the proposed Data Centres north western and north eastern elevations and roofing shall comply with Sections 3 and 9 (BAL FZ) of Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber. 11. Construction on the proposed Data Centres south eastern and south western elevations shall comply with Sections 3 and 8 (BAL 40) of Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006. 12. Construction on the proposed Indoor Substation north western and south western elevations and roofing shall comply with Sections 3 and 9 (BAL FZ) of Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber.	three (3) separated generator platforms located on the outer extremities of the building (north, east and west). Based on the new locations these platforms will be constructed using non-combustible materials and will be housed within a non-combustible structure. In addition, radiant heat shields will be provided to prevent flame contact and reduce radiant heat exposure on the structures / machinery. The revised scheme (refer to Appendix 28) can comply with this condition. The Bushfire Assessment Report recommended a BAL FZ and part BAL 40 construction for these aspects. The NSW RFS recommends a higher BAL FZ construction across the entire north-western elevation to improve the overall safety of the Proposed Development with greater emphasis on construction standards. Schedule 1 attached (refer to Appendix 28) depicts the new BAL ratings with regard to the revised scheme in compliance with the relevant condition. The revised scheme (refer to Appendix 28) can comply with this condition. This condition is consistent with the recommendations of the Bushfire Assessment Report. However, it is noted, that the revised scheme (refer to Appendix 28) has resulted in relocating the proposed substation to be positioned below the suspended roadway deck. The substation will be open with blast walls between each transformer. The blast walls and suspended roadway deck will provide the required shielding to prevent flame zone contact to the substation. A 26 m APZ has been applied to the revised scheme (refer to Appendix 28) to avoid flame contact and reduce radiant heat impact to the non-enclosed substation elements.

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13. Construction on the proposed Indoor Substations north eastern and south eastern elevation shall comply with Sections 3 and 8 (BAL 40) of Australian Standard AS3959-2009 Construction of buildings in bush fire-prone areas or NASH Standard (1.7.14 updated) National Standard Steel framed Construction in Bushfire Areas – 2014 as appropriate and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection 2006.	Additionally, the GIS switch gear will be positioned within a roofed enclosure, whilst the APZ extent has not changed the amended location of the GIS switch gear has increased the setback afforded to the structure and it can therefore comply with BAL 29 construction standard (as opposed to BAL FZ as per the previous design). This condition is consistent with the recommendations of the Bushfire Assessment Report. As outlined above, the revised scheme has resulted in the relocation and positioning of the proposed substation to below the suspended roadway deck. Additionally, the GIS switch gear will be positioned within a roofed enclosure, whilst the APZ extent has not changed the amended location of the GIS switch gear has increased the setback afforded to the structure and it can therefore comply with BAL 29 construction standard (as opposed to BAL FZ as per the previous design).
Landscaping: 14. Landscaping to the site is to comply with the principles of Appendix 5 of Planning for Bush Fire Protection 2006.	This condition is consistent with the recommendations of the Bushfire Assessment Report submitted with the SSD Application. Generally, Appendix 5 of the PBP requires consideration of the following items: ▪ Vegetation choices such as species selection; their location relative to their flammability and avoidance of continuity vegetation (horizontally & vertically), should be taken into account. ▪ Ongoing vegetation management to avoid the accumulation of fine debris close to buildings. Removal of loose bark and fine fuels whilst retaining taller trees with canopies to filter out embers. ▪ Landscaping should maintain a clear area of low cut lawn or pavement adjacent to buildings; keep areas under fences and gates and trees rakes and clear of fuel; use non-combustible fencing and retaining walls; break up canopy of trees and shrubs with defined garden beds; and organic mulch should not be used.

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	- Planting trees and shrubs such that branches will not overhang roof and tree canopy is not continuous. - Maintenance of Property – maintenance of buildings, check pumps and water supply, driveways / roads in good condition etc.
Ausgrid (Jason Wall – Program Development Manager)	
<i>Ausgrid recommends that the conditions of consent include a requirement for consultation with Ausgrid to establish a right of way in the proposed development for access to Ausgrid's easement (DP641935) at the rear of the block. The right of way is to be compliant with the relevant Ausgrid network standards.</i>	AirTrunk have consulted with Ausgrid on providing access to the Transmission towers located on Lot 3 DP 217565 and Lot 2 DP 115137. AirTrunk have confirmed that they will work with Ausgrid and provide access across the proposed development and alleviate the need to clear the easement under the transmission lines. The access to the transmission tower on Lot 3 DP 217565 will be via the existing access track. Attached is a letter from Ausgrid of this agreed arrangement (refer to Appendix 40).
<i>An earthing assessment and appropriate design of the proposed boundary fence that traverses Ausgrid's Transmission Line easement is also required. If the fence is of metallic construction, it must be earthed to AS/NZ standards.</i>	The complete site Earthing study is a requirement of certification of the connection approval from Ausgrid and this will need to be addressed before supply connection is certified.
Lane Cove Bushland & Conservation Society Inc.	
<u>Summary</u> <i>The LCB&CS agree that the Data Centre is a positive use for the site and also agree that such a use requires a large site to be able to build a viable centre.</i> <i>We do however object to the size and footprint of the development, the destruction of the bushland on the site, the extent of the excavation and fill necessary to achieve this result and the stormwater disposal system proposed. We will outline in more detail these points further in this submission as well as some concerns we have on other issues.</i> <i>Our comments will be based on the documents on exhibition even though we are suggesting changes that would alter these comments. We reserve the right to comment further on any changes in a revised application.</i>	Noted. Refer to the below-mentioned line items.

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<u>Size and Footprint</u> <i>The development nominally complies with the FSR for the site, it exceeds the height but is still mainly under the height above natural ground level as required in the LEP (due to the extensive excavation) and complies with the zoning. However, because of the nature of the use and the requirement for such extensive plant areas to support the use, we say that the building is too large and should be reduced to a more realistic size for the use.</i> <i>The mechanical plant on the roof with their acoustic enclosures must be considered as plant space and not roof space. This makes the extent of plant spaces, one complete floor, roof area, three level plant platform and substation, greater than the calculable area. This amount of plant may be necessary for the use but it should in part be calculated more in the line with normal light industrial use and included in the GFA.</i> <i>We recommend that the building be reduced in size and footprint and that the substation be repositioned which will solve some of our other objections.</i>	In accordance with the <i>Standard Instrument – Principal Local Environmental Plan</i> (Standard Instrument) definition for 'Gross Floor Area' (GFA), GFA excludes: <i>"(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and"</i> Therefore, the proposed Data Centre remains compliant with the Development Standard under Clause 4.4 of LCLEP2009, with respect to a maximum Floor Space Ratio (FSR) of 1:1, for which the Proposed Development would achieve an FSR of approximately 0.82:1 (refer to Appendix 5). Furthermore, the revised Architectural Plans reiterate, that the northern-most portion on the proposed Data Centre has been amended to reduce the amount of mechanical plant and equipment stored in this area of the Site, as well as remove a portion of office area originally proposed. Notwithstanding, the size and footprint of the Proposed Development are considered to be suitable for the Site, given a larger footprint would require the need for further vegetation clearing, whilst a building with a reduced height would prohibit the operational requirements of the end-user from being able to achieved. Accordingly, the Proposed Development would provide a transitional development, with respect to adjoining industrial developments, which comprise similar sizes and development footprints. Further consideration is not considered warranted in this respect.
<u>Bushland</u> <i>The development does not protect the bushland on the site as required in the LCDCP, Clause E.14 even if the document says that it does. These are important pieces of bushland serving as a part wildlife corridor as well as habitat and should be preserved on the site. A reduction in the size of the building on the northern end as well as moving the substation would protect</i>	The impact caused by the Proposed Development has been reduced by relocating the substation in the southern portion of the Site, as recommended. It is noted, that the Proposed Development, for the purposes of a Data Centre is located in a highly disturbed site. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of

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<i>most of the bushland and remedy some of our objection to the destruction of this bushland.</i> <i>The Tree Assessment Report states that 73% of the trees will be removed for the development, which we consider far too great a sacrifice to make on this site.</i> <i>We recommend that the building be reduced in size and that the substation and parking area be redesigned to retain more of the natural bushland on the site.</i>	the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance. Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970. A revised Tree Impact Assessment has been prepared to reflect these changes (refer to Appendix 24).
<u>Stormwater</u> <i>At the moment some rain falling on the site drains to the south and southwest feeding the wetland areas in Ventemans Reach Reserve. This must be preserved with any development. Some stormwater should be directed to this end and controlled in its discharge by an OSD as well as subsurface drainage trenches so that the water is slowly released to the wetland and its vegetation.</i> <i>Stormwater directed to the north and Stringybark Creek must also be controlled by OSD and dissipation so that there is no scouring of the creek with the rush of large volumes of water in times of heavy rain. This detention</i>	Additionally, the stormwater discharge from the Site will be controlled by a combination of infiltration and reticulation and tanks, including a 110 KL rainwater reuse tank and subsoil discharge trenches to mitigate any stormwater runoff.

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<i>could also be used to supply more landscape water which will be necessary to maintain the large landscape areas.</i>	
<u>Excavation and Fill</u> <i>The extensive excavation and fill necessary to keep the height under the control and the levels to maintain access for servicing the equipment, mean that the site will be quite radically transformed, to the detriment of the adjoining bushland as well as the bushland on the site. As noted in the section above this will affect the subsurface water to the wetland and could cause erosion with the steepness of the fill in places.</i> <i>We recommend that levels be revised to reduce the amount of fill and the steepness of any fill still required as well as raking the steps outlined above to provided surface and sub-surface water to the wetland area.</i>	As mentioned above, the earthworks proposed across the Site (with particular attention given to the cut volumes), were proposed to combat any adverse environmental impacts from occurring and to mitigate any further impacts from occurring across the Site on nearby sensitive visual receivers. This ultimately provides a suitable platform for the proposed Data Centre operations, which are considered to be imperative in achieving maximum operational efficiencies across the Site. It is noted, that the topography of the Site, for any such future development (and not just the Proposed Development) would require to be significantly altered to accommodate the appropriate levels and building pads to house a structurally sound development. This has been confirmed and reinforced within the Geotechnical Report, prepared by Douglas Partners. Further confirmation is provided within the Flood Assessment Report, prepared by grc Hydro, which analyses the pre and post-development scenarios associated with the Proposed Development during times of flood affectation across the Site. Furthermore, the cut volumes proposed also respond to the footprint and scale of the Proposed Development, for which fewer cut volumes would have required a development much higher than originally proposed, increasing potential visual impacts on adjoining industrial sites and nearby sensitive receivers. Notwithstanding, the cut volumes proposed are considered to be representative of any such industrial-related development proposed on the Subject Site, that would be required to comply with relevant Building Code of Australia (BCA) and Australian Standards, for which appropriate and compliant levels for building would be required to be adhered to. Furthermore, with regard to subsurface and groundwater conditions experienced on the Subject Site, Senversa confirm, that groundwater was identified at depths ranging from 4 m to 14 m below the surface and was inferred to be flowing in a

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	north westerly direction towards the Lane Cove River, which meanders the northern boundary of the Subject Site. Additionally, the <i>Assessment of Coastal Wetlands, Groundwater Dependent Ecosystems, Key Fish Habitat and Riparian Vegetation</i> (CT Environmental, 2019), confirms the presence of Coastal Wetlands adjoining the Site; however, they note, that it is unlikely the identified community will be impacted by the Proposed Development. Accordingly, CT Environmental suggest, that it is unlikely the Proposed Development will have a significant impact on groundwater dependent, aquatic and / or riparian ecosystems and improvement to these ecosystems will occur if the following recommendations are implemented, including: ▪ Develop a Stormwater Management Plan (SMP); ▪ Establish appropriate Vegetated Riparian Zones, which include a 40 m buffer from top of bank for Lane Cove River and 20 m from top of bank for Stringybark Creek; ▪ Develop a CEMP; and, ▪ Consider an alternate stormwater management strategy. Further Stormwater Treatment Measures are proposed in accordance with the revised provisions to incorporate OSD into the proposed scheme, which would capture stormwater runoff and appropriately treat captured quantities, prior to discharge. Proposed OSD would be located directly underneath the proposed Data Centre building. Notwithstanding, it is considered the proposed earthworks, including cut and fill and corresponding recommendations and mitigation measures would not adversely impact on the hydrological conditions affiliated with both subsurface and groundwater conditions.
<u>Landscaping</u>	Whilst denser landscaping planting would be ideal for the Proposed Development along the fire trail, this would form a non-compliance with the legislative

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<i>The landscape design is based on the requirements of the RFS and we question the reasoning behind this decision. The construction of the building and substation are the highest category for fire protection, there are substantial fire-fighting provisions through-out the site and the fire risk is really only valid from a small area directly west of the site.</i> <i>We suggest that these requirements be relaxed and that denser planting be provided, including more understorey planting, particularly shielding the view from the walking track and along the SW corner to reduce the views from across the river.</i> <i>We also request that the developer provide funds for Council to replant the flat contaminated areas between the walking track and this site, again to shield the view from this very important and well used track.</i>	requirements of the NSW RFS, with regard to access along the fire trail (4 m setback), which is required to be adhered to. The Proposed Development is required to comply with PBP. The aim of PBP is to provide for the protection of human life (including firefighters) and to minimise the impacts on property from the threat of bushfire. In order to achieve the aims and objective of PBP, a combination of bushfire protection measures are to be afforded, with regard to the Proposed Development. The APZ provided, allows for the provision of defendable space around buildings and provides appropriate separation between the hazard and the building to prevent direct flame contact and to ensure safe operational access and egress for emergency services. Accordingly, whilst the building will be constructed to prevent material ignition, safe firefighting access around the building is also required and therefore the APZ's are required to be maintained to the specifications outlined in the NSW RFS documentation, 'Standards for Asset Protection Zones' and Appendix 5 of PBP. Denser plantings within the APZ (beyond the standard requirements) cannot be supported as it would negate the function and effectiveness of the APZ and reduce the defendable space available for firefighting operations from the bushfire risk posed to the west, north and east.
<u>Parking</u> <i>The parking is shown as all above ground, but there is no landscaping in this to assist visually or as shade for the cars. As we have indicated we would like to see the substation repositioned and this area redesigned so that it is not built up to the level shown with massive fill falling to the south and destroying the bushland. We can see no reason to provide a complete turning circle for trucks when in most cases a three point turn is easy and acceptable to most drivers. This would reduce this area and help the bushland.</i>	In accordance with the adjacent submission, the substation has been repositioned out of sight. Additionally, the proposed car parking area has included revised provisions to include further landscaping between car parking spaces, where best practicable and suited, which will provide positive social benefits, and reinforce the nature and wellbeing of workers and visitors accessing the site. Furthermore, this will significantly improve the microclimate experienced in the car parking area during the warmer summer months of the year.

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<i>We suggest that multilevel carparking be investigated to reduce the footprint of this unsightly hard paved area.</i>	Further, a multi-level car parking area was considered; however, provisions for this concept were neglected to the increase in bulk and scale that would be accounted across the Site. Therefore, the car parking area proposed is considered to be suitable for the Proposed Development.
<u>Sediment</u> <i>The control of sediment is vital for this site so that no debris or runoff flows into the wetland area. This has already been subject to major inundation previously and cannot afford to have any more sediment flowing into it. Any controls must be adequately monitored and regularly cleaned so that they remain effective throughout the excavation and construction periods.</i>	The revised Architectural Plans and Landscape Plans (refer to Appendix 5 & 6) include provisions for on-site detention (OSD), which provide additional stormwater management outcomes for the Proposed Development across the Subject Site, drastically reducing the potential for stormwater runoff and resultant sediment and erosion from taking place. Further, the incorporation of OSD into the proposed design would significantly improve pollution reduction targets across the Site by limiting potential pollutants from being discharged into nearby tributaries, including the Lane Cove River and Stringybark Creek. Stormwater Treatment Measures to be implemented would improve the water quality in the immediate downstream locality of the Lane Cove River and nearby adjoining Coastal Wetland areas, requiring mitigation and due consideration.
<u>Power Supply</u> <i>Although the documents state that authorities have not responded to the application, Ausgrid have agreed to supply the 132,000kv service necessary, but have yet to define a route for this line from the switching station.</i> <i>We would strongly oppose any route that may be proposed following the incoming route across the bushland of Ventemens Reach Reserve. The route must be along Sirius Road, and be either underground (preferred) or overhead.</i>	The route along Sirius Road is not considered feasible, given that available infrastructure could not accommodate the required services. Notwithstanding, the proposed route currently under consultation and further agreement with Ausgrid is considered to be the most suitable arrangement with regard to power supply for the Proposed Development. The proposed power supply route will be constructed via means of underbore techniques, which will be supervised by a Level 5 Arborist, for which vegetation removal will not be required.
<u>Other Comments</u> <i>We know that in the past Ausgrid have used this site to access the route of the incoming power line for maintenance and tree pruning. There is no indication that this could be provided with this design as the fill for the carparking would exclude any form of access. We question if this has been raised with the authority? We would be against any other point of access from the river side as it would pass through the wetland area and other good bushland.</i>	It is noted, that access arrangements would be resolved, for any such authority seeking to access the Subject Site for maintenance purposes. This would be drafted within the Operational Plan of Management, as part of the formal Conditions of Consent.

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<u>Conclusion</u> <i>We recommend that the building be reduced in size, the footprint reduced to protect the existing on site bushland, the landscaping not adhere to the RFS requirements but be strengthened, the substation be moved, that the stormwater system be changed to provide water to the wetlands and reduced velocity flows to the creek and that the parking be multilevel to reduce the hard standing area.</i>	Noted. Refer to the abovementioned items, which satisfactorily address any concerns raised.
Ryde Community Alliance (Jennie Minifie)	
<i>Ryde Community Alliance seeks that the Department ensure that the proposed development is consistent with the relevant State and Local environmental planning instruments and controls applying to the land, see below, as these were prepared with extensive research and community engagement, plus public comment. These include:</i> <i>SREP (Sydney Harbour Catchment) 2005 -The proposal is subject to SREP (Sydney Harbour Catchment) 2005 and Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005. The SEPP has planning principles for the Sydney Harbour Catchment, extract as follows:</i> <i>Sydney Harbour Catchment</i> <i>The planning principles for land within the Sydney Harbour Catchment are as follows:</i> <i>(a) development is to protect and, where practicable, improve the hydrological, ecological and geomorphological processes on which the health of the catchment depends,</i> <i>(b) the natural assets of the catchment are to be maintained and, where feasible, restored for their scenic and cultural values and their biodiversity and geodiversity,</i> <i>(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,</i>	As noted in Section 4.2.11 of this EIS, the <i>Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005</i> (Sydney Harbour Catchment SREP) applies to land within the Sydney Harbour Catchment. This EIS notes, that the Subject Site is located within the Sydney Harbour Catchment, and specifically with the 'Foreshores and Waterways Area Boundary Area'. Land adjacent to the north, west and northwestern portions of the Subject Site are zoned W2 Environmental Protection under the Sydney Harbour Catchment SREP, for which the Proposed Development has satisfactorily taken into consideration, with respect to the overall planning and design of the proposed Data Centre. Notwithstanding, the Proposal has considered the aims of the SREP; the objectives of the W2 Environmental Protection zone; and the Matters for Consideration listed under Division 2 of the SREP, for which no adverse environmental impacts would occur to the Subject Site or surrounding area. Accordingly, referral to the Foreshores and Waterways Planning and Development Advisory Committee is not considered to be warranted for the Proposal.

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- (d) action is to be taken to achieve the targets set out in Water Quality and River Flow Interim Environmental Objectives: Guidelines for Water Management: Sydney Harbour and Parramatta River Catchment (published in October 1999 by the Environment Protection Authority), such action to be consistent with the guidelines set out in Australian Water Quality Guidelines for Fresh and Marine Waters (published in November 2000 by the Australian and New Zealand Environment and Conservation Council),*
- (e) development in the Sydney Harbour Catchment is to protect the functioning of natural drainage systems on floodplains and comply with the guidelines set out in the document titled Floodplain Development Manual 2005 (published in April 2005 by the Department),*
- (f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,*
- (g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,*
- (h) development is to improve the water quality of urban run-off, reduce the quantity and frequency of urban run-off, prevent the risk of increased flooding and conserve water,*
- (i) action is to be taken to achieve the objectives and targets set out in the Sydney Harbour Catchment Blueprint, as published in February 2003 by the then Department of Land and Water Conservation,*
- (j) development is to protect and, if practicable, rehabilitate watercourses, wetlands, riparian corridors, remnant native vegetation and ecological connectivity within the catchment,*
- (k) development is to protect and, if practicable, rehabilitate land from current and future urban salinity processes, and prevent or restore land degradation and reduced water quality resulting from urban salinity,*

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<i>(l) development is to avoid or minimise disturbance of acid sulfate soils in accordance with the Acid Sulfate Soil Manual, as published in 1988 by the Acid Sulfate Soils Management Advisory Committee.</i> <i>The development as proposed does not comply with a number of these principles and should therefore be refused.</i> <i>The Lane Cove River is zoned W2 Environmental Protection on Zoning maps 5 and 6 of the REP where the subject site is located, extract as follows:</i> <i>Zone No W2 Environment Protection</i> <i>The objectives of this zone are as follows:</i> <i>(a) to protect the natural and cultural values of waters in this zone,</i> <i>(b) to prevent damage or the possibility of longer term detrimental impacts to the natural and cultural values of waters in this zone and adjoining foreshores,</i> <i>(c) to give preference to enhancing and rehabilitating the natural and cultural values of waters in this zone and adjoining foreshores,</i> <i>(d) to provide for the long-term management of the natural and cultural values of waters in this zone and adjoining foreshores.</i> <i>The subject site is within the area to which the development control provisions of the Sydney Harbour REP apply, and development should not be approved within this area adjacent to the river foreshores unless it complies with the development assessment criteria provided by the REP and the accompanying DCP, which includes detailed ecological mapping and urban design guidelines which are relevant to the subject land.</i>	
<i>The subject land is zoned Light Industrial under Lane Cove LEP 2009 and it is understood to have significant contamination from previous uses. This has resulted in it remaining fenced to exclude the public for more than a decade. Given its proximity to the river the community would need to be assured that the contamination is removed prior to redevelopment being approved,</i>	<i>In accordance with State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) and Senversa’s (2018) Phase 2 Acquisition Environmental Due Diligence Assessment and Remedial Action Plan (RAP), it is considered, that the Subject Site can be made suitable for the Proposed Development. Senversa recommend that the RAP be developed and implemented accordingly.</i>

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<i>for the long-term health of the river and the environment. Decontamination should precede any approval for redevelopment in accordance with SEPP No. 55 (Remediation of Land) and relevant EPA Guidance.</i>	Notwithstanding the abovementioned, the following requirements should be adopted during and / or prior to remediation, as identified within this EIS in Section 4.2.9, including: ▪ <i>Specific requirements for any works that impact the portion of the Site, subject to the 'NSW EPA Notice Maintaining Remediation' (No.28027, 27 September 2005).</i> ▪ <i>Additional groundwater monitoring to assess identified PFAS within fill and groundwater within the vicinity of the inferred capped area.</i> ▪ <i>Additional ground gas monitoring to assess whether carbon dioxide issues may have a potentially significant impact on the Proposed Development.</i> ▪ <i>An Acid Sulfate Soils Management Plan.</i> The Site has been previously managed and remediated accordingly in accordance with the NSW EPA site orders applicable to the Subject Site. However, it is noted, that the Subject Site would be satisfactorily remediated prior to construction works taking place, for which the Proposed Development would not disturb the capped areas.
<i>SEPP No. 19 (Bushland in Urban Areas) - The subject site adjoins bushland which is protected by the provisions of SEPP 19. The SEPP contains provisions relating to the protection of bushland on land adjoining SEPP 19 bushland which apply to the current proposal. The proposed development includes the clearing of natural vegetation which for ecological reasons should be maintained, as part of the bushland corridor along the river, and its contribution to the visual landscape of the River.</i>	It is noted, that <i>State Environmental Planning Policy No 19 – Bushland in Urban Areas</i> (SEPP 19) applies to the Lane Cove Local Government Area (LGA) and aims to protect and preserve bushland within urban areas owing to its community; aesthetic; recreational; educational; and scientific values. It is noted, that the northern, western and north-western boundaries of the Site are adjoined by E2 Environmental Conservation zoned land. The bushland within this zone would not be compromised by the Proposal, as the proposed development works are to be located wholly within the boundaries of the Subject Site. Rather, the landscape treatment offered (refer to Appendix 6) for the Site would be considered conducive and completely consistent with aims and objectives of SEPP 19.

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	Further consideration is not considered to be warranted in this respect.
<i>Lane Cove National Park is an item of environmental heritage significance under Ryde LEP 2014, and located along the opposite bank of the Lane Cove River. The height, scale and imposing form of the proposed buildings will have a negative impact on views from the National Park which is traversed by the Great North Walk along the River foreshores opposite the subject land. The development as proposed has not addressed the requirements of the relevant environmental planning instruments and DCPs applying to the land which require specific regard to visual impacts on the catchment and tributaries of Sydney Harbour, and seek to protect the natural landscape setting of the Lane Cove River Valley.</i>	As detailed within the Clause 4.6 Variation (refer to Appendix 35) the most significant visual impacts, with respect to the Proposed Development would be noted from ground level, along the walking track, that is noted to meander alongside the Lane Cove River and Stringybark Creek. Geoscapes (2019) have undertaken a further field survey and revised their Visual Impact Assessment, which accounts for the potentially impacted views from the ground level alongside the Lane Cove River and Stringybark Creek. It is noted, that existing and proposed vegetation would provide sufficient and satisfactory landscape screening for any passersby, as well as further reinforce the ecological character of the Site and adjoining bushland area. The built-form, particularly the height of the Proposed Development would respond to and be further complemented by the height of adjoining industrial developments along the southern and eastern interfaces; positioned within an area zoned for such permissible industrial-related purposes. Therefore, as a result of the Proposed Development, there would be no undue impacts with regard to visual amenity, privacy or view loss. Accordingly, careful selection of building finishes and colours, combined with proposed landscape planting across the Site (particularly along the northern and western (including north-western) boundaries of the Subject Site), are considered to be appropriately treated from an architectural perspective, as well as being aesthetically pleasing to mitigate any visual impacts. This will assist in screening the built-form of the Proposed Development within the locality, from any concerned visual perspectives. As a result, this will assist in reducing the potential visual impacts to passersby along the Lane Cove Bushwalk walking track and adjoining industrial sites, that are in close proximity to the Proposed Development and are of the highest sensitivity. The following colour scheme has also been chosen to mitigate any further visual impacts and further complement the adjoining bushland setting:

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	▪ Pale Eucalypt Painted Concrete; ▪ Dark Green Painted Concrete; ▪ Light Grey Painted Concrete; and ▪ Dark Grey Painted Concrete. Furthermore, the landscaping treatment proposed, as a result of mitigating potentially impacted views, will be most effective after a period 15 years, which is the point that trees are expected to reach maturity, or an acceptable height. It is noted, that after three (3) years, trees would attain a height of approximately 4 m, based on a 200 mm pot size. It is noted, that significant tall areas of existing vegetation to be retained across the Site are located along the northern and western boundaries, which are the most visually impacted interface with regard to the sensitive bushland receivers (zoned E2 Environmental Conservation) to the north and west. By increasing the landscaping along this portion of the Site (as well as throughout the Subject Site), this will provide an effective screening measure for the Proposed Development, towards a number of potential visual receivers to the north and west, including the noted E2 Environmental Conservation zone. It is noted, that views looking south and west towards the Site from Sirius Road and Apollo Place are significantly screened and further transitional by existing industrial developments, which further complement the Proposed Development. The Architectural and Landscape Plans for the Proposed Development are included in Appendix 5 & 6, which demonstrate, that there will be no such significant visual impacts on adjoining sites and sensitive receivers within close proximity.
<i>The subject land, which is currently vacant, is potentially an important addition to the Lane Cove National Park. Ryde and Lane Cove LGAs are experiencing a rapid population increase the result of State government policies since the mid-1990s. The existing local environmental planning powers were subsumed by the State and established local environmental planning instruments have been overridden, resulting in mixed land use developments most of which are high rise, high density residential</i>	Noted. The Subject Site is zoned IN2 Light Industrial under the LCLEP2009. The Proposed Development, for the purposes of a Data Centre is considered permissible with consent under the IN2 zone. Until such a time, the Subject Site remains designated for industrial-related development, for which the Proposal satisfactorily responds to and adheres to the IN2 zone objectives. Further consideration is not considered warranted in this respect.

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<i>developments, in excess of the three times the scale of prior developments. These developments have increased the pressure on the natural environment in the surrounding suburbs of Ryde and Lane Cove.</i>	
<i>The existing zoning of the subject land as Light industrial is now redundant, following the approval of major residential and mixed uses at 150 Epping Road, Lane Cove West. In addition, the Lane Cove LEP, gazetted in 2009, is due to be reviewed in accordance with State Government policy. In all of the circumstances, the proposal for the subject land should be refused and the future uses of the site be subject to a strategic planning review, having specific regard to the value of the land for alternative uses which are compatible with the immediate proximity to the Lane Cove National Park and public foreshore open space and conservation lands in Lane Cove.</i>	As above.
Stringy Bark Creek Residents Association Inc. (Guy Hallowes – President Stringy Bark Creek Residents Association)	
<i>The development is too large for the site. The FSR is within the allowable, but the need for excessive plant to service the data banks means that the total GFA is more than double the calculable GFA.</i>	In accordance with the <i>Standard Instrument – Principal Local Environmental Plan</i> (Standard Instrument) definition for 'Gross Floor Area' (GFA), GFA excludes: <i>"(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and"</i> Therefore, the proposed Data Centre remains compliant with the Development Standard under Clause 4.4 of LCLEP2009, with respect to a maximum Floor Space Ratio (FSR) of 1:1, for which the Proposed Development would achieve an FSR of approximately 0.82:1. Further consideration is not considered warranted in this respect.
<i>The footprint protrudes into the only two areas of bushland on the site and means that 73% of the trees will be removed. Many of those remaining are exotics or weeds (privet, camphor laurel).</i>	Ecoplaning note, that the proposed footprint has been modified to minimise impacts to the patch of vegetation in the south west of the Site. Whilst complete avoidance is not possible, satisfactory efforts have been made to avoid tree clearance where possible. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor

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	condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance. Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970. Furthermore, Travers note, that the majority of trees present within the study area are commensurate with Plant Community Type (PCT) 1776 – Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast, which is not commensurate with any Threatened Ecological Community (TEC) listed under both the EPBC Act and BC Act.
<i>New planting is restricted due to bushfire protection requirements and most of the open space and under canopy trees will be mown grasses and the like.</i>	Landscape planting proposed by Geoscapes, as part of the overall Landscape Masterplan for the Site is considered to be both responsive to the Subject Site and its surrounds, as well as taking into consideration the relevant bushfire protection requirements for the Site. Notwithstanding, the dichotomous mix of native and endemic trees, plants, shrubs and grass species is considered to be conducive for the Site layout, with respect to the Proposal, as well as respond to the surrounding floristic composition of adjoining sites, particularly within adjoining bushland surrounding the Subject Site.

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	Further consideration is not considered to be warranted in this respect.
<i>This landscape area includes a 4 m wide fire trail made up of perforated elements with grass grown in the open spaces. This is never very successful in providing vegetation of any description.</i>	The landscaping proposed in the 4 m fire wide trail setback has been indicatively chosen based on prior consultation held with the NSW RFS. The species chosen for this portion of the Site are not considered to warranted redesign or reselection for the purposes of this Proposal.
<i>There is massive excavation which will affect surface and sub-surface water to the adjoining wetland areas to the south and southwest.</i>	As mentioned above, with regard to subsurface and groundwater conditions experienced on the Subject Site, Senversa confirm, that groundwater was identified at depths ranging from 4 m to 14 m below the surface and was inferred to be flowing in a north westerly direction towards the Lane Cove River, which meanders the northern boundary of the Subject Site. Additionally, the <i>Assessment of Coastal Wetlands, Groundwater Dependent Ecosystems, Key Fish Habitat and Riparian Vegetation</i> (CT Environmental, 2019), confirms the presence of Coastal Wetlands adjoining the Site; however, they note, that it is unlikely the identified community will be impacted by the Proposed Development. Accordingly, CT Environmental suggest, that it is unlikely the Proposed Development will have a significant impact on groundwater dependent, aquatic and / or riparian ecosystems and improvement to these ecosystems will occur if the following recommendations are implemented, including: ▪ Develop a Stormwater Management Plan (SMP); ▪ Establish appropriate Vegetated Riparian Zones, which include a 40 m buffer from top of bank for Lane Cove River and 20 m from top of bank for Stringybark Creek; ▪ Develop a CEMP; and, ▪ Consider an alternate stormwater management strategy. Further Stormwater Treatment Measures are proposed in accordance with the revised provisions to incorporate OSD into the proposed scheme, which would capture stormwater runoff and appropriately treat captured quantities, prior to discharge.

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<i>Again massive fill will be required in places to provide the levels necessary for the design — parking, truck access to service the plant and the substation. This will affect the sub-surface water.</i>	As above. No further consideration is considered to be warranted in this respect.
<i>All of the stormwater is shown as discharging through a 750 mm pipe into Stringybark Creek (at least it is shown as discharging along the creek and not directly towards the opposite bank).</i> <i>There is a need to direct some of this water to provide sub-surface water to the wetland areas via drainage trenches or similar. This cannot be done to the north because of sealed contaminated land.</i> <i>The remainder of the water should be controlled through either on site detention and/or through a flow dissipater system to reduce the velocity when it reaches the creek.</i>	The post-developed scenario addresses flooding in the 1%, 2%, 5% ARI storm events and responds to current site conditions; thereby, improving the Site's topography by deviating stormwater effectively into proposed OSD located underneath the Data Centre building, as part of the overall stormwater treatment measures, to be incorporated into the design, prior to discharge (refer to Appendix 11).
<i>Questions may be raised when the statutory authorities respond to the development as none have done so as of the application date.</i>	Noted and agreed. All submissions have been taken into consideration and are satisfactorily addressed.
<i>Rain water is shown as being used to top up the water for the cooling towers but there is no indication of its use for landscaping — which it should be used for.</i>	It is noted, that rainwater harvesting mechanisms would be implemented with the proposed design, promoting reuse applications for potable and non-potable water, for the proposed Data Centre amenities internally, as well as external applications for irrigation, for landscaped areas across the Site.
<i>Ausgrid have said that they can supply the 132,000 high voltage electricity for the site from the switching station nearby, but there is no agreement as to the route. It should not follow the incoming lines across the bushland.</i>	Airtunk can confirm that the proposed route does not follow the existing 132kV power transmission lines and no clearing will be required within existing power easements. The proposed power supply route will be constructed via means of underbore techniques, which will be supervised by a Level 5 Arborist, for which vegetation removal will not be required.
Resident Comment (SE 54548)	
<u>Location and Scale</u> <i>In broad terms the proposal challenges issues of location and scale; it intrudes on the natural littoral corridors to an overwhelming degree, at 30-40,000 sqm it will almost completely, cover a large parcel of degraded land, bordered on south, west and north by a narrow riparian/foreshore zone, coming to within 20m of the Lane Cove River, that, Wades Cornflour heritage</i>	The location and scale of the Proposed Development have been previously discussed throughout the abovementioned items. Further consideration is not considered to be required.

