



WILLOWTREE PLANNING

ENVIRONMENTAL IMPACT STATEMENT:

GLENDENNING ROAD DATA CENTRE

SSD-73761707

2 Glendenning Road, Glendenning
Lot 2 DP1137162

—

Prepared by Willowtree Planning Pty Ltd
on behalf of **Lehr Consultants International (Australia) Pty Ltd (LCI Consultants)**

18 March 2025

Willowtree Planning acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing and ongoing connections to land, waters, and community.

We acknowledge the Cammeraygal people, the Traditional Custodians of the land where this document was prepared, as well as the Traditional Owners of the Land where the proposed development will be located, the Gadigal people of the Eora Nation. We pay our respects to Elders past, present and emerging.

DOCUMENT CONTROL TABLE			
Project Reference	SSD-73761707_Environmental Impact Statement		
Contact:	Cameron Gray		
Version and Date	Prepared by	Checked by	Approved by
Version No. 1 – 05/12/2024	Charlotte MacDonald	Andrew Cowan	Andrew Cowan
Version No. 2 – 11/12/2024	Cameron Gray	Andrew Cowan	Andrew Cowan
Version No. 3 – 04/03/2025	Cameron Gray	Andrew Cowan	Andrew Cowan
Version No. 4 – 13/03/2025	Cameron Gray	Andrew Cowan	Andrew Cowan
Version No. 5 – 17/03/2025	Cameron Gray	Andrew Cowan	Andrew Cowan

SYDNEY

—
Suite 204, Level 2
165 Walker Street
North Sydney NSW 2060

02 9929 6974
equiries@willowtp.com.au
willowtreeplanning.com.au

BRISBANE

—
Level 3
240 Queen Street
Brisbane QLD 4000



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EIS DECLARATION

Declaration Form: Submission of EIS

Project Details

Project name	Glendenning Road Data Centre
Application number	SSD-73761707
Address of the land on which the development is to be carried out	2 Glendenning Road, Glendenning

Proponent Details

Proponent name	Lehr Consultants International (Australia) Pty Ltd (LCI Consultants)
Proponent address	73 Miller Street, North Sydney, NSW

Details of person by whom this EIS was prepared

Name	Cameron Gray
Address	Suite 204, Level 2 165 Walker Street North Sydney NSW 2060
Professional qualifications	Bachelor of Planning (Honours), University of New South Wales

Declaration by registered environmental assessment practitioner

Name	Andrew Cowan
Registration number	135475
Organisation registered with	PIA

Declaration	The undersigned declares that this EIS: ▪ has been prepared in accordance with Part 8 of the <i>Environmental Planning and Assessment Regulation 2021</i>; ▪ contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the EIS relates; ▪ does not contain information that is false or misleading; ▪ addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project; ▪ identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments; ▪ has been prepared having regard to the Department's <i>State Significant Development Guidelines - Preparing an Environmental Impact Statement</i>; ▪ contains a simple and easy to understand summary of the project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development; ▪ contains a consolidated description of the project in a single chapter of the EIS; ▪ contains an accurate summary of the findings of any community engagement; and ▪ contains an accurate summary of the detailed technical assessment of the impacts of the project as a whole.
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Signature



Date 17/03/2024



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GLOSSARY OF KEY TERMS

TERM	MEANING
ACHA	Aboriginal Cultural Heritage Assessment
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
APZ	Asset Protection Zone
AQIA	Air Quality Impact Assessment
ASS	Acid Sulfate Soils
BAM	Biodiversity Assessment Methodology
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2016</i>
BC Regulation	<i>Biodiversity Conservation Regulation 2017</i>
BDCP 2015	<i>Blacktown Development Control Plan 2015</i>
BLEP 2015	<i>Blacktown Local Environmental Plan 2015</i>
BMCS	<i>Building Management Control System</i>
BOS	Biodiversity Offset Scheme
CBD	Central Business District
CEMP	Construction Environmental Management Plan
Council	Blacktown City Council
CTMP	Construction Traffic Management Plan
DA	Development Application
DC	Data Centre
District Plan	<i>Central City District Plan</i>
DP	Deposited Plan
DPHI	Department of Planning, Housing and Infrastructure
DSI	Detailed Site Investigation
EDC	Estimated Development Cost
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>
EPA	Environment Protection Authority
EPBC Act	<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
EPL	Environmental Protection Licence
ESD	Ecologically Sustainable Development
EV	Electric Vehicle
FSR	Floor Space Ratio
FTE	Full Time Equivalent
GFA	Gross Floor Area
HV	High Voltage
LCI Consultants	Lehr Consultants International (Australia) Pty Ltd
LGA	Local Government Area



ENVIRONMENTAL IMPACT STATEMENT

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LSPS	<i>Local Strategic Planning Statement 2020</i>
MNES	Matter of National Environmental Significance
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
MW	Mega watts
NCC	National Construction Code
NVIA	Noise and Vibration Impact Assessment
OSD	On-Site Detention
PAM	Pre-Application Meeting
PMF	Probable Maximum Flood
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Planning Systems SEPP	<i>State Environmental Planning Policy (Planning Systems) 2021</i>
RAPs	Registered Aboriginal Parties
Regional Plan	<i>Greater Sydney Region Plan – A Metropolis of Three Cities</i>
RL	Reduced level
SAQP	Sampling and Analysis Quality Plan
SEARs	Secretary's Environmental Assessment Requirements (SSD-73761707), dated 25 July 2024
SEPP	State Environmental Planning Policy
SIDRA	Signalised & unsignalised Intersection Design and Research Aid
Sqm or m²	Square metres
SSD	State Significant Development
SSDA	State Significant Development Application
Subject site / site	2 Glendenning Road, Glendenning
TfNSW	Transport for NSW
Transport and Infrastructure SEPP	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>
UFP	<i>Unexpected Finds Protocol</i>
VIA	Visual Impact Assessment
Western Parklands SEPP	<i>State Environmental Planning Policy (Precincts – Western Parkland City) 2021</i>
Willowtree Planning	Willowtree Planning Pty Ltd
WM Act	<i>Water Management Act 2000</i>
WMP	Waste Management Plan
WSUD	Water Sensitive Urban Design



SUMMARY

Overview and Project Description

This State Significant Development Application (SSDA) relates to the redevelopment of the site at 2 Glendenning Road, Glendenning (known as the “subject site”). This Environmental Impact Statement (EIS) has been prepared by Willowtree Planning Pty Ltd (Willowtree Planning), on behalf of Lehr Consultants International (Australia) Pty Ltd (LCI Consultants). In short, the proposal involves the staged construction and operation of a data centre development, comprising:

- Site preparation and establishment works including:
 - Bulk earthworks to create proposed site levels;
 - In-ground building services and utility work;
 - Clearance of trees and vegetation within the proposed development extent;
- Construction and operation of three data centre buildings, known as DC01, DC02 and DC03, comprising:
 - A total Gross Floor Area (GFA) of 50,233m² (DC01 – 19,985m², DC02 – 10,263m² and DC03 – 19,985m²);
 - A maximum building height of 45.3m, including five storeys for each building;
 - Three internal substations;
 - A total IT capacity of approximately 193.6MW (DC01 – 79.2MW, DC02 – 35.2MW and DC03 – 79.2MW);
- Total diesel fuel storage of 2,736,030L within underground bulk fuel storage tanks and generator day tanks;
- 97 back-up generators across the full development;
- External plant and equipment (including water tanks and pump rooms);
- Installation of evaporative cooling units;
- Three vehicle crossovers to Glendenning Road and internal access roads;
- Security fencing surrounding the development, including a controlled entry and exit point;
- 165 on-site car parking spaces (including 6 accessible parking spaces and 12 Electric Vehicle (EV) parking spaces);
- Landscaping across the subject site;
- Hours of operation being on a 24 hours per day, seven days per week basis.

The proposed works would be constructed in three stages, as follows:

- **Stage 1:** The first stage would include the construction of DC01, located at the rear of the subject site. The three existing site buildings would be demolished.
- **Stage 2:** The second stage would involve the construction of DC02.
- **Stage 3:** The construction of DC03.

Perspectives of the proposed development are provided in **Figure 1** and **Figure 2**.





Figure 1. Proposed Development Glendenning Road (Source: Greenbox Architecture, 2024)



Figure 2. Proposed Development North-West View (Source: Greenbox Architecture, 2024)

The proposal is State Significant Development (SSD) pursuant to Schedule 1, Clause 25 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP), as it has a total power consumption of more than 15 megawatts. The Secretary of the Department issued industry-specific Secretary's Environmental Assessment Requirements (SEARs) (reference: SSD-73761707) for data storage centres on 25 July 2024, in accordance with Section 4.39 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).



The Subject Site

The subject site is located at 2 Glendenning Road, Glendenning and is legally described as Lot 2 DP 1137162 (refer **Figure 3**). It is zoned E4 General Industrial under the *Blacktown Local Environmental Plan 2015* (BLEP 2015).

The subject site comprises a total area of 10.44ha and exhibits a primary frontage to Glendenning Road at the western boundary for approximately 295m. A secondary frontage to Woodstock Avenue is located along the southern boundary, for a length of approximately 335m.

The subject site comprises three existing warehouse buildings that undertake various operations, including storage and logistics and a transport vehicle centre. The buildings are positioned toward the Glendenning Road frontage and cover approximately one half of the subject site. The remainder of the subject site to the rear is vacant and contains a mix of grass, native vegetation and sporadic trees. A patch of mature native vegetation exists along the southern boundary. An established landscaping strip is located along the Glendenning Road frontage, providing some screening of the existing buildings.

Vehicle access is obtained via four vehicles crossings off Glendenning Road, which provide separate access for the two large tenants. Vehicle access is also provided off Woodstock Avenue for the southern tenant.

The subject site is traversed by overhead 132kV transmission lines and towers along the rear boundary, managed by Endeavour Energy. A drainage reserve also exists directly north of the subject site, which is managed by Blacktown City Council.

The subject site is surrounded by industrial land to the north, west and south (refer to the site context in **Figure 4**). Directly adjoining the subject site to the east is the Nurragingy Reserve, which falls under the jurisdiction of the Greater Sydney Parklands. Eastern Creek is located within the reserve and runs along the eastern boundary of the subject site. The closest residential area is located approximately 400m to the west of the subject site on the opposite side of the M7 Motorway.





Figure 3. Aerial Map of Subject Site (Source: NearMap, 2024)



Figure 4. Site Context and Zoning (Source: Willowtree Planning, 2024)



Planning and Legislative Framework

All relevant Federal and State legislation, as well as Environmental Planning Instruments (EPIs), have been considered in the preparation of this EIS. The proposal is satisfactory in terms of its legislative context, on the basis that:

- The proposal is permissible in the zone;
- The objectives of the zone are satisfied;
- The range of applicable State Environmental Planning Policies (SEPPs) have been considered. Strategic policies that apply to the locality and wider region have identified that the proposed use is consistent with the strategic context of the area;
- The proposed development can satisfy the relevant provisions of the National Construction Code (NCC) and applicable Australian Standards.

Engagement

A range of authorities have been consulted with during the preparation of this EIS. These include:

- Blacktown City Council;
- Department of Planning Housing and Infrastructure (DPHI);
- Greater Sydney Parklands;
- Sydney Water;
- Endeavour Energy;
- Registered Aboriginal Parties (RAPs) (as outlined in the Aboriginal Cultural Heritage Assessment (ACHA); and
- Surrounding local landowners, business and stakeholders.

Relevant feedback has been incorporated into the project's design, where practicable.

Environmental Impact Assessment

An assessment of environmental impact has been undertaken against the relevant planning controls and policies in accordance with the requirements of the issued SEARs. Additionally, a number of expert consultants have been engaged to specifically consider relevant aspects of the proposal. The environmental impact assessment has found that the proposed development complies with the relevant controls and it is considered that appropriate mitigation measures can be put in place to minimise any identified risks.

Based on the specialist studies and extensive investigations carried out for the proposed development, the following conclusions are made:

▪ Statutory Context

The proposal is entirely consistent with the Objects of the EP&A Act. The appropriateness of the proposed development is also demonstrated through compliance with the BLEP 2015, in that it achieves the employment generating outcomes envisaged for the subject site, whilst minimising impacts on surrounding uses and environments. The proposal does not seek any departures from development standards under the BLEP 2015.

▪ Estimated Development Cost and Employment

The proposal has an EDC of \$2,168,267,746 and would generate approximately 1,076 direct construction jobs and approximately 106 operational jobs for the proposed facility through the provision of a data centre development. As a key piece of infrastructure for the cyber security



sector, the subject site has been identified to have the potential to deliver substantial benefits to the Blacktown LGA.

- **Design Quality**

The proposal achieves good design in accordance with the seven objectives for good design in the *Better Placed* guidelines.

- **Built Form and Urban Design**

The proposed development includes three new data centre buildings to a maximum height of 45.3m from existing ground level (including mechanical plant and lift overruns). The BLEP 2015 does not provide a maximum building height control or maximum Floor Space Ratio (FSR) control for the subject site. Therefore, the bulk and scale of the proposed development has been considered in relation to the context of the surroundings, as well as the need to provide sufficient IT capacity for the area. The subject site has been deemed suitable for the proposed development as it is located within an established industrial precinct, with residential development at least 400m away.