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<i>area aside is not otherwise developed. It, intrudes below the sandstone cliff line - only the second (and the first in 100 years) in the valley to so do.</i>	
<u>Anomalous Zoning</u> <i>The Industrial zoning is an accident of history - when heavy and dirty industry was located away from habitation, accessible only by river.</i>	As mentioned above, the Subject Site is zoned IN2 Light Industrial under the LCLEP2009. The Proposed Development, for the purposes of a Data Centre is considered permissible with consent under the IN2 zone. Until such a time, the Subject Site remains designated for industrial-related development, for which the Proposal satisfactorily responds to and adheres to the IN2 zone objectives. Further consideration is not considered warranted in this respect.
<u>Provision of Backup Energy</u> <i>The design makes no provision for renewable energy back up, but rather requires the storage on site of a large amount (1 million litres) of diesel to run generators in the event of a power break. No provision has been made to exploit the enormous roof area planned for on site energy generation and storage for instance.</i>	Sustainability measures to be implemented for the Proposed Development (where deemed practicable), include: ▪ Power is distributed as far as practical at high voltage, reducing electrical transmission losses. ▪ The proposed chillers are significantly more efficient than the minimum allowed to satisfy local code requirements. ▪ Rainwater harvesting – where practical, rainwater will be captured on-site and used to supply make up water to the cooling towers, in place of mains water. ▪ VSD drives will be used on fans and pumps allowing turndown and energy savings as part load. ▪ High efficiency electrical drives will be used on the various systems. ▪ Low flow fixtures and fittings will be used to minimise water consumption.
<u>Landscaping for Staff Amenity</u> <i>The adventitious inclusion of a landscaped amenity area exclusively for staff, exploits the peculiarity of the lot shape - this peninsular of sculpted bushland will not be publicly accessible; any rehabilitation done here would not be coordinated with management of bush generation and clean up in the land adjacent.</i>	Noted. The staff amenity area will be landscaped appropriately for the enjoyment of workers, for which seating and rest areas will be provided for this area. Furthermore, the Site is not supposed to be publicly accessible for safety reasons, with respect to the operational requirements of the proposed Data Centre; therefore, further consideration is not considered warranted in this respect.
<u>Industrial Siting in the Landscape</u>	Provisions for fencing around the Site are strictly for security purposes and separation. Additionally, the Subject Site is zoned IN2 Light Industrial under the LCLEP 2009. The Proposed Development, for the purposes of a Data Centre is

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<i>The references to landscaping in the plans do not seem in harmony with the practices of the Lane Cove Council in bushland recovery and management; make no references to recovery for instance, and in any case are said to be enclosed by a 1.8m security fence, thus interfering with connectivity in the narrow shelf of bushland between the river and the cliff, otherwise continuous from Linley Point to Fullers Bridge.</i> <i>While I acknowledge the effort by designers to make this building complex fit into the site, and the easily demonstrable value of this industry establishing itself in the municipality in a zone whose impact on residents is limited, I decry the retrograde and superficial approach to siting, and what appears to be an effort to maximise site coverage.</i>	considered permissible with consent under the IN2 zone. Until such a time, the Subject Site remains designated for industrial-related development, for which the Proposal is considered to be sited appropriately given its industrial zoning and prevailing industrial setting, with regard to adjoining industrial sites. Additionally, the proposed landscape design (refer to Appendix 6) will create an indigenous rich environment, that will be cohesive with the natural character of the Lane Cove River corridor and bushland. It will also help to mitigate the Proposed Development from visual receptors by filtering views through vegetation. This will be especially important for those receptors within close proximity to the Proposed Development, while still complying with bushfire and VMP requirements. A low maintenance and low water use philosophy is to be adopted across the Site, with respect to the landscape design.
<u>Industrial Heritage</u> <i>The cultural impact refers to Cumberland Paper Board Mill site on the Lower Stringybark and Chicago mills site on the Lane Cove immediately upstream. This reference is superficial and not based on any contemporary examination of the conjunction of these sites in a zone of industrial activity connected to the Lane Cove River, as for instance mapped in Lynne McLoughlin's 1986 monograph, "The Middle Lane Cove River - a History and a Future" Macquarie University, Centre for Urban Studies."</i> <i>An examination of site association cannot ignore the 50 years of CSR/Corbett occupation; the role of the Stringybark site in the history of chemical manufacture in Australia, and as a key wartime provisioning factory,, and the pioneering policies of CSR Chemicals in relation to industrial landscaping of its Lane Cove property - credited as the first consciously landscaped industrial site in Australia (as written up in the Land in 1951); just as Corbett's/CSR activity marks the founding of chemical manufacturing in Australia = see for instance back issues of Double Bond, the CSR Chemicals staff magazine.</i>	Appendix 27 of this EIS includes the <i>Historical Heritage Assessment and Statement of Heritage Impact</i> (Biosis, 2019), which was prepared in accordance with current heritage guidelines, including <i>Assessing Heritage Significance, Assessing Significance for Historical Archaeological Sites and 'Relics'</i> and the <i>Burra Charter</i>. Section 6.14 of this EIS captures, that the Subject Site contains land that has a low potential for archaeological items, given its highly disturbed nature. Furthermore, with respect to the two (2) listed heritage items of significance within close proximity to the Subject Site, the recommendations and mitigation measures outlined by Biosis would be implemented accordingly, for which any impacts anticipated to the Subject Site with regard to the Proposed Development are considered to be acceptable, given, that there are no items of heritage significance within the Subject Site. An unexpected finds policy will be implemented to identify and record any archaeological material that may be encountered during the proposed works.
<u>Prior Site Contamination</u>	As mentioned above, in accordance with Senversa's (2018) Phase 2 Acquisition Environmental Due Diligence Assessment and Remedial Action Plan (RAP), it is

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<i>The history of the site prior to sale to current ownership is not mentioned. There is reference to contamination on the site - traces of molasses - but no details of the degree of reparation required. It is not only the molasses residue: the site is adjacent to the molasses feeder tanks used by Corbetts/CSR, pumped from barges moored in Stringybark Creek over maybe 25 years: but as well more recent illegal dumps of potentially hazardous waste.</i> <i>There can expect to be the residue of Electricity Commission's occupancy - there does not appear to have been requirement for the site to be rectified at the time of the disposal of the asset. This should have been noted in the EIS</i> <i>It is a large site, without a prior use cited in the report. This must be relevant to impact. It is likely that the ground, as with other harbourside sites of heavy and pollutant industries (eg the battery site at Homebush Bay), is contaminated; Disturbance in the construction will risk leaching fill into the river; these questions were not taken up in the EIS.</i>	considered, that the Subject Site can be made suitable for the Proposed Development. Senversa recommend that the RAP be developed and implemented accordingly. Notwithstanding the abovementioned, the following requirements should be adopted during and / or prior to remediation, as identified within this EIS in Section 4.2.9, including: ▪ <i>Specific requirements for any works that impact the portion of the Site, subject to the 'NSW EPA Notice Maintaining Remediation' (No.28027, 27 September 2005).</i> ▪ <i>Additional groundwater monitoring to assess identified PFAS within fill and groundwater within the vicinity of the inferred capped area.</i> ▪ <i>Additional ground gas monitoring to assess whether carbon dioxide issues may have a potentially significant impact on the Proposed Development.</i> ▪ <i>An Acid Sulfate Soils Management Plan.</i> It is noted, that the Subject Site would be satisfactorily remediated prior to construction works taking place. Further consideration is not considered warranted in this respect.
<u>Attention to Drainage</u> <i>There is no drainage plans - the two buildings and associated roads will generate a high stormwater volume that will potentially adversely affect natural drainage patterns.</i>	The stormwater discharge from the Site will be controlled by a combination of infiltration and reticulation and tanks, including a 110 KL rainwater reuse tank and subsoil discharge trenches to mitigate any stormwater runoff.
<u>Generation of Fill</u> <i>The fill report shows a large volume of excess fill quarried from the sandstone cliff: Judging by the nearby (Gordon Cr and Epping Road) flat developments cutting into sandstone, a long period (2-3yrs) of highly intrusive noise, or, the likelihood of flooding in the excavations as happened in the Epping Road construction.</i>	The <i>Acoustic Assessment</i> prepared by ARUP (2019) confirms, that no unacceptable noise emissions as a result of proposed construction works will exceed the relevant NSW Environment Protection Authority (EPA) criteria thresholds, as well as experience any exceedances and undue acoustic amenity impacts in accordance with the relevant controls, with regard to the LCDCP2009. Further consideration is not considered warranted in this respect.

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<u>Significance of Sheltered Riverine Wildlife Corridor</u> <i>The animal population crossing the site is not given attention. For instance there does not appear to be any survey for reptiles or small mammals; for which this below cliff sheltered bushland presents preferred habitat.</i> <i>Likewise bird behaviour and habitat will be affected. The Cumberland impoundment is a sanctuary for water birds, including visiting birds of national significance such as the Nankeen Night Heron..While this may have been overlooked during construction of the Epping Road flats, it should not be ignored for this state significant development.,</i> <i>The site adjoins and overlaps a grassy open space; natural grassland and grassy ecosystems - with their complex relations between grasses, forbs, shrubs, insects reptiles and birds - have been ignored in the impact statements - it should not have been.</i>	It is considered, that the BDAR prepared by Ecoplanning satisfactorily addresses any potential impacts with regard to faunal habitats located within or within close proximity to the Subject Site, for which the Proposed Development would not adversely impact (refer to Appendix 23).
<u>Integrity of Below Cliff Habitat Corridor</u> <i>The maps used do not make clear just how much the building work intrudes into the below cliff natural habitat (however disturbed it might be by past activity). It is not just a corridor for the walking public, but part of a habitat strip representing pre-1788 natural forms and ecological associations, coexisting with suburban and industrial occupancy.</i> <i>The proposal stretches the industrial zone beyond its intended purpose, thus triggering the need to work closely with landscape planners managing the public reserves, and state managers of the riverine environment. There is no evidence of this yet in the documents produced.</i>	As mentioned above and stated in the BDAR (refer to Appendix 23), prepared by Ecoplanning, the Subject Site contains exposed Hawkesbury Sandstone outcropping, boulders and minor cliff development in the southeast and northeast of the Subject Site. These features do not support threatened species or ecological communities; hence, do not constitute a prescribed biodiversity impact. Nevertheless, the BDAR has been updated to include a Figure depicting the following: ▪ The Site boundary; ▪ The cliff line, crevices, rocks and other geological areas of significance; and ▪ The Proposed Development footprint. The revised BDAR has taken into consideration relevant components of Section 6.7.1.1 and Section 6.7.1.2 of the BAM and included these features on the Site Map and additional text explaining these features where necessary (refer to Appendix 23).

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<u>Significance of Lane Cove Remnant Bushland</u> <i>Unlike other Mars Road factories this development intrudes into river side bush corridors. These have been a source of pride for Lane Cove residents following actions by Council and citizens to protect bushland habitat since the 1970s in the face of strong developmental pressure (as evidenced in the SC Johnson case).</i> <i>The network of paths through recovering bushland around Lane Cove's foreshores and streams is a major public asset. Its value needs to be recognised in any intrusive proposal. It is a concern for not only nearby residents, but to all people who live in or visit the municipality. The EIS does not recognise these values. It addresses site damage by replacing 'like for like', with tree losses replaced by tree plantings, etc; a once off landscape design, without recognising the interconnectivities of bushland on the margins of cities.</i> <i>Lane Cove can show nationally significant developments in urban industrial landscaping, and planning; its attention to recognising bushland remnants, building expertise and employment in bushland conservation and recovery, and in collaboration between citizen and council in educating the public in the value of healthy bush habitat close to the city centre. It is justly imitated and admired; This reputation should not be compromised by insensitive development.</i>	The Proposed Development will be undertaken wholly within the confines of the Subject Site, for which it will not comprise any adjoining pathways / walking tracks, that are located in close proximity to the Site. Furthermore, it is stated in the CTENVIRONMENTAL (2019) Aquatic Report that for Stringybark Creek, although the subject land boundary falls slightly within the 20 m VRZ, the proposed footprint does not encroach into the VRZ (i.e. buffer). A site assessment to confirm Top of Bank (ToB) and the edge of wetlands has been conducted for Lane Cove River and Stringybark Creek (Travers Bushfire and Ecology 2019). The revised mapping and application of riparian buffers is in accordance with the Natural Resource Access Regulator (NRAR) (2018) Guidelines for controlled activities on Waterfront Land – Riparian Corridors. The revised ToB and wetland edge mapping has confirmed that all buildings will be setback a minimum of 20 m from Stringybark Creek, therefore outside of the Vegetated Riparian Zone (VRZ) for Stringybark Creek; demonstrating compliance with Clause E14 (a) of the LCDCP2009. Portions of the Asset Protection Zone (APZ) have been mapped within the 20 m VRZ of Stringybark Creek. Where encroachment has occurred within the VRZ of Stringybark Creek the averaging rule has been applied and an offset area connected to the riparian corridor along has been provided in accordance with NRAR (2018). It is acknowledged that the complete avoidance of all areas mapped as 'bushland' on the LCDCP2009 map has not been achieved although avoidance has been demonstrated where possible. The Proponent has advised that further avoidance of impacts to native vegetation is not economically viable, as the Project requires a large amount of services infrastructure, which only becomes economical with the capacity currently proposed for the Data Centre. Further, the steep gradients in the Subject Site require a large amount of excavation to achieve the level floor planes required, resulting in substantial financial input.
<u>Lane Cove Industrial Heritage</u>	The existing walking track will not be physically comprised in any such way. Whilst, views may be slightly impacted, provisional landscape screening will

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<i>The existing track connects the Lane Cove National Park with the harbour; it passes historical sites, and evidence of earlier river activity, duly explained. Its integrity depends on the separation of urban building, roads etc from the mangrove communities, and the narrow strip of wet temperate rainforest and grassy woodland below the sandstone cliffs, themselves exhibiting remarkable naturally sculpted forms easily visible from the track.</i>	satisfactorily address any impacted views experienced at ground level along the walking track.
<u>Environmentally Sensitive Industrial Siting</u> <i>This wrap of the foreshore needs protecting from intrusive, and polluting new industrial activity. The 19th and 20th century examples can remain as of particular interest in this phase of Sydney's growth.</i> <i>For the 21st century it is time to match CSRs mid-20th century defence of the landscape in factory deployment, with a truly 21st century approach that recognises that having large volumes of hydrocarbons stored close to a river, and in a bushfire prone zone, solely as an energy backup is unacceptable; that design can extend to respect of habitat continuity and connectivity, and the likely attention to cleaning up old disfigured and damaged industrial sites using new methods and will.</i> <i>This is at best a 20th century grade proposal - it should aspire to the standards of this century. State Legislation applies to the protection of foreshores; it must be invoked here. Likewise stream and harbour setbacks appropriate to scale and density of activity. There are antecedents in Sydney harbour foreshore protection going back to the 1880s, that were reinforced privately by CSR in this landscaped zone.</i>	The adjacent statement is factually incorrect, rather, the Proposed Development comprises the construction of a world-class, State-of-the-Art Data Centre, and sets a precedent for future modernised industrial development with regard to the immediate and wider localities. Through increased landscape planting and strategic colour and material selections, the Proposed Development is considered to respond to adjoining industrial development and complements the adjoining bushland.
<u>Deficiencies in Public Consultation</u> <i>From deposited papers there is no evidence of consultation with users of the public paths that will be impacted by this development. These tracks have evolved over time as an educational and recreational asset; are used by people from all over the municipality and beyond; and will only become more important as the pressure increases on remnant vegetation in residential and industrial areas.</i>	The Stakeholder Management and Community Consultation Strategy implemented for the Proposed Development included consultation with the wider community, individuals and agencies, that are directly impacted, or within close proximity to the Site. With respect to public paths, it should be noted, that the bushland is owned and maintained as a Council asset, by which the responsibility falls on Council themselves to inform its wider community of nearby developments. It is noted,

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<i>Conspicuously not consulted were the groups who have dedicated time to bush regeneration in the municipality, the Council itself with its vision for bushland remnant management, and expert citizen contributions to planning and environment protection. Not only is the industrial purpose of state significance, but as well the site and surrounds which it would be intruding on: there is room for finding a truly 21st century solution based on open and informed deliberation. The EIS does not give evidence that this approach had been considered.</i>	that an advertising period, through the process of exhibition (formal notification) was undertaken within the local newspaper; NSW DP&E's Major Projects website and Council's website. The level of consultation undertaken for the Project is considered to be sufficient and satisfactorily address the NSW DP&E's Guidelines for Community and Stakeholder Engagement / Participation. Further consideration is not considered to be warranted in this respect.
<u>Conclusion</u> <i>This submission (nor the original application) has made no reference to the rationality of this site use within the industrial mix of Mars/Sirius Road complex. It is concerned alone with the credibility of the EIS, raising questions about the development's scale, the hazard that goes with its intended operation, intrusion on habitat, and the superficiality of treatment of cultural and environmental values. Lane Cove has a proud industrial past, built on enterprise and vision; part of that vision is to allow for site occupancy to grow into the landscape, not to take it over.</i>	Noted. The abovementioned responses are considered to satisfactorily address any concerns raised throughout the submission. Further consideration is not considered warranted in this respect.
Resident Comment (SE 54552)	
<u>Bulk, Height and Scale</u> <i>This is a massive building development for this location. The landscape context for this development is not predominantly the industrial zone on the eastern side, in part because the site sits at the end of its own entrance drive and does not present a main street frontage. Rather its landscape context is the view from the west as shown in the photo montage on page of Appendix 5, the Architectural Plans.</i> <i>The Lane Cove River upstream of Figtree Bridge at Hunters Hill presents a very 'natural' character, a corridor of vegetated slopes punctuated by very few buildings. Such a corridor is highly valuable in an inner urban context. The river is used by many canoeists / kayakers, there are walking tracks on both sides of the river and the river corridor provides a peaceful natural</i>	The location and scale of the Proposed Development have been previously discussed throughout the abovementioned items. Further consideration is not considered to be required.

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<i>experience close to the many people who live in surrounding areas. This building would be highly intrusive in this landscape. As it sits on a site lower and closer to the river and the vegetation corridor than the rest of the industrial area, it should be far more sympathetic to that environment in its design.</i> <i>Yet, not only do these buildings occupy as big a footprint as possible on an unevenly shaped site with a section of contaminated land that cannot be developed, the buildings exceed the maximum height allowed under Lane Cove's LEP 2009 by 6 metres (as identified in Table 8 of the Environmental Impact Statement). And this is the case across the whole development, which is essentially a big rectangular box. The application for variation, in fact it is quite confused / confusing at some points, arguing that the development maintains the LEP standard, except for exceeding it by 6m.</i>	
<u>Impact on Vegetation in a Wildlife Corridor</u> <i>For example, the Powerful Owl, which is listed under the NSW Threatened Species Act as Vulnerable is an important species in our bushland. Normally they require a range of 400 hectares of bush to support a breeding pair and deep hollows in mature eucalypts for nesting. That there has been an increase in sightings of Powerful Owls in Lane Cove, as well as occurrence of several known breeding sites, when Lane Cove has just 98 hectares of reserve bushland is a success story in the management and restoration of this reserve bushland, as well as an indication of the extent to which such species also rely on the pockets of bushland on private land to increase their available habitat and foraging ability.</i> <i>Most of the vegetation on this site will be impacted through complete clearing for the buildings or by heavy management in a bushfire Asset Protection Zone. For example, here are currently 171 trees (with diameter 15cm or above) currently on this site. This development will remove:</i> <i>- 82 trees in fair to good condition (SULE 2d or above), in addition to the 43 to be removed as they are assessed to be in poor condition.</i>	It is considered, that the BDAR prepared by Ecoplanning satisfactorily addresses any potential impacts with regard to faunal habitats located within or within close proximity to the Subject Site, for which the Proposed Development would not adversely impact (refer to Appendix 23).

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- 24 to 29 visually significant trees. - 10 of 12 hollow bearing trees. <i>For Lane Cove this is an unacceptable level of loss. While these removals / clearing of native vegetation trigger offset purchases, purchasing offsets which may be within 100 km of the development site is totally inadequate. In inner urban Lane Cove, loss of any remnant of native vegetation is serious as there is so little and all remnants are highly valuable as both historical records and in the provision of networked habitats and corridors.</i>	
<u>Actual and Potential Impacts of a Cut and Fill Operation</u> <i>The EIS site analysis of site suitability claims 'the topography is highly suitable for the intended use' (p. 26). In fact is a sloping site (in parts steeply) with rock escarpments, upslope of sensitive ecological communities. Consequently the development would require a major cut and fill operation that will obliterate the sandstone rock escarpments (pictures p.40 Appendix 23) that are an important feature of the river corridor, and require major retention walls and fill to build the platforms to support the buildings.</i> <i>It is of considerable concern that the Biodiversity Assessment (Appendix 23) claims (p.6) 'there are no important or local wetlands.... Within the subject site or buffer area' (1500m radius). While they use a BAM definition, this is obviously inadequate as the statement is demonstrably false. There are three important wetland communities adjacent to the site along the river – Estuarine Mangrove Forest, Estuarine Saltmarsh and Estuarine Swamp Oak Forest, and the existence of wetlands here is recognised in the EIS for the development at least in Part D Legislative and Policy Context.</i> <i>These Threatened Ecological Communities, the Saltmarsh and Swamp Oak Forest, have already had substantial impacts in recent years from massive erosion across the subject site when it was unwisely cleared to bare dirt and the steep slopes left open to rainfall impact. The soil from this erosion completely overwhelmed the tiny silt fences around the site and disgorged</i>	The BDAR has been updated by Ecoplanning (refer to Appendix 23) to address the relevant BAM sections and also to reflect the recent footprint modification to provide further avoidance of impacts to native vegetation. As mentioned above, the proposed footprint has been modified to minimise impacts to the stand of vegetation in the south west of the site. Whilst complete avoidance is not possible, efforts have been made to avoid tree clearance where possible and vegetation in the north of the site has also been conserved where possible.

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<i>across these two communities below the site. Lane Cove Council then had to embark on a substantial clean-up operation for these communities.</i> <i>The potential for similar problems to arise in such a massive building project as in this proposal is very high and the documentation includes no details on how the proponent will ensure NO downslope impacts.</i>	
<u>Conclusion</u> <i>This proposal is unsuitable for this site – it is overdevelopment of a sensitive site. It would impact local vegetation and wildlife through clearing of important local patches of native vegetation and loss of trees. It exceeds Lane Cove’s LEP maximum height for this area by 6 metres and its bulk and height are too great for its landscape context in a sensitive river corridor, while the impacts of a cut and fill construction are likely to be unacceptably high.</i>	Noted. The adjacent items are satisfactorily addressed throughout the abovementioned items in response to <i>Resident Comment (SE 54552)</i>, for which further consideration is not considered warranted in this respect.
Resident Comment (SE 54588)	
<i>The Data Centre is neither a warehouse nor a distribution centre nor a container storage facility so is incorrectly classified as falling under SEPP (State and Regional Development) 2011’s Schedule 1 cl 12. The proposal is for a high technology industry and it does not fall under SEPP (SRD)2011 so should not be assessed in the current manner. Meeting the \$ value threshold alone does not give qualification for being assessed under the SSD process. The data centre does not fit Cl 12, and warehouse/distribution characteristic cannot be claimed under the SEPP (SRD) when they do not exist, just by utilising a photograph of a warehouse on the cover page to subliminally suggest it is a warehouse. The Consent Authority should be Lane Cove Council.</i>	In accordance with the Standard Instrument definition, a <i>warehouse or distribution centre</i> means: <i>“ a building or place used mainly or exclusively for storing or handling items (whether goods or materials) pending their sale, but from which no retail sales are made, and includes local distribution premises.”</i> By virtue of the definition bestowed above, the proposed Data Centre constitutes a building used mainly for storing or handling items. From an operational perspective (as an owner / operator / landlord), the business (Data Centre) provides a similar service to its tenants as any commercial landlord would. Notwithstanding, the point of difference is, that the tenants of the facilities are focused on the housing and delivery of cloud-based internet to service the global market. Notwithstanding the above, the Proposed Development constitutes a warehouse or distribution pursuant to the Standard Instrument definition, by which meets the requirements for State Significance Development under Schedule 1, Clause

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	12(1) of <i>State Environmental Planning Policy (State and Regional Development) 2011</i> (SEPP (SRD) 2011). Accordingly, an SSD Application (SSD 9741) has been submitted to the NSW DP&E, whom are the applicable consent authority, rather than Lane Cove Council. Further consideration is not considered to be warranted in this respect.
<i>Consideration of futureproofing for re-purposing or recycling of proposed facility, and site remediation/rehabilitation, in event of redundancy of function. Notwithstanding that there is current growing demand for the services the Data Centre proposes to meet, high technology hardware has a tendency of becoming smaller due to technological advances, and over time, newer processes revolutionise or replace old processes. This enormous proposal has a massive, long-term impact on a highly sensitive bushland, riverside site by way of excavation and very large site coverage to provide its platform. There is significant loss of trees and habitat on and off site, as well as on-site storage of fuel materials – yet its pavilion design is highly modular and particular to its function. Methods of site remediation, rehabilitation and ways to re-purpose the construction for other uses, should be considered and outlined at the EIS stage with a view to undoing environmental harm and providing for sustainability. This is the more important because the site is precious, in a location where demands due to surrounding intensification of urban living come with the corollary of greater need for preservation of natural environments to provide an antidote.</i>	Based on the results of the Environmental Site Assessment (Phase 2 Contamination Assessment) undertaken on the Subject Site, Senversa considers that the Subject Site can be made suitable for the Proposed Development and recommends that a Remedial Action Plan (RAP) be developed accordingly. Notwithstanding, the following requirements should be adopted during and / or prior to remediation, including: ▪ Specific requirements for any works that impact the portion of the Site, subject to the 'NSW EPA Notice Maintaining Remediation' (No.28027, 27 September 2005). ▪ Additional groundwater monitoring to assess identified PFAS within fill and groundwater within the vicinity of the inferred capped area. ▪ Additional ground gas monitoring to assess whether carbon dioxide issues may have a potentially significant impact on the Proposed Development. ▪ An Acid Sulfate Soils Management Plan. Along with proposed remediation recommendations, the Subject Site offers an aesthetically pleasing architectural landscaped design, which would significantly improve the aesthetic offered by the proposed Data Centre, through enhanced riparian planting along the northern and western boundaries, paying tribute to the adjoining environmentally sensitive recognised bushland. In regard to vegetation clearing, it is noted, that impacts associated with vegetation zones PCT 1776 in an 'intact' and 'disturbed' condition for the Proposed Development will require offset under the BAM pursuant to the BC Act.

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	The total cost of ecosystem credits, should the Biodiversity Conservation Trust (BCT) be used to offset the potential impacts, are currently (27 August 2019) estimated to be approximately \$23,127.78 (excluding GST). Additionally, no species credits are required for the potential impacts proposed on the Subject Site. It is noted, that the construction phase of development will incorporate best-practice measures and the principles of Ecologically Sustainable Development into the overall design, to provide a State-of-the-Art Data Centre and set a precedent for future modernised industrial development with regard to the immediate and wider localities. It is considered that appropriate recommendations and mitigation measures will be implemented accordingly, for which potential adverse environmental impacts would be significantly reduced and minimised.
<i>Consideration of heat output of external plant (cooling towers, chillers, transformers and diesel generators) and heat absorption/re-radiation of concrete-mass walling/roofing and external hardstand surfaces. - The EIS has identified noise output as a potential problem, and air quality, but does not consider heat output or cold air blown out by the rooftop and platform plant. In addition, the mass concrete structure, non-cool rooftops, and surrounding hard surfaces are highly likely to create an urban heat island (UHI) effect. Not only is this UHI effect likely to contribute to increase in heat waves on a regional scale, it is also highly likely to be detrimental to surrounding vicinity bushland and wetland areas, with altered hot or cold air turbulence, and night-time re-radiation.</i>	As mentioned above, provisions for green roofs and cool roofs to be integrated into the proposed design was considered to be impractical and unfeasible, given the requirement for mechanical plant to be located on the roof area of the proposed Data Centre. Additionally, ARUP acknowledge, that by replacing existing vegetation with a building (and heat rejected by the cooling systems associated with this building) will impact on the microclimate in the general area of the Site in a way that is commonly known as the "Heat Island Effect". It is noted, that any such development proposed on the Subject Site would exhibit similar traits, with respect to direct and indirect impacts to the microclimate, given the Site's IN2 Light Industrial zoning (refer to Appendix 42). Notwithstanding, ARUP suggest, that further studies or investigations are not needed to satisfy relevant planning controls or legislation and such further studies are not considered to be warranted in this respect.
<i>Noise output does not comply, and solutions are yet to be provided in the EIS. If solutions are not found to noise mitigation, the result will be loss of the peacefulness of the bushland walking tracks and kayaking on the river,</i>	It is noted, that in the <i>Acoustic Assessment</i> prepared by ARUP (2019), where non-compliances arose, was due to acoustic testing being determined via a 'worst-case scenario', for which the data extrapolated corresponds with the

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<i>and disturbance to wildlife "24/7". Even then, it appears the 'minimum' requirement only will be met, and this will still adversely impact peaceful tranquillity. The adverse air quality produced by plant, also has not been properly addressed.</i>	upper limit of potential noise emissions incurred, which could be experienced if all generators were operational. This would only occur if there was a power failure experienced on-site during operation. ARUP note, that the project specific targets are particularly low and the Noise Policy for Industry target are typically not adopted for such atypical operations. Furthermore, ARUP suggest, that the likelihood of power failure is generally low, and if it was to occur, the duration of an outage would be expected to be only hours and not for days, for which emissions would be treated to an acceptable level, once the power is restored. Combined with the recommendations, mitigation measures and the Construction Noise and Vibration Management Plan, the noise emissions anticipated to result from the Proposed Development are considered to be acceptable and would not warrant further investigations or amendments to the proposed equipment and mechanical plant to be undertaken.
<i>The clause 4.6 Variation - Height of Buildings - is not considered to provide sufficient justification. Much of the justification for exceeding the height is claimed to be forced upon the proponent by its need for consistency with the surrounding industrial character - but the visual impacts of development on neighbouring property of public reserve land, which is where zones meet, is completely ignored in the analysis. Of the Objectives, it is contrary to "(b) to ensure that privacy and visual impacts of development on neighbouring properties, particularly where zones meet, are reasonable." The proposal exceeds height considerably, and in doing so, it does not meet Objective "(d) to relate development to topography ". The same problem applies to the argument about whether meeting the standard is unreasonable or unnecessary - it fails to even consider the public domain of the bushland reserve, the walking tracks, the river, and the surrounding urban areas of Lane Cove and Ryde, which will see the intrusive development in the riverland context. In this case, the test of Clause 4.6 is failed because the flexibility for height sought in the proposal does not achieve "better outcomes from development "but produces worse outcomes from the</i>	In accordance with the adjacent line item, the Clause 4.6 Variation has been revised to consider the relevant zone objectives raised, as part of the Submission, outlined as follows: <i>(b) to ensure that privacy and visual impacts of development on neighbouring properties, particularly where zones meet, are reasonable,</i> The most significant visual impacts, with respect to the Proposed Development would be noted from ground level, along the walking track, that is noted to meander alongside the Lane Cove River and Stringybark Creek. Geoscapes (2019) have undertaken a further field survey and revised their Visual Impact Assessment, which accounts for the potentially impacted views from the ground level alongside the Lane Cove River and Stringybark Creek. It is noted, that existing and proposed vegetation would provide sufficient and satisfactory landscape screening for any passersby, as well as further reinforce the ecological character of the Site and adjoining bushland area.

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development for all but itself. It is only the proponent, and their tenant, who benefits from the flexibility. Others suffer.

The built-form, particularly the height of the Proposed Development would respond to and be further complemented by the height of adjoining industrial developments along the southern and eastern interfaces; positioned within an area zoned for such permissible industrial-related purposes. Therefore, as a result of the Proposed Development, there would be no undue impacts with regard to visual amenity, privacy or view loss.

Accordingly, careful selection of building finishes and colours, combined with proposed landscape planting across the Site (particularly along the northern and western (including north-western) boundaries of the Subject Site), are considered to be appropriately treated from an architectural perspective, as well as being aesthetically pleasing to mitigate any visual impacts. This will assist in screening the built-form of the Proposed Development within the locality, from any concerned visual perspectives. As a result, this will assist in reducing the potential visual impacts to passersby along the Lane Cove Bushwalk walking track and adjoining industrial sites, that are in close proximity to the Proposed Development and are of the highest sensitivity.

Furthermore, the landscaping treatment proposed, as a result of mitigating potentially impacted views, will be most effective after a period 15 years, which is the point that trees are expected to reach maturity, or an acceptable height. It is noted, that after three (3) years, trees would attain a height of approximately 4 m, based on a 200 mm pot size.

It is noted, that significant tall areas of existing vegetation to be retained across the Site are located along the northern and western boundaries, which are the most visually impacted interface with regard to the sensitive bushland receivers (zoned E2 Environmental Conservation) to the north and west. By increasing the landscaping along this portion of the Site (as well as throughout the Subject Site), this will provide an effective screening measure for the Proposed Development, towards a number of potential visual receivers to the north and west, including the noted E2 Environmental Conservation zone. It is noted, that views looking south and west towards the Site from Sirius Road and Apollo Place

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	are significantly screened and further transitional by existing industrial developments, which further complement the Proposed Development. The Architectural and Landscape Plans for the Proposed Development are included in Appendix 5 & 6, which demonstrate, that there will be no such significant visual impacts on adjoining sites and sensitive receivers within close proximity. <i>(d) to relate development to topography.</i> The overall scale of the Proposed Development seeks to provide a transition from the existing industrial developments along the eastern and southern interfaces comprising developments of similar nature, which are considered compatible in terms of built-form and scale. Additionally, the topography of the Subject Site is on a gradual slope, for which the Proposed Development's architectural design responds to accordingly. Detailed geotechnical investigations and combined civil engineering analysis confirms the topography of the Site can be made suitable for the Proposed Development. The levels and balance of cut and fill across the Site have been designed and proposed to respond to the Subject Site and adjoining site's, so as to not exhibit any adverse visual impacts on nearby sensitive receivers. In relation to topography, it is noted, that portions of the Site are identified by flood affectations. The current gradient and pre-developed scenario of the Subject Site, with respect to flooding, results in significant influxes of stormwater runoff (including potential runoff contaminants given the Site's contaminated history) into identified tributaries such as the Lane Cove River and Stringybark Creek. The post-developed scenario addresses flooding in the 1%, 2%, 5% ARI storm events and responds to current site conditions; thereby, improving the Site's topography by deviating stormwater effectively into the proposed OSD on the Site, located under the Data Centre building, as part of the overall stormwater treatment measures, to be incorporated into the design, prior to discharge.