Although the buildings will introduce a new visual element to the landscape, the architectural design incorporates a thoughtfully chosen colour palette and materials that harmonise with the surrounding environment. Different panels have been included to provide interest on the façade, including patterns that draw inspiration from the Nurragingy Reserve. The generators have also been suitably screened through the use of louvres.

- **Visual Impact**

The sensitivity of visual receivers within the immediate context, such as views experienced from Glendenning Road, Woodstock Avenue and the M7 Motorway, would be low. This is due to the industrial character of the surrounding area and the pedestrians being predominantly workers from adjacent facilities. The significance of the visual impact would be minor/negligible to minor.

A public pathway exists directly adjacent to the subject site, within the Nurragingy Reserve. The proposed development would be clearly noticeable and would cause a substantial change to the baseline from this location. However, views from this pathway would be transitional and experienced for a limited time only. Further, it is noted that whilst the visual appearance of the subject site would change, the perception of the subject site from the public domain, being industrial development, would not. The significance of the visual impact would be moderate – high / moderate. Within the Nurragingy reserve at the Colebee Centre, the proposed development would be screened by existing vegetation and there would be no impact.

The residential suburbs directly west of the subject site (Plumpton and Rooty Hill) are elevated and therefore would receive higher visual impacts from the proposed development. This is due to visual receivers being located in residential areas that presently experience longer distance views over Nurragingy reserve. These views are generally screened from the Glendenning Industrial area by existing vegetation, and therefore, visual sensitivity is increased. The change in view created by the development is also more apparent at higher elevations. The significance of the visual impact from these locations would be moderate / minor – high / moderate.

Residential suburbs to the east of the subject site (Doonside) are generally screened by the Nurragingy Reserve. The significance of this visual impact from the east would be negligible – minor.



▪ **Traffic, Transport and Accessibility**

The proposed development is expected to have a minor impact on the surrounding road network during peak periods, as a result of the proposed traffic generation (during both construction and operational phases). Road upgrades or infrastructure works in the surrounding road network are not considered to be required to accommodate the proposed development.

Whilst carparking on the subject site is not compliant with the rates identified under the *Blacktown Development Control Plan 2015* (BDCP 2015), 165 carparking spaces are proposed which would sufficiently meet staff and visitor parking demand. Adequate parking is also available on the subject site during each construction phase.

▪ **Trees and Landscaping**

A total of 247 trees and partial removal of three stands of trees are proposed to be removed due to project impacts. This comprises:

- 13 high retention value trees and partial removal of two stands of trees;
- 164 medium retention value trees (including six street trees along Glendenning Road); and
- 70 low retention value trees and partial removal of one stand of trees.

The proposal seeks to retain approximately 60% of existing trees on the subject site including the area of high biodiversity value which will be retained and rehabilitated. To offset the impacts arising from the tree loss, a site-wide Landscape Plan has been prepared. The resulting landscape characteristics of the proposed development include:

- A landscaped area of 20,300m², representing 19.43% site coverage;
- A total of 317 new trees to be planted; and
- A total tree canopy cover of 10,460.3m², representing 10% site coverage. This is an increase to the existing tree canopy coverage.

▪ **ESD**

The proposed development aims to implement sustainable design and construction practices. It would support organisational commitment to design, construct, and operate ultra-low carbon (and/or net zero carbon) buildings. The Proponent's net zero commitment will enable consumers and businesses to procure cloud services from a company which is on a net zero carbon trajectory. The Proponent provides its customers with transparent data on the carbon emissions associated with their cloud services usage and provides educational material on how to use those services in a more carbon efficient way. They have made a commitment to 100% renewable energy for all operations by 2025, meaning that all electricity would be purchased through Power Purchase Agreements for renewable energy.

The development would incorporate various sustainable design and construction initiatives to ensure it meets the requirements outlined in the SEARs, industry standards, and the sustainability pillars set by the NSW Government's Net Zero Plan. Embodied emissions attributed to the proposed development have been quantified.

▪ **Biodiversity**

Avoidance, mitigation and management measures have been incorporated into the design of the proposed development and will be carried out during construction and operation. Both ecosystem credit and species credit offsets are required to be secured for the proposed



development, and these obligations would be satisfied prior to the construction of the proposed development.

- **Back-up Power System**

Low voltage diesel generators will be provided for each building on the subject site to support the site loads during mains power failure events. These generators are designed to operate in standby in the case of a power outage only.

As part of the design development process, the project team considered alternatives to diesel fuel for providing the requisite standby power which is fundamental to ensuring the buildings redundancy requirements. The investigation concluded that given the scale of the electrical power demand, coupled with redundancy requirements and risk associated with any failure, a diesel generator standby power provision is justified and the most appropriate.

- **Air Quality**

The Air Quality Impact Assessment (AQIA) concludes that the construction phases can be adequately managed so that the short-term and temporary dust related impacts will be low risk to human health.

Dispersion modelling of the operational phase was carried out and it was concluded that the proposed development is not considered likely to result in additional exceedances of the relevant air quality criteria at any identified receptor location, should appropriate selection of generators, or limiting of generator testing hours be implemented. Appropriate generators will be selected in accordance with the recommendations of the AQIA.

- **Noise and Vibration**

A range of construction noise scenarios were modelled as part of the Noise and Vibration Impact Assessment (NVIA). This did not identify any noise sensitive receivers that would be highly noise affected or experience noise levels significantly above the project's noise management levels. A limited number of nearby industrial receivers were predicted to exceed the noise management levels by up to 5dB at a time during construction only. Appropriate construction noise management and mitigation measures have been recommended to reduce the potential for impacts on the surrounding community.

Noise impacts from construction traffic are predicted to increase road traffic noise levels by less than 1dB as a result of the additional construction vehicle movements. A change in noise of less than 2 or 3dB is typically not considered discernible.

Noise modelling of the operational phase of the proposed development indicated compliance at all noise sensitive receivers. A minor exceedance of up to 2dB is predicted to occur at some passive recreation receiver locations within close proximity to the boundary of the Nurragingy Reserve during periods of emergency back-up power system testing, during adverse weather conditions. These potential exceedances are considered negligible due to the less sensitive nature of the receiver type (passive recreational), magnitude of exceedance (a difference of 1-2 dB is difficult to perceive for most receivers), and the fact that potential exceedance is limited to occur during adverse weather conditions only which is unlikely to combine with any noisy activities.

- **Ground and Water Conditions**

The north-western and south-western portions of the subject site are mapped in the Bringelly Shale outcrop zone, consisting of shale, carbonaceous claystone, claystone, laminate, fine to



medium grained lithic sandstone and rare coal and tuff. The remainder of the subject site is underlain by Quaternary deposits comprising fine-grained sand, silt and clay.