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	Furthermore, the Proposed Development attributes to the IN2 Light Industrial zone objectives, for which it is compatible with the existing built-form of surrounding developments, providing a gradual transition across the Subject Site accordingly. Notwithstanding, the Clause 4.6 Variation is considered to satisfactorily address the objectives of Clause 4.3 under the LCLEP2009, for which sufficient justification is considered to have been provided. The complete Clause 4.6 Variation request is located within Appendix 35 of this Submission.
<i>The Visual Impact study is not well-presented for viewer understanding. Clearly a rendered model of the proposal has been worked up, yet no effort has been made to insert different views of this model into photomontages. Photos should be taken using a focal length of 55 mm lens which would much more accurately illustrate the real human viewer's vision, and the models inserted at matching focal length. It is considered that the visual impact of the proposal is highly intrusive. The architectural drawings analysing visual impact have used a trick of implying that the permissible 18m high building extent could be much closer to the bushwalker and hence have a much more intrusive impact. But the reality is, this is not what can be achieved because of required buffers, setbacks, bushfire roads, contaminated areas, and so on. There is a massive long bunker wall facing the bushwalker, relieved only by different coloured slabs of tilt-up concrete or similar. Other than different colours, and some vertical sticks, there is no attempt to soften the rigid parapet line of the rooftop or create any lacey effects to screen the battle canon-like rooftop plant design. The proposal should be more sympathetic in its position of transition between industrial buildings and the riverbanks and surrounds. In addition, the elevated columns supporting the driveways are of ugly.</i>	The photomontages were generated using 3D Studio Max software. The 3D model was provided by Greenbox and is an accurate real-time Revit Model. The virtual camera within 3D Studio Max was matched to the baseline photo.
<i>Adverse environmental Impact on adjoining wetlands of alterations to surface/subsurface water flow - inevitable due to large site coverage by</i>	As mentioned above, with regard to subsurface and groundwater conditions experienced on the Subject Site, Senversa confirm, that groundwater was identified at depths ranging from 4 m to 14 m below the surface and was inferred

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<i>buildings and hard surfaces, bulk excavation/fill, loss of rock formations and removal of vegetation.</i>	to be flowing in a north westerly direction towards the Lane Cove River, which meanders the northern boundary of the Subject Site. Additionally, the <i>Assessment of Coastal Wetlands, Groundwater Dependent Ecosystems, Key Fish Habitat and Riparian Vegetation</i> (CT Environmental, 2019), confirms the presence of Coastal Wetlands adjoining the Site; however, they note, that it is unlikely the identified community will be impacted by the Proposed Development. Accordingly, CT Environmental suggest, that it is unlikely the Proposed Development will have a significant impact on groundwater dependent, aquatic and / or riparian ecosystems and improvement to these ecosystems will occur if the following recommendations are implemented, including: ▪ Develop a Stormwater Management Plan (SMP); ▪ Establish appropriate Vegetated Riparian Zones, which include a 40 m buffer from top of bank for Lane Cove River and 20 m from top of bank for Stringybark Creek; ▪ Develop a CEMP; and, ▪ Consider an alternate stormwater management strategy.
<i>Significant loss of trees and detrimental impact on most other vegetation or potential vegetation on the site, as well as off-site detrimental ramifications. The two areas of trees on the site, which provide wildlife corridors, are removed by this proposal. In addition, the APZ requirement is to be likely to slash to produce maximum 10cm long grass (p23, Appendix 23) so native grasses and shrubs growth will not be supported. 10 Hollow-providing trees (out of 12), 24 visually significant trees (out of 29), and 73% of total trees are to be removed. The loss of this native vegetation is a significant loss in the band of vegetation which borders the Lane Cove River and Stringybark Creek, and has an impact greater than the actual area lost, because it impacts wildlife habitat and endangered ecological communities of Estuarine Saltmarsh and Swamp Oak forest.</i>	Ecoplaning note, that the proposed footprint has been modified to minimise impacts to the patch of vegetation in the south west of the Site. Whilst complete avoidance is not possible, satisfactory efforts have been made to avoid tree clearance where possible. With regard to the revised layout, Travers (2019) note in their Tree Assessment Report (refer to Appendix 24), that the SULE assessment identifies that 95 of the observed trees (55.55%) had a SULE condition rating of 1 or 2 (good condition). 35 of the assessed trees (20.47%) had a SULE rating of 4 (poor condition). Eight (8) (or 4.68%) of threes rated 3b or 3c were recommended for removal on an individual basis due to poor health or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance.

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	Accordingly, the Proposed Development works will account for the removal of 84 trees within the impact area regardless of their SULE rating. The breakdown is noted as follows: ▪ Trees removed within or immediately adjacent to the impact area, regardless of SULE rating – 83/171 trees = 48.54%. ▪ Trees removed for poor SULE rating (3b, 3c, 4a-4f) – 39/171 trees = 22.81%. ▪ Retained trees – 49/171 = 28.65%. Tree Protection Zones (TPZs) are to be implemented for any retained tree in accordance with Australian Standard AS4970. The revised layout has been designed to avoid impacts to native vegetation with a higher Vegetation Integrity Score (VIS), specifically Smooth-barked Apple - Red Bloodwood open forest in an 'intact' condition. These avoidance measures have resulted in the retention of 0.28 ha of Smooth-barked Apple - Red Bloodwood open forest in an 'intact' condition, which would not be impacted by the building footprint or proposed APZ. The footprint has avoided impacts to the vegetation in an 'intact' condition where possible and reduced the clearing of native vegetation impacted by the building footprint and APZ extent. As mentioned above, the BDAR has been updated to address relevant sections of the BAM, including sections 8.1.1.4, 8.1.1.5 and 8.1.2.1.
Resident Comment (SE 55057)	
<u>Size of the Development</u> <i>The size of the development is excessive for the site, With FSR exceeding what is allowable when you take into account the underground area and the rooftop infrastructure. It seems all developers try to exceed the allowable development space and it falls on community to try to rectify this.</i>	Noted. The proposed Data Centre remains compliant with the Development Standard under Clause 4.4 of LCLEP2009, with respect to a maximum FSR of 1:1, for which the Proposed Development would achieve an FSR of approximately 0.82:1 (refer to Appendix 5).
<u>Loss of Remnant Native Vegetation</u> <i>The foot print of the proposed building protrudes into the only two areas of what was bushland on this site thus resulting in the loss of most of the native</i>	As stipulated throughout the contents of this Submission, the avoidance of removal of vegetation is almost impossible, with respect to any such development proposed to be undertaken on the Subject Site. Notwithstanding,

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<i>trees on the site and leaving mainly invasive weed species i.e. Camphor laurels and Privets.</i> <i>This situation should be reversed with most of the native trees retained and the weed species removed and some supplementary planting done to strengthen these areas. These areas of native vegetation though small serve to support the nearby reserve with habitat and a wild life corridor and should be preserved. Our reserves are under pressure from development and usage and need all the support they can be given.</i>	through strategic landscaping and retention of trees where possible, the integrity of the adjoining bushland will not be comprised.
<u>Landscaping</u> <i>Due to the very large bulk of the development some landscaping should be done to screen the building from the massive visual impact from the bushland track, the river and the opposite bank.</i> <i>I understand that due to bushfire regulations that there are limited possibilities to achieve this within the site. However, consultation with council and a payment for the costs and the establishment of the plantings, such a screen could be achieved on the contaminated land adjoining the site with mounds of top soil to facilitate plantings. This would greatly contribute to the health of the reserve and reduce the detrimental visual impact. A solution would need to be worked out with Council.</i>	In accordance with the Landscape Design Report, prepared by Geoscapes (refer to Appendix 7), the proposed landscape design will create an indigenous rich environment, that will be cohesive with the natural character of the Lane Cove River corridor and bushland. It will also help to mitigate the Proposed Development from visual receptors by filtering views through vegetation. This will be especially important for those receptors within close proximity to the Proposed Development, while still complying with bushfire and VMP requirements. A low maintenance and low water use philosophy is to be adopted across the Site, with respect to the landscape design.
<u>Earthworks and Hydrology</u> <i>There are massive excavations and other earth work to be undertaken on this site which will have an extensive impact on the surface and sub surface water to the wetlands to the south and southwest of this site. This change to the site hydrology will be further impacted by the change from soft to hard surfaces with the building covering a major proportion of this site. It appears that all the water from the roof and other storm water is to be directed to Stringybark creek in one pipe.</i> <i>This is very concerning as this could divert vital water from the wetland area. This aspect of the design need to be reassessed, so that an appropriate</i>	The hydrological conditions across the Site have been previously responded to above. Further consideration is not considered to be warranted in this respect.

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<i>amount of water is slowly released back to the wetland area. Also the storm water that is to be discharged into the creek needs to be re-examined so that at least it goes through some distilling basins in order to reduce of the velocity of the flow and thus avoid damage to the creeks banks.</i>	
<u>Overshadowing of the Reserve</u> <i>In order to produce the levels required for this development as well as massive excavations an enormous amount of fill will be required thus raising soil levels adjacent to the wetlands area. On top of that we will have a tall building. Thus, producing considerable overshadowing onto the reserve to the south and the south west. I feel that some adjustment to the proposal should be made to reduce this effect.</i>	The levels and quantities of cut and fill proposed across the Subject Site have been previously considered and substantially justified throughout this Submission, for which there would be low and no adverse impacts on adjoining sensitive receivers with regard to overshadowing.
<u>Sediment Control a Major Issue</u> <i>With such extensive earth work sediment control will be a major issue on this site. This needs to be of the highest standard and regularly checked and maintained. We have had a recent problem in this area from the site when some earth works were carried out and despite some effort made to put siltation fabric around the lower part of the boundary fence in heavy rain a large spill occurred into the salt marsh area. The sediment escaped both over the top and under the siltation fabric. On this site there should be two siltation barriers, then if silt escapes the first barrier it should be stopped by the second barrier. There should also be particular attention given to the lowest drainage point. Maintenance of siltation barriers during construction is also critically important.</i> <i>Ventemans Reach is a vital part of the river frontage vegetation. It is also a highly valued part of the network of small reserves that are found throughout the Lane Cove municipality. These reserves are highly valued by the community and have been actively cared for and managed by council since the late 1970's. In 1991 Council adopted a Plan of Management for Bushland, employed specialised staff and allocated annual funding. As a result, our reserves are cared for and relatively free of weed and provide a varied habitat for native animals and birds. Ventemans Reach also has a</i>	As mentioned above, the revised Architectural Plans and Landscape Plans (refer to Appendix 5 & 6) include provisions for stormwater treatment measures, which provide additional stormwater management outcomes for the Proposed Development across the Subject Site, drastically reducing the potential for stormwater runoff and resultant sediment and erosion from taking place. Further, the incorporation of stormwater treatment measures into the proposed design would significantly improve pollution reduction targets across the Site by limiting potential pollutants from being discharged into nearby tributaries, including the Lane Cove River and Stringybark Creek. Stormwater Treatment Measures to be implemented would improve the water quality in the immediate downstream locality of the Lane Cove River and nearby adjoining Coastal Wetland areas, requiring mitigation and due consideration.

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<i>great diversity of plant communities including an ecologically endangered salt marsh. With its boardwalk it is a beautiful area to walk through.</i>	
NSW Environment Protection Authority (Jacqueline Ingham – Unit Head – Regulation Unit North)	
<i>An auditor accredited under the Contaminated Land Management Act 1997 be required to confirm the appropriateness of the Remedial Action Plan, and to issue a Section A Site Audit Statement and Report on completion of the works confirming suitability of the site for the intended use.</i>	Noted and agreed. The appropriateness of the RAP prepared by Senversa is being verified accordingly by an appointed consultant.
<i>Please also consider the advisory letter previously provided by the EPA, dated 12 December 2018.</i>	Noted and agreed.
Fire and Rescue NSW (Superintendent Mick Henly – Manager Infrastructure Liaison Unit)	
<i>Confirmation should be provided that no flammable liquids will be stored with the diesel such that it would be treated as a class 3PGIII dangerous good in accordance with SEPP 33.</i>	In the SEPP 33 – Preliminary Risk Screening Report, prepared by SLR Consulting, they confirm, that there are no Dangerous Goods to be used or stored at the Subject Site; therefore, the Data Centre is not considered to be potentially hazardous (refer to Appendix 22). Additionally, it is noted, that diesel fuel to be stored on-site, is not classed as Dangerous Goods, rather is classed as a C1 Combustible Liquid, provided that no flammable liquids are stored with the diesel fuel.
<i>Consultation with FRNSW be undertaken by way of the Fire Engineering Brief Questionnaire (FEBQ) process prior to the issue of the relevant construction certificate.</i>	Noted and agreed.
<i>Further information be provided in regard to the storage of the diesel on site, including consideration and provisions made for special problems of fighting fire in accordance with E1.10 of the National Construction Code (NCC).</i>	Diesel fuel proposed to be stored on-site would be appropriately screened, for which the SEPP 33 screenings for storage of Dangerous Goods indicates, that the Proposed Development may not be classified as a hazardous or offensive industry (refer to Appendix 22).
NSW Office of Environment & Heritage (Tim Olliver – A/Senior Customer Strategies Officer – Heritage Division)	
<i>Thanks for the referral, I've had a look at the documentation and the Heritage Division has no concerns in relation to State Heritage. The Department does not need to refer subsequent stages of this proposal or modifications to the Heritage Division (i.e. Heritage Council). Please note, other Divisions of OEHL may respond in relation to biodiversity or Aboriginal Cultural Heritage.</i>	Noted and agreed.

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NSW Roads and Maritime Services (Pahee Rathan – Senior Land Use Assessment Coordinator – North West Precinct)	
<i>Vibration monitoring will be required around the south-eastern side of the proposed development to monitor the vibration attenuation within the area of the LCT MCC, ventilation shaft and ventilation tunnel to the satisfaction of LCT & Roads and Maritime.</i>	Vibration Monitoring: Vibration monitoring will be implemented during the construction phase of the Proposed Development. The Construction Management Plan (CMP) prepared by AW Edwards satisfactorily addresses the construction procedures to be undertaken on-site, for which the finalised version will be made available prior to the issue of a Construction Certificate (CC) (refer to Appendix 43). Other Proposed Works: Refer should be made to the plans in Appendix A of Appendix 45, which identifies the relationship of the proposed in-ground services zone to the LCT ventilation tunnel easement. The shaded area represents the zone, which will have new stormwater, and comms cables installed. It is understood, that the RL to the top of the stratum ranges from RL 6.5 to RL 10.0 within the zone, that crosses the Subject Site. The lowest services in this particular area will be located at an RL of 23.0, approximately 13.0 m above the stratum level, for which there will not be any impacts on the easement.
<i>Foundation design – detailed drawings showing foundation design especially on the eastern side of the proposed development should be provided for review and assessment by LCT & Roads and Maritime.</i>	Foundation Design: The proposed foundation system is provided in structural drawing SY180 197 SK00/P1, prepared by Van Der Meer (refer to Appendix 45). Given the depth of the ventilation shaft it is anticipated, that there will be no such impacts on the existing LCT asset.
<i>Developer should confirm if a retention system will be extended beyond the site boundaries towards the east and south eastern side of the site boundary.</i>	Retention System: There will be no works extending beyond the boundaries of the Site. The proposed drainage system will be contained along the perimeter of the Data Centre (refer to Appendix 45), for which there will be no direct impacts anticipated on the LCT.
<i>It is noted only a single borehole has been taken within the proximity of the LCT MCC area. It is suggested further boreholes within this area would assist in providing a more accurate geotechnical profile in this area.</i>	Additional Boreholes:

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	It is noted, that at present, the single borehole adjacent to the south-eastern boundary of the Site gives a reasonable level of certainty on the existing site conditions. During the construction phase, additional boreholes will be undertaken by qualified Geotechnical Engineer, to provide an accurate representation of the area adjoining the LCT ventilation tunnel, for which the data will be provided to the NSW RMS, when completed.
<i>According to the landscape plan, native canopy trees are to be planted at the south-eastern boundary of the proposed site which appears to be overhanging with 5 Sirius Road lease area. Information of the particular type of trees and vegetation should be provided for review as concerns raised regarding the tree root may damage our current retaining wall structures if they are planted too close to the retaining wall.</i>	Proposed Landscape Treatment: Reference should be made to the revised Landscape Plans (refer to Appendix 6), specifically, drawings LDA 02 and LDA 07, which outline the proposed landscaping approach along the southern boundary. The initial planting selections have been amended to incorporate smaller species, which will not have any adverse impacts on existing infrastructure assets beyond the Site boundary.
<i>Developer should provide design information of any significant works outside the building profile which may impact LCT assets.</i>	Other Proposed Works: Refer should be made to the plans in Appendix A of Appendix 45 , which identifies the relationship of the proposed in-ground services zone to the LCT ventilation tunnel easement. The shaded area represents the zone, which will have new stormwater, and comms cables installed. It is understood, that the RL to the top of the stratum ranges from RL 6.5 to RL 10.0 within the zone, that crosses the Subject Site. The lowest services in this particular area will be located at an RL of 23.0, approximately 13.0 m above the stratum level, for which there will not be any impacts on the easement.
<i>As-Built drawings of the LCT ventilation stack as well as the ventilation tunnel can be issued to the Developer upon request for further design assessment, as the ventilation shaft and ventilation tunnel are not indicated or referenced on the design information.</i>	As-Built Drawings: The as-built drawings for the LCT could be assessed accordingly to further inform any potential impacts.
City of Ryde Council (Kripa Sharma – Client Manager – Development Assessment)	
<i>I refer to your email below and wish to advise you that Council has no objection to the proposed development.</i>	Noted and agreed.
Transport for NSW (Mark Ozinga – Principal Manager, Land Use Planning & Development – Freight, Strategy & Planning)	

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<i>The Applicant shall prepare a Transport Access Guide (TAG) / Sustainable Travel and Access Plan (STrAP) as provided for under Section R.5 of the Lane Cove DCP.</i>	A Sustainable Travel and Access Plan (STrAP) and Transport Access Guide (TAG) has been prepared by ARUP (2019), which aims to provide measures, which positively influence transport demand and behaviours in relation to the Proposed Development (refer to Appendix 41). The STrAP and TAG prepared by ARUP concludes, that there are always opportunities to reduce car dependency to encourage travel to the future site by sustainable, alternative modes – taking particular advantage of the Site’s close proximity to nearby bus stations. It is noted, that a proportion of the staff working at the Site may also live within walking distance to the Site. Furthermore, in order to promote active travel to the Site, five (5) bicycle parking spaces are provided within a secure room for staff. It is concluded, that these travel demand measures complement the objectives of the NSW Government to encourage non-car modes to make up a larger mode share of travel on roads. Further consideration is not considered warranted in this respect.
Sydney Water (Fernando Ortega – A/Manager, Growth Planning & Development)	
Sydney Water Requirements: ▪ Due to the nature of the typically high water & wastewater demand and discharge requirements for a Data Centre, it is recommended that the developer lodges a feasibility application to identify any servicing constraints which will facilitate determination of detailed servicing requirements prior to a Section 73 application. ▪ The feasibility application should be submitted with a detailed water and wastewater concept servicing proposal. The concept servicing/connection plan should include water and wastewater daily and peak volumes/flow rates for all stages of the development proposal.	It is noted, that the required processes and approval pathways stipulated by Sydney Water are underway and will be resolved prior to issue of a Construction Certificate.

PART F ENVIRONMENTAL RISK ASSESSMENT

6.1 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The SEARs were issued on 21 December 2018. The Key Issues include:

- Strategic Context;
- Urban Design and Visual;
- Suitability of the Site;
- Community and Stakeholder Engagement;
- Soils and Water;
- Traffic and Transport;
- Noise and Vibration;
- Contamination;
- Heritage;
- Waste;
- Air Quality;
- Hazards and Risks;
- Bushfire;
- Socio-Economic Impacts; and,
- Biodiversity.

The above matters are satisfactorily addressed in the sections detailed below.

6.2 STRATEGIC & STATUTORY CONTEXT

Sections 2.3 and **4.2** above have previously considered the Proposed Development's strategic and statutory context.

Furthermore, the Proposed Development, for the purposes of Data Centre is considered consistent with the intended development of industrial land within the Lane Cove LGA. The Proposed Development would enable the efficient and sustainable use of such designated industrial land via adherence to the provisions, and overarching aims, and objectives set out within LCLEP2009 that allows for the construction and operation of Data Centres. The Proposed Development would beneficially contribute to the regional and local economies, and population groups positioned in the wider locality.

The Proposed Development is considered compatible with surrounding industrial land uses (southern and eastern interfaces), including warehouses and industrial facilities alike, that are designated for such employment-generating land uses of similar and parallel nature within the Lane Cove West Business Park. The Subject Site is not located in proximity of any residential development (~550 m west along Pittwater Road, East Ryde) or other sensitive land uses; therefore, would not exhibit any adverse environment or amenity impacts. It is noted, that to the north of the Site there is identified bushfire prone land and ecological communities for which are further analysed in the respective consultant reports in **Sections 6.11 & 6.15** of this EIS. Accordingly, any recommendations drawn from these reports would be adopted and adhered to.

The proposed site layout and building design would ensure the functional operation of the Data Centre in accordance with the needs of the end user, whilst not impacting on any other operations. Similarly, the Site and built form have been designed in respect of the planned / existing road infrastructure, noting its direct linkages to the wider regional road network, including the M2 Motorway and Epping Road.

As mentioned above, the Proposed Development would not exhibit any significant environmental impacts and would not adversely impact on the amenity or operations of any

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adjoining sites within close proximity to the Subject Site. Therefore, the Proposed Development would be considered compatible with the Site's strategic and statutory context.

6.3 URBAN DESIGN AND VISUAL

This part of the EIS takes into account the SEARs, specifically addressing the Urban Design and Visual assessment items.

The layout and design of site features and built form have been considered in terms of the visual amenity of the Proposed Development, with respect to the broader area in order to facilitate a positive visual outcome. Specifically, the visual impact of the proposal is informed by the following:

Site Layout including Landscaping

The proposed site layout has been designed to ensure the efficient use of the land and the functionality of the proposed Data Centre meets the operational requirements of the end-user. The overall site layout is configured in a sense, to provide fluid access to and from the facilities provided on-site, whilst offering a sense of safety and continuity concerning circulation of vehicle and pedestrian movement on-site.

The precise siting of the various structures and hardstand areas of the Site including buildings, offices, loading docks, car parks and landscaping, has been strategically coordinated to provide a functional layout and coherent visual outcome. Where feasible offices have been positioned and orientated to address the street frontage and loading docks located away from the street frontage.

Soft landscaping around the perimeter of the Site and in the building separation zones would soften the appearance of the built form and contribute to an attractive streetscape characterised by native vegetation planting and green verges. Vegetation planting would provide a natural buffer between the Site and surrounding allotments to define the separate buildings and ensure views to and from the Site take in high quality landscaping. Additionally, setbacks allow for landscape buffer planting to help screen the Proposed Development and integrate the Site within its broader environment.

The Subject Site contains access from Sirius Road to identified car parking areas and applicable loading docks for the proposed Data Centre. This has been designed in accordance with Australian Standards.

To comply with the LCDCP2009, bushfire requirements and the VMP, the landscaping design aims to provide the following:

- Adhering to the bushfire requirements as set out in the Bushfire Report (refer to **Section 6.15 & Appendix 27**);
- Adhering to the VMP requirements as set out by Travers Ecology;
- Preservation and retention of existing trees where possible on the advice of the project Arborist;
- Strengthen the local character with the use of local indigenous species. These are to be selected predominantly from the LCDCP2009;
- Provision of 10% of the Site for Landscape Amenity for workers;
- Provision of 36% Landscape Area;
- To help screen and filter views of the development for users of the adjacent bushland and visual receptors within the wider context with tree and shrub planting.

The following aspects have been designed accordingly as follows:

North

Turf is intended to be regularly mowed to a height of 40 mm so that workers can sit and enjoy breaks. Park shelters and seating are also proposed to provide additional shade amenity and passive relaxation. Planting of indigenous trees and shrubs and groundcovers are proposed as per the VMP to complement the existing backdrop of adjoining bushland. Furthermore, a 4 m fire trail is required to comply with RFS requirements. This is proposed to be a reinforced grid structure with seeding over the top and is to be regularly maintained to prevent windborne seeds taking root.

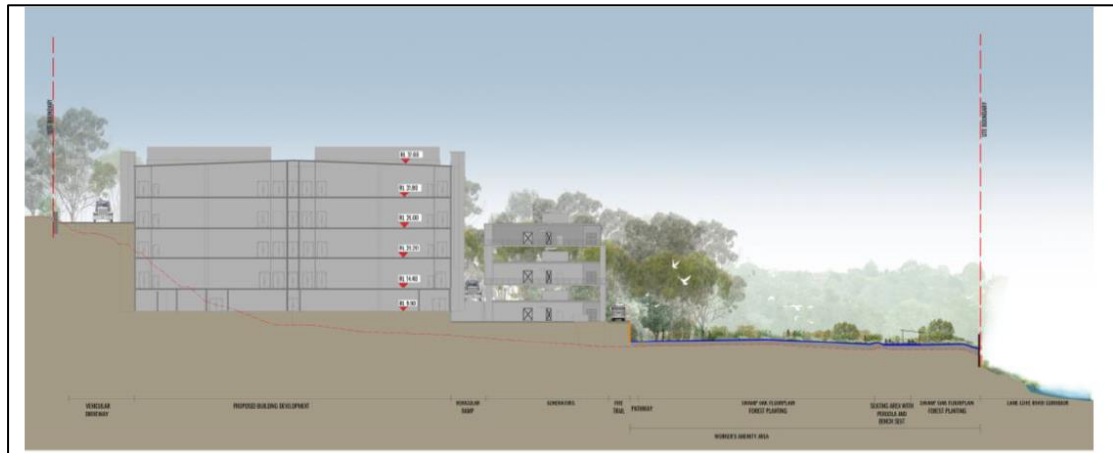


Figure 21 North and South Section of the Proposed Development (Source: Geoscapes, 2019)

East and West

An indigenous seed mix of local grasses is proposed to help prevent soil erosion and enable regular slashing / mowing to a height of 100 mm. Existing trees are retained where possible and additional planting is provided in the form of scattered trees and shrubs. Smooth barked species and evergreen trees and shrubs are preferred.

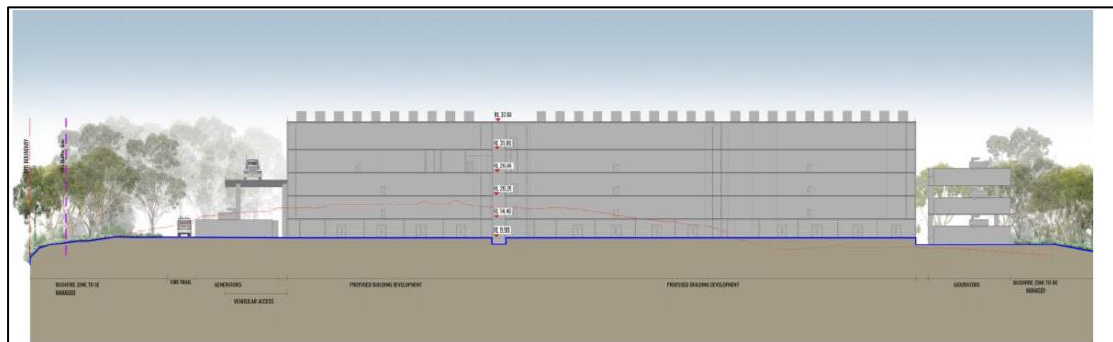


Figure 22 East and West Section of the Proposed Development (Source: Geoscapes, 2019)

South

This area contains the entry approach from Sirius Road. On the eastern side, existing landscaping associated with the Harley Davidson development is proposed to be retained. On the western side, landscape areas exist along the verge and have also been incorporated between the proposed retaining wall and the adjoining development. Native trees, shrubs and mass planted groundcovers have been proposed in these areas.

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Furthermore, the proposed landscape design will create an indigenous rich environment that will be cohesive with the natural character of the Lane Cove River corridor and bushland. It will also help to mitigate the Proposed Development from visual receptors by filtering views through vegetation. This will be especially important for those receptors in close proximity to the Proposed Development, whilst still complying with the specific bushfire and VMP requirements. A low maintenance and low water use approach is to be adopted across the landscape design.

The Landscape Plan and Landscape Design Report are annexed to this EIS at **Appendix 6 & 7** of this EIS, which include a range of endemic and exotic species selections creating an indigenous rich environment, as mentioned above. It is considered that the species selected are suitable for the soil and climatic conditions and would therefore serve the intended purpose addressing the landscaping aims as addressed above.

Design of Built Form

The proposed built form incorporates high quality design and fabric to ensure a positive visual outcome and sustainable development.

The bulk and scale of the proposed built form is typical of similar industrial developments throughout the Lane Cove West Business Park and is therefore considered highly appropriate for the Site. The proposed Data Centre buildings would exhibit a consistent design, which would be considered transitional and complementary given the context of the broader area in direct proximity of the Site.

The positioning of the built-form is considered transitional to the adjoining industrial premises surrounding the Subject Site, which allows the proposed height of the Proposed Development to be broken down accordingly via the gradual transition that would be experienced with regard to height. Proposed planting along Sirius Road and the northern boundary would help create another buffer level to help conceal and reduce the scale of the Proposed Development furthermore.

The proposed building bulk and scale would not cause any undesirable visual impact, view obstruction, privacy intrusion or loss of solar access owing to the provision of adequate setbacks, building separation and deep-soil landscaping. It is noted that the Data Centre would ascertain a height of approximately 30.2 m (forming a non-compliance with Clause 4.3 of LCLEP2009); however, the pertained height in contrast to the overall site area would be further justified by the architecturally pleasing design, maintaining the aesthetic quality of the Lane Cove West Business Park, achieving a gradual transition between buildings surrounding the Subject Site, whilst not impinging and compromising any existing views and vistas.

The proposed development would be expressed in simple volumetric forms, which would display the functional aspect of the Site operations, reflecting flexibility for any future expansion intended. The hardstand zone is located at the southern aspect of the Subject Site, which serves a function of accommodating parking and any deliveries.

The proposed site layout has been designed to address the street frontage through the positioning and orientation of offices at the forefront of the Site where feasible. This would provide additional façade articulation as-well-as opportunities for passive surveillance of the street and car park in accordance with the principles of CPTED. To a similar effect loading and service areas have been located away from the street frontage and naturally screened by vegetation to mitigate an adverse visual impact.

Additionally, the functionality of building type is architecturally articulated through language of simple contrast, with the solid volume of data storage space fronting the corner of Sirius Road and the adjoining industrial developments along the southern and eastern interfaces. Façade articulation is incorporated in building design through a complementary variety of materials,

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colours design features and openings, which would create visual interest and prevent the presentation of large expanses of blank wall with positive connotations for views towards the Site.

Height, Scale, Materials and Colours

The Proposed Development considered six (6) varied schemes (refer to **Appendix 37**) prior to deciding on the proposed Masterplan for the Subject Site. It is important to note, that all of the schemes drafted, formed non-compliances (particularly regarding height). The preferred scheme was 'Scheme 6', which the final design, represented in the Architectural Plans (refer to **Appendix 5**) has been designed with similarities drawn.

Further reinforcing the Landscape Design Report (refer to **Appendix 7**), the *Landscape and Visual Impact Assessment Report* (Geoscapes, 2018) considers the potential visual impact on visual receptors that were perceived to potentially have the highest sensitivity to the Proposed Development (refer to **Appendix 8**). These visual receptors include:

- Lane Cove Bush Walk, Lane Cove West (VP1);
- Arise Meriton, Lane Cove West (VP2); and,
- Lane Cove Valley Walk, Lane Cove North (VP3).

Receptors which are regarded to have less sensitivity but have also been assessed are:

- Magdala Park, North Ryde (VP4);
- Honeywell Office, North Ryde (VP5);
- Ryde Gardens (VP6);
- 44 Cox Road, East Ryde (VP7);
- 282 Pittwater Road, East Ryde (VP8); and,
- 102 Melba Drive, East Ryde (VP9).

It is important to note, that immediately adjacent to the east of the Proposed Development include several commercial and industrial buildings that are identified at higher topographical elevations than the Site, for which the Proposed Development would be screened by these existing developments. Furthermore, significant vegetation along either side of the Lane Cove River to the north, west and south is also present, which provides screening for many potential visual receivers.



Figure 23 Viewpoint Locations (Source: Geoscapes, 2018)

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Figure 24 On-Site at Eye Level (Position 1) Looking North (Source: Geoscapes, 2018)



Figure 25 On-Site at Eye Level (Position 1) Looking West (Source: Geoscapes, 2018)



Figure 26 On-Site at Eye Level (Position 1) Looking South (Source: Geoscapes, 2018)

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Figure 27 On-Site at Eye Level (Position 2) Looking North (Source: Geoscapes, 2018)

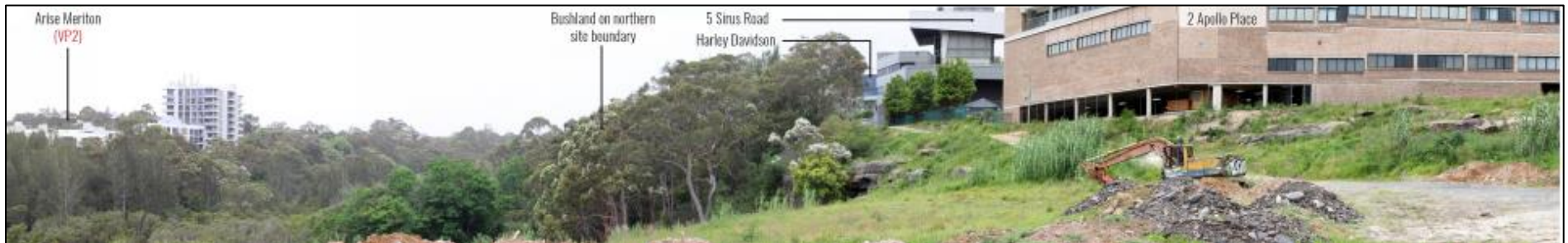


Figure 28 On-Site at Eye Level (Position 2) Looking East (Source: Geoscapes, 2018)



Figure 29 On-Site at Eye Level (Position 2) Looking South (Source: Geoscapes, 2018)

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Figure 30 On-Site at Eye Level (Position 2) Looking West (Source: Geoscapes, 2018)



Figure 31 Drone at 40 m RL (Position 1) Looking North (Source: Geoscapes, 2018)

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Figure 32 Drone at 40 m RL (Position 1) Looking East (Source: Geoscapes, 2018)



Figure 33 Drone at 40 m RL (Position 1) Looking South (Source: Geoscapes, 2018)

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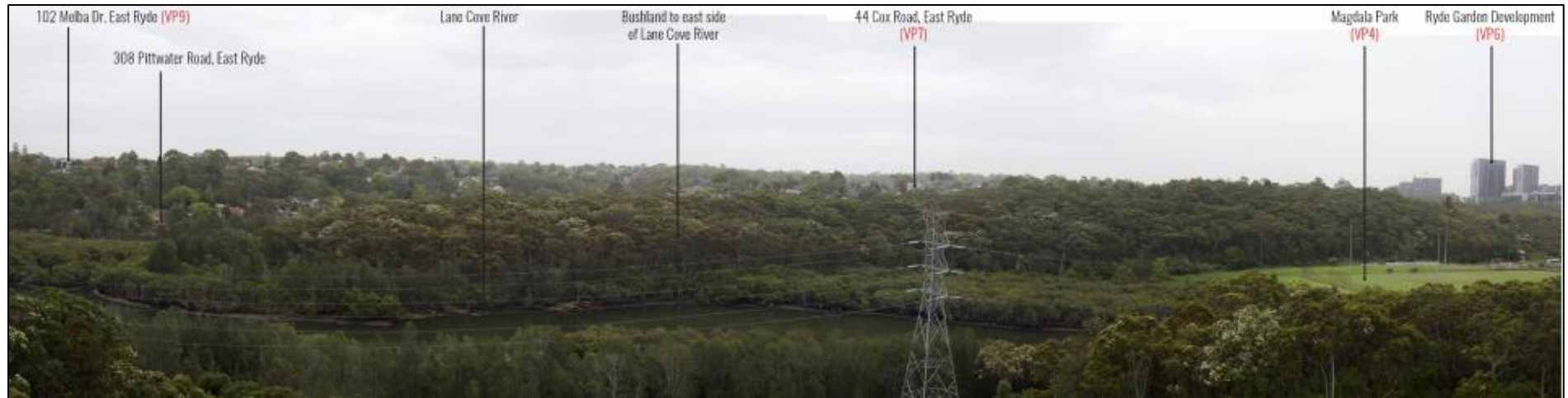


Figure 34 Drone at 40 m RL (Position 1) Looking West (Source: Geoscapes, 2018)

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The Proposed Development has been designed to work with the natural topography of the Site. By setting the Proposed Development down into the Subject Site, this ensures that the maximum height of built elements does not protrude higher than the adjacent existing building of 1 Apollo Place. 1 Apollo Place has a roof height of 39 m AHD and other similar types of building further to the southeast are taller.