Mapping indicates that the subject site is located in an area of moderate salinity potential. A Salinity Management Plan has been prepared for the proposed works.

Groundwater inflow was encountered during drilling of BH101 and BH102 at 7.7mbgl (26.6m AHD) and 9mbgl (24.8m AHD), respectively. Given the proximity to Eastern Creek, this groundwater level may fluctuate due to seasonal variation in creek water level. Groundwater was not encountered in other boreholes up to drilling depth and could not be observed below drilling depth due to during the introduction of drilling fluids during rock coring.

Ephemeral perched groundwater may be present within soil profile and / or at the soil / rock interface, originating from infiltration of surface water during prolonged or intense rainfall events. Consequently, water bearing layers may be encountered during excavation, however inflow into excavation is expected to be limited and may be managed by sump and pump methods.

Based on the groundwater observations at the subject site during investigations, the proposed development is unlikely to intercept the permanent groundwater table at the site and an aquifer interference approval is unlikely to be required.

▪ **Water Management**

The proposed data centre development has been designed to meet the relevant Blacktown City Council and SEARs requirements.

The pit and pipe stormwater system has been designed to convey the 5% Annual Exceedance Probability (AEP) storm event including climate change factors. The overland flow paths during the 1% AEP storm event have been designed to convey flow safely to the roadway or open space areas within the subject site.

Stormwater quantity treatment has been provided for the development to satisfy Blacktown City Council pollution reduction targets. Rainwater reuse through rainwater tanks (one per building) has been provided as part of the treatment train system to supply recycled water for toilet flushing and to supplement water use for the mechanical cooling system.

▪ **Flooding Risk**

Review of Blacktown City Council flood mapping and available flood studies shows the subject site is not impacted by the 1% AEP riverine flood nor subject to potential evacuation difficulties during this flood event. All proposed buildings on the subject site would be constructed above the flood planning level.

▪ **Hazards and Risks**

The operation of the proposed development would involve the storage and handling of diesel and lithium-ion batteries. The facility has a total of 2,736,030L of diesel comprised in underground bulk storage tanks and day tanks of the generator units. A Dangerous Goods Compliance Report has been prepared which details the high-level compliance requirements for the diesel fuel system and lithium battery rooms. The report confirms that the dangerous goods can be stored safely provided that all the design requirements are met and upheld during normal operations. This will ensure that the facility can be operated safely, in compliance with the relevant standards and regulations, and with acceptable risk to people, property and the environment.



- **Contamination and Remediation**

Potential risks to human health and ecological receptors have not been identified through contamination investigations. It has been determined that the subject site is suitable for the proposed use as a data centre and no remediation is required.

- **Waste Management**

A Waste Management Plan has been provided, which considers construction and operational waste measures to be undertaken for the proposed development. All buildings have considered the provision for waste management areas to ensure the effective management and disposal of waste can occur.

- **Aboriginal Cultural Heritage**

Review of background information, existing assessments, database searches and site surveys have confirmed that the subject site possesses cultural significance and value. There are six registered sites within the project area and further Aboriginal objects are likely within the project area in both disturbed and intact contexts.

The proposed development has the opportunity to create exclusion zones to protect a percentage of land within areas of moderate and high archaeological potential and Aboriginal objects areas. Management and mitigation measures are required to avoid, minimise and mitigate harm to known and likely Aboriginal objects and heritage values including the protection and conservation of a substantial portion of the subject site which contains cultural values and adoption of an Aboriginal Cultural Heritage Management Plan.

Consultation with the RAPs has been undertaken for this assessment and conducted in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*.

- **Environmental Heritage**

There are no statutory or non-statutory listed heritage items in, or in the vicinity of the subject site for historical archaeology. However, background archival research has determined that there is potential for historical archaeological resources on the subject site, including a c.1894 cottage, c.1909 cottage and the Owen farm, however, it is noted that there is no evidence of the these structures at ground level. The proposed development may have an adverse impact to the identified heritage values of these potential relics.

Prior to project works commencing, the Proponent will undertake the recommended investigation and mitigation measures as per the Archaeological Design and Research Methodology.

- **Social Impact**

Long term socio-economic impacts of the proposal are expected to be positive, with benefits to be felt by groups extending beyond the immediate locality. The proposal is expected to have the greatest negative impact during the construction phase, which will be temporary and limited to the subject site's immediate surroundings. This can be managed through the implementation of appropriate mitigation measures.

▪ Infrastructure Requirements and Utilities

The proposed development can be adequately serviced and does not necessitate any infrastructure upgrades. Connections into the existing electricity transmission network would be subject to separate approvals by Endeavor Energy.

▪ Bush Fire Risk

The subject site is located on designated bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable. A Bushfire Assessment has been prepared and confirms that the proposal satisfies the requirements of *Planning for Bush Fire Protection 2019*.

▪ Construction, Operation and Staging

The proposed development would be undertaken in three stages, resulting in one building constructed per stage. Separate construction certificates would be required for each stage. The existing warehouse located at the north of the subject site would remain in operation during the first two stages.

▪ Contributions and Public Benefit

A contribution would be required in accordance with the *Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2023*. This is levied at \$15.80 per square metre of GFA (as of 1 October 2024).

Blacktown City Council has confirmed that no s7.11 Contributions are required for the proposed development.

▪ Engagement

A comprehensive level of community and stakeholder engagement, including community and agency consultation has been undertaken for the proposed development, and feedback has been incorporated, where practicable.

Justification for the Proposed Development

A thorough consideration of the environmental impacts of the proposal has been undertaken in the environmental impact assessment process and in the preparation of the EIS. In assessing the impacts of the proposed development, consideration has been given to social, economic and environmental matters. All assessed impacts have been examined and deemed acceptable, in relation to all the relevant legislative requirements applicable to the subject site.

The proposed development aligns with the objectives of the strategic planning documents, including *A Metropolis of Three Cities – Greater Sydney Region Plan*; *the Central City District Plan*; *the Blacktown Local Strategic Planning Statement 2020*; and *the Future Transport Strategy 2056*. The proposal would contribute to employment generation in an area already earmarked for employment through both State and Regional planning policies.

Based on the findings of this EIS, the subject site can successfully support the proposed data centre development, inclusive of related development and operations, with acceptable environmental impacts. The proposed development is a logical addition to the existing Glendenning Industrial Estate. Given the above reasons and the satisfaction of both of the objects of the EP&A Act and the aims of the BLEP 2015, it is recommended that the proposed development, for the purposes of a data storage centre, be supported subject to relevant and reasonable conditions.



PART 1 INTRODUCTION

1.1 INTRODUCTION

This EIS has been prepared by Willowtree Planning, on behalf of LCI Consultants. The EIS is submitted to the NSW DPHI, in support of an application for SSD, for the Glendenning Road Data Centre project, involving the staged construction and operation of a data centre development at 2 Glendenning Road, Glendenning, more formally described as Lot 2 DP1137162.

The particulars of this proposal are summarised below:

- Site preparation and establishment works including:
 - Bulk earthworks to create proposed site levels;
 - In-ground building services and utility work;
 - Clearance of trees and vegetation within the proposed development extent;
- Construction and operation of three data centre buildings, known as DC01, DC02 and DC03, comprising:
 - A total GFA of 50,233m² (DC01 – 19,985m², DC02 – 10,263m² and DC03 – 19,985m²);
 - A maximum building height of 45.3m, including five storeys for each building;
 - Three internal substations;
 - A total IT capacity of approximately 193.6MW (DC01 – 79.2MW, DC02 – 35.2MW and DC03 – 79.2MW);
- Total diesel fuel storage of 2,736,030L within underground bulk fuel storage tanks and generator day tanks;
- 97 back-up generators across the full development;
- External plant and equipment (including water tanks and pump rooms);
- Installation of evaporative cooling units;
- Three vehicle crossovers to Glendenning Road and internal access roads;
- Security fencing surrounding the development, including a controlled entry and exit point;
- 165 on-site car parking spaces (including 6 accessible parking spaces and 12 EV parking spaces);
- Landscaping across the subject site;
- Hours of operation being on a 24 hours per day, seven days per week basis.

The proposed works would be constructed in three stages, as follows:

- **Stage 1:** The first stage would include the construction of DC01, located at the rear of the subject site. The three existing site buildings would be demolished.
- **Stage 2:** The second stage would involve the construction of DC02.
- **Stage 3:** The construction of DC03.

The proposal has an EDC of \$2,168,267,746 and would generate approximately 1,076 direct construction jobs and approximately 106 operational jobs for the proposed facility.

This EIS describes the subject site and proposed development. It also responds to the SEARs and assesses the proposed development in terms of all relevant matters set out in legislation, EPIs and associated planning policies.

The structure of this EIS has been prepared in accordance with the NSW DPHI's *State Significant Development Guidelines – Preparing an Environmental Impact Statement* as follows:

- **PART 1 INTRODUCTION**
- **PART 2 STRATEGIC CONTEXT**
- **PART 3 PROJECT DESCRIPTION**
- **PART 4 STATUTORY CONTEXT**
- **PART 5 ENGAGEMENT**



- **PART 6 ASSESSMENT OF IMPACTS**
- **PART 7 PROJECT JUSTIFICATION**

1.2 STATUTORY REQUIREMENTS

The relevant statutory requirements of the proposal are suitably addressed in **Section 4.1.1** and **Appendix C** of this EIS.

1.3 MANDATORY CONSIDERATIONS

Mandatory matters for consideration by the consent authority are outlined in **Section 4.1.1** of this EIS.

1.4 SUPPORTING PROJECT DOCUMENTATION

Documents provided in support of the proposal are outlined in **TABLE 1**.

TABLE 1: DOCUMENT SCHEDULE		
Appendix No.	Document Title	Consultant
Appendix 1	SEARs	-
Appendix 2	Estimated Development Cost (EDC) Report	Turner & Townsend
Appendix 3	Title Documents	Various
Appendix 4	Architectural Drawings	Greenbox Architecture
Appendix 5	Architectural Design Report	Greenbox Architecture
Appendix 6	Survey Plan	LTS Surveyors
Appendix 7	Building Code of Australia (BCA) Compliance Report	MBC Group
Appendix 8	Accessibility Report	MBC Group
Appendix 9	Visual Impact Analysis (VIA)	Geoscapes
Appendix 10	Transport and Accessibility Impact Assessment and Green Travel Plan (TAIA)	Positive Traffic
Appendix 11	Construction Traffic Management Plan (CTMP)	Positive Traffic
Appendix 12	Landscape Plan	Geoscapes
Appendix 13	Arboricultural Impact Assessment (AIA)	Capability Green
Appendix 14	Ecologically Sustainable Development (ESD) Report	LCI Consultants
Appendix 15	NABERS Embodied Emissions Materials Form	Turner & Townsend
Appendix 16	Biodiversity Development Assessment Report (BDAR)	Biosis
Appendix 17	Air Quality Impact Assessment (AQIA)	Northstar Air Quality
Appendix 18	Noise and Vibration Impact Assessment (NVIA)	Pulse White Noise Acoustics
Appendix 19	Geotechnical Assessment	Martens
Appendix 20	Civil Engineering Report (Water Management Plan)	Acor Consultants
Appendix 21	Flood Impact Risk Assessment	Acor Consultants
Appendix 22	Preliminary Risk Screening	Acor Consultants
Appendix 23	Dangerous Goods Compliance Report	Acor Consultants
Appendix 24	Detailed Site Investigation	Martens
Appendix 25	Construction and Demolition Waste Management Plan	APC Waste Consultants



Appendix 26	Operational Waste Management Plan	APC Waste Consultants
Appendix 27	Aboriginal Cultural Heritage Assessment (ACHA)	Virtus Heritage
Appendix 28	Statement of Heritage Impact	Virtus Heritage
Appendix 29	Archaeological Assessment	Virtus Heritage
Appendix 30	Social Impact Assessment	Ethos Urban
Appendix 31	Infrastructure Delivery, Management and Staging Plan	LCI Consultants
Appendix 32	Bushfire Assessment Report	Bushfire Consulting Services
Appendix 33	Engagement Report	Willowtree Communications
Appendix 34	Blacktown Development Control Plan Assessment	Willowtree Planning
Appendix 35	Energy and Water Report	LCI Consultants

1.5 ESTIMATED DEVELOPMENT COST

The EDC of the proposed development, in accordance with the EDC definition under the *Environmental Planning & Assessment Regulation 2021* (EP&A Regulation), is estimated to be \$2,168,267,746

An EDC Report, prepared by Turner & Townsend, is included in **Appendix 2**. Employment numbers derived from this report are summarised below.

1.6 EMPLOYMENT NUMBERS

The following employment numbers are estimated for the proposal.

1.6.1 Construction Jobs

An estimate of employment during each construction phase has been calculated below.

Construction Stage 1 (DC01)

- Construction cost: \$571,013,322
- Labour component is approximately 62% of the construction cost at \$95/hour: 3,726,613 total work hours
- Construction duration in calendar months: 53 months
- Average daily work hours recalculated at 22 workdays per month: 3,200 work hours/day

The estimate of Full-Time Equivalent (FTE) jobs generated by Stage 1 is 400.