Additionally, the colours, materials and finishes have been selected to consider the surrounding bushland in which the Proposed Development will be situated. Building facades contain four (4) colours

As previously suggested, many tall canopy trees would be planted within all designated landscape areas. Almost all planting within the development is proposed to be native with a substantial proportion of endemic species too, creating an indigenous rich environment. This would ultimately increase the vegetated area and surrounds of the Site from the existing condition and further complement the densely populated vegetative zones adjoining the Subject Site to the north.

The design concept for the Proposed Development was based on a vision to provide quality functional building design solutions, that respond to the Site and wider surroundings accordingly, by providing a flexible working environment appropriate for end users and visitors alike, relevant to the current nature of industrial development practices.

As mentioned in **Section 3.5** of this EIS, the Subject Site was chosen as it would be able to accommodate the Proposed Development both commercially and from an operational standpoint.

Land Use Conflict

The Subject Site is located within Lane Cove West Business Park, which comprises a versatile range of industrial land uses pursuant to its IN2 Light Industrial zoning. Accordingly, the Site context may be described as part of an employment-generating industrial precinct (Lane Cove West Business Park), which the proposed Data Centre would positively contribute to. Given the existing industrial character of the Site's surrounds, no land use conflict is expected to occur.

There are a range of land uses which surround the Subject Site, all of which have been given due consideration in the design of the Subject Site. Of particular relevance, the following land uses are noted within the vicinity of the Site:

- **East** – Lane Cove West Business Park, which contains various industrial-related developments of similar nature and scale to that of the Proposed Development. Due consideration has been given to this area; hence, the Subject Site being chosen based on its compatibility with the surrounding land uses.

Further to the east include other residential and educational (Lane Cove West Public School) land uses. It is considered that the separation distance between the Subject Site and the above land uses would be sufficient to ensure there would not be any unacceptable, visual, noise, air or traffic impacts.

- **North** – Comprises bushland identified as bushfire prone land. The Subject Site would retain identified bushland where possible, as well as integrate an aesthetically pleasing architectural landscaped design.
- **South** – Contains various industrial-related developments of similar nature and scale to that of the Proposed Development. The southern interface is reflective to that of the eastern interface providing a gradual transition of industrial development towards the Subject Site.

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- **West** – Comprises bushland identified as bushfire prone land. The Subject Site would retain identified bushland where possible, as well as integrate an aesthetically pleasing architectural landscaped design. Additionally, further west comprises the Lane Cove River, which is identified as a 'Coastal Wetland' under the Coastal Management SEPP. The Proposed Development would not compromise the identified land portion in any way, for which a controlled activity approval would be required. Notwithstanding, the Proposed Development would incorporate mitigation measures (where considered necessary) in the form of an erosion and sediment control plan to limit any potential runoff from occurring.

In terms of the public domain, Sirius Road and Apollo Place (and potentially driving along Epping Road) are the main vantage points which afford a direct view to the Site. These roads presently have limited capacity for pedestrian movement and experience relatively low traffic volumes (besides Epping Road). Vehicles passing the Site would afford a direct view of the proposed Data Centre; however, given the proposed architectural articulation and deep soil landscaping, the visual impact would be considered acceptable.

It is noted that the following recommendations must be adhered to accordingly prior to the issuance of a Construction Certificate (refer to **Table 22** below), including:

Table 22: Indicative Noise Mitigation Measures		
Item	Location	Attenuation Details
Water-cooled Chillers	Enclosure	Enclosure achieving 15-20 dB noise level reduction.
Cooling Towers	Intake / discharge / equipment reselection	A collective noise level reduction of 25-30 dB is required which is likely to require a reselection of the cooling tower type along with intake/discharge attenuators.
Diesel Generators (backup power only)	Inlet / Discharge	Gensets recommended to be specified with a maximum emission of 72 dB(A) @ 1m. Discussed further below.
	Exhaust	
	Enclosure	
Building Envelope	Walls	Precast concrete ~150 mm Doors may need to be acoustically rated dependant on location.
	Roof	Recommend concrete ~150 mm.
Transformers	Enclosure	Enclosure achieving 10-15 dB noise level reduction.

The Visual Impact Assessment (refer to **Appendix 8**) concludes, that the Proposed Development will create visual impacts for several user groups that are in close proximity to the Proposed Development site. The following residential locations are judged to receive moderate¹ visual impacts from the proposed Data Centre. These include:

- Lane Cove Bush Walk, Lane Cove West (VP1);
- Arise Meriton, Lane Cove West (VP2);
- Lane Cove Valley Walk Bridge (VP3).

The following locations are judged to have moderate minor impacts:

- 282 Pittwater Road, East Ryde (VP8);
- 102 Melba Drive, East Ryde (VP9).

The following locations are judged to have minor visual impacts:

¹ The sensitivity of the location is combined with the predicted magnitude of change to determine the level of effect on any particular receptor (Geoscapes, 2018).

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- Magdala Park, North Ryde (VP4);

The following locations are judged to have minor negligible visual impacts:

- Honeywell Office (VP5);
- Ryde Gardens, North Ryde (VP6).

The following locations are judged to have negligible visual impacts:

- 44 Cox Road, East Ryde (VP7).

The locations with moderate visual impacts anticipated are based on their proximity to residential properties or locations to the Site and the extent of the view being affected. Overall it is judged that the architectural design and treatment of the Proposed Development considers the surrounding context (including land use) and landscape.

Geotechnical Assessment

It is noted from the Phase 2 Investigation (Senversa), that at least some of the contaminated material has been recommended for removal offsite as part of the works; however, the removal of the material within the footprint of the building is not required from a geotechnical perspective, as confirmed in the Geotechnical Report undertaken by Douglas Partners (refer to **Appendix 12**).

The geotechnical issues considered relevant to the proposed development include excavation and associated vibration, stress relief, excavation support, earthworks, groundwater, settlement, foundations and earthquake provisions. These issues are discussed further below in **Section 6.5** of this EIS.

Development Control Plan

It is noted, that Development Controls Plans do not apply to SSDAs under the SRD SEPP. Notwithstanding, the LCDCP2009 is addressed in **Section 4.4.3** and **Appendix 35**, having regard to the specific controls which apply to the Subject Site, and the level of compliance achieved with regard to the proposed development. As noted in **Section 4.4.2 & 4.4.3**, there are no numerical non-compliances with the proposed development – despite the increased height, which has been strategically justified (refer to Clause 4.6 Variation in **Appendix 34**); therefore, the subject scheme is considered consistent with the objectives of the DCP which are:

- *Provide detailed planning provisions supplementing the Lane Cove LEP 2009.*
- *Support the locality's sustainability in environmental, social and economic terms.*
- *Conserve, protect and enhance the environmental and built heritage of Lane Cove.*
- *Contribute to effective management of biodiversity.*
- *To protect the quality of water catchments, encourage the use of water sensitive urban design and promote the adoption of whole of water cycle management principles.*
- *Minimise any impacts of transition to higher residential and employment density zones.*
- *Minimise any impacts of the redevelopment of uses not conforming to the zone they are in, by having regard to the scale and character of the surrounding neighbourhood.*
- *Balance individual and community interests to preserve and, where appropriate, improve the existing character and amenity of the municipality.*
- *Enhance the visual quality and functionality of the public and private domain interrelationship.*
- *Achieve an overall character for neighbourhoods that enhance s their sense of identity and place.*

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- *Provide a context for the economic vitality of centres.*
- *To promote use of public transport, walking and cycling as the main forms of access, particularly within commercial centres.*
- *Regulate the visual impact of all development within foreshore areas.*
- *Further the goal of equal access for all residents and visitors.*
- *Enhance opportunities for cultural experiences throughout the natural and built environment by promoting public art.*

Surrounding Vehicular, Pedestrian and Cycling Networks

The Subject Site is well serviced by the bus network, for which the existing services are shown in **Figure 35** below.



Figure 35 Public Transport Services (Source: ARUP, 2018)

Additionally, the Subject Site can be accessed by cyclists from the north (via Epping Road) connecting to Mars Road. Dedicated bicycle lanes are provided on both Epping Road and Mars Road, which provide safe and convenient access from the Subject Site through to the surrounding area (refer to **Figure 36** below). Furthermore, the Lane Cove Bicycle Plan has also been included for reference (refer to **Figure 37** below).

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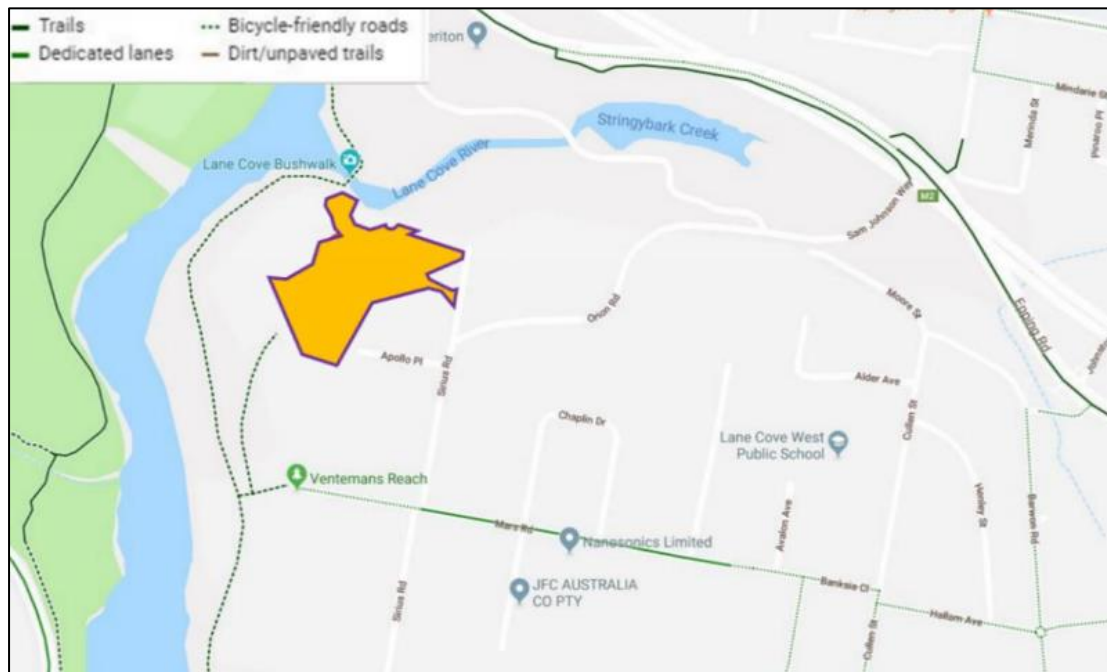


Figure 36 Existing Cycle Infrastructure (Source: ARUP, 2018)



Figure 37 Lane Cove Bicycle Plan with the Proposed Bicycle Network (Source: ARUP, 2018)

Signage

Signage would not form a large or dominate component of the Proposed Development. Any signs would be subtle and would not be visually obtrusive in any such way. Additionally, any signage would most likely represent the style of other signage within the area.

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Lighting

Lighting would be provided with a combination of light poles and building mounted lighting around the Site for on-site security and safety. Lighting would be strategically positioned to shine inward towards the Proposed Development to minimise any anticipated light spillage onto adjoining properties. The layout of the buildings, internal roads and loading areas would ensure that neighbouring properties would not be affected by light spillage.

Additionally, lighting would be restricted to allow access at night, for which this would comprise general lighting to the identified car parking areas and entry points to the Data Centre building.

6.4 SAFETY, SECURITY AND CRIME PREVENTION

The principles of Crime Prevention Through Environmental Design (CPTED) have been considered in the design of the proposed development.

The CPTED guidelines were prepared by the NSW Police in conjunction with NSW DP&E. CPTED provides a clear approach to crime prevention and focuses on the 'planning, design and structure of cities and neighbourhoods'. The main aim of the policy is to:

- Limit opportunities for crime;
- Manage space to create a safe environment through common ownership and encouraging the general public to become active guardians; and,
- Increase the perceived risk involved in committing crime.

The guidelines provide four (4) key principles to limit crime, including:

- Natural Surveillance;
- Access Control;
- Territorial Reinforcement; and,
- Space Management.

Principle 1 – Surveillance:

The attractiveness of crime targets can be reduced by providing opportunities for effective surveillance, both natural and technical.

- The proposed development would orientate active areas such as the ancillary offices and building entrances towards surrounding roads, pedestrian paths, car parking areas and deep-soil landscaping;
- The proposed development would utilise low lying landscaping in appropriate locations to ensure there would be no obstruction of surveillance opportunities; and,
- External lighting would enable the maintenance of sight-lines and surveillance after dark.

Principle 2 – Access Control

Access Control can be defined as physical and symbolic barriers that are used to 'attract, channel or restrict the movement of people'.

- The Site would be secured by perimeter fencing and access gates to deter unauthorised access to the Site; and,
- Directional signage to heavy vehicle, car parking, pedestrian paths and building entries would define the various areas of the Site, providing legibility and minimising vehicular and pedestrian conflict with the Site.

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Principle 3 – Territorial Reinforcement

Territorial Reinforcement can be described as creating a sense of ownership to a public space or vicinity, encouraging the usage of that space. By increasing usage capability, this also deters crimes and further increases the chances of a crime being witnessed and reported in a timely manner.

- The provision of security-controlled entrances to the Site and proposed Data Centre would emphasise the separation between the private and public domain; and,
- Well maintained landscape design would indicate the proposed development is well-used and cared for to reduce criminal activity.

Principle 4 – Space Management

Space Management is intuitive of Principle 3 – Territorial Reinforcement – and, refers to ensuring a space is utilised and cared for appropriately.

- On the ground level, pathways and planters would be well maintained by a landscape contractor. Continued repairs and maintenance would discourage vandalism; and,
- High quality materials, varied façade treatments and landscaping along boundaries would assist in discouraging vandalism and graffiti.

The proposed development would successfully integrate the four (4) principles outlined to limit crime outlined in the CPTED guidelines, which are adopted into the PDCP2014.

6.5 SOILS AND WATER

The *Water Quality Report* (Van Der Meer, 2018) considers the water quality requirement for the Subject Site as well as investigating appropriate stormwater management strategies for the Subject Site in accordance with Council's requirements (refer to **Appendix 9-11**).

The following information and documents were utilised for the investigation undertaken, including:

- Sydney Water – Stormwater Quality Target 2016;
- Detailed Site Survey Plans;
- Architectural Plans defining the proposed works and existing infrastructure; and,
- LCDCP2009 – Part O: Stormwater Management.

Stormwater Quality Control

Van Der Meer note, that a significant catchment is currently directed through the Subject Site comprising the following features:

- An inter-allotment drainage easement from Apollo Place between number 1 and 2 Apollo Place via a 375 mm concrete pipe.
- An overland flow path at the end of Apollo Place between 2 and 3 Apollo Place.
- Drainage from Sirius Road down the main access road to our property.
- An inter-allotment drainage from the end of Sirius Road along the rear of 1A Sirius Road.
- A small catchment (approximately 400 m²) from the low side of 3 Apollo Place, draining the hardstand of the property.

Sydney Water has a water quality target set before the stormwater runoff enters any Sydney Water asset or natural waterway. The site-specific water quality targets are outlined in **Table 23** below.

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Table 23: Pollution Reduction Targets

Pollutant	Reduction Target
Total Suspended Solids (kg/yr)	85% reduction of the annual load
Total Phosphorus (kg/yr)	60% reduction of the annual load
Total Nitrogen (kg/yr)	45% reduction of the annual load
Gross Pollutants (kg/yr)	90% reduction of the annual load

Accordingly, the treatment train proposed for the Proposed Development are summarised below:

Erosion & Sediment Control

- During construction, water quality control is achieved by deposition and trapping of silt clays, which often has nutrients such as phosphorus and nitrogen attached to their surfaces. Silt fences will be erected prior to construction to control sediment runoff. This will reduce and isolate sediments and particulate matter.
- An Erosion and Sediment Control Plan has been provided in accordance with LCDCP2009 and within Landcom's "Managing Urban Stormwater – Soils and Construction (2004). This will ensure that a significant portion of sediments and attached nutrients can be contained on-site during construction (refer to **Appendix 9**).

CDC Separator

- Is a device to contain and retain gross pollutants, litter, sediments and associated oils using energy of the inflow to create a vortex flow regime within the CDS screening chamber. A single CDS 1012 (or approved equivalent) will be used at the Site discharge point.

EnviroPod 200

- EnviroPod 200 filters will be placed at all proposed surface inlet pits within the Proposed Development to assist in concentrating suspended solids into particulate sizes for removal.

Rainwater Tank

- One (1) 100 kL rainwater tank will be placed at the proposed location within the Subject Site. Accordingly, MUSIC modelling predicts a reduction in predicted flow by approximately 48%.

Filter Cartridges

- StormFilter is a proprietary device containing multiple cartridge units in a single system, for which are considered suitable for larger catchments.

Infiltration Trenches

- Infiltration trenches are suitable for holding water and slowly releasing into the surrounding soil. They assist in improving ground water levels, removing pollutants, primarily sediments and reducing runoff.
- The trench system totals 240 m in length and runs along much of the north western and south western perimeter of the Site.

Table 24 below shows the calculated mean annual pollutant loads for the proposed site conditions before and after the implementation of the treatment devices.

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Table 24: Summary of Treatment Train

	Total Suspended Solids (kg/yr)	Total Phosphorus (kg/yr)	Total Nitrogen (kg/yr)	Gross Pollutants (kg/yr)
Pre-Treatment	1,510	3.55	20.1	311
Post-Treatment	196	0.829	7.03	0.9

The Sydney Water Stormwater Quality Target 2016 outlines the requirements for the reduction of pollutants from stormwater before it can be discharged from the Site. These targets are listed in **Table 25** below together with the percentage pollution reduction that will be achieved by the proposed treatment train.

Table 25: Comparison of Pollutant Reduction Target vs. Achieved

Pollutant	Reduction Target		
Total Suspended Solids (kg/yr)	85%	87.0%	YES
Total Phosphorus (kg/yr)	60%	76.6%	YES
Total Nitrogen (kg/yr)	45%	65%	YES
Gross Pollutants (kg/yr)	90%	99.8%	YES

By implementing the proposed treatment train measures as part of the Proposed Development, there would be no detrimental effect on the quality of stormwater running off from the Subject Site.

Notwithstanding, the key strategies to be adopted as part of the Proposed Development include:

- A pit and pipe network to collect minor stormwater runoff from surface areas, which will minimise nuisance flooding;
- Oceanguard at nominated inlet pits will form part of the water quality treatment train, removing pollutants and nutrients that are detrimental to downstream waterways;
- CDS Separator to treat stormwater runoff before discharging into the downstream waterways;
- One (1) 110 kL rainwater tank will be used to collect stormwater runoff from roofs and could be used for reapplication purposes such as landscaping; and,
- Two (2) chambers with 5 and 10 filter cartridges in the proposed locations.

Accordingly, the Proposed Development, with the proposed Water Sensitive Urban Design (WSUD) strategy and management can provide a safe and ecologically sustainable environment. Furthermore, the Proposed Development and the proposed water quality treatment devices comply with Council's and Sydney Water's requirements.

Flooding

In the *Flood Report* prepared by GRC Hydro (refer to **Appendix 10**) a WBNM model was developed in order to generate catchment flows from applied rainfall. Resultant flows were then applied to the Site TUFLOW model. Critical duration for Stringybark Creek analysis was undertaken in the WBNM model to determine the storm duration responsible for 1% AEP and PMF events peak flood levels in the catchment. The results of critical durations were two (2) hours for 1% AEP (assume for 0.5% AEP event) and one (1) hour for PMF.

The flood levels at the four (4) reported points are shown in **Table 26** below.

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Table 26: Flood Levels in Critical Durations for Each Event

	Point 1 Flood Level (m AHD)	Point 2 Flood Level (m AHD)	Point 3 Flood Level (m AHD)	Point 4 Flood Level (m AHD)
1% AEP	2.6	2.5	2.5	2.4
0.5% AEP	2.7	2.5	2.5	2.4
PMF	5.6	5.5	5.4	5.2

The results indicate that:

- Flood levels in the relevant reach of Stringybark Creek pertain more to the Lane Cove River water level than they do the flow generated by the catchment; and,
- To be flood free, buildings would be set at a level no lower than ~5.4 m AHD.

The 1% AEP peak flood levels at four (4) critical points have been obtained from the TUFLOW model results, shown in **Table 27** below.

Table 27: Flood Levels in Critical Durations for Each Event

	Point 1 Flood Level for 1% AEP (m AHD)	Point 2 Flood Level for 1% AEP (m AHD)	Point 3 Flood Level for 1% AEP (m AHD)	Point 4 Flood Level for 1% AEP (m AHD)
Tailwater Level for 20 year ARI event (1.38 m AHD)	2.1	1.8	1.8	1.4
Tailwater Level for 100 year ARI event (2.35 m AHD)	2.5	2.4	2.4	2.4
Tailwater Level for PMF event (4.3 m AHD)	5.0	5.1	5.0	4.8

Based on the flood modelling undertaken, the following mainstream flood levels apply to the Site (or surrounds):

- 1% AEP – 2.5 m AHD;
- 0.5% AEP – 2.5 m AHD;
- PMF – 5.4 m AHD.

The lowest habitable building level is 14.4m m AHD (excluding basement). It is therefore reasonable to suggest that the Proposed Development is unaffected by flooding.

Geotechnical

It is noted from the Phase 2 Investigation (Senversa), that at least some of the contaminated material has been recommended for removal offsite as part of the works; however, the removal of the material within the footprint of the building is not required from a geotechnical perspective, as confirmed in the Geotechnical Report undertaken by Douglas Partners (refer to **Appendix 12**).

It should be noted, that the approximate cost of removing the entirety of the fill material from the Site would be in the region of approximately \$7-9M (assuming 13,000 m³ – 15,000 m³ at a density of 1.8 and a cost to dispose, inclusive of testing, formal waste-classification, dig, haul and dispose of \$250-\$300/tonne).

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The field work for the geotechnical investigation was undertaken between 12 and 15 November 2018 and included ten (10) machine-drilled boreholes. A site walkover and measurement of groundwater levels in standpipe piezometers was carried out by an engineering geologist on 6 December 2018. The current test locations are shown in **Figure 38** below. The geotechnical issues considered relevant to the proposed development include excavation and associated vibration, stress relief, excavation support, earthworks, groundwater, settlement, foundations and earthquake provisions.

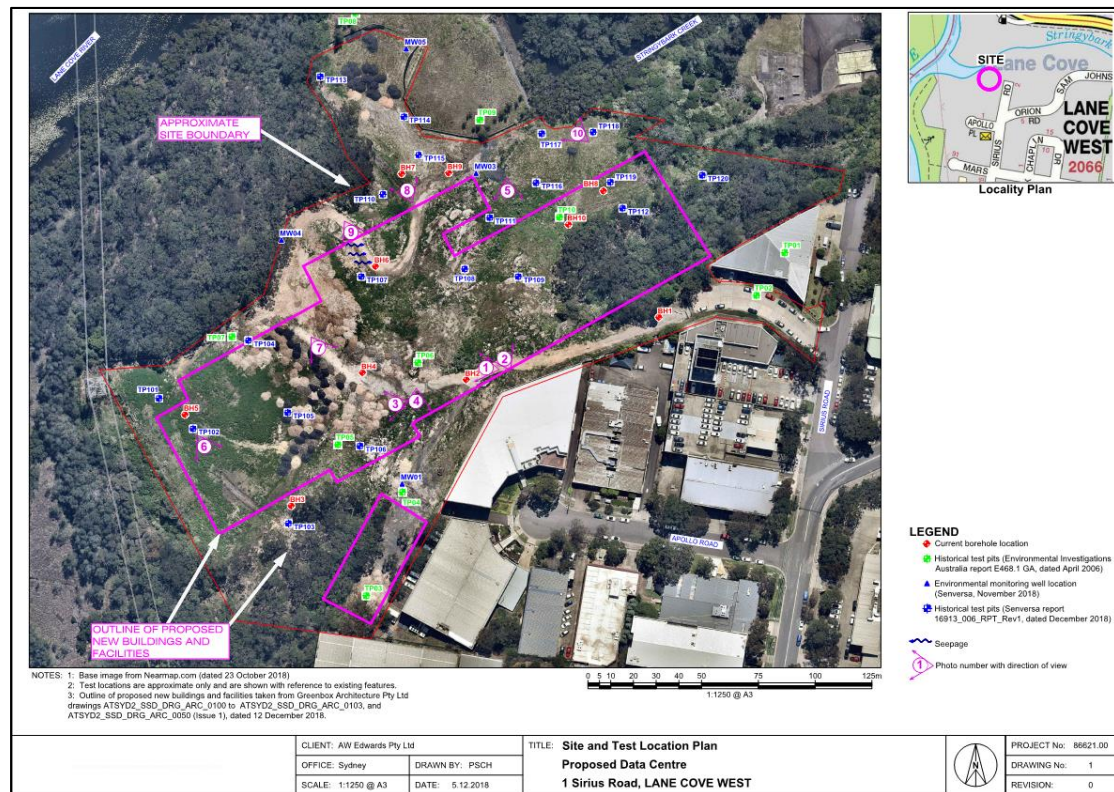


Figure 38 Site and Test Pit Locations (Source: Douglas Partners, 2018)

Excavation

The Geotechnical Report (refer to **Appendix 12**) suggests, that excavation near cliff lines will require careful assessment with regard to safety of workers, both above and below the cliff. The filling, colluvial and residual soils should be readily excavated using conventional earthmoving equipment; however, the use of heavy plant will be required to excavate medium strength and stronger rock. Based upon the exposed rock and the core from the boreholes, some discontinuities and lower strength bands are present within the medium and high strength rock units, which may aid excavation.

Effective removal of the medium or higher strength sandstone within the lower levels of the excavation should be achieved by heavy bulldozers ripping in conjunction with rock hammers; however, excavation contractors should make their own assessment of likely productivity depending on their equipment capabilities and operator skills.

In accordance with the Phase 2 Investigation undertaken by Senvensa (refer to **Appendix 14**), if excavations are proposed within the asbestos affected or PASS materials then an Acid Sulfate Soil Management Plan will be required.

Materials Re-Use

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Any offsite disposal of material will require assessment for re-use or classification of the soil in accordance with *Environmental Guidelines: Assessment, Classification and Management of Non Liquid Wastes* (NSW EPA, 2014: Reference 8), prior to disposal to an appropriately licensed landfill. This includes filling and natural materials that may be removed from the Site. Accordingly, environmental testing will need to be carried out to classify spoil prior to transport from the Site.

Stress Relief

Although stress relief movements are likely to occur over a relatively short duration, it is likely that there will be some small, long-term stress relief movements. It is impracticable to provide restraint for any relatively high in-situ horizontal stresses present within the Hawkesbury Sandstone. Therefore, concrete / structural elements should not be cast directly against the excavated rock face and it would be prudent to leave a gap between the structure and the rock face on the southern side of the Subject Site, which will accommodate any minor movements.

Regular monitoring of survey targets along the excavation perimeter during construction, such as following each successive 'drop' in excavation level, should be undertaken to monitor the effects of stress relief. If vertical or horizontal movements in excess of 6 mm are recorded, further excavation should be temporarily suspended to enable a careful review of the data and implementation of appropriate control measures.

Settlement

The duration of immediate and consolidation settlement could be reduced by the installation of ground treatment such as wick drains, and the magnitude of post-construction settlement could be reduced by pre-loading the area to be constructed over the alluvium. However, based on the magnitude of calculated settlement it is expected that suspended floors will be required to assess the various available options.

Vibration Control

Assuming that the nearby buildings are founded on medium or high strength sandstone, it is suggested that vibrations be provisionally limited to a peak particle velocity (PPV) of 8 mm/s at the ground level of the neighbouring buildings to protect architectural features. The provisional level complies with AS/ISO 2631.2-2014 and is below the normal building damage threshold level.

Batter Slopes

Although batters are not shown in the Architectural Plans (refer to **Appendix 5**), it is likely that a temporary batter / access ramp will need to be maintained through the central area of the Site for continued construction access. The recommended maximum batter slopes for excavated slopes is presented in **Table 28** below.

Table 28: Recommended Maximum Batter Slopes for Excavated Slopes		
Excavated Material	Temporary Batter	Permanent Batter
Filling	1.5H:1V	2H:1V
Extremely low to very low strength sandstone	0.75H:1V	1H:1V
Low strength sandstone	0.5H:1V	1H:1V
Medium strength sandstone (or better)	Vertical	Vertical

Excavation Support

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Excavation faces retained either temporarily or permanently will be subjected to earth pressures from the ground surface down to the top of medium strength rock. Suggested material parameters for the preliminary design of excavation support structure are summarised in **Table 29** below.

Table 29: Suggested Material Parameters for Preliminary Design of Excavation Support Structures

Material	Bulk Density (kN/m ³)	Coefficient of Active Earth Pressure (K _a)	Coefficient of Earth Pressure at Rest (K ₀)	Ultimate Passive Earth Pressure (kPa)
Filling	18	0.3	0.6	-
Soil: Residual and Colluvial	18	0.25	0.5	-
Sandstone: Extremely low to very low strength	22	0.1	0.2	400
Sandstone: Low strength	22	0	0.1	2,000
Sandstone: Medium strength	22	0	0	6,000

Anchors may be required to support blocks or wedges exposed during excavation. The design of temporary ground anchors for the support of potential unstable rock wedges may be carried out using the typical average bond stresses at the grout-rock interface given in **Table 30** below.

Table 30: Recommended Maximum Batter Slopes for Excavated Slopes

Material Description	Allowable Bond Stress (kPa)	Ultimate Bond Stress (kPa)
Sandstone: Very Low Strength	50	100
Sandstone: Low Strength	150	300
Sandstone: Medium Strength	500	1,000
Sandstone: High Strength	1,000	3,000

The Geotechnical Report suggests, that in normal circumstances the building will restrain the excavation over the long term and therefore ground anchors are expected to be temporary only.

Groundwater

Based upon the groundwater observation and ground conditions encountered during the investigation, the groundwater drawdown effects on adjacent properties are likely to be negligible.

Douglas Partners recommend that supplementary geotechnical investigation be completed at a later stage of the project to confirm the geotechnical model in areas where there are geotechnical gaps. The supplementary investigations include:

- The site of the proposed electrical substation, in the southwest corner of the Site (including thermal resistivity);
- Investigation and assessment of groundwater levels and rock mass permeability, to refine the assessment of likely groundwater flows into the excavation; and,

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- Further testing and assessment of the filling and alluvial soils in the eastern area of the Site, to refine estimates of settlement and to confirm the depth and extent of potential Acid Sulfate Soils.

Contamination

The Subject Site is regulated by the NSW EPA under the *Contaminated Land Management Act 1997* as the northern portion of the Site was previously found to be impacted by contaminated fill material. It is noted, that it was remediated by capping the fill material with clay and a 'Notice Maintaining Remediation' (No.28027, 27 September 2005) was put in place on it by the EPA.

Based on the results of the investigation undertaken (discussed in **Section 4.2.9** of this EIS), Senversa considers that the Subject Site can be made suitable for the Proposed Development and recommends that a Remedial Action Plan (RAP) be developed accordingly. Notwithstanding, the following requirements should be adopted during and / or prior to remediation, including:

- *Specific requirements for any works that impact the portion of the Site, subject to the 'NSW EPA Notice Maintaining Remediation' (No.28027, 27 September 2005).*
- *Additional groundwater monitoring to assess identified PFAS within fill and groundwater within the vicinity of the inferred capped area.*
- *Additional ground gas monitoring to assess whether carbon dioxide issues may have a potentially significant impact on the Proposed Development.*
- *An Acid Sulfate Soils Management Plan.*

The RAP (refer to **Appendix 16**) prepared by Senversa provides the following remedial objectives with regard to the Proposed Development, including:

- Develop a strategy that complies with requirements detailed within the 'NSW EPA Notice Maintaining Remediation' (No. 28027, 27 September 2005).
- Develop and implement a strategy to ensure the Site is suitable for the use as a commercial / industrial Data Centre.
- Mitigate risks to human health during and following the remedial works.
- Validate the completed remedial works as satisfactorily allowing the development.
- Meeting regulatory requirements prescribed by relevant regulatory agencies to carry out the remedial works and for site use.
- Completed works should lift the Maintenance of Remediation Order and hence end the regulation of the Site under the *Contaminated Land Management Act 1997*. This would be replaced by a passive EMP that is listed on title and made legally enforceable by means of a development application condition.

Based on the analytical results obtained during the Phase 2 Investigation undertaken by Senversa (refer to **Appendix 14**), the required remediation comprises management of the following practices, including:

- Impacted fill material within the "capped area" subject to the NSW EPA Notice Maintaining Remediation.
- Asbestos impacted surface materials located within the northern and central portion of the Site.
- Isolated fill materials located within the western portion of the Site.