Construction Stage 2 (DC02)

- Construction cost: \$275,414,257
- Labour component is approximately 62% of the construction cost at \$108/hour: 1,581,082 total work hours
- Construction duration in calendar months: 27 months
- Average daily work hours recalculated at 22 workdays per month: 2,662 work hours/day

The estimate of FTE jobs generated by Stage 2 is 333.



Construction Stage 3 (DC03)

- Construction cost: \$567,473,325
- Labour component is approximately 62% of the construction cost at \$112/hour: 3,141,370 total work hours
- Construction duration in calendar months: 52 months
- Average daily work hours recalculated at 22 workdays per month: 2,746 work hours/day

The estimate of FTE jobs generated by Stage 2 is 343.

Based on the above, the estimate of total FTE jobs generated by the full development is 1,076.

1.6.2 Operational Jobs

An estimate of operational employments numbers has been provided by the Proponent based on the operative requirements of the data centre development. It is estimated that the total operational FTE employment roles for DC01, DC02 and DC03 is 106.

1.7 THE PROPONENT

TABLE 2 below outlines the relevant details of the proponent.

TABLE 2: PROPONENT CONTACT DETAILS	
Company Details	Lehr Consultants International (Australia) Pty Ltd
ABN	92 124 107 973
Contact Name	Ben Avallone
Position	Project Manager
Email Address	ben.avallone@lciconsultants.com.au

1.8 SECRETARY’S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

An application requesting industry-specific SEARs was submitted to the NSW DPHI (reference: SSD-73761707). The SEARs were subsequently issued by NSW DPHI on the 25 July 2024 and are addressed by this EIS.

For reference, the industry-specific SEARs, as issued, are annexed in **Appendix 1** of this EIS. An overview of how the SEARs have been satisfied are outlined in **Appendix A**.

PART 6 of this EIS provides a detailed environmental risk assessment of all SEARs items.

This EIS is also consistent with the minimum requirements for an EIS, as set out in Division 5 of the EP&A Regulation and has considered the *State significant development guidelines – preparing an environmental impact statement*.

PART 2 STRATEGIC CONTEXT

2.1 SITE LOCATION & EXISTING SITE CHARACTERISTICS

The subject site is located at 2 Glendenning Road, Glendenning and is legally described as Lot 2 DP 1137162.

The subject site comprises a total area of 10.44ha and exhibits a primary frontage to Glendenning Road at the western boundary for approximately 295m. A secondary frontage to Woodstock Avenue is located along the southern boundary, for a length of approximately 335m.

The subject site comprises three existing warehouse buildings that undertake various operations, including storage and logistics and a transport vehicle centre. The buildings are positioned toward the Glendenning Road frontage and cover approximately one half of the subject site. The remainder of the subject site to the rear is vacant and contains a mix of grass, native vegetation and sporadic trees. A patch of mature native vegetation exists along the southern boundary. An established landscaping strip is located along the Glendenning Road frontage, providing some screening of the existing buildings.

Vehicle access is obtained via four vehicle crossings off Glendenning Road, which provide separate access for the two large tenants. Vehicle access is also provided off Woodstock Avenue for the southern tenant.

The subject site is traversed by overhead transmission infrastructure, which is managed by Endeavour Energy. Specifically, this includes two transmission towers and two 132kV transmission lines; one running east-west and one running north-south.

The subject site is surrounded by industrial land to the north, west and south (refer to the site context map in **Figure 6**). Surrounding land uses in the immediate vicinity of the subject site include:

- **North** – The subject site directly adjoins a drainage reserve on the northern boundary, which extends for approximately 25m in width. This is owned and managed by Blacktown City Council. North of the reserve is industrial development including warehouse and distribution facilities and steel manufacturing. A physiotherapist office is also located within this area. Industrial development extends for approximately 1.35km north of the subject site.
- **South** – Adjoining the subject site on the adjacent side of Woodstock Avenue is a large concrete manufacturing facility, as well as a recycling facility. Industrial development extends for approximately 750m south of the subject site.
- **East** – The subject site directly adjoins the Nurragingy Reserve on the eastern boundary. This is heavily vegetated and extends for approximately 800m to the east. A public pathway is located adjacent to the site boundary, and the Eastern Creek is located east of the pathway. The Nurragingy Reserve is unzoned land, which forms part of the Greater Sydney Parklands jurisdiction.
- **West** – Adjoining the subject site on the adjacent side of Glendenning Road is further industrial development. This includes a vehicle service centre and warehouse and distribution facilities. Industrial development extends for approximately 300m west, where it borders the M7 Motorway.

An aerial image of the subject site is depicted in **Figure 5** and the surrounding context is depicted in **Figure 6**. Photographs of the subject site are depicted in **Figure 7 - Figure 8**.





Figure 5. Aerial Map of Subject Site (Source: NearMap, 2024)



Figure 6. Site Context and Zoning (Source: Willowtree Planning, 2024)

ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707



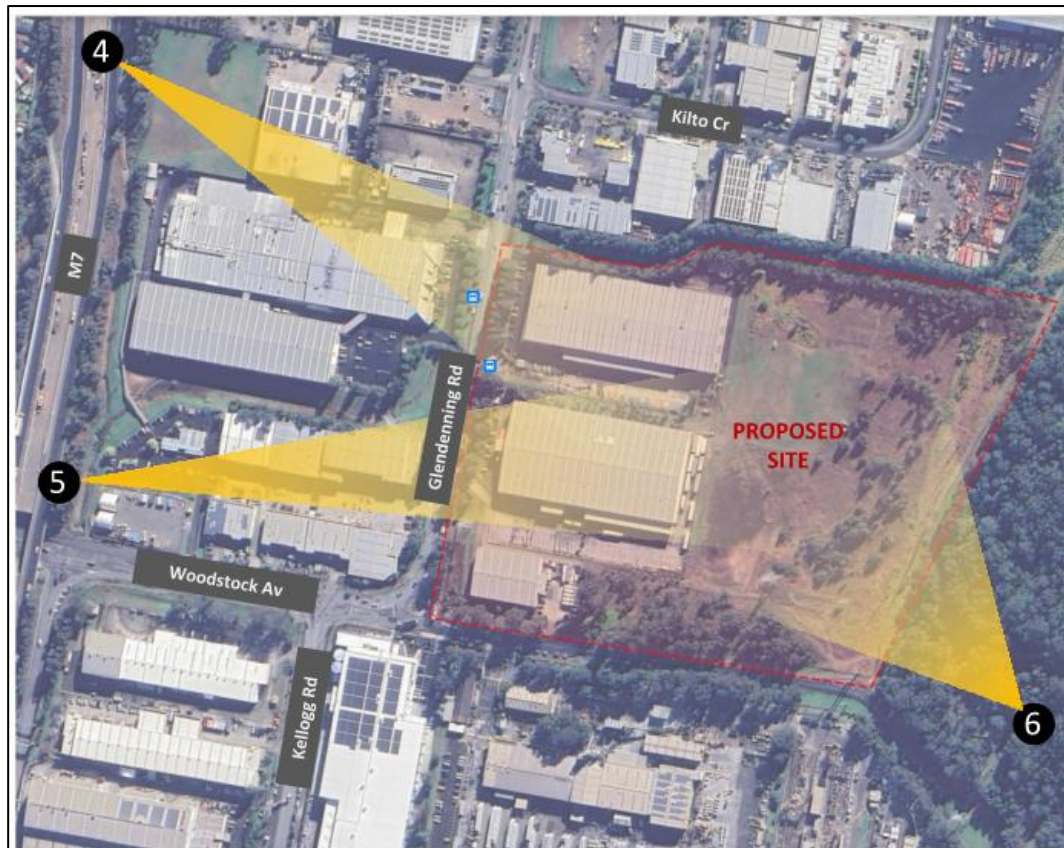
Figure 7. Site Photographs (Source: Greenbox Architecture, 2024)

ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707



View from M7 Northbound, Glendenning (Looking Northeast)



View from Public Cycleway Adjacent to M7 (Looking Southeast)



View from Jannawi Garden, Nurragingy Reserve (Looking Northwest)

Figure 8. Site Photographs (Source: Greenbox Architecture, 2024)

An overview of the site characteristics is included in **TABLE 3**, as follows.

TABLE 3: SITE CHARACTERISTICS	
Component	Description
Address and legal description	2 Glendenning Road, Glendenning Lot 2 DP 1137162
Site area	10.44 hectares
Current use	The subject site includes three existing industrial buildings, including: ▪ Warehouse and distribution centre ▪ Warehouse and distribution centre ▪ Vehicle transport centre All existing tenancies will be vacated and not in operation at the time of construction of the proposed development.
Topography	The elevation of the subject site ranges from 44.5m AHD in the south-western corner of the site, to 30.5m AHD in the north-eastern corner of the subject site. Elevation changes across the subject site are largely managed through existing retaining walls along the existing Endeavour Energy transmission easement within the southern portion of the subject site, and the existing stacked rock retaining wall along the northern boundary. The area subject to re-development works is relatively flat, with an approximate gradient of between 0.5% to 1.0% sloping from western boundary (Glendenning Road) to eastern boundary (Eastern Creek).
Access	The subject site contains four existing vehicle crossings from Glendenning Road and one existing vehicle crossing from Woodstock Avenue.
Biodiversity	The subject site is mapped as containing “terrestrial biodiversity” under the BLEP 2015, as indicated in Figure 9 below. The subject site is also mapped as containing “outstanding biodiversity values” under the <i>Biodiversity Conservation Act 2016</i> (BC Act), as indicated in Figure 10 below. 

Figure 9. Terrestrial Biodiversity Map (Source: BLEP 2015, 2024)

TABLE 3: SITE CHARACTERISTICS

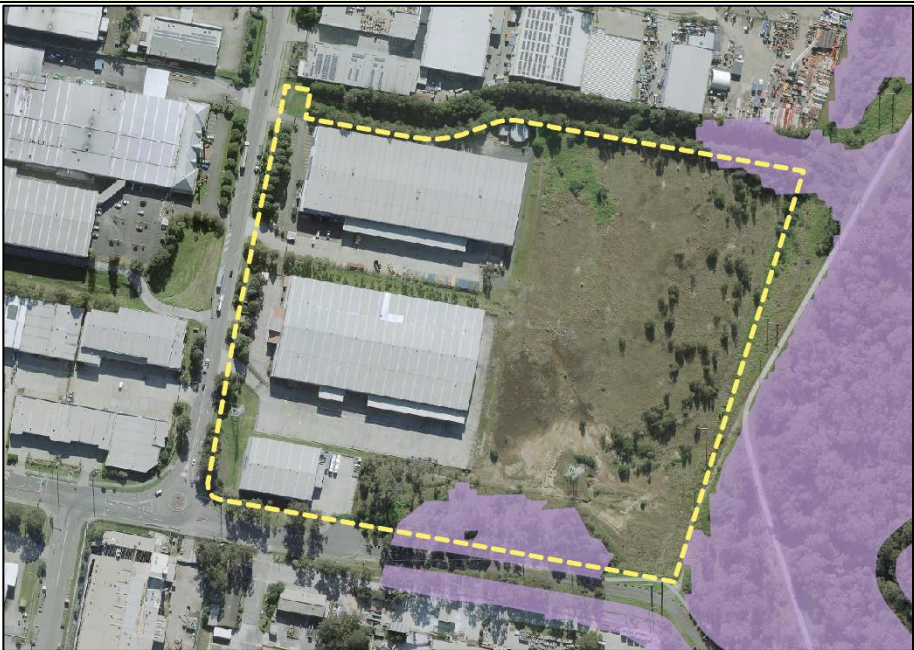
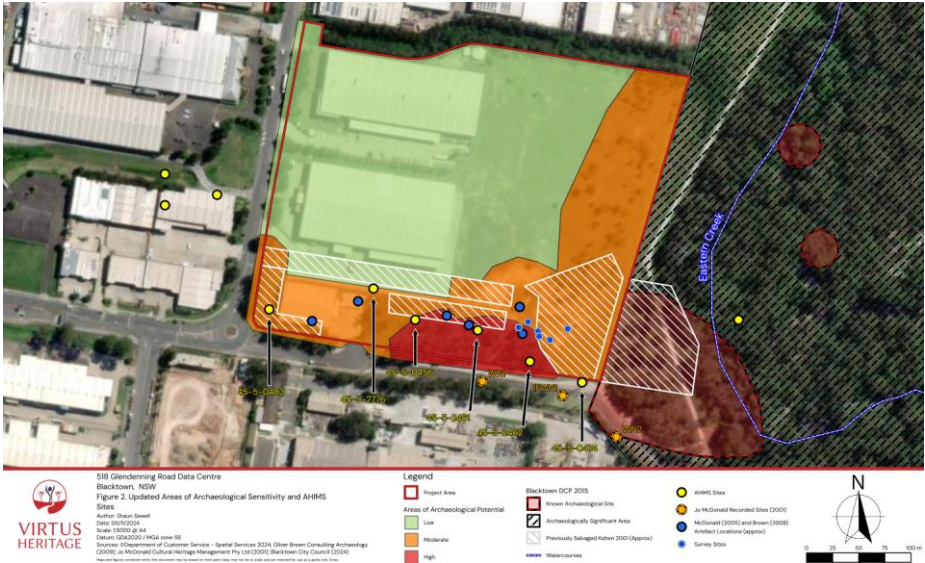
Component	Description
	 Figure 10. Outstanding Biodiversity Map (Source: BC Act, 2024)
Infrastructure	Potable water: An existing 300mm Sydney Water trunk main is present on the nearside of Glendenning Road outside of the subject site. Wastewater: An existing 400mm Sydney Water trunk sewer main is present on the northern side of the subject site. The trunk main is located approximately 2m inside the northern property boundary and there are two Sydney Water sewer manholes located within the property. Electricity: The subject site is within the authority of Endeavour Energy network, with existing Endeavour Energy electrical assets within the subject site and adjacent to the site boundary. There is an existing Endeavour Energy pad mounted substation on the western boundary of the subject site, adjacent to Glendenning Road. To the south of the subject site there are two existing transmission towers and 132kv transmission lines (running east-west and north-south). Telecommunications: Multiple carrier points of entry are provided at the eastern and western boundaries of the development.
Geology	The north-western and south-western portions of the subject site are mapped in the Bringelly Shale outcrop zone, consisting of shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone and rare coal and tuff. The remainder of the subject site is underlain by Quaternary deposits comprising fine-grained sand, silt and clay.
Salinity Potential	The 1:100,000 Salinity Potential in Western Sydney Map indicates the subject site to be located in an area of moderate salinity potential.
Bushfire	The subject site is located on bushfire prone land as indicated in Figure 11 . Specifically, the area along the eastern boundary is identified as “vegetation buffer”.