The Report notes, that any developed remedial strategy should include a process for assessment / characterisation of any unexpected finds and / or additional fill materials. The locations of these areas is illustrated further in **Figure 39** below.

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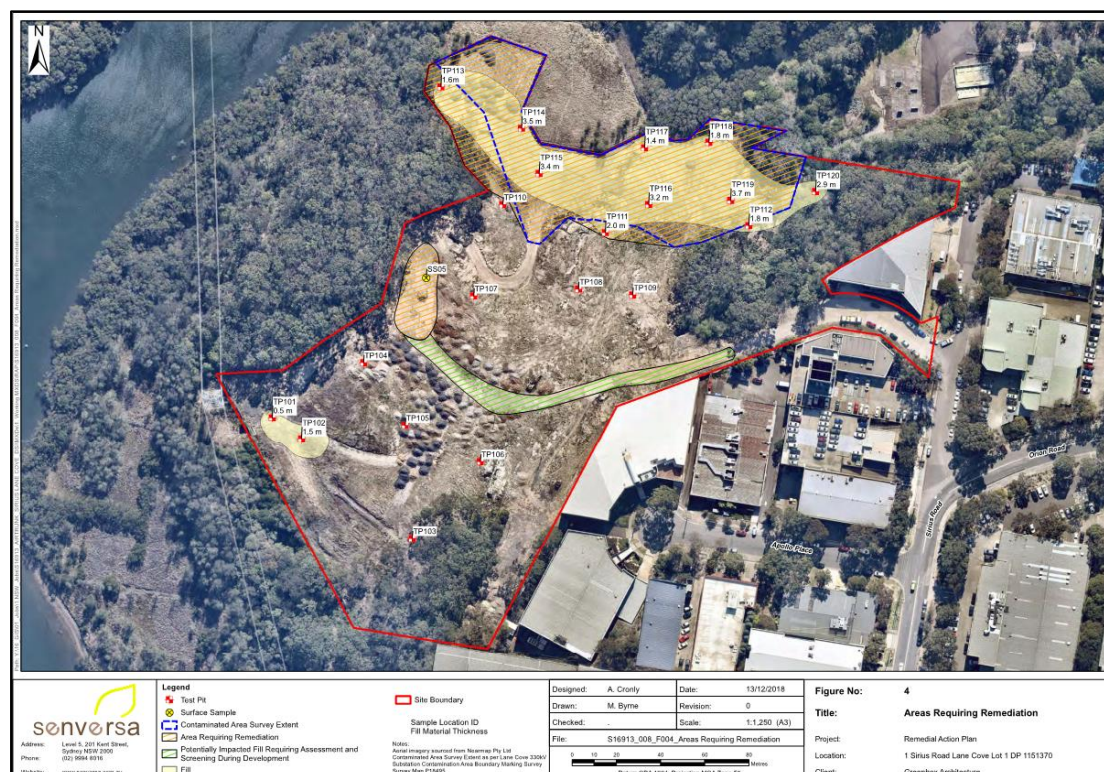


Figure 39 Areas of the Subject Site Requiring Remediation (Source: Senversa, 2018)

The proposed remediation works will be undertaken in a staged manner over approximately six (6) stages. These include:

- Stage 1 – Preliminaries and Approvals;
- Stage 2 – Engagement of Environmental Consultant;
- Stage 3 – Establishment of Environmental Controls;
- Stage 4 – Development Controls;
- Stage 5 – Validation.

The stages listed above will comprise the following proposed remediation works, including:

- Preliminaries and approvals.
- Engagement of an environmental consultant.
- Address data gaps and preparation of a Work Plan.
- Establishment of environmental controls.
- Preparation of placement areas and (where necessary) excavation of designated placement locations.
- Excavation and (where necessary) temporary stockpiling of contaminated fill materials from Remediation Areas.
- Placement of contaminated materials within designated locations within the Site.
- Construction of a cover layer over impacted materials.
- Validation of excavations, and cover and marker layers.
- Classification of waste materials (if generated) prior to offsite disposal and assessment of imported materials to the Site.
- Production of a remedial.

Senversa note, that residual impacted materials will require long-term management. Following the completion of remedial and validation works, a long-term Environmental Management Plan (LTEMP) will be prepared. The LTEMP will document the expected limitation of on-site use;

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relevant environmental and health and safety processes and procedures; management processes, procedures and responsibilities to be adopted by future site users within the Site; and, include details on the location and extent of placed or residual asbestos contaminated fill materials, capping layers and marker barriers within the Site.

Notwithstanding, it is considered the impacted portion of the Site identified within the Phase 2 Investigations could be rendered suitable for the Proposed Development.

6.6 TRAFFIC AND TRANSPORT

The *Sirius Road Data Centre: Traffic Impact Assessment – SSDA Submission* (ARUP, 2018) considered the potential traffic impacts of the Proposed Development (refer to **Appendix 17**).

The road hierarchy near the Subject Site is shown in **Figure 40** below and comprises the following roads of interest, including:

- Epping Road;
- Orion Road; and,
- Sirius Road.

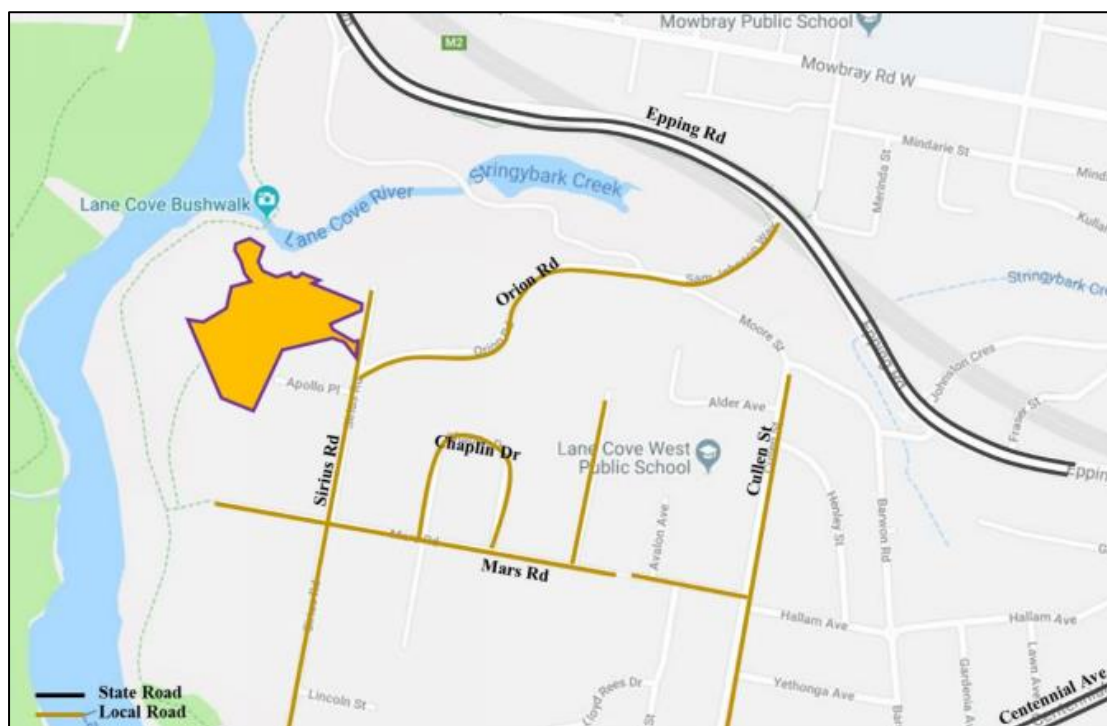


Figure 40 Road Hierarchy (Source: ARUP, 2018)

Access to the Site is proposed via the main vehicular crossing off Sirius Road. This would provide access for vehicles up to 19 metres in length in the proposed loading areas. From an operational standpoint, it is anticipated that identified commercial vehicles, such as Articulated Vehicles and Medium Rigid Vehicles (and other small vehicles such as cars) would enter the Site via the eastern access driveway to access the hardstand area. It is noted, that sufficient hardstand is provided for vehicles to be able to make a 'u-turn' on-site. Additionally, the car parking area has been designed accordingly to be accessed by cars and other light passenger vehicles.

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Furthermore, the roads surrounding the Site contain a significant amount of on-street parking, which is generally untimed and available for all day use. An on-street car parking occupancy inspection of the surrounding roads (within 400 m of the Subject Site) was carried out on Friday 7 December 2018 for the following roads, including:

- Sirius Road;
- Orion Road;
- Apollo Place;
- Mars Road; and,
- Chaplin Drive.

It was observed that on a typical weekday around 90% of on-street parking spaces were occupied. Based on the 2016 Journey to Work Census data for the area surrounding the Subject Site, approximately 86% of the preferred mode of travel was by car. In response, the proposed Data Centre would make provisions for approximately 76 car parking spaces on the Subject Site (refer to **Figure 41** below).

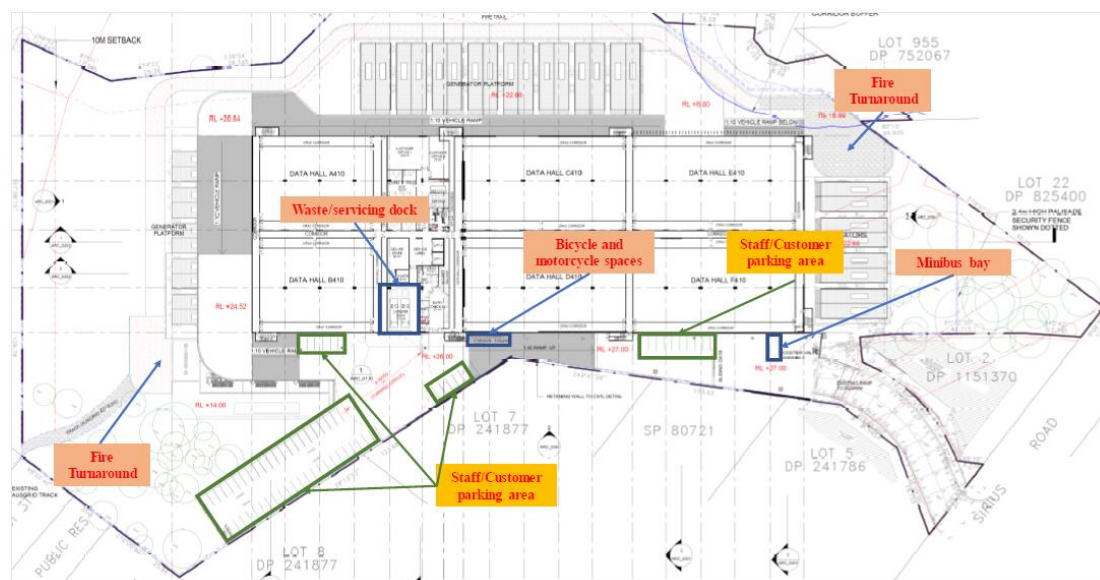


Figure 41 Proposed Site Layout with Regard to Parking and Loading Areas (Source: ARUP, 2019)

Parking for the Proposed Development has been assessed in accordance with the requirement of the LCDPC2009 (Part R), which requires parking to be provided in accordance with the relevant controls below, including:

- Light Industrial Area: Minimum of one (1) space per 77 m² GFA; plus
- Office Component: Minimum of one (1) space per 60 m² GFA; plus
- Warehouse Area: Minimum of one (1) space per 300 m² GFA; plus
- One (1) disabled space per 50 car parking spaces (minimum 1 space).

Based on the LCDPC2009 guidelines, the Site should provide a minimum of 98 car parking spaces. Additionally, the DCP guidelines assume that the size of each component of a proposed building is directly proportional to the number of employees; hence, the required car parking spaces.

It should be noted, that at full capacity, a total of 80-100 people per day will be generated by the Proposed Development, including management staff, data centre engineers, maintenance technicians, security personnel and customer staff.

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By applying the existing mode share percentages to the number of people on-site at any one time, the Site should provide at least 84 car parking spaces. The Proposed Development proposes to provide 67 off-street parking spaces, which is deemed to satisfy the expected parking demand for the following reasons:

- A minibus bay is proposed outside of the front gate for drop off and pick up of the staff.
- A Transport Access Guide (TAG) / Sustainable Travel and Access Plan (STrAP) can be provided for the Proposed Development under Section 5.1 of the LCDCP2009. This is a package to reduce car-based travel and include mode share targets. The objective of this is to encourage customers / staff to make greater use of public transport, vanpooling, car sharing, walking and cycling for their journeys to / from the Proposed Development site.
- As a result of the measures to be implemented by the future development to encourage alternate modes of transport, it is assumed that a 20% mode shift away from the private vehicle can be achieved compared to the current mode share for people working in the area. By applying this reduction factor to 84 car parking spaces, 67 car parking spaces will be required.
- An annual travel survey can be conducted by the Sirius Road Data Centre.
- Some parts of the trips to / from the Proposed Development would be generated by people in the local area. The trips originating from the local area would rely more on walking and cycling mode choice rather than using private cars.

In accordance with the Architectural Plans prepared by Greenbox Architecture (2019), there are approximately 68 car parking spaces provided for the Proposed Development.

Additionally, LCDCP2009 requires the provision for disabled car parking spaces at the rate of one (1) space per 50 car spaces. In response, the Proposed Development proposes two (2) disabled / accessible car parking spaces, complying with the requirement. Furthermore, Part R of Council's DCP requires the provision for bicycles and motorcycles at the rate of one (1) space per 20 staff and one (1) motorcycle parking space per 15 car parking spaces, respectively. A total of five (5) bicycle parking spaces and four (4) motorcycle parking spaces are required by the LCDCP2009, for which have been provided accordingly.

The trip generation for the Site has been based on guidance specified in Section 3.10 of the RMS Guide to Traffic Generating Developments, which stipulates that the peak traffic generation period for the industrial land use is generally determined by three (3) key factors, including:

- Employee density;
- Travel mode; and,
- Peak period travel distribution.

From an operational perspective, the staff and shift numbers and times for the development are expected as the following:

- Day Shift Staff: 7:00am-7:00pm – 70 staff on-site, including 25 customer staff;
- Night Shift Staff: 7:00pm-7:00am – 20 staff on-site, including five (5) customer staff; and,
- At full capacity, a total of 80-100 full-time roles will be generated by the Proposed Development, including management staff, data centre engineers, maintenance technicians, security personnel and customer staff.

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In this regard, the Proposed Development will generate vehicle trips generally associated with the arrival and departure of staff with only infrequent service deliveries expected (maximum of three (3) service vehicle movements per day in peak period). The traffic generation of the Proposed Development would be as per **Table 31** below.

Table 31: Trip Generation for the Proposed Development				
Travel Modes	Mode Split	No. of Trips	Vehicle Occupancy	No. of Vehicles
Private Car	66%	66	1.05	63
Public Transport	24%	24	N/A	N/A
Active Transport	6%	6	N/A	N/A
Other	4%	4	N/A	N/A
Total	100%	100	N/A	63

The peak period travel distribution (i.e. the proportion of workers who travel to or from the Site in the peak hour), varies with the type and extent of development. For the proposed Data Centre, it is assumed, that 50% of day shift staff trips would occur over a single hour.

The level of vehicle traffic generated by the Proposed Development during operation, for both the AM and PM peak hours, as well as daily volumes are presented in **Table 32** below. The Proposed Development is estimated to generate a total of approximately 31 vehicle trips during the peak hour.

Table 32: Forecast Traffic Generation the Proposed Development	
Period	Number of Vehicles Generated by the Proposal
AM Peak Hour	31
PM Peak Hour	31
Daily	190

It should be noted, that the peak hour demand during the weekend is generally significantly lower compared to weekdays.

The volumes during the peak periods would equate to an addition of one (1) vehicle trip being generated every two (2) minutes and are therefore considered to result in minimal impacts on the surrounding road network and that traffic modelling software would not be sensitive to such small fluctuations of vehicular flows. In summary, the traffic impacts for the Proposed Development are considered acceptable.

The design of the Site has been designed in accordance with the following Australian Standards, including:

- AS2890.1-2004 Parking Facilities: Off-street car parking;
- AS2890.2-2002 Parking Facilities: Off-street commercial vehicle facilities;
- AS2890.3-2015 Parking Facilities: Bicycle parking facilities; and
- AS2890.6-2009 Parking Facilities: Off-street car parking for people with disabilities.

A swept path analysis was conducted (Appendix B of **Appendix 17**) to check compliance with the road design standards using approved software, for which the proposed design complies with the relevant standards.

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Additionally, the loading areas for the Proposed Development are located in three (3) various areas around the Site. These loading areas have been designed for 19 m long articulated vehicles (AV) to access pumps and other equipment located around the Subject Site, for which they also have a required 4.5 m height clearance. Accordingly, access and circulation has been analysed for both 19 m AVs and 8.8 m medium rigid vehicles (MRVs), for which the waste area would be accessed by MRVs.

Additionally, emergency vehicles are proposed to access the Site off Sirius Road, similar to the loading / service vehicles. It is noted, that emergency vehicles (up to 10.5 m – fire general compliance) is smaller in size than the 19 m AVs. Therefore, emergency vehicles can comfortably be accommodated on-site.

The following proposed traffic management principles would be adopted during the construction period as an attempt to mitigate any potential traffic impacts from occurring as a result of the Proposed Development. These include:

- Disruption to all road users during the construction period would be kept to a minimum.
- Traffic control would need to be provided to manage and regulate traffic movements during construction.
- Construction and delivery vehicles entering or leaving the site compound and/or stockpile sites would use arterial roads. These movements would be restricted to non-peak traffic periods.
- In most cases, property access would be maintained throughout the construction period with suitable alternative access arrangements provided otherwise.
- Clear signage and alternate pedestrian routes should be organised if footpaths are affected.
- It is recommended that a detailed CTMP is developed as part of the detailed design stage.

Construction vehicles would be restricted to the State road network for access to the Site and vehicles will likely originate from this network. It is envisaged the main site entrance will be off Epping Road. It is noted, that the main access to the area is via Sirius Road, which is identified as a local road. The proposed construction vehicle routes are illustrated below in **Figure 42**.

Construction would be undertaken during standard working hours which are assumed to be as follows:

- Monday to Friday: between 7am-6pm.
- Saturday: between 8am-1pm.
- Sunday and public holidays: no work.

The forecast level of construction activity generated by the proposal is summarised in **Table 33** below. It is noted, that a construction vehicle movement is defined as the one-way flow of a single vehicle at a particular location. A single truck entering the Site and departing some time later, is regarded to contribute to two (2) movements to the overall traffic flow.

Table 33: Forecast Construction Vehicle Movements			
Works	Forecast Number of Construction Vehicle Movements		
	Daily	AM Peak Hour	PM Peak Hour
Excavation	200	20	20
Construction	100	10	10

A maximum workforce of approximately 320 personnel per day is expected for the construction works. Given the public transport availability to the Site, construction workers will most likely take public transport or carpool to work.

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Furthermore, as informed by AW Edwards Pty Ltd, construction staff typically arrive to the Site in the morning between 6am and 7am. Therefore, workers start earlier and finish earlier than the commuter peak periods and would not coincide with the Site's peak.

It should be noted, that should employees visit the Site using private cars, they must park within available off-street public car parks in the locality to ensure that impact on staff parking spaces in the vicinity of the Site are minimised where possible.

Accordingly, as informed by AW Edwards Pty Ltd, the intention is to lease space within the adjacent office building, which has parking for just over 100 cars, for which this would accommodate some construction workers. Additional parking for construction staff would be provided within the construction site.

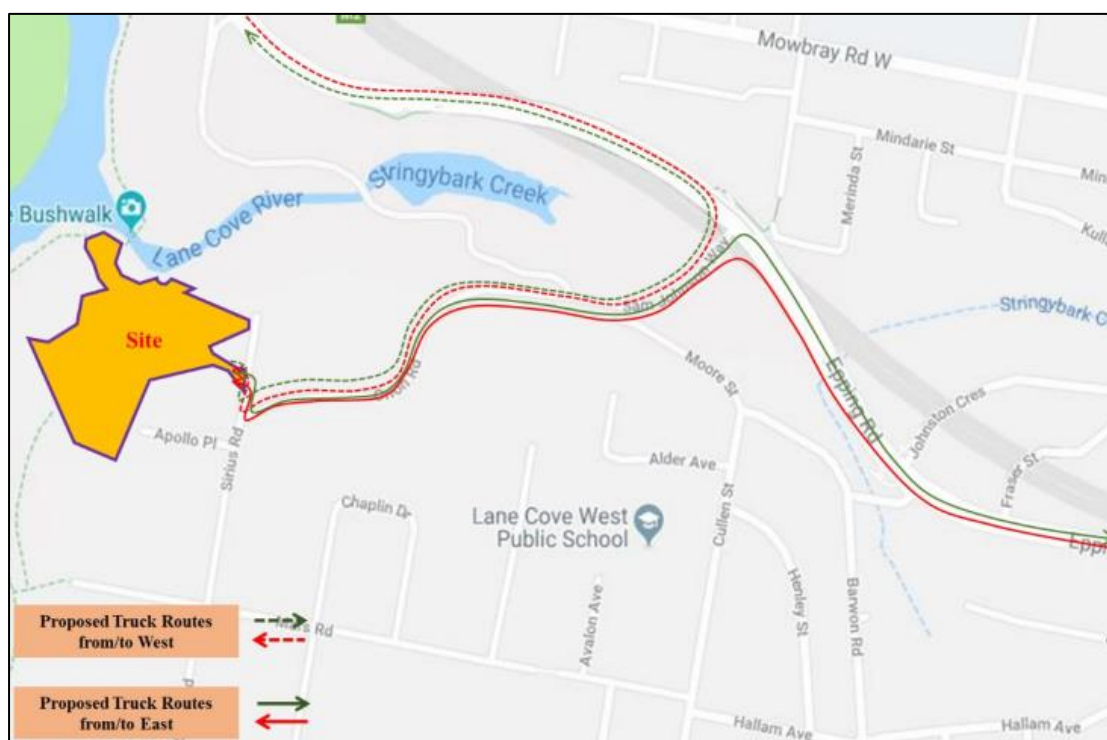


Figure 42 Proposed Construction Vehicle Routes (Source: ARUP, 2018)

Construction would be undertaken during standard working hours which are assumed to be as follows:

- Monday to Friday: between 7am-6pm.
- Saturday: between 8am-1pm.
- Sunday and public holidays: no work.

In summary, the Proposed Development is considered to have a minimal impact on the surrounding local transport network.

6.7 WASTE

Details of the construction and operational waste are provided within the *Waste Management Plan* prepared by SLR Consulting (refer to **Appendix 18**). Where possible, all construction materials would be recycled either on-site through reuse or off-site at a licensed facility. Waste would be transported and disposed of offsite by a licensed contractor to a licensed landfill facility.

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Similarly, recyclable and non-recyclable materials generated during operation would be collected and disposed of by a licensed contractor. The ongoing management of waste would be promoted through the following:

- *Staff awareness of recyclable items, providing on-site training. This would include the company's Waste and Recycle Policy with clear objectives and expectations;*
- *Staff awareness and educational programs would be run which would supplement existing OH&S, and environmental programs on waste management;*
- *Suitable information would be supplied in staff induction kits, which would require refreshers on a yearly basis;*
- *The recycle and waste areas would be clearly marked and bins suitably labelled; and,*
- *Cleaning staff would be responsible for day-to-day management and control of all waste and recycling stations.*

The performance of the Proposed Development should contribute to the following target from the NSW EPA (2014) *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*:

- 75% of total construction and demolition waste recycled, increasing to 80% by 2021.

Accordingly, the site preparation and construction activities are anticipated to generate the following broad waste streams, including:

- Site clearance and excavation wastes;
- Construction waste;
- Packaging waste; and,
- Work compound waste from on-site employees.

A summary of the likely waste types generated from site preparation and construction activities, along with their waste classifications and proposed methods is provided in **Table 34** below.

Table 34: Potential Waste Types, Classifications and Management Methods – Construction Waste		
Waste Types	NSW EPA Waste Classification	Proposed Reuse / Recycling / Disposal Method
Site Preparation and Construction		
Green Waste	General solid waste (non-putrescible) (garden waste).	Off-site recycling.
"Clean" Fill	To be classified subject to the results of testing.	Beneficial re-use on-site or offsite, if assessed to be suitable.
Contaminated Fill	To be classified subject to the results of testing.	Offsite treatment or disposal to landfill.
Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM)	To be classified subject to the results of testing.	Beneficial re-use on-site or offsite, if assessed to be suitable.
Construction		
Sediment Fencing, Geotextile Materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal to landfill.
Concrete	General solid waste (non-putrescible)	Offsite recycling for filling, levelling or road base.
Bricks and Pavers	General solid waste (non-putrescible)	Offsite recycling; Cleaned for reuse, rendered over or crushed for landscaping or driveway use.

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Gyprock or Plasterboard	General solid waste (non-putrescible)	Offsite recycling or returned to supplier.
Sand or Soil	General solid waste (non-putrescible)	Offsite recycling.
Metals such as Fittings, Appliances and Bulk Electrical Cabling	General solid waste (non-putrescible)	Offsite recycling.
Timber	General solid waste (non-putrescible)	Offsite recycling; Treated: reused for formwork, bridging, blocking, propping or second hand supplier. Untreated: reused for floorboards, fencing, furniture, mulched second hand supplier.
Doors, Windows, Fittings	General solid waste (non-putrescible)	Offsite recycling at second hand supplier.
Insulation Material	General solid waste (non-putrescible)	Offsite disposal.
Glass	General solid waste (non-putrescible)	Offsite recycling; glazing or aggregate for concrete production.
Asbestos	Hazardous Waste	Removal and offsite disposal by specialist contractors.
Fluorescent Light Fittings and Bulbs	Hazardous Waste	Offsite recycling or disposal; contact <i>FluoroCycle</i> for more information
Paint	Hazardous Waste	Offsite recycling, Paintback collection or disposal.
Synthetic Rubber or Carpet Underlay	General solid waste (non-putrescible)	Offsite recycling; reprocessed and used in safety devices and speed humps.
Carpet	General solid waste (non-putrescible)	Offsite recycling or disposal; reused for landscaping, insulation or equestrian uses.
Plant Maintenance		
Empty Oil and Other Drums or Containers, such as Fuel, Chemicals, Paints, Spill Clean Ups.	Hazardous waste: Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid waste (non-putrescible): containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for offsite recycling or disposal at licensed facility. Note: Discharge to sewer subject to Trade Waste Agreement with local Council.
Air Filters and Rags	General solid waste (non-putrescible)	Offsite disposal
Oil Filters	Hazardous waste	Offsite recycling

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Batteries	Hazardous waste	Offsite recycling; Contact the Australian Battery Recycling Initiative for more information.
Packaging		
Packaging Materials, including Wood, Plastic (including Stretch Wrap or LLPE), Cardboard and Metals	General solid waste (non-putrescible)	Offsite recycling
Wooden or Plastic Crates / Pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or offsite recycling. Contact <i>Business Recycling</i> for more information.
Work Compound and Associated Offices		
Food Waste	General solid waste (non-putrescible)	Donate (if suitable) or compost on-site. Alternatively dispose to landfill with general garbage.
Recyclable Beverage Containers (Glass and Plastic Bottles, Aluminum Cans), Steel Cans	General solid waste (non-putrescible)	Co-mingled recycling at offsite licensed facility or at a local NSW container deposit scheme 'Return and Earn' offsite licensed facility.
Clean Paper and Cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at offsite licensed facility.
General Domestic Waste Generated by Workers (Soiled Paper and Cardboard, Food Stuffs, Polystyrene)	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill.

In the absence of construction waste quantities, SLR Consulting have adopted the 'Office' waste generation rates (refer to **Table 35** below) from The Hills Development Control Plan 2012, for estimating the type and quantities of waste generated from the construction of the Proposed Development (refer to **Table 36** below).

Table 35: Construction Waste Generation Rates								
Waste Material (tonnes)								
Rate Type	Floor Area (m²)	Timber	Concrete	Bricks	Gyprock	Sand / Soil	Metal	Other
Office	1,000	5.1	18.8	8.5	8.6	8.8	2.75	5
Factory	1,000	0.25	2.1	1.65	0.45	4.8	0.6	0.5
Carpark	1,000	-	30.6	-	-	14.3	4.5	8.1

Table 36: Anticipated Types and Estimated Quantities of Construction Waste								
Develop ment Component	Area (m²)	Waste Types and Quantities (Other)						
		Timber	Concrete	Bricks	Gyproc k	San d / Soil	Meta l	Othe r
Level 1 Basement Floor	10,510	55	200	90	95	95	30	55

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Level 2 Floor	11,470	60	220	100	100	105	35	60
Level 3 Floor	10,530	55	200	90	95	95	30	55
Level 4 Floor	10,620	55	200	95	95	95	30	55
Level 5 Floor	10,620	55	200	95	95	95	30	55
Roof	10,620	5	25	20	5	55	10	10
Level 1 Generators	3,000	0	95	0	0	45	15	25
Level 2 Generators	2,940	0	90	0	0	45	15	25
Level 3 Generators	3,720	0	115	0	0	55	20	35
Vehicle Ramps, Routes and Parking	6,450	0	200	0	0	95	30	55
Totals	80,480	285	1,545	490	485	780	245	430

Operation of the Proposed Development is anticipated to generate the following broad waste streams, including:

- General waste and commingled recycling;
- Food and organic wastes;
- Bulk packaging wastes, including polystyrene and cardboard boxes;
- E-wastes;
- Bulky waste items, such as furniture; and,
- Plant and general maintenance wastes.

Potential waste types, their associated waste classifications and management methods are provided in **Table 37** below.

Table 37: Potential Waste Types, Classifications and Management Methods – Operational Waste					
Waste Types		NSW EPA Classification		Proposed Reuse / Recycling / Disposal Method	
Work Compound and Associated Offices					
Clean Office Paper		General solid (non-putrescible) waste		Paper recycling at offsite licensed facility.	
Cardboard / Bulky Cardboard Boxes		General solid (non-putrescible) waste		Cardboard recycling at offsite licensed facility.	
Recyclable Beverage Containers (Glass and Plastic Bottles, Aluminium Cans), Tin Cans		General solid (non-putrescible) waste		NSW container deposit scheme 'Return and Earn'; container recycling at offsite licensed facility.	
Food Waste		General solid (putrescible) waste		Donate, if suitable; alternatively compost on or offsite or dispose to landfill with general garbage.	

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Batteries	Hazardous waste	Offsite recycling; can be taken to the Lane Cove Civic Centre, Lane Cove Woolworths and Lane Cove Coles; alternatively contact the Australian Battery Recycling Initiative for more information.
Mobile Phones	Hazardous waste	Offsite recycling; can be taken to a number of locations in the Lane Cove Councils area, through the Mobile Muster program. Contact Mobile Muster for more information.
Stationary	General solid (non-putrescible) waste	Offsite recycling or disposal to landfill.
Bulky Polystyrene Furniture	General solid (non-putrescible) waste	Offsite recycling or disposal to landfill.
E-waste	General solid (non-putrescible) waste	Offsite reuse or disposal to landfill.
Printer Toners and Ink Cartridges	Hazardous waste	Offsite recycling; free disposal box or bags and pickup service exists for printer toners and ink cartridges.
General Garbage (including Non-Recyclable Plastics)	General solid (putrescible and non-putrescible) waste	Disposal at landfill.
Spent Smoke Detectors	General solid (non-putrescible) waste or hazardous waste (some commercial varieties)	Disposal to landfill, or offsite disposal at licensed facility.
Glass (Other Than Containers)	General solid (non-putrescible) waste	Offsite recycling.
Light Bulbs / Fluorescent Tubes	Hazardous waste	Offsite recycling or disposal; contact FluoroCycle for more information.
Air Conditioning Parts or Filters	General solid (non-putrescible) waste	Offsite recycling or disposal to landfill.
Cleaning Chemicals, Solvents, Area Wash Downs, Empty Oil / Paint Drums / Chemical Containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies preparation for offsite recycling or disposal at licensed facility. Discharge to sewer likely to be subject to Trade Waste Agreement with Sydney Water.

The estimated quantities of operational waste generated by the offices in the Proposed Development are demonstrated in **Table 38** below.

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Table 38: Estimated Quantities of Operational Waste and Recycling

Location	Area (m ²)	Waste (L/day)	Paper and Recycling (L/day)	Recyclable Containers (L/day)	Waste (L/week)	Paper and Cardboard Recycling (L/week)	Recyclable Containers (L/week)
L4 Kitchenette	13	10	5	5	70	35	35
L4 Meeting Room 1	31	5	5	5	35	35	35
L4 Meeting Room 2	31	5	5	5	35	35	35
L4 Meeting Room 3	17	5	5	5	35	35	35
L4 Security Office	43	5	5	5	35	35	35
L4 NOC	69	10	5	5	70	35	35
L4 FM Office	20	5	5	5	35	35	35
L4 Breakout Space	100	10	10	5	70	70	35
L4 Office	92	10	10	5	70	70	35
L5 Office 1	174	20	15	10	140	105	70
L5 Office 2	161	20	10	10	140	70	70
Total	751	105	80	65	735	560	455

Additionally, waste storage locations would be designed in accordance with accessibility and sufficient space for storage and servicing requirements, will be integrated into the design. Where space is restricted, dedicated stockpile areas are to be delineated on the Site and adequately contained. Waste storage locations would be provided within loading dock areas that comply with BCA requirements and relevant Australian Standards.

All wastes removed from the Subject Site should be transported in accordance with relevant road and transportation regulatory requirements. Additionally, where required (depending on the classification of wastes), appropriately licensed transport contractors will be commissioned.

Further details are provided within **Appendix 18**.

6.8 NOISE AND VIBRATION

An Acoustic Assessment prepared by ARUP in March 2019 and subsequently reviewed by Pulse Acoustic Consultancy has considered noise generated during earthworks, construction and operation and includes the identification of sensitive noise receivers, noise sources with potentially adverse impacts, noise emissions, relevant acoustic criteria from Lane Cove Council

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and the EPA and controls necessary to ensure compliance with noise emission goals (refer to **Appendix 19**).

The ARUP assessment undertaken has been carried out in accordance with the requirements of the SEARs and reference to the following Policy and Guidelines, including:

- *NSW Noise Policy for Industry*
- *NSW Interim Construction Noise Guideline*
- *NSW Assessing Vibration – A Technical Guideline*

The nearest sensitive receiver / assessment locations are identified in the following locations (refer to **Table 39** below) and can be best illustrated geographically in **Figure 43** below.

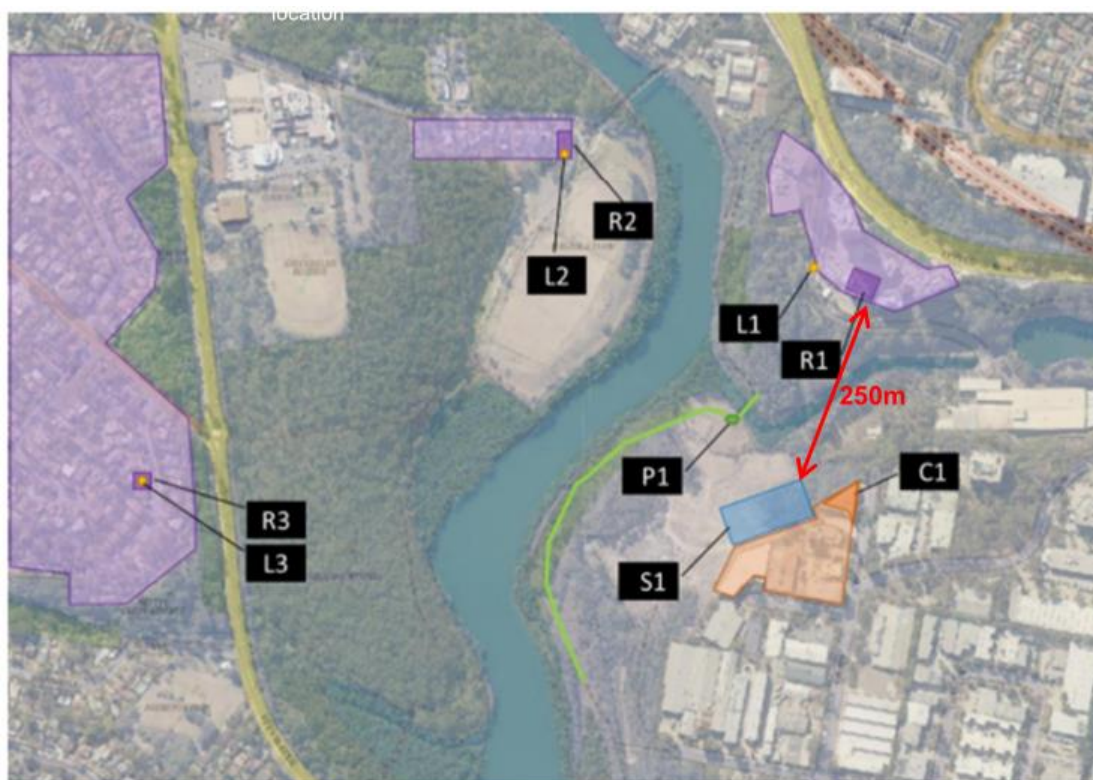


Figure 43 Receiver and Noise Monitoring Locations (Source: ARUP, 2019)

Table 39: Assessment Locations			
Type	ID	Address	Description
Residential	R1	150 Epping Road, Lane Cove	Residential apartment complex to the northeast of the Subject Site.
Residential	R2	65 Magdala Road, North Ryde	Residential building to the northwest of the Subject Site.
Residential	R3	14 Jeanette Street, East Ryde	Residential building to the west of the Subject Site.
Commercial	C1	1A Sirius Road, Lane Cove West	Commercial building to the east of the Subject Site.
Passive Recreation	P1	Lane Cove Bushwalk	River walk to the west-northwest of the Subject Site.

Long-term noise monitoring was undertaken at 14 Jeanette Street, East Ryde (L3 from **Figure 43** above). The measured levels are provided below in **Table 40**. Additionally, spot noise

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measurements were made at two other locations over single 15-minute periods as shown in **Table 41**.

Table 40: Long-term Noise Monitoring Results (dB(A))			
Location	Time Period	Rating Background Noise Level dBL _{A90}	Ambient dBL _{Aeq} Noise Levels
L3 – 14 Jeanette Street	Day	42	57
	Evening	42	57
	Night	31	49

- Day: 07:00-18:00 Monday to Saturday and 08:00-18:00 Sundays and Public Holidays
- Evening: 18:00-22:00 Monday to Sunday & Public Holidays
- Night: 22:00-07:00 Monday to Saturday and 22:00-08:00 Sundays and Public Holidays

Short-term noise measurements were undertaken on at locations L1-L3. The background noise was dominated by distant traffic noise, with aircraft flyovers, birds / insect sounds and the sound of children playing determining the ambient level. The measured levels are prescribed below in **Table 41**.

Table 41: Short-term Noise Monitoring Results (dB(A))				
Location	Time Period	Background Noise Levels dBL _{A90}	Ambient Noise Levels, dBL _{Aeq}	Comments
L1 – 150 Epping Road	14:55-15:10	47	49	Traffic noise, child crying, occasional aeroplane pass-by.
L2 – 65 Magdala Road	16:31-16:46	53	56	Traffic noise, car pass-by, children playing sports, birds and insects.
L3 – 14 Jeanette Street	17:09-17:25	46	50	Traffic noise, birds and insects, car pass-by.

To validate the estimated background noise levels at Location 1, noise monitoring was conducted by Pulse Acoustic at the residences located at 150 Epping Road between:

- External noise measurements were made between Saturday the 29th June 2019 and Tuesday 2nd July 2019.
- Noise levels were made at ground level and are therefore likely to be lower than if the noise monitor was placed on a residential balcony, where traffic noise levels are expected to be higher.
- One noise logger was positioned in the garden area in front of the apartment buildings, with direct line of sight to the Lane Cove West Industrial Park.
- The noise logger recorded noise levels that are thought to be typical of the lower level apartments that face the Industrial Park.
- The noise monitoring results at this location are therefore representative of the background noise levels currently experienced by the potential receivers of noise emissions from the development.

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The measured ambient noise levels as noted in the Pulse Acoustic Report are as follows.

Table 42: Measured Ambient Noise Levels Corresponding to the NPIs Assessment Time Periods						
Measurement Location	Daytime		Evening		Night-time	
	1		1		1	
	7:00 am to 6:00 pm		6:00 pm to 10:00 pm		10:00 pm to 7:00 am	
	RBL	LAeq	RBL	LAeq	RBL	LAeq
South Western Logger	2	3	2	3	2	3
	46 dBA	53 dBA	46 dBA	50 dBA	41 dBA	47 dBA

The results of the measurement survey (**Table 42**) provide ambient noise levels that are considered to be representative of the levels to be expected at the nearest and most affected residences to the proposed development (i.e. the apartments located at 150 Epping Road).

The Noise assessment goal for the closest residences at 150 Epping Road is given below:

- Daytime 51 dBA Leq
- Evening 48 dBA Leq
- Night 43 dBA Leq

The calculated noise levels from the chillers without attenuators and with the transformers at the nearest residents for an assessment that uses real distances of each section of the proposed development (i.e. Sections A, B & C) is given below:

- Daytime 52 dBA Leq (+1 dB)
- Evening 46 dBA Leq
- Night 43 dBA Leq

The day limits are exceeded by a marginal 1 dB.

It is noted that circular ducts will be fitted onto the discharge side of the chiller fans to help prevent recirculation of hot air which are assessed as follows:

- ducts are 900mm long and 910mm in diameter
- If these ducts are lined internally with 25mm acoustic insulation, then the additional acoustic attenuation listed is anticipated as noted above.
- No additional attenuation devices are recommended for the transformers.

The calculated noise levels from the transformers and the chillers with the 900 mm long discharge ducts (910 mm diameter lined with 25mm acoustic insulation) at the nearest residents for an assessment that uses real distances of each section of the development (i.e. Sections A, B & C) is given below:

- Daytime 50 dBA Leq
- Evening 44 dBA Leq
- Night 40 dBA Leq

This results in compliance with the noise criteria for all time periods (with a marginal of 1 dB, 4 dB and 3 dB for the daytime, evening and night-time periods respectively). It is noted that the noise levels from the transformers and chillers will be approximately 6 dBA lower at the closest residences located to the west of the site at a distance of approximately 600 m. The criterion here is also lower, particularly for the night-time period when the noise criterion is 35 dBA. The calculated noise level for this time period is 35 dBA and therefore meets the noise criterion. The noise criteria for the national park and the nearest commercial receivers are 48 dBA and 63 dBA respectively. Both of these receiver locations will be significantly affected by

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acoustic shielding provided by the edge of the building structure and adjacent mechanical plant items. Noise emission during the daytime period will be calculated to these receiver locations during the detailed design stage of the project.

There are a number of generators proposed on the external platform adjacent the main building. These generators are to be used only in the event of a power blackout and will be tested periodically.

Importantly Section 1.4 of the Noise Policy for Industry states that the NPI applies to activities listed in Schedule 1 of the POEO Act. In Schedule 1 of the POEO Act, Section 17 (1A), it states that "this clause does not apply to the generation of electricity by means of electricity plant that is emergency stand-by plant operating for less than 200 hours per year".

Testing of generators one by one will tally over 200 hours per year, while use of all generators in a power outage will not exceed 200 hours per year. Therefore, use of all generators at once is outside the Noise Policy for Industry. In this section, the testing of one generator at a time is analysed.

The calculated noise levels from the transformers and the chillers with the 900mm long discharge ducts (910mm diameter lined with 25mm acoustic insulation), as well as the testing of a single generator is given below. At the nearest residents for an assessment that uses real distances of each section of the development (i.e. Sections A, B & C), predicted noise levels are:

- Daytime (Section A Generator) 50 dBA Leq
- Daytime (Section B Generator) 50 dBA Leq
- Daytime (Section C Generator) 50 dBA Leq

This results in compliance with the noise criteria for the day time period by 1 dB.

It is therefore evident that the total noise emission for the proposed datacentre for the currently selected transformer, generator and air-cooled chiller scheme has subsequently been calculated to the nearest residential receiver locations. The predicted noise levels are in compliance with the relevant noise criteria for these residential receiver locations during chiller, transformer and a single generation operation.

6.9 AIR QUALITY AND ODOUR

The *Lane Cove West Data Centre: SSDA Air Quality Assessment* (ARUP, 2018) considered the potential air quality impacts of the Proposed Development (refer to **Appendix 22**).

Given the unlikely event of an interruption of main power, the standby generators would switch on to provide power to each of the buildings. It is likely any loss of main power would be resolved quickly, within a few hours and therefore, even when required the generators would only operate for a short time. It is not possible to estimate the likelihood of power outage / damage over a year, which would require the standby generators to be in operation; however, it is anticipated that the generators would only be required for around 50 hours per year (approximately 0.6% of the time).

The standby generators would be tested on a monthly basis (approximately one hour of operation per month) to ensure they can continue to provide an uninterrupted power supply when required. Each generator would be tested independent of one another and be completed during the daytime period when wind conditions are favourable for dispersion.

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While in use, the standby generators would produce total unburned hydrocarbons (HC), nitrogen oxide (NO_x), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO₂) and smoke.

At present, there are no regulations in place in Australia that limit emissions from non-road diesel engines and equipment. Therefore, to determine the likelihood for air quality impacts, a review of the US EPA emission standards (where the generator was developed) and the NSW Protection of the Environment (POEO) Regulation 2010 emission limits against the Cummins QSK95-G4 generator specification sheet (see Appendix B) has been completed. The outcomes of the assessment are summarised in **Table 43** below.

Table 43: Emission Rate Assessment				
Pollutant	Cummins QSK95-G4		US EPA	POEO Regulation 2010
	g/kWh²	mg/m³	g/kWh	mg/m³
HC	0.14	81	0.19	No limit detailed
NO _x	6.79	3,990	0.67	500
CO	0.22	150	3.5	No limit detailed
PM	0.04	18	0.03	50
SO ₂	0.004	1.8	No limit detailed	No limit detailed

Given the distance of sensitive receiver (residential properties or schools), it is unlikely that local air quality at these locations would be significantly affected, even when the standby generators are in operation.

However, operation of the generators has the potential to impact local air quality immediately adjacent to the site, particularly concentrations of NO_x / NO₂, if in operation over a long period of time. While emissions of NO_x are exempt from regulatory standards, these emissions can convert to NO₂ in the atmosphere and impact on human and ecological health. Therefore, operation of the generators during a power outage or damage event should be minimised as far as possible. This is included in the maintenance strategy for the site and therefore it is expected that this would be achieved under typical circumstances.

Notwithstanding, given that the standby generators will operate within relevant emissions limits, are a considerable distance from sensitive receptors (residential / schools) and are only expected to be used for short, intermittent periods. The associated air quality impact for them is considered to be minor and transient.

Therefore, no further air quality assessment (e.g. dispersion modelling) for the Proposed Development is considered to be warranted.

6.10 HAZARDS AND RISKS

As mentioned previously in **Section 4.2.8** of this EIS, to facilitate the intended operation of the Data Centre, there will be some small portions of diesel fuel stored on-site to service the back-up generators; however, there are no combustibles proposed to be stored, thus *State Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33) is not triggered. The *SEPP 33 – Preliminary Risk Screen* (SLR Consulting, 2018) notes, that diesel fuel to be stored on-site, is not classed as Dangerous Goods, but is classed as a C1 Combustible Liquid (refer to **Appendix 22**).

The proposed inventory of diesel (and classification), is provided in **Table 44** below.

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Table 44: Classification of Diesel in Storage

Substance	Hazardous Class	Packaging Group	Combustible Liquid Class	Total Storage On-Site	Threshold Quantity	SEPP 33 Threshold Level Findings
Diesel	N/A	-	C1	510,000 L	N/A	N/A

The Report notes, that the SEPP 33 screenings for storage of Dangerous Goods indicate, that the Proposed Development is not classified as a hazardous or offensive industry.

For consistency and completeness a further review of the proposed Data Centre was prepared by Lote Consulting (2019) based on the revised design, which includes an increase in the proposed diesel fuel storage, which confirms whether the Proposed Development was a 'Major Hazard Facility'; the required storage locations for the proposed products; the associated design requirements for each storage; and the studies required to obtain approval (refer to **Appendix 39**).

As noted above, diesel fuel is classified as a C1 combustible liquid and is subject to AS 1940-2017. The diesel will be stored in 42,504 L sub-tanks as part of a diesel genset combination, which are separated into three (3) individual sub banks with a combines storage of 3,336,000 L.

A review of each storage indicates they would be classified as bulk storages under the relevant Standard. The following recommendations have been provided for the proposed Data Centre:

6. The tank fill points shall be provided with impact protection.
7. Tank fill points shall be provided with signage clearly identifying the location of the fill points.
8. The tanks shall be provided with high level monitoring and alarms per Clause 5.3.3 of AS 1940-2017.
9. At least one (1) powder type extinguisher shall be accessible within 10 m of the diesel tanks.
10. The hydrant system shall be able to provide at least 20 L/s.

Provided that all the recommendations are complied with, the storages at the Subject Site would be compliant with the applicable Standards and thus the WHS Regulation 2017.

Lote Consulting (2019) conclude, that a review of the Site Dangerous Goods thresholds indicates the Data Centre would not be classified as a 'Major Hazard Facility' and is therefore not subject to a formal safety case assessment and review by SafeWork NSW.

6.11 BIODIVERSITY

The *Biodiversity Development Assessment Report (BDAR)* (Ecoplaning, 2018) considers the potential impacts of the Proposed Development on threatened species, ecological communities and their habitats as required under the BC Act and BC Regulation, respectively.

It is important to note, that the Subject Site does not include any areas of outstanding biodiversity value, as defined under the BC Act. A layer of native vegetation cover is required for a 1,500 m buffer around the Subject Site to accurately determine the context of the Site. The extent of native vegetation on the Subject Site and immediate surrounds was mapped using the OEH (2016) as a base, with edits made to the layer where obvious changes to vegetation extent had occurred (refer to **Figure 44** below).

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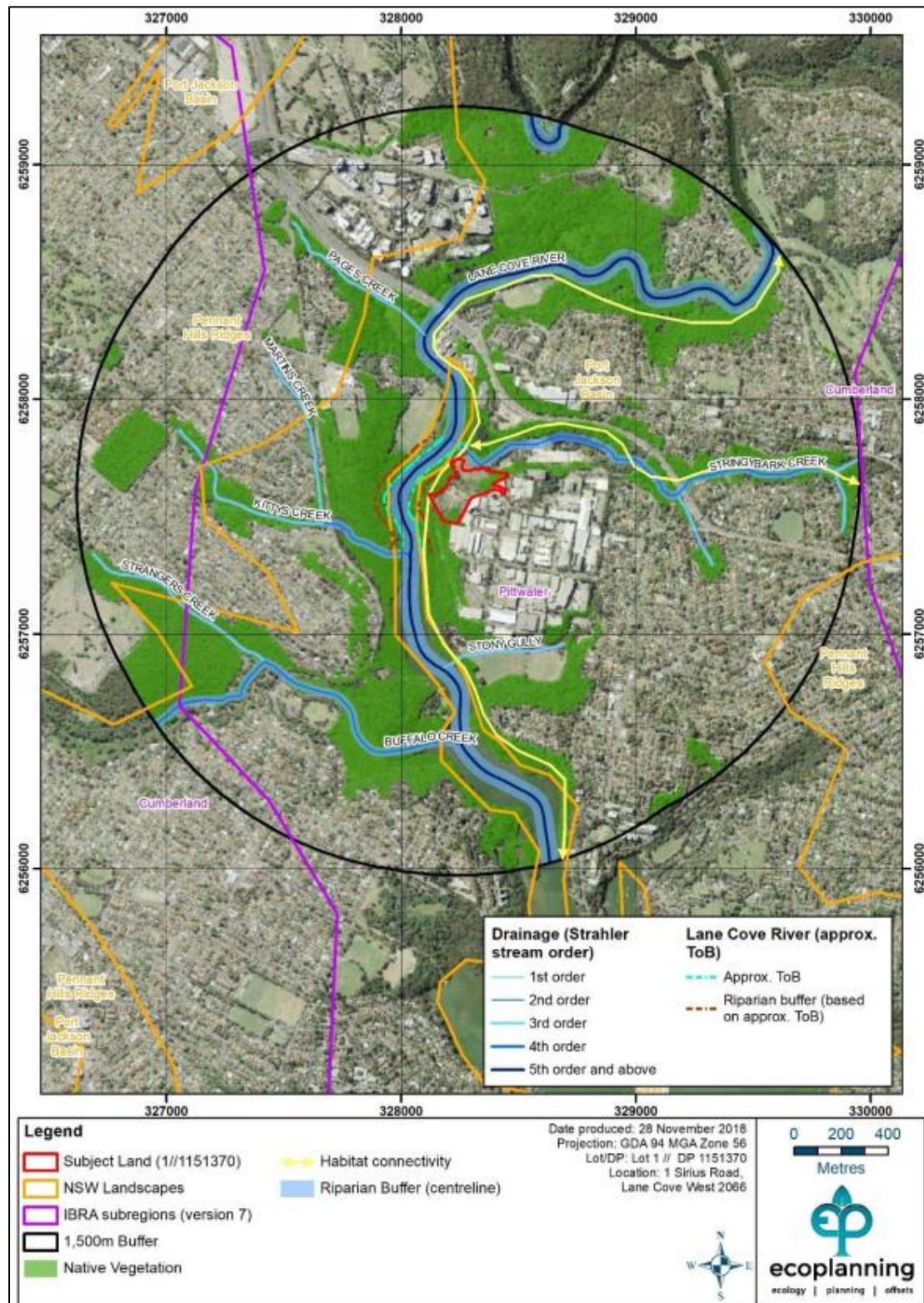


Figure 44 Locality Map (Source: Ecoplanning, 2019)

The desktop assessment determined the Subject Site to contain a number of vegetation communities (OEH 2016a) (refer to **Figure 45** below), including:

- Coastal Enriched Sandstone Dry Forest;
- Coastal Sandstone Foreshores Forest;

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- Estuarine Mangrove Forest; and,
- Coastal Shale-Sandstone Forest.

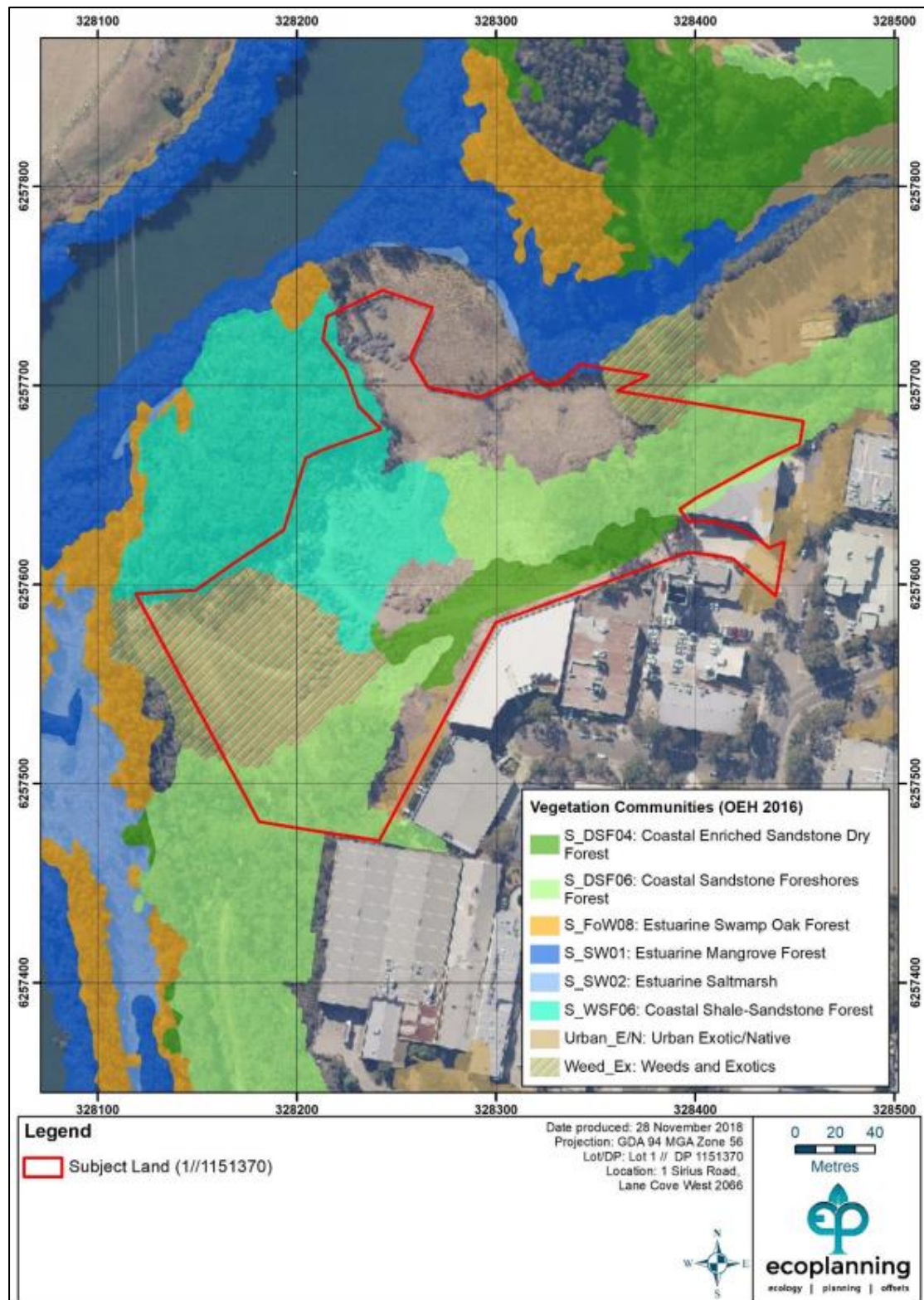


Figure 45 Vegetation Types (OEH 2016a) (Source: Ecoplanning, 2019)

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Notwithstanding, the vegetation communities mapped by OEH (2016) in the Subject Site do not correspond with any Threatened Ecological Communities (TECs) listed under the BC Act or the EPBC Act.

Assessment and mapping of Plant Community Types (PCTs) was undertaken on 14 November 2018 and 6 December 2018. Identification of vegetation communities within the Subject Site and community nomenclature follows the vegetation classification of OEH (2016). Based on the floristic composition of the vegetation in the Subject Site, one (1) native vegetation community with varying condition classes, and one (1) exotic community were identified (refer to **Figure 49** below), including:

- Coastal Enriched Sandstone Dry Forest; and,
- Cleared Land 'Exotic Grassland'.

The Coastal Enriched Sandstone Dry Forest (CESDF) identified in the Subject Site corresponds with the PCT:

- Smooth-barked Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast (PCT 1776; HN 654).

A summary of the PCT and vegetation zones within the Subject Site is listed below in **Table 45**.

Table 45: Details of PCTs within the Subject Site including Area of Vegetation Zones			
Plant Community Types (PCTs)	Vegetation Formation & Class	Vegetation Zones	Area (ha)
PCT 1776 - Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast.	Dry Sclerophyll Forests (Shrubby Sub-formation)	Disturbed	0.54
	Sydney Coastal Dry Sclerophyll Forests	Intact	0.37
Total Native Vegetation			0.91
Cleared Lane 'Exotic Grassland'	N/A	N/A	3.05
Total Exotic Vegetation			3.05
Total Vegetation			3.95

The PCT identified within the Subject Site was classified into vegetation zones for credit calculation purposes. The vegetation zones are based on the condition descriptions below consistent with **Table 46**.

Table 46: VIS Plant Community Type Profile (OEH 2018b) – Smooth-barked Apple – Red Bloodwood Open Forest on Enriched Sandstone Slopes Around Sydney and the Central Coast (PCT 1776; HN654)	
Plant Community Type (PCT)	Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast
PCT and Biometric veg type (BVT) ID	PCT 1776 / BVT: HN654 and ME64
Vegetation Formation	KF_CH5B Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class	Sydney Coastal Dry Sclerophyll Forests
Upper Stratum	<i>Angophora costata</i> (Sydney Red Gum), <i>Corymbia gummifera</i> (Red Bloodwood), <i>Eucalyptus piperita</i> (Sydney Peppermint), <i>Eucalyptus pilularis</i> (Blackbutt), <i>Eucalyptus umbra</i> (Broad-leaved White Mahogany) and <i>Syncarpia glomulifera</i> (Turpentine).

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Middle Stratum	<i>Allocasuarina littoralis</i> (Black She-Oak), <i>Banksia serrata</i> (Old-man Banksia), <i>Elaeocarpus reticulatus</i> (Blueberry Ash), <i>Pittosporum undulatum</i> (Sweet Pittosporum), <i>Ceratopetalum gummiferum</i> (Christmas Bush), <i>Acacia ulicifolia</i> (Prickly Moses), <i>Leptospermum trinervium</i> (Slender Tea-tree), <i>Persoonia levis</i> (Broad-leaved Geebung), <i>Acacia suaveolens</i> (Sweet Wattle), <i>Acacia terminalis</i> (Sunshine Wattle), <i>Lomatia silaifolia</i> (Crinkle Bush), <i>Dodonaea triquetra</i> (Large-leafed Hop-bush) and <i>Banksia spinulosa</i> (Hairpin Banksia).
Ground Stratum	<i>Dianella caerulea</i> (Blue Flax-lily), <i>Entolasia stricta</i> (Wiry Panic), <i>Lomandra longifolia</i> (Spiny-headed Mat-rush), <i>Pteridium esculentum</i> (Bracken) and <i>Xanthosia pilosa</i> (Woolly Xanthosia).
Landscape Position	-
Profile Source	S_DSf04 (OEH 2013)
Full Reference Details	OEH (2013) The Native Vegetation of the Sydney Metropolitan Area Version 2.0 NSW Office of Environment and Heritage Sydney.
Estimate Remaining Pre-European Extent Round to Nearest 5%	35%
TEC Name (Listing Status)	BC Act: Not listed. EPBC Act: Not listed.

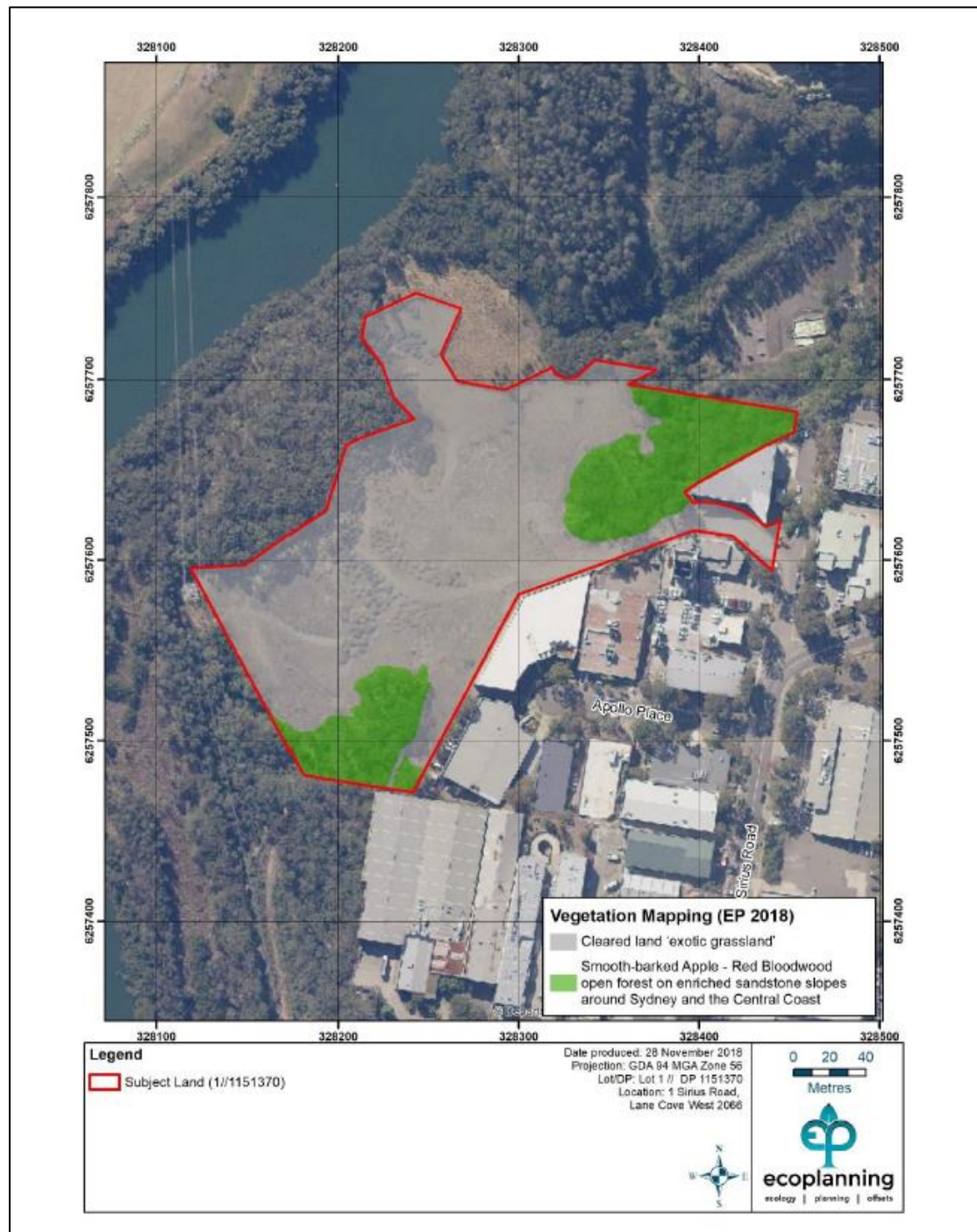


Figure 46 Field Results and Validated Vegetation within the Subject Site (Source: Ecoplanning, 2019)

Accordingly, the vegetation zones were divided into two (2) management zones; one (1) for complete clearing and one (1) for an Asset Protection Zone (APZ) (refer to **Figure 50** below).

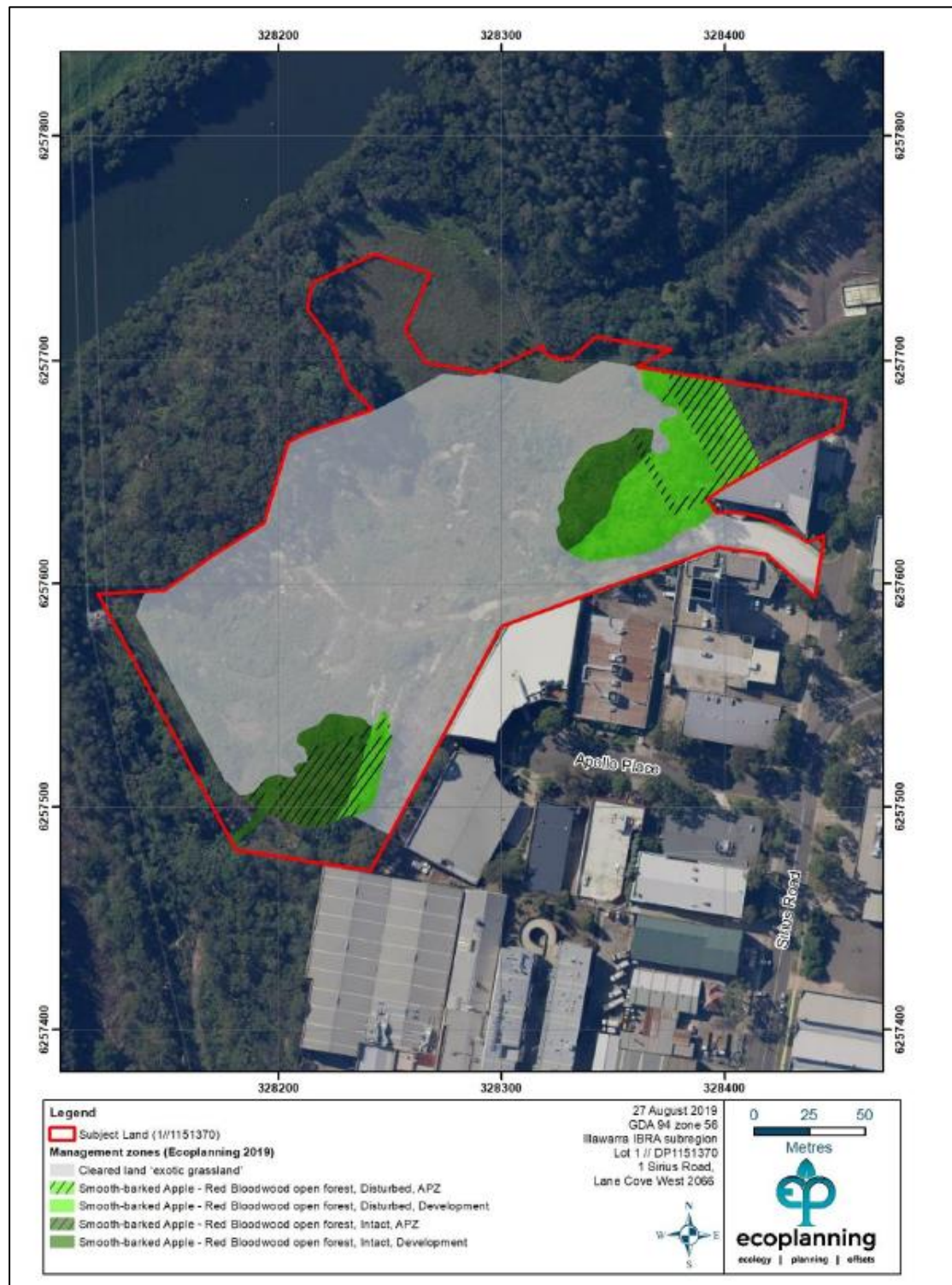


Figure 47 Management Zones Applicable to the Subject Site (Source: Ecoplanning, 2019)

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Credits have been calculated to account for a reduction in vegetation quality in the APZ, as informed in the Bushfire Report (refer to **Section 6.15** of this EIS). The APZ is situated within PCT 1776 in a 'disturbed' condition, which has a tree cover of 43.5% and a shrub cover of 1%. It is considered likely that the APZ would require routine slashing in order to keep grass species at a height of 10 cm or less, which will prevent the establishment of midstorey and canopy species. Notwithstanding, the reduction in habitat quality would not constitute complete clearing, as native groundlayer species will be able to persist in the APZ; hence, the impact within the APZ does not constitute a complete loss resulting in a future vegetation integrity score of 0. Areas to be managed as APZs were adjusted based on the likely level of management intervention required (refer to **Table 47** below).

Table 47: Vegetation Integrity Scores							
Veg Zone No.	PCT	Condition Class	Impact Type		Veg Integrity Score – Before Development or APZ Impacts	Veg Integrity Score – After Development (Complete Clearing)	Veg Integrity Score – After Development (APZ)
			Complete Clearing (ha)	Partial Impact – APZ (ha)			
1	PCT 1776 – Smooth-barbed Apple – Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast	Disturbed	0.26	0.14	46.8	0	16.6
2		Intact	0.16	0.12	70.5	0	29.6
Total Clearing (Native Vegetation)			0.38	0.28	N/A	N/A	N/A
3	N/A	Cleared	2.15	0.51	0.8	0	0

Ecoplanning note, that whilst the principal components of the Proposal have been defined based upon the ideal design of the proposed Data Centre, both the development footprint of the Data Centre and the associated APZ have been designed to optimize the design of the Proposed Development, whilst minimising impacts to native vegetation and riparian buffer areas, where possible.

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The complete avoidance of impacts has not been achievable given the large amount of excavation and infrastructure services required to support the proposal, which only becomes economical with the 80-90 MW capacity and extent of the footprint currently proposed.

The proposal would involve clearing of approximately 0.66 ha of native vegetation within the Subject Site, of which 0.38 ha will be removed to accommodate the Data Centre and associated infrastructure and an additional 0.28 ha would be managed within the APZ. A further 2.65 ha of land identified as cleared land, 'exotic grassland' will be impacted as a result of the Proposal. As such, a majority (approximately 80.08%) of the impacts will occur to cleared land 'exotic grassland'.

Accordingly, the avoidance measures have resulted in the retention of approximately 27.47% of the identified native vegetation within the Subject Site. Notwithstanding, the Proposal has been designed to avoid impacts to native vegetation with a higher vegetation integrity score, specifically Smooth-barked Apple – Red Bloodwood open forest in an 'intact' condition. These avoidance measures have resulted in the retention of 0.10 ha (approximately 25.77%) of Smooth-barked Apple – Red Bloodwood open forest in an 'intact' condition, which would not be impacted by the building footprint or proposed APZ.

It is important to note, that several measures will be implemented to reduce impacts, where possible, such as appropriate pre-clearance protocols and a CEMP. These include:

- Pre-Clearance Protocols:
 - On-site supervision of habitat tree felling and relocation of fauna; and,
 - Soft felling operations.
- Vegetation Management Plan (VMP)
- CEMP

Excluding the requirement for a CEMP, additional mitigation measures have been recommended by the NSW OEH, and should be implemented as part of the Proposal, including:

- The revegetation areas and landscaped areas must use a diversity of local provenance species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that occurs, or once occurred on the Site.
- Any native trees that are required to be cleared from the Site shall be salvaged (for example, tree hollows and tree trunks which are greater than approximately 25-30 cm in diameter and 3 m in length) and placed in the revegetation and regeneration areas to enhance habitat.
- Remnant native vegetation that is required be removed from the Site, especially juvenile plants shall be translocated to the revegetation and regeneration and landscape areas.
- The topsoil from areas of native vegetation that are to be cleared for the Proposed Development shall be collected and used in the revegetation and regeneration areas on the Site.
- Seed from any native plants that are to be removed shall be collected and used in the revegetation and regeneration areas and landscape areas.
- Any tree hollows to be removed are to be replaced at a ratio greater than 1:1.

Furthermore, a Vegetation Management Plan has been prepared by Travers to guide the revegetation of the retained native vegetation; the revegetation of disturbed land; cleared areas; and contaminated land (refer to **Appendix 38**). The primary objectives of the VMP include:

- To protect, restore and maintain retained native vegetation.
- To revegetate selected areas with appropriate native vegetation of local provenance.
- Maximise native vegetation cover and species diversity within the restoration areas.

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- Minimise weed cover to ensure long-term establishment of native vegetation.
- Undertake monitoring, auditing and maintenance activities to ensure an effective and a resilient restoration outcome.
- Ensure compliance with Development Consent and the VMP.

Impacts associated with vegetation zones PCT 1776 in an 'intact' and 'disturbed' condition for the Proposed Development will require offset under the BAM. The total cost of ecosystem credits, should the Biodiversity Conservation Trust (BCT) be used to offset the potential impacts, are currently (27 August 2019) estimated to be approximately \$23,127.78 (excluding GST). Additionally, no species credits are required for the potential impacts proposed on the Subject Site.

Additionally, the *Tree Assessment Report* (Travers Bushfire & Ecology, 2018) undertook an assessment of all trees equal to or greater than 15 cm in Diameter at Breast Height (DBH) within the Subject Site, for which 171 trees were assessed (refer to **Appendix 24**).

A Safe Useful Life Expectancy (SULE) and Tree AZ assessment was conducted on 8th and 10th December 2018. The Report has been prepared in accordance with Australian Standard AS4970 (2009) – Amendment No. 1 2010.

It is noted, that the Safe Use Life Expectancy (SULE) assessment identifies 95 of the observed trees (55%) as having a SULE condition rating of 1 or 2 (good condition). Thirty-five of the trees (20.47%) that were assessed has a SULE rating of 4 (poor condition) and eight (8) (4.68%) of the trees were rated 3b or 3c were recommended for removal due to poor health and / or structural instability. The remaining 33 trees were rated as 3a, 3b or 3c, indicating that they are likely to be retainable for 5 to 15 years with appropriate maintenance.

Accordingly, the Proposed Development would account for the removal of 84 trees on the Subject Site (regardless of their SULE rating). With this in mind, Tree Protection Zones (TPZ) are to be implemented for any retained tree in accordance with Australian Standard AS4970 (Section 4).

Travers note, that the majority of trees present within the study area are commensurate with PCT 1776 – Smooth-barked Apple – Red Bloodwood Open Forest on Enriched Sandstone Slopes around Sydney and the Central Coast, which is not commensurate with any Threatened Ecological Community (TEC) listed under the BC Act and EPBC Act.

Approximately 29 trees within the study area are visually prominent trees primarily due to their size and being 'larger than most' of the trees observed. 22 of these trees are to be removed either due to poor health or because they are located within or closely adjacent to the development footprint.

Additionally, 12 trees were found to contain a variety of small cracks, splits or hollows that may support roosting / breeding habitat for hollow-dependent threatened fauna species. Eight (8) hollow-bearing trees are identified to be removed either due to poor health or because they are located within or closely adjacent to the development footprint.

To minimise impacts in local ecology and to maintain a stand of healthy trees within a broad scale development, the following recommendations apply, including:

- Aim to retain hollow bearing trees of good condition wherever possible throughout the landscape in order to retain fauna habitat;
- Preferentially remove dangerous or poor condition trees and examine development layouts to maximise tree retention;
- Consider the placement of services to avoid or minimise tree removal or damage to tree protection zones;

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- Remove suppressed or otherwise poor condition trees to reduce bushfire fuel loads; and,
- Actively replant native trees commensurate with previously occurring vegetation types within the study area as per an approved Vegetation Management Plan (VMP) to maximise local amenity within the development, to consolidate any retained native vegetation within the locality and to provide suitable habitat, with connectivity for locally occurring native fauna.

Furthermore, in the event that trees are retained under the Proposed Development scenario, appropriate tree protection measures should be implemented, including:

- In the event that trees can be retained it is considered that an AQ5 qualified arborist be engaged to manage any construction works within the TPZ and to identify any other mitigation measures to maintain or improve their condition where the works proposed impact on more than 10% of the TPZ.
- TPZs in close proximity to proposed works should be adequately marked and sign-posted. Signage identifying the TPZ shall be placed at 10 metre intervals along the TPZ barrier fencing. These signs will face towards the development site and shall have lettering that complies with AS 1319. TPZ fencing and signage should be inspected on a regular basis and maintained in good condition.
- All trees nominated for removal are to be removed prior to any construction activity or bulk earthworks. Approved tree removal operations in the vicinity of retained trees are to be undertaken in a manner that avoids canopy or root damage and soil compaction to retained trees. Such works should be supervised by a qualified arborist.
- Stumps are to be ground, not dozed or dug out unless they impact on the installation of services, roads or building works.
- All trenches, footings and major earth movement are to avoid TPZs.
- Stockpiling materials and soils within TPZs is forbidden.
- Machinery and other vehicles are to avoid TPZs during all operations.
- Any trenching or construction works unavoidably undertaken within TPZs should be witnessed, supervised and recorded (photographed and documented) by an AQ5 qualified arborist who will specify any works to be undertaken to avoid or remediate damage to trees.

Notwithstanding, a tree revegetation plan is to be prepared and integrated with the Proposed Development works and landscaping.

6.12 SOCIO-ECONOMIC IMPACTS

Within the *Liveable Lane Cove Community Strategic Plan 2035* (2018), the vision for Lane Cove promotes the evolution of this area as a smart vibrant economy characterised by a diversity of modern businesses. Lane Cove Council is already supporting strategies for encouraging the growth of Lane Cove West Business Park and to increase local employment opportunities. Additionally, Council has also produced a *Delivery Program and Operational Plan 2018-2021* (2018), which identifies ways of creating and supporting a vibrant and sustainable local economy. This includes encouraging a diverse range of businesses. Both these documents are supportive in principle to the development of the proposed Data Centre.

There are three (3) reasons as to why the Proposed Development should be facilitated, including:

1. There is an adequate stock of undeveloped and zoned employment land under the *North District Plan* (Greater Sydney Commission); hence, this land should be developed for its intended use to generate further employment-generating opportunities and local jobs in the *North District Plan* region.

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2. There is a demand to store electronic data and records within secure locations. It is not necessarily feasible for this to occur in commercial and business locations (e.g. within the CBD).
3. The size and location of the Site is considered suitable for the intended and proposed use. It will also generate significant employment-generating opportunities for the professional employment sector.

Additionally, the Proposed Development would assist in providing new employment opportunities and promoting industry diversification (i.e. ICT sector). This SSDA would not alter the quantity or configuration of land currently zoned for light industrial uses.

The Proposed Development, for the purposes of a Data Centre is considered consistent with the strategic direction of both the *North District Plan* (Greater Sydney Commission, 2018) and Lane Cove Council's – *Lane Cove Community Strategic Plan 2035* (2018) and *Delivery Program and Operational Plan 2018-2021* (2018). Additionally, the Proposed Development will further contribute to the growth of knowledge and professional service jobs within the North District; hence, contributing to the North District's economic growth.

It is noted, that if the Proposed Development did not proceed, the Site would not provide employment-generating opportunities for an employment sector.

The Proposed Development can support the existing Lane Cove West Business Park by maintaining industrial land stocks and employment objectives, while promoting industry diversification (and generate new employment sources) and can generate more employment during the planning, construction and maintenance stages.

It is noted, that the Proposed Development format would deliver an employment outcome accommodating between 80-100 (operational) jobs. Whilst, the construction phase of the Proposed Development would be in the order of approximately 320 jobs

Additionally, the Proposed Development would generate a range of community benefits / drivers, including:

- Reduced travel distances – which, would generate benefits including, reduced vehicle wear and tear, reduced fuel costs, reduced pollution, reduced traffic congestion, reduced risks of car accidents and more time which can be spent either working, socializing or undertaking other activities;
- New employment opportunities; and,
- Providing jobs closer to people's homes.

It should be noted, given the scale and nature of the Proposed Development, it will have a minimal impact on existing community and social facilities and that there are no requirements to provide for or contribute to new community or social infrastructure in the local area.

Accordingly, the Proposed Development can support the existing Lane Cove West Business Park by developing existing industrial land stocks and promoting industry diversification (i.e. ICT sector and professionals). Additionally, it will also generate more employment during the planning, construction and maintenance stages.

6.13 ABORIGINAL CULTURAL HERITAGE

The *1 Sirius Road, Lane Cove: Archaeological Report* (Biosis, 2019) was conducted in accordance with the requirements of the SEARs as part of the EIS process, as well as undertaking consultation with the Aboriginal community as part of adhering to requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010a) (refer to **Appendix 26**).

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A search of the Aboriginal Heritage Information Management System (AHIMS) database (Client Service ID: 396636) identified 115 Aboriginal archaeological sites within a 2 x 2 km search area, centred on the Subject Site. It is noted, that none of these registered sites are located within the study area. **Table 48** below provides the frequencies of Aboriginal site types within the vicinity of the study area.

Table 48: AHIMS Sites within the Vicinity of the Study Area		
Site Type	Occurrences	Frequency (%)
Artefact	72	40.00
Shell	60	33.33
Potential Archaeological Deposit (PAD)	20	11.11
Art (Pigment or Engraved)	18	10.00
Grinding Groove	8	4.45
Habitation Structure	2	1.11
Total	180	100%

An archaeological survey (field investigation of the study area) was undertaken on 20 November 2018. The archaeological survey consisted of four (4) transects being walked across the study area in order to identify Aboriginal sites present within it. Based on the archaeological survey undertaken, the study area has been assessed and determined as possessing a low archaeological potential to contain intact Aboriginal sites (refer to **Figure 48** below).



Furthermore, in accordance with the archaeological survey undertaken, the *1 Sirius Road, Lane Cove: Aboriginal Cultural Heritage Assessment Report* (Biosis, 2019) has been prepared in accordance with the *Code of Practice for the Archaeological Investigation Objects in NSW* (DECCW 2010b). Consultation with the Aboriginal community has been undertaken as per the process outlined in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a).

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As noted above, a search of the AHIMS database (Client Service ID: 396636) identified 115 Aboriginal archaeological sites within a 2 x 2 km search area, centred on the Subject Site. It is noted, that none of these registered sites are located within the study area.

Owing to the levels of disturbance, there were no locations identified within the study area, which were considered to have the potential to retain intact archaeological deposits of artefacts or shell. The majority of the study area has been subject to cut and fill actions, with much of the original ground surface having been visibly altered. With the study area, disturbance included the removal of topsoil, construction of buildings within the study area, and the dumping and removal of contaminated fill. Based on this archaeological survey, the study area has been assessed as holding low archaeological potential to contain intact Aboriginal sites.

It should be noted, that the AHIMS site data demonstrates, that there is a concentration of sites located along the Lane Cove River and Stringybark Creek. Both water sources are perennial sources, which would provide access to flowing water, and to aquatic species such as freshwater crayfish, fish and eels (Rosen 1995). As demonstrated by White and McDonald (2010), water supply was a significant factor influencing Aboriginal land use and habitation in the area. The close access to water and resources suggests that Aboriginal people would have used the area; however, the landforms within the study area are not favourable for long term occupation and subsequent high levels of disturbances would have destroyed any Aboriginal sites present.

Consultation with the Aboriginal community has been undertaken in compliance with the consultation requirements as detailed below. Consultation undertaken included the following stages:

- Stage 1: Notification of the Proposed Development and registration of interest.
 - Identification of relevant Aboriginal stakeholders:
 - Lane Cove Council;
 - NSW OEH;
 - NSW Native Title Services Corporation Limited (NTSCORP Limited);
 - Office of the Registrar, Aboriginal Land Rights Act 1983 of Aboriginal Owners;
 - National Native Title Tribunal (NNTT);
 - Greater Sydney Local Land Services;
 - Metropolitan Local Aboriginal Land Council (MLALC).
 - Public Notice:
 - Daily Telegraph (30 January 2019).
 - Registration of Aboriginal Parties.
- Stage 2: Presentation of information about the Proposed Development.
- Stage 3: Gathering information about cultural significance.
 - Archaeological assessment methodology information pack;
 - Information gathered during fieldwork.
- Stage 4: Review of draft Aboriginal Cultural Heritage Assessment Report.

The two (2) main values addressed when assessing the significance of Aboriginal sites are cultural values to the Aboriginal community and archaeological (scientific) values. The Aboriginal Cultural Heritage Assessment Report (ACHAR) assesses the cultural values of Aboriginal sites in the study area, for which the heritage assessment criteria in NSW fall broadly within the significance values outlined in the Australia International Council on Monuments and Sites (ICOMOS 2013) (the Burra Charter). Additionally, the NSW OEH, *Guidelines to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) has been utilised within the ACHAR, which specifies the importance of considering cultural landscape when determining and assessing Aboriginal heritage values.

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Historic significance refers to associations with a place or object, which may have historical importance to a person, event, phase or activity with regard to Aboriginal and other communities. It is noted, that the study area is not known to have any historic associations.

Further, the aesthetic value of the study area is considered low due to the extensive disturbance, with both cut and fill actions identified during the survey; large amounts of illegal dumping of material; and, the construction of both tracks and drainage features throughout. However, the association of the landscape with the Lane Cove River is considered significant and is closely linked with Aboriginal cultural values and provides a context for Aboriginal sites, that gives a strong sense of place.

The significance of the study area was assessed in accordance with the following criteria:

- Requirements of the Code;
- The Burra Charter; and
- *Guide to investigating and reporting on Aboriginal Heritage.*

The combined use of these guidelines is widely considered to represent the best practice for assessments of Aboriginal Cultural Heritage. The identification and assessment of cultural heritage values includes the four (4) values of the Burra Charter: social; historical; scientific; and aesthetic values. A resultant statement of significance was constructed for the study area (Biosis 2019), based on the significance ranking criteria assessed in **Table 49** below.

The study area has been subject to cut and fill actions, with much of the original ground surface having been visibly altered. Within the study area, disturbance included the removal of topsoil, construction of building within the study area, and dumping and removal of contaminated fill. It is noted, that no Aboriginal sites are located within the study area due to the high levels of previous ground disturbance, for which no areas of Aboriginal archaeological potential were identified. The entire study area has therefore been assessed as having low Aboriginal archaeological potential. During the consultation process, the Aboriginal community indicated, that the general area around the Lane Cove River has significance to the community; however, the study area does not have any direct historical associations and the scientific significance of this site has been assessed as low.

Table 49: Significance Assessment Criteria		
Site Name	Criteria	Ranking
Lot 1 DP 1151370	Cultural – discussions with the local Aboriginal communities reflect that the general area is significant.	Moderate
	Historical – the Site is not connected to any historical event or personage.	Low
	Scientific – the Site possesses low archaeological values.	Low
	Aesthetic – the Site is located adjacent to the Lane Cove River. It has been impacted by multiple cut and fill actions, with much of the original ground surface being significantly altered.	Low

The proposed works will consist of bulk earthworks and site infrastructure, followed by the construction of driveways and landscaping. All of these activities will have the potential to impact Aboriginal sites. However, as mentioned above, the study area has been subject to cut and fill actions, with much of the original ground surface having been visibly altered. As there are no Aboriginal sites within the study area and the area is highly disturbed, the Proposed Development works will not impact on Aboriginal heritage values.

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Avoidance of impact to archaeological and cultural heritage sites through the design of the Proposed Development is the primary mitigation and management strategy, and should be implemented, where practicable. However, due to the levels of disturbance incurred on the study area, there are no specific management and mitigation measures required. The MLALC identified intangible values in the area, which were associated with the landscape of the Lane Cove River. Therefore, the following mitigation measures are recommended in order to ensure that the proposed works do not further impact on the cultural values of the Lane Cove area. This is considered in line with the principles of Ecologically Sustainable Development (ESD) and intergenerational equity in their design.

Furthermore, after the completion of the construction phase of the Proposed Development, MLALC suggests that landscapes of native vegetation be planted and Gammerraygal names be used in any visual interpretation or signage within the gardens. This will ensure the visual amenity of the area is retained and acknowledgement of Aboriginal people as the original custodians of the area are recognised.

The recommendations stipulated below, respond specifically to the wishes of the Registered Aboriginal Parties (RAPs). These include:

Recommendation 1: No further archaeological assessment is required

No further archaeological work is required in the study area due to the entire study area assessed as having low archaeological potential.

Recommendation 2: Landscape design to include Indigenous plants

After the completion of the construction phase of the Proposed Development, it is suggested, that landscapes of native vegetation be planted and Gammerraygal names be used in any visual interpretation or signage within the gardens. This will ensure the visual amenity of the area is retained and the acknowledgement of Aboriginal people as the original custodians of the area are recognised.

Recommendation 3: Discovery of Unanticipated Aboriginal Objects

All Aboriginal objects and Places are protected under the *National Parks and Wildlife Act 1974* (NPW Act). It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the NSW OEH. Should any Aboriginal objects be encountered during works associated with the Proposed Development, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying the NSW OEH and Aboriginal stakeholders.

Recommendation 4: Discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity, the proponent must:

1. Immediately cease all work at that location and not further move or disturb the remains.
2. Notify the NSW Police and the NSW OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location.
3. Not recommence work at that location unless authorised in writing by the NSW OEH.

The ACHAR can be located within **Appendix 27** of this EIS. It should also be noted, that the ACHAR located in **Appendix 27** is in its draft form, for which it will be finalised following the

completion of the 28 day consultation period with the RAPs, whom are currently reviewing the draft ACHAR.

6.14 HISTORIC HERITAGE

The *Historical Heritage Assessment and Statement of Heritage Impact* (Biosis, 2018) has been prepared in accordance with current heritage guidelines, including *Assessing Heritage Significance, Assessing Significance for Historical Archaeological Sites and 'Relics'* and the *Burra Charter* (refer to **Appendix 26**). Accordingly, the Report provides a heritage assessment to identify if any heritage items or relics exist within or in the vicinity of the study area.

The study area is located within the vicinity of two (2) items (refer to **Figure 49**), which are listed as being both heritage items and archaeological sites of local significance, including:

- Cumberland Paper Mills (Item No. I214 and A5), 170 Epping Road, Lot 22 DP 825400, Lots 954 and 955 DP 752067, approximately 15 m to the northeast; and,
- Chicago Mills (Item No. I215 and A6), 160 Epping Road, Lot 13 DP 807958, approximately 250 metres to the north.

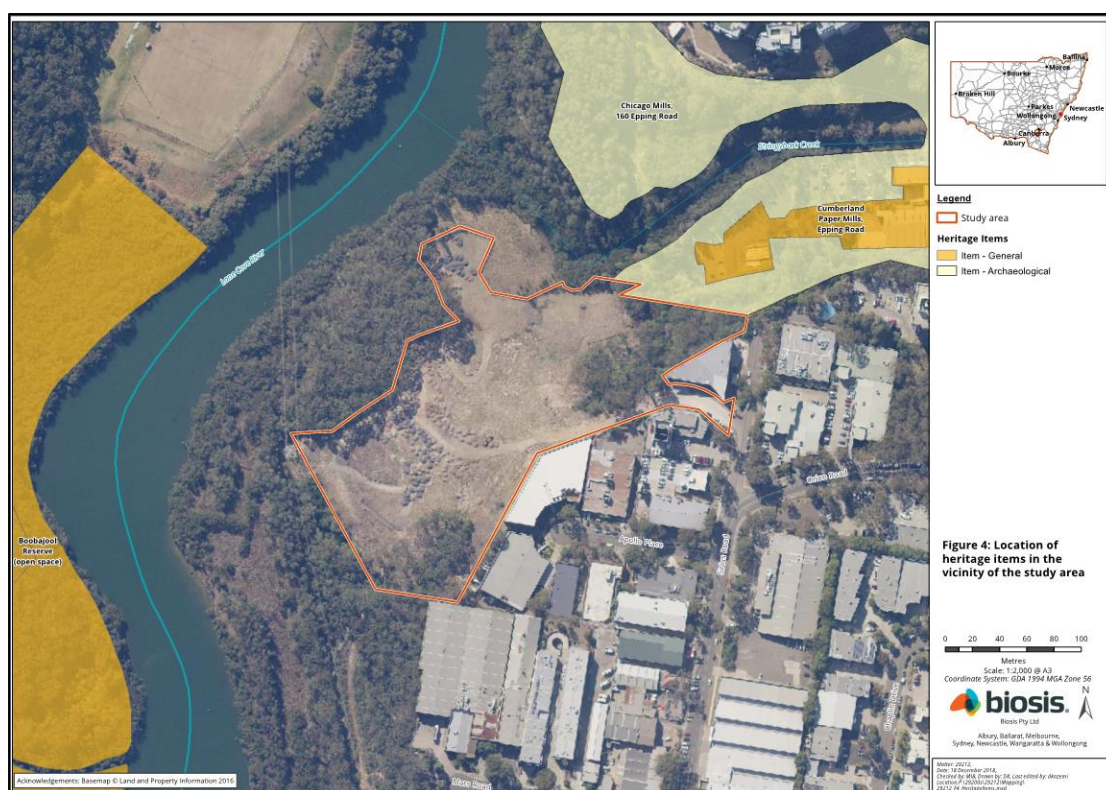


Figure 49 Location of Heritage Items in the Vicinity of the Study Area (Source: Biosis, 2019)

It is important to note, that whilst **Figure 52** is a copy of the map from the LCLEP2009, the listing shown within the map are incorrect. The Chicago Mills archaeological site and heritage item are located approximately 250 m to the north of the study area and are not shown on this map. The archaeological item that is shown in light yellow should be the Cumberland Paper Mills archaeological site. The Cumberland Paper Mills heritage item is correct, shown in the darker yellow to the north east of the study area.

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Current aerial imagery (refer to **Figure 50**) illustrates, that the study area has undergone significant vegetation clearing and industrial development, with the majority of the area being highly disturbed. It is noted, that the structures present in previous aerial imagery (1943) are no longer present, with sparse vegetation surrounding the edges of the study area. Within the study area, there are large piles of rubble and fill objects, heavily concentrated towards the western side of the area. Additionally, graded dirt roads appear throughout the study area, particularly towards the western side. In the southern portion there is an incised channel bank 20 m east of the southern boundary, and the eastern portion of the area backs onto a high developed light industrial area.



Figure 50 Current Aerial Showing Cleared with No Structures (Source: Biosis, 2019)

In order to fully understand the heritage significance of the study area, it is necessary to consider the character of the landscape within to which it is situated. Three (3) general landscape categories have been developed and applied by heritage organisations to assist in understanding different types of landscapes, including:

- **Designed Landscapes:** Those that are created intentionally such as gardens, parks, garden suburbs, city landscapes, ornamental lakes, water storages and campuses.
- **Evolved Landscapes:** Those that display an evolved land use in their form and features. They may be 'relict' such as former mining or rural landscapes. They may be continuing such as modern active farms, vineyards, plantations or mines.
- **Associative Cultural Landscapes:** These are landscape features that represent religious, artistic, sacred or other cultural associations to individuals or communities.

The study area is located within a broader evolved landscape, which has evolved through the development of many industries in the area. The study area has likely been utilised for activities

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associated with early industry in the Lane Cove LGA since the land was bought by Cumberland Paper Mills in 1912. However, while there may be both disturbed and undisturbed archaeological material associated with these activities within the study area, it is unlikely that any remains would provide further information regarding industry; activities associated with manufacture; production; and, distribution of goods that cannot be ascertained from historical documentation.

Through analysis of the above factors a number of assumptions have been made relating to the archaeological potential of the study area, for which are presented in **Table 50** below.

Table 50: Assessment of Archaeological Potential			
Description	Probable Feature(s)	Possible Construction Date	Archaeological Potential
Features associated with early land ownership.	Post holes, fence lines, rubbish pits.	1834+	Low
Building in centre of the lot	Footings, associated deposits.	Early-mid 20 th Century	Low
Steel tank	Footings, cut from removal of tank.	Early-mid 20 th Century	Low

Statement of Significance:

The Level of Significance for the item 'Features associated with early land ownership' was described as Nil. Biosis provided the following statement of significance:

"The possible archaeological material associated with the early land ownership of the study area, such as post holes, fence lines and rubbish pits, are not considered an important component of the cultural history of NSW or the Lane Cove district and they are not associated with the life or works of a person(s) of importance in local or state cultural history. These possible materials will not yield information that will contribute to a greater understanding of the cultural history of NSW or the Lane Cove district, and they unlikely to demonstrate aesthetic characteristics or a high degree of creative or technical achievement in the state or local area. They do not hold a strong or special association with a community or cultural group for social, cultural or spiritual reasons in NSW or the Lane Cove district. The possible archaeological materials are not considered to possess uncommon, rare or endangered aspects of NSW or the Lane Cove district's cultural history, nor do they demonstrate the principal characteristics of a class of cultural places or environments within the state or local area. The possible archaeological materials associated with the early land ownership within the study area do not hold heritage significance."

The Level of Significance for the items described as 'Building in the centre of the lot and steel tank' were described as Nil. Biosis provided the following statement of significance:

"The possible archaeological material associated with the industrial ownership of the study area (Cumberland Paper Mills Pty Ltd and Robert Corbett & Sons), such as post holes, fence lines, rubbish pits and building foundations, are not considered an important component of the cultural history of NSW or the Lane Cove district. While the land may be associated with a group of persons (and Robert Corbett & Sons Pty Ltd) of importance to NSW and the Lane Cove district, the possible remains on this site do not reflect this. These possible materials will not yield information that will contribute to a greater understanding of the cultural history of NSW or the Lane Cove district, and they unlikely to demonstrate aesthetic characteristics or a high degree of creative or technical achievement in the state or local area. They do not hold a strong or special association with a community or cultural group for social, cultural or spiritual

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reasons in NSW or the Lane Cove district. The possible archaeological materials are not considered to possess uncommon, rare or endangered aspects of NSW or the Lane Cove district's cultural history, nor do they demonstrate the principal characteristics of a class of cultural places or environments within the state or local area. The possible archaeological materials associated with the industrial ownership within the study area do not hold heritage significance."

The proposed development is on land that has a low potential for archaeological items. These items would not be locally or state significant. It is however situated in the vicinity of two (2) archaeological areas and heritage items. These are the Chicago Mills and the Cumberland Paper Mills, as previously mentioned above. The design of the Proposed Development encompasses a number of mitigation measures that reduce the impact of the proposal on the two (2) listed heritage items of significance; however, these may not completely mitigate the impact on the heritage items. These are discussed further below:

- **Chicago Mills (Locally Significant):** The Proposed Development does not directly impact the Chicago Mills heritage values; however, it may indirectly impact the Chicago Mills heritage values.
- **Cumberland Paper Mills (Locally Significant):** The Proposed Development may directly affect the Cumberland Paper Mills heritage values as an archaeological area. However, with the precautions for the archaeological area this will be minimal.

The Proposed Development may indirectly affect the Cumberland Paper Mills heritage values as a heritage item; however, with the precautions for the archaeological area this will be minimal.

The impacts anticipated to the study area with regard to the Proposed Development are considered acceptable, as there are no items of heritage significance within the study area that will be impacted by the proposed works, provided that an unexpected finds policy is implemented to identify and record any archaeological material that may be encountered during the proposed works.

The following recommendations have been provided by Biosis, based on the conclusions drawn above. They include:

Recommendation 1 – No Further Assessment Required:

This assessment has identified no items of heritage significance or archaeological potential within the study area, and minimal heritage impacts to surrounding heritage items. As such, no further assessment is required prior to the approval of this SSDA. Prior to any ground disturbance occurring within the study area, an unexpected finds procedure should be implemented as outlined in Recommendation 2.

Recommendation 2 – Development of an Unexpected Finds Procedure:

Relics are historical archaeological resources of local or State significance and are protected in NSW under the *Heritage Act 1977*. Relics cannot be disturbed except with a permit or exception / exemption notification. Should unanticipated relics be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic.

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6.15 BUSHFIRE

A *Bushfire Protection Assessment* (Travers Bushfire & Ecology, 2019) has been prepared in addressing the Subject Site, with regard to the Proposed Development comprising a Data Centre (refer to **Appendix 28**). The Report has been prepared to address the bushfire hazard posed to the Proposed Development and to address the aims and objectives outlined in *Planning for Bushfire Protection 2006* (PBP).

It is noted, that the Proposed Development is adjoined by forest, remnant forested wetland and grassland vegetation to southwest, west, north and northeast, which does expose the development to potential flame, ember and radiant heat attack. The bushfire risk posed to the Subject Site by this vegetation is reduced by the presence of saline wetland and the Lane Cove River, which is not considered to be bushfire prone. As a result, the fire run potential has been significantly reduced with full flame widths of 100 m not expected. Notwithstanding, the bushfire risk has been mitigated with the provision of APZs to ensure defensible space is achieved in compliance with the performance criteria outlined within PBP.

PBP guidelines require the identification of the predominant vegetation formation in accordance with David Keith (2004) to determine APZ distances. The hazardous vegetation is calculated for a distance of at least 140 m from a proposed building envelope. The hazardous vegetation within 140 m of the Proposed Development consists of:

- Dry sclerophyll forest to the southwest, northwest and northeast.
- Remnant forested wetland located to the west.
- Remnant / exotic vegetation located to the northeast.
- Grassland to the north.

The Report notes, that the saline wetland and mangrove swamps associated with Lane Cove River are not mapped as bushfire prone and are unable to sustain a fire; therefore, effectively providing a fire break and limiting fire run potential.

Table 51 below provides a summary of the bushfire attack assessment undertaken.

Table 51: Bushfire Attack Assessment				
Aspect	Vegetation Formation within 140 m of Development	Effective Slope of Land	Calculated Flame Length	Defendable Space Provided (m)
Data Centre				
South	Managed land / industrial development	N/A	N/A	N/A
Southwest	Forest	0-5 ^{0D}	25.2 m flame length	60
West	Forested Wetland	5-10 ^{0D}	25.72 m flame length	61
North	Forest	5-10 ^{0D}	34.1 m flame length	22
	Short Heath	0-5 ^{0D}	9.07 m flame length	44
	Remnant / exotic vegetation	0-5 ^{0D}	9.7 m flame length	14
East	Forest	0-5 ^{0D} Crossslope	25.2 m flame length	51

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Substation				
South	Forest	0-5 ^{0D}	25.2 m flame length	33
West	Forested Wetland	5-10 ^{0D}	25.72 m flame length	36
North and East	Managed land / industrial development	N/A	N/A	>100
Generator Platform 1				
West	Forested Wetland	5-10 ^{0D}	25.72 m flame length	36
North	Forest	5-10 ^{0D}	34.1 m flame length	25
Generator Platform 2				
North	Forest	5-10 ^{0D}	34.1 m flame length	30
	Short Heath	0-5 ^{0D}	9.07 m flame length	16
East	Remnant / exotic vegetation	0-5 ^{0D}	9.7 m flame length	10
Generator Platform 3				
North	Remnant / exotic vegetation	0-5 ^{0D}	9.7 m flame length	10
East	Forest	0-5 ^{0D} Crossslope	25.2 m flame length	25

Accordingly, **Table 52** tabulated below outlines the Proposed Development's compliance with the performance criteria for APZs.

Table 52: Performance Criteria for Asset Protection Zones (PBP Guidelines (pg. 19))				
Performance Criteria	Acceptable Solutions	Acceptable Solution	Performance Solution	Comment
Radiant heat levels at any point on a proposed building will not exceed 29 kW/m ²	APZs are provided in accordance with Appendix 2 of the Report. APZs are wholly within the boundary of the development site.	-	YES	Refer to Section 2.2 of the Bushfire Report. Whilst radiant heat level exposure on the data centre & indoor substation exceeds 29 kW/m ² a defensible space has been provided for fire fighting operations and the data centre will be constructed to withstand flame attack.

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APZs are managed and maintained to prevent the spread of fire towards the building	In accordance with the requirements of <i>Standards for Asset Protection Zones</i> (RFS 2005)	YES	-	The APZ consists of landscaped areas, roads and turf areas.
APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated	The APZ is located on lands with a slope of less than 18°	-	YES	APZs are located on slopes exceeding 18°.

The assessment undertaken has found that bushfire can potentially affect the Proposed Development from the forest, remnant forested wetland and grassland vegetation located to the southwest, west, north and north east, resulting in possible flame, ember and radiant heat attack.

Accordingly, the assessment undertaken has concluded that the Proposed Development will achieve compliance with the aims and objectives of the PBP, with the implementation of the following bushfire protection measures, including:

- *The data centre will be constructed using concrete and will comply with BAL FZ & 40 as outlined in AS3959 (2009) – Construction of buildings in bushfire prone areas.*
- *The substation (southern portion of site) is to comply with BAL 29 for all facades.*
- *Service openings will be screened with a metal mesh (aperture of 2mm). This may impact on required airflow quantities and should therefore be engineered to ensure efficiency.*
- *Fire exits and stairs in flame zone areas are to be enclosed with fire rated doors and seals.*
- *The generator platforms are not enclosed. The equipment is provided over the three(3) levels on generator platforms 2 & 3 and over two (2) levels on generator platform*
- *The proposed generators and diesel fuel tanks will be constructed using non-combustible materials and will be housed within a non-combustible structure. In addition, radiant heat shields will be provided to prevent flame contact and reduce radiant heat exposure on the structures / machinery.*

It therefore is considered that the Proposed Development complies with the specific aims and objectives of PBP. Additionally, the following recommendations have been provided, requiring adoption as part of the Proposed Development. These include:

Recommendation 1 – *At the commencement of building works and in perpetuity, the area around the proposed buildings shall be managed as an inner protection area (IPA) as depicted in Schedule 1 – Bushfire Protection Measures (ref: 18AWE02_BF001) dated 8/8/2019 prepared by Travers bushfire & ecology and as outlined within Section 4.1.3 and Appendix 5 of PBP 2006 and the NSW Rural Fire Service's Standards for asset protection zones as follows:*

- *north-east: IPA for a distance of 25m (residue of site located towards the north-east to be revegetated to a riparian corridor);*
- *south-west: IPA for a distance of 33m;*
- *south: IPA for a distance of 36m; and,*

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- north: IPA for a distance of 16-22m.

Recommendation 2 – *The provision of water, electricity and gas shall comply with Section 1.1.3 of PBP 2006.*

Recommendation 3 – *The proposed property access road (driveway) shall comply with Section 4.1.3 (2) of PBP 2006.*

Recommendation 4 – *Fire trails shall comply with the performance criteria outlined in section 4.1.3 (3) of PBP 2006.*

Recommendation 5 – *Arrangements for emergency and evacuation are to comply with Section 4.2.7 of PBP 2006, including the preparation of an emergency/ evacuation plan consistent with the NSW RFS document titled Guidelines for the Preparation of Emergency / Evacuation Plan.*

Recommendation 6 – *Construction of the proposed data hall's southern elevation and roofing shall comply with Sections 3 & 8 (BAL 40) of AS3959 – 2009 or NASH Standard – 2014 as appropriate and section A3.7 Addendum Appendix 3 of PBP 2006.*

Recommendation 7 – *Construction of the proposed data halls northern, eastern and western elevations and roofing shall comply with Section's 3 & 9 (BAL FZ) of AS3959 – 2009 or NASH Standard – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber.*

Recommendation 8 – *Construction of the proposed substation shall comply with Sections 3 & 7 (BAL 29) of AS3959 – 2009 or NASH Standard – 2014 as appropriate.*

Recommendation 9 – *Construction of the proposed generator platforms shall comply with Sections 3 & 9 (BAL FZ) of AS3959 – 2009 or NASH Standard – 2014 as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber.*

Recommendation 10 – *Radiant heat shields are to be provided to the generator platforms to prevent flame contact and reduce radiant heat exposure on the structures / machinery.*

Recommendation 11 – *Landscaping to the site is to comply with the principles of Appendix 5 of PBP 2006.*

6.16 INFRASTRUCTURE REQUIREMENTS

ARUP have undertaken an assessment of the relevant infrastructure requirements for the Subject Site applicable to the Proposed Development (refer to **Appendix 29**).

Power

AusGrid have confirmed that the requested capacity and arrangement is available from a nearby 132 kV Sub-Transmission Switching Station (STSS) south of the Subject Site. Options have been provided by AusGrid as to possible overhead and underground 132 kV cable reticulation routes from the STSS to the Site 132 kV substation that is proposed as part of this SSDA on the Subject Site (refer to the Architectural Plans in **Appendix 5**).

It is noted, that the final reticulation routes, including whether diverse cable routes are required for the feeders are still under investigation. Additionally, new AusGrid easements will be required along the routes in accordance with AusGrid Standard NS 143.

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As mentioned above, a new 132 kV privately owned substation will be procured to serve the Subject Site as part of this SSDA. The proposed substation will be fed by two (2) new 132 kV AusGrid feeders from the STSS to the south of the Subject Site. The substation itself will be owned by the end user and further MV and LV distribution on the Site will be a private network. The infrastructure in the substation will include:

- 3 No. 45 MVA 132/11 kV transformers. It is envisaged that 2 No. transformers will be installed initially, with the 3rd installed at a later date as the Site electrical load increases.
- A 132 kV Gas Insulated Switchgear (GIS) unit to allow for protection, control and distribution of power around the Site via an 11 kV private network.
- 3 No. Neutral Earthing Resistors to allow for reduction of the substation fault current to an acceptable level.
- 2 No. 11/0.4 kV Station services transformer to supply the electrical demands of the substation.
- Additional miscellaneous equipment relating to SCADA, protection, control and operation of the substation.

Water

An existing DIA150 Sydney Water main is present along the southern boundary of the Site at the entrances on both Sirius Road and Apollo Place. Connections at one or both of these locations should be possible. The assessment undertaken suggests, that the existing DIA150 main will be sufficient for the first phases of the Proposed Development. It is noted, that as the Site develops it may be necessary to increase the connection to DIA200.

Sewer

An existing DIA225 sewer line runs along the southern border of the Site. It is envisaged that a connection will be made along this line and will involve pumping as the Site is lower than this existing line and other nearby infrastructure. It is not envisaged that an upgrade to this line will be required.

Communications

Both Optus and NBN have infrastructure in the vicinity of the Site on Sirius Road and Apollo Place, which may be appropriate for construction and site operations. It is noted, that numerous high capacity communications connections to the Site will be needed to support the proposed Data Centre operations.

Gas

The Site does not require a gas supply.

6.17 GREENHOUSE GAS AND ENERGY EFFICIENCY

The *Lane Cove West Data Centre: SSDA Sustainability Statement* considers the overall energy consumption with regard to the Proposed Development (refer to **Appendix 30**).

The National Australian Built Environmental Rating System (NABERS) provide a star rating system for energy usage within data centres. Three (3) types of rating systems are available, including IT Equipment, infrastructure and Whole Facility. The Infrastructure rating was utilised for the Report.

The NABERS Data Centres Infrastructure rating assesses the efficiencies by comparing the following:

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- Infrastructure Energy Consumption (i.e. exclusive of IT Equipment); and,
- IT Energy.

The Report converts the above points to Power Usage Efficiency (PUE) and tabulates the maximum permissible PUE with respect to each NABERS energy star rating (refer to **Table 53** below).

Table 53: NABERS Energy Stars with Permissible PUE	
NABERS Energy Stars	Maximum PUE
3 – “average benchmark”	1.88
4	1.61
4.5	1.48
5	1.34
5.5	1.2
6	1.07

6.18 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The *Lane Cove West Data Centre: SSDA Sustainability Statement* considers ESD initiatives associated with the Proposed Development (refer to **Appendix 30**). Sustainability measure that will be implemented (where deemed practicable), include:

- Power is distributed as far as practical at high voltage, reducing electrical transmission losses.
- The proposed chillers are significantly more efficient than the minimum allowed to satisfy local code requirements.
- Rainwater harvesting – where practical, rainwater will be captured on-site and used to supply make up water to the cooling towers, in place of mains water.
- VSD drives will be used on fans and pumps allowing turndown and energy savings as part load.
- High efficiency electrical drives will be used on the various systems.
- Low flow fixtures and fittings will be used to minimise water consumption.

6.19 BUILDING CODE OF AUSTRALIA AND FIRE ENGINEERING

As demonstrated within the *Building Code of Australia Report: AirTrunk Data Centre Development – 1 Sirius Road, Lane Cove* (Mckenzie Group, 2019), the proposed Data Centre must be designed to comply with the BCA (refer to **Appendix 31**). The detailed design of the proposed Data Centre would be in accordance with the BCA and would be further assessed prior to the issue of a Construction Certificate.

The assessment undertaken of the design documentation has revealed that the following areas are required to be assessed against the relevant performance requirements of the BCA (refer to **Table 54** below). The submission for Construction Certificate will need to include verification from a suitable accredited fire engineer.

Table 54: Relevant Performance Requirements of the BCA – Fire Safety Items			
No.	Alternative Solution Description	DTS Clause	Performance Requirement
1	It is proposed to permit rationalised Fire Resistance Level (FRL) for the following areas of the subject building: ▪ L1 – Switch rooms	C1.1, Spec C1.1,C2.7, C2.8, C2.9	CP1, CP2

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	▪ L2 and L3 – MMR rooms, comms rooms, storerooms and data hall fire doors ▪ L4– Office MMR rooms, Comms rooms ▪ Internal perimeter walls to be 2hrs in lieu of 4hrs		
2	Extended travel distances and distances between alternative exits to be assessed under a performance solution. Open Roof Plant: ▪ Travel distance to nearest exit is up to 55 m in lieu of 40 m; and ▪ Travel distance between alternative exits is up to 90 m in lieu of 60 m, measured to horizontal exit. L4 Office Building: ▪ Travel distance to point of choice of up to 25 m in lieu of 20 m; ▪ Travel distance to nearest exit of up to 50 m in lieu of 40 m; and ▪ Travel distance between alternative exits of up to 65 m in lieu of 60 m. Crac Corridors: ▪ Travel distance between exit is up to 80 m in lieu of 60 m, measured to horizontal exit. Data Halls: ▪ Travel distance to nearest exit is up to 50 m in lieu of 40 m, measured to horizontal exit; and ▪ Travel distance between alternative exit is up to 80 m in lieu of 60 m, measured to horizontal exit. L1 Plant Room: ▪ Travel distance of 120 m between alternative exits in lieu of 60 m; and ▪ Travel distance of 80 m to nearest exit in lieu of 40 m.	D1.4, D1.5	DP4, EP2.2
3	Horizontal exits are proposed which exit the maximum allowable of 50% in the crac corridors.	D1.5 and D1.11	DP4, EP2.2
4	It is proposed to permit the reduced unobstructed egress width in the hot aisle corridor in the data hall to be no less than 750 mm in lieu of the required 1,000 mm.	D1.6	DP6

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5	For the purpose of data hall operations, it is proposed to permit the door in the data hall compartments to swing against the direction of egress.	D2.20	DP2
6	Additional fire hydrant hose lengths to provide coverage are anticipated to be required.	E1.3	EP1.3
7	It is anticipated the hydrant booster location will not meet the prescriptive requirements of AS2419.1-2005 and will be required to be assessed as a fire engineered performance solution.	E1.3	EP1.3
8	Removal of fire hose reels within the data heels and link corridor in lieu of providing fire hose reels as required.	E1.4 and AS2441-2005	EP1.1

The fire engineered solution relating to EP1.3 and EP2.2 will be subject to consultation with the NSW Fire Brigade as part of the Construction Certificate process under Clause 144 of the EP&A Regulation.

Additionally, within the letter titled, *Fire Safety Engineering Design Review for DA Submission* (Scientific Fire Services, 2018), it confirms, that the documentation in relation to the Proposed Development will achieve fire safety design compliance to the relevant Performance Requirements of the National Construction Code Series – Volume 1, Building Code of Australia (BCA) (refer to **Appendix 32**).

Furthermore, Mckenzie Group assessed the access requirements with regard to the Proposed Development (refer to **Appendix 33**). In this regard the following areas require further review as the overall project develops.

Table 55: BCA Access Requirements			
BCA Compliance Mandatory			
1.	General Access & Exemptions	Access is required to and within all areas of the building normally used by occupants.	By virtue of the proposed use of the building, it is understood that the proposal is to rationalise equitable access / circulation provision to much of the data hall space under the auspices of BCA Clause D3.4. AS the design develops, further clarification should be obtained from the operator of the facility.
2.	Pedestrian Access at Boundary	A continuous accessible path is to be provided to the new building: - From the main points of a pedestrian entry at the allotment boundary; and, - From any required accessible carparking space on the allotment.	It is noted that pedestrian access provision outside of the boundary is reduced comprising: - A small footpath to the far side of the road, with no pedestrian crossing provision; and, - Footpath finishing approximately 20 m short of the entrance roadway.

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			Coupled with the above, the level change from the boundary to the pedestrian entrance is noted to exceed 3.6 m permitted under Clause D3.11 of the BCA. Accordingly, consideration will be required to ensure operationally, staff / visitors are aware of the limitations and access is managed accordingly.
3.	Carparking	Provide accessible carparking spaces in accordance with D3.5 of the BCA. Number of accessible spaces to conform to Table D3.5. Design of space to AS/NZS 2890.6-2009.	Annotate shared zone locations with bollards, to the two (2) annotated accessible car parking spaces. Additional consideration as to the provision of a clearly highlighted path of travel to the Administration building from the second space should be made as the design develops.
4.	Doors	All doors within accessible spaces shall comply with AS1428.1-2009: - Clear width (850 mm) of active leaf; - Where double doors are provided, at least one leaf is to achieve clear width of 850 mm; - Compliant door circulations spaces; - Operational force (<20N); - 30% Luminance contrast of opening.	As the design develops, allow to detail a supporting door schedule illustrating door leaf sizes / clear openings / hardware. It is initially anticipated with the current design that compliance can be achieved towards much of the administration space. However, further assessment is required as the design develops to determine the ability to provide compliant sliding door latchside clearance internally to within the meeting rooms and FM Office.
5.	Lifts	Any lift travelling >12m requires a minimum compartment size of 1400 mm wide x 2000 mm depth (requires 2000 mm depth where stretcher use indicated and travelling >12 m). Any lift travelling <12m requires a minimum compartment size of 1100mm wide x 1400mm depth. Fitout must comply with AS1735.12.	Compartment sizes indicate compliance can be achieved. Fit-out details to be reviewed in as the design develops as necessary for equitable circulation beyond the considerations in Section 1 above.

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6.	Stairs – General	All general circulation stairs are to be designed to comply with Clause 11 of AS1428.1-2009: - clear width not less than 1m; - handrails both sides; - Handrail extensions; - Provision of TGSIs and nosings.	Further assessment will be required as the design develops. It is initially anticipated with the current design that compliance can be achieved.
7.	Fire Stairs Isolated	Any FIS stairs used for general circulation are to be designed to comply with AS1428.1-2009.	Further assessment will be required as the design develops. It is initially anticipated with the current design that compliance can be achieved.
8.	TGSIs	TGSIs are required to be installed in accordance with D3.8 and AS1428.4.1, to the top and bottom of every: - General circulation stair; - General circulation ramp; - Pedestrian crossings / shared roadways / car park entrances; - Vertical hazards (<2m); - Kerb ramps	Further assessment will be required as the design develops.
9.	Internal Walkways	Internal walkways / corridors are to be design to comply with D3.3 and AS1428.1 2009: ▪ minimum width of 1m; ▪ a width of 1240 mm allows for side approach door circulation (door swinging away from user); ▪ corridor terminations within 2m of end (1540mm min width); ▪ turning spaces every 20m (1540mm min width); ▪ passing bays every 20m where no direct line of sight (1800mm min width); ▪ circulation spaces at directional turns.	Based on review of current documentation it is anticipated that compliance can be achieved. Further assessment will be had as the design develops. Ensure wider security gate provisions are detailed at the entry check-in to allow for equitable wheelchair circulation.
10.	Unisex Accessible Sanitary Facilities (UASF)	UASF to be provided on each level where one or more toilets are provided.	All sanitary facility provisions are noted to Level 4, within the main administration space.

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		Provide an equal distribution of LH & RH toilets / showers within the design. Design to comply with Clause 15 AS1428.1-2009: - combined WC and basin minimum of 1900x2630mm; - combined WC and shower facility: 2300x2630mm; - Refer to Figure 50 of AS1428.1 for required compartment size and layout of fixtures and fittings.	Allow to alter the current provision of the two (2) right hand transfer facility.
11.	Ambulant Cubicles	Male and Female Ambulant Cubicles are required on each level where gender facilities are provided in addition to UASF. Design to comply with Clause 16 of AS1428.1-2009.	Annotate male and female ambulant cubicles as required. It is anticipated, that compliance can be achieved.
12.	Braille & Tactile Signage	BCA D3.6: Mandatory Braille and tactile signage must be provided.	Details to be reviewed as design develops. It is anticipated, that compliance can be achieved.
13.	Furniture & Fixtures	Future fitout/design of fixtures, furniture and fittings should consider accessible requirements in accordance with AS1428.2: - Reception / counters - Common kitchens / teapoints - Internal / external seating design	Note for future fit-out.

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PART G DRAFT MANAGEMENT AND MITIGATION MEASURES

By:	Greenbox Architecture
In relation to:	Proposed Data Centre – State Significant Development Application
Site:	1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Greenbox Architecture would undertake the facilitated construction and operation of the proposed Data Centre in accordance with the following:

Below prescribes some of the terms and abbreviations used in this Statement, including:

Approval	The Minister's approval of the Proposed Development
BCA	Building Code of Australia
Council	Lane Cove Council
Department	Department of Planning and Environment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act, 1979</i>
Greenbox	Greenbox Architecture
Project	The Proposed Development as described in this EIS
Secretary General	Secretary General of the Department (or delegate)
Site / Subject Site	Land to which the project application applies
WorkCover	NSW WorkCover

ADMINISTRATIVE COMMITMENTS

Commitment to Minimise Harm to the Environment

1. Greenbox would implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the project.

Occupation Certificate

2. Greenbox would ensure a staged Interim and Final Occupation Certificate is obtained prior to the occupation of the facilities.

Terms of Approval

3. Greenbox would carry out the project generally in accordance with the:
 - a) Environmental Impact Statement;
 - b) Drawings prepared by Greenbox;
 - c) Management and Mitigation Measures;
 - d) Any Conditions of Approval.
4. If there is any inconsistency between the above, the Conditions of Approval shall prevail to the extent of the inconsistency.
5. Greenbox would ensure compliance with any reasonable requirement/s of the Secretary-General of the Department of Planning and Environment arising from the Department's assessment of:
 - a) Any reports, plans, programs, strategies or correspondence that are submitted in accordance with this Approval; and
 - b) The implementation of any recommended actions or measures contained in reports, plans, programs, strategies or correspondence submitted by the Project Team as part of the application for Approval.

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Structural Adequacy

6. Greenbox would ensure that all new buildings and structures data centre buildings and ancillary offices) on the Site are constructed in accordance with the relevant requirements of the BCA.

Operation of Plant and Equipment

7. Greenbox would ensure that all plant and equipment used on the Site is maintained and operated in proper and efficient manner, and in accordance with relevant Australian Standards.

Construction Traffic Management Plan

8. Greenbox would ensure a Construction Traffic Management Plan is prepared and submitted to DP&E. This plan would:
 - a) be submitted to the Secretary-General for approval prior to the commencement of construction;
 - b) describe the traffic volumes and movements to occur during construction;
 - c) detail proposed measures to minimise the impact of construction traffic on the surrounding network, including driver behaviour and vehicle maintenance; and,
 - d) detail the procedures to be implemented in the event of a complaint from the public regarding construction traffic.

Contractors Environmental Management Plan

9. Prior to the commencement of construction, a Contractors Environmental Management Plan (CEMP) would be prepared that addresses the following:
 - a) Land Contamination;
 - b) Air Quality;
 - c) Waste Classification;
 - d) Erosion and Sediment Control; and,
 - e) Materials Management Plan

Monitoring of State of Roadways

10. The Applicant should monitor the state of roadways leading to and from the Site and should take all necessary steps to clean up any adversely impacted road pavements as directed by Council.

Waste Receipts

11. A permanent record of receipts for the removal of both liquid and solid waste from the Site should be kept and maintained up to date at all times. Such record is to be made available to authorised person upon request.

SPECIFIC ENVIRONMENTAL COMMITMENTS

Noise

12. Construction on the Site would only be undertaken between 7am and 6pm Monday to Friday, and 7am and 1pm on Saturdays. No construction would be allowed on Site on Sundays or public holidays. The following specific measures are proposed throughout the construction and operational phases of development:
 - a) Prompt response to any community issues of concern;
 - b) Noise monitoring on site and within the community;
 - c) Refinement of onsite noise mitigation measures and plant operating procedures where practical;
 - d) Preparation of a formal noise management plan including noise monitoring program;

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- e) For equipment with enclosures (i.e. compressor rooms) ensure door and seals are well maintained and kept closed when not in use;
- f) Keep plant and equipment well maintained, regular inspection and maintenance of equipment to ensure it is good working order;
- g) Equipment not to be operated until it is maintained or repaired;
- h) Regularly train workers (ie toolbox talks) to use equipment in ways to minimise noise;
- i) Operate mobile plant in a quiet, efficient manner;
- j) Switching off vehicles and plant when not in use; and,
- k) Incorporate clear signage at the Site including relevant contact numbers for community enquiries.

13. Prior to issue of an Occupation Certificate, the following recommendations provided in the Noise Impact Assessment Report should be acknowledged and adhered to accordingly, including:

Table 56: Indicative Noise Mitigation Measures		
Item	Location	Attenuation Details
Water-cooled Chillers	Enclosure	Enclosure achieving 15-20 dB noise level reduction.
Cooling Towers	Intake / discharge / equipment reselection	A collective noise level reduction of 25-30 dB is required which is likely to require a reselection of the cooling tower type along with intake/discharge attenuators.
Diesel Generators (backup power only)	Inlet / Discharge	Gensets recommended to be specified with a maximum emission of 72 dB(A) @ 1m. Discussed further below.
	Exhaust	
	Enclosure	
Building Envelope	Walls	Precast concrete ~150 mm Doors may need to be acoustically rated dependant on location.
	Roof	Recommend concrete ~150 mm.
Transformers	Enclosure	Enclosure achieving 10-15 dB noise level reduction.

Air Construction Traffic

14. During construction:

- a) all trucks entering or leaving the Site with loads have their loads covered;
- b) trucks associated with the project do not track dirt onto the public road network; and,
- c) the public roads used by these trucks are kept clean.

Dust Management

15. During the construction phase of the project, all reasonable and feasible measures must be considered to minimise the dust generated by the project. These include:

Source	Control Measures
General	
Visual Inspection	Carry out visual inspections of the Site during site preparatory / construction activities and employ measures where necessary to minimise any visible air pollution generated by the Project.
Regular Maintenance	Regularly inspect and perform maintenance on dust control technologies (i.e. water sprays nozzles) and measures to ensure the effectiveness of these controls.

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Erosion Control Structures	Silt and other material removed frequently from around erosion control structures to ensure deposits do not become a dust source.
Vegetated Buffers	Retain existing vegetation where appropriate and implement additional vegetated buffers around the boundary of the site to provide act as a physical barrier to the transport of pollutants in the direction of sensitive receptors.
Waste Materials	Cleared vegetation, demolition materials and other combustible waste material shall not be burnt on site. All waste materials be appropriately contained (in skips, bins) and covered during adverse weather conditions and handled in accordance with the site's Waste Management Plan.
Wind Blown Dust Sources	
Disturbed Areas	- Disturb only the minimum area necessary. - Stabilise all disturbed areas as soon as practicable to prevent or minimise windblown dust. - Rehabilitate disturbed areas as soon as practicable with a layer of inert material and vegetation (generally a minimum of 500mm). - Regularly assess weather conditions to identify adverse weather conditions that are unfavourable in terms of dust levels at receptor locations surrounding the Site (i.e. on dry days, during strong winds, and particularly north easterly winds blowing in direction of the school).
Stockpile/s	- Water sprays and/or covers would be employed for material stockpiles, particularly during adverse weather conditions, to minimise dust generation. - Stockpiles would be covered overnight. - Use of chemical dust suppressants would also be used where necessary. - Fencing, bunding or shelterbelts used to reduce ambient wind speeds (in some areas).
Transportation (Trucks)	- Truck loads covered with tarpaulin or lid prior to transport of dusty materials by road. - Minimise truck queuing and unnecessary trips through logistical planning of materials delivery and work practices. - Reduce vehicle / truck idling times. - Maintain a following distance of trucks of 20 seconds minimum to allow for dust clouds generated by the lead truck to dissipate. - Install a truck wheel wash or shaker grid to remove any loose dirt.
Activity Generated Dust Sources	
Internal Road Dust	- Roads and trafficked areas would be watered down using a water cart and/or sprinkler to minimise the generation of dust. - Haulage vehicles would be restricted to the most direct route and minimal manoeuvring areas to prevent indiscriminate driving over non-active areas. - Haul roads and hard stand areas would have designated speed limits (ie generally 20 km/hour). - Enforce speed limits on all on-site vehicles to minimise wheel-generated dust. - Stabilise access roads and work areas as soon as practicable to prevent or minimise windblown dust.

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	– Maintain roads on a regular basis to ensure roads are clearly marked, pot holes and corrugations are eliminated, and extra material build up is removed or redistributed on the road. – Chemical dust suppressants used where necessary.
External Road Dust	– Vehicles causing dirt track out onto main roads would be cleaned up on a regular basis to prevent this becoming an additional source of dust. – Material spillages would be cleaned up promptly.
Excavation	– Apply water sprays to trucks and loading points for dust suppression.
Loading and Dumping	– Dump heights would be minimised wherever possible (reduce to 5 m).
Plant and Equipment	– All plant and equipment used during mining activities would be maintained and operated in a proper and efficient condition. – Reduce idling times of trucks and other machinery. – Fixed plant should be located as far from local receptors as possible.
Excessive Dust Events	
Internal Roads	– Employ additional water spraying / water carts. – Further reduce speed on haul roads during high winds. – Halt traffic movements.
Stockpiles	– Cover stockpiles of material.
Project Site	– Temporarily halt activities and resume once weather conditions have improved.

Waste Management

16. Greenbox would ensure that all waste generated on-site during operation is classified in accordance with the Office of Environmental and Heritage's *Waste Classification Guidelines: Part 1 Classifying Waste* and disposed of to a facility that may lawfully accept the waste.

Erosion and Sediment Control

17. Greenbox would install silt traps during the construction phase to ensure there are no pollutants or sediments that exit the Site or unacceptable impacts that would result on surrounding vegetation or waterways.

Protection of Vegetation

18. Greenbox would mark the clearance boundaries prior to commencement of construction to ensure that there is no unnecessary removal of vegetation.

Aboriginal Heritage

19. During works, Greenbox would notify the NSW Office of Environment and Heritage should an Aboriginal site and/or object be recorded in the Aboriginal Heritage Information Management System (AHIMS).

Ecologically Sustainable Development

20. Greenbox would investigate the following ESD measures in respect of:

- a) Energy & Greenhouse Gas Emissions;
- b) Potable water reduction;
- c) Minimising waste to landfill;
- d) The Indoor Environment;
- e) Occupant amenity and comfort;
- f) Land Use & Ecology;

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- g) Emissions; and,
- h) Building Management

Bushfire Protection

21. Greenbox would ensure that:

- a) Fire hydrants to be installed to comply with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419);
- b) Where overhead electrical transmission lines are installed no part of a tree should be closer to a powerline than the distance specified in "Guideline for managing vegetation near power lines" issued by Department of Energy, Utilities and Sustainability (ISSC 3, December 2005);
- c) Gas services are to be installed and maintained in accordance with AS/NZS 15962008 The storage and handling of LP gas.

PART H PROJECT DEVELOPMENT JUSTIFICATION

The Proposed Development is justified in the context of environmental, social and economic terms and is compatible with the locality in which it is proposed.

This SSD Application is lodged on the basis of:

Supporting State, Regional and Local Planning Objectives

The Proposed Development is consistent with the objectives, provisions and strategies outlined within the *A Metropolis of Three Cities – Greater Sydney Region Plan, North District Plan* and *LCLEP2009*.

Appropriate Use of an Approved Site

The Proposed Development would retain and contribute to the growth of important industry for the immediate locale as-well-as the wider region. The strengthening of this sector is an important strategy for the economic welfare of the Sydney Metropolitan Region, as-well-as the wider NSW Government Region. The Proposed Development compliments significant government investment in infrastructure and strategic planning vision as enunciated throughout State & Regional Strategies alike. The Proposed Development would be a direct response to the strategic vision (goals / objectives) for the Site, as set out in the Regional Strategies, including *A Metropolis of Three Cities – Greater Sydney Region Plan* and the *North District Plan*.

Environmental Impacts have been Minimised

Specialist consultants have assessed the risks and determined that the Proposed Development can be undertaken with minimal environmental impacts. No significant risk to the locality would result from the Proposed Development. Where impacts have been identified, these would be appropriately managed and mitigated through the compilation of mitigation measures and recommendations requiring adherence.

Compatibility with Surrounding Development

The Proposed Development use is compatible with existing uses surrounding the Subject Site on adjacent land within the Lane Cove West Business Park. The investigations undertaken as part of this SSD Application conclude, that no significant cumulative impact is to occur from the proposed use for the purpose of a Data Centre. Rather, the proposed use would be complementary to the surrounding developments within the IN2 Light Industrial zone.

Ecologically Sustainable Development

The principles of Ecologically Sustainable Development as outlined in Clause 7(4) of the EPA Regulations are addressed as follows:

- *Precautionary Principle*
No unmanageable threat or irreversible damage to the environment has been identified in relation to the Proposed Development.
- *Inter-generational Equity*
No unreasonable use of resources, affectation of environmental processes or prevention of the use of land for future generations would occur from the Proposed Development.

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- *Conservation of Biological Diversity and Ecological Integrity*
The Site remains undeveloped; however, is heavily disturbed. No processes, habitats or species outside the Site are likely to be significantly affected by the Proposed Development.
- *Improved Valuation, Pricing and Incentive Mechanisms*
The Proposed Development seeks to implement measures to avoid, contain and address any associated waste or pollution through appropriate design and management.

The Proposed Development would effectively enable improved cost efficiencies in the provision of facilitating development, for the purposes of a proposed Data Centre.

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PART I CONCLUSION

The Proposed Development, for the purposes of a Data Centre, is defined as State Significant Development pursuant to Schedule 1 of *State Environment Planning Policy (State and Regional Development) 2011*.

Furthermore, the provisions outlined in *Lane Cove Local Environmental Plan 2009* permit the Proposed Development with the IN2 Light Industrial zone.

No adverse environmental impacts are anticipated to result from the construction or pursuant operational phases of the Proposed Development. The Proposed Development is also suitably separated from sensitive areas and would be serviced by adequate infrastructure, including a capable road network. The minor environmental impact of the Proposed Development would be ensured by the implementation of the management mitigation measures as outlined in **Part F** of this EIS, formulated in response to the findings and recommendations of the specialist's reports provided within **Appendix 4 - 38**.

The Proposed Development is consistent with the objectives, provisions and strategies outlined within the *A Metropolis of Three Cities – Greater Sydney Region Plan*, and the *North District Plan*. The Proposed Development would contribute to economic growth and prosperity in accordance with these strategies / policies by supporting private enterprise, thereby creating employment opportunities in a site earmarked for such permissible development.

Based on the findings of this EIS, the Proposed Development supports the continued development of jobs in the Sydney Metropolitan Region and contributes to the retention and growth of industrial-related development. The Proposed Development is suitable for the local context and is appropriate based on social, cultural, economic and environmental considerations.

As such, it is recommended that the Proposed Development be supported by the Department of Planning and Environment.

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Appendix 1 Secretary's Environmental Assessment Requirements

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Appendix 2 Pre-DA (Pre-SEARs) Meeting Minutes

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Appendix 3 Quantity Surveyors Report

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Appendix 4 Survey Plan

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Appendix 5 Architectural Plans

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Appendix 6 Landscape Plan

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Appendix 7 Landscape Design Report

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Appendix 8 Landscape and Visual Impact Assessment Report

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Appendix 9 Water Quality Report

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Appendix 10 Flood Assessment Report

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Appendix 11 Civil Engineering Drawings and Plans

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Appendix 12 Geotechnical Report

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Appendix 13 Phase 1 Due Diligence Assessment

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Appendix 14

Phase 2 Acquisition Environmental Due Diligence Assessment

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Appendix 15 Sampling and Analytical Quality Plan

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Appendix 16 Remedial Action Plan

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Appendix 17 Traffic Impact Assessment

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Appendix 18 Waste Management Plan

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Appendix 19 Noise Impact Assessment

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Appendix 20 Construction Noise Management Plan

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Appendix 21 Air Quality Impact Assessment

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Appendix 22 **SEPP 33 Report**

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Appendix 23 Biodiversity Development Assessment Report

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Appendix 24 Tree Impact Assessment Report

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Appendix 25 Archaeological Report

Appendix 26
Aboriginal Cultural Heritage Assessment Report

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Appendix 27 Historic Heritage Report

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Appendix 28 Bushfire Report

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Appendix 29 Site Infrastructure Report

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Appendix 30 Energy Efficiency Report

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Appendix 31 BCA Report

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Appendix 32 Fire Engineering Report

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Appendix 33 Access Report

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Appendix 34 Community Consultation Report

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Appendix 35

Clause 4.6 Variation – Height

Appendix 36

Lane Cove Development Control Plan 2009 Compliance Table

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Appendix 37 Options Analysis

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Appendix 38 Vegetation Management Plan

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Appendix 39 **Dangerous Goods Report**

Appendix 40
Ausgrid Letter of Support

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Appendix 41 STrAP & TAG

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Appendix 42

Urban Heat Island Effect Letter of Support

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Appendix 43 Construction Management Plan

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1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Appendix 44 Watercourse Assessment Report

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Appendix 45 Lane Cove Tunnel Assessment