TABLE 3: SITE CHARACTERISTICS

Component	Description
	 Figure 11. Bushfire Prone Land Mapping (Source: NSW Spatial Viewer, 2024)
Vegetation	The subject site has been subject to extensive vegetation clearing, which occurred in the early 2000s. As a result, native vegetation is limited, primarily consisting of scattered patches of regenerating canopy species and planted native vegetation in the eastern, undeveloped portion of the subject site. In areas of regrowth, there is a lack of midstory vegetation, and the ground layer is predominantly made up of exotic weeds and grasses. However, higher-quality remnant vegetation is present along the southern boundary of the subject site, which may provide a refuge for mobile fauna species. Along the drainage line within northern boundary of the subject site, a vegetation corridor provides additional habitat connectivity. Vegetation within the subject site is sparsely connected to larger, intact patches to the east, including those associated with Eastern Creek and Nurragingy Reserve.
Watercourses	The Eastern Creek, a Strahler order 4 system, is located within the reserve and runs along the eastern boundary of the subject site.
Wetlands	One ephemeral wetland depression exists within the centre of the subject site, however, no areas within, adjacent or downstream of the subject site, are mapped as an important wetland.
Aboriginal Heritage	There are six recorded Aboriginal Heritage Information Management System (AHIMSs) on the southern portion of the subject site. These are identified in yellow in Figure 12. Other recorded sites and areas of archaeological potential have been identified in Figure 12. Refer to Section 6.1.19 and Appendix 27 of this EIS for further detail.

TABLE 3: SITE CHARACTERISTICS	
Component	Description
	 Figure 12. Archaeological Sites and Potential Areas (Source: Virtus Heritage ACHA, 2024)
Built Heritage	There are no statutory or non-statutory listed heritage items in, or in the vicinity of the subject site for historical archaeology. However, background archival research has determined that there is potential for historical archaeological resources on the subject site, including a c.1894 cottage, c.1909 cottage, and the Owen farm. Refer to Section 6.1.2 and Appendix 28 of this EIS for further detail.

2.2 SITE CONTEXT

The subject site is located in the suburb of Glendenning and is part of the Blacktown LGA. The subject site is situated approximately 33km west of the Sydney CBD. It is within close proximity to transport infrastructure routes, including the M7 Motorway which has direct access from Woodstock Avenue. Public transport options are also available, with a number of existing bus stops located along Glendenning Road.

The nearest sensitive land uses comprise the R2 Low Density Residential Zone located approximately 400m west of the subject site, and 800m east of the subject site. These communities are largely buffered by the M7 Motorway, the Nurragingy Reserve to the east, and heavy rail tracks as well as sporting fields to the south. Existing industrial development buffers the suburb of Glendenning to the north from the subject site. Key suburbs surrounding the subject site include Glendenning to the north, Doonside to the east, Rooty Hill to the south, and Plumpton and Oakhurst to the west. No social infrastructure facilities or sensitive receivers (e.g., schools, hospitals) have been identified in close proximity to the subject site (i.e., short walking distance, or within 400m).

2.3 DEVELOPMENT HISTORY

TABLE 4 below provides a summary of previous development applications pertaining to the subject site that have been approved. There are no concept approvals or gateway determinations applicable to the subject site.

TABLE 4. DEVELOPMENT HISTORY

DA Reference	Summary	Determination Date
CDC-16-03404	Complying Development Certificate – Change of use of premises	17/08/2026
CDC-20-02100	Complying Development Certificate - Commercial cladding replacement	24/11/2020
CDC-21-02089	Complying Development Certificate - Installation of select racking and longspan shelving and additional services in empty Warehouse Facility	30/09/2021
MOD-18-00578	Modification Application – Construction of an additional driveway and associated civil works.	30/10/2018
DA-17-01805	Development Application – Advertising signage	28/08/2017

2.4 LAND OWNERSHIP

Consent has been obtained from the landowner of the subject site.

2.5 EASEMENTS AND ENCUMBRANCES

The encumbrances noted on the Certificate of Title are summarised in **TABLE 5**, and a copy of the relevant documents included in **Appendix 3**. A copy of the survey plan is included in **Appendix 6**.

TABLE 5: ENCUMBRANCES ON TITLE

Reference	Description and Location
H467380	Easement for transmission line 30.48m wide (refer Area A in Figure 13). The proposal does not involve any buildings or structures within this easement, however, includes the construction of a stormwater swale. Consultation with Endeavour Energy is ongoing.
Z128497	Transfer of easement H467380 to the Prospect County Council.
Y180346	Easement for transmission line 25m wide (refer Area B in Figure 13). No physical works are proposed within this easement area, other than small-scale planting which would be developed in consultation with Endeavour Energy.
Y648415	Easement for transmission line 22m wide (refer Area D in Figure 13). No works are proposed within this easement area.
Y725712	Easement for transmission line 2m wide (refer Area F in Figure 13). No works are proposed within this easement area.
3817805	Fencing covenant by Blacktown City Council (refer Area G in Figure 13). All fencing proposed as part of the development would be paid and constructed by the Proponent. Therefore, there is no impact on this covenant.
3817805	Easement to drain water 10m wide (refer Area E in Figure 13). No works are proposed within this area.
DP1133668	Right of carriageway 5m wide (refer Area R in Figure 13). No works are proposed within this easement area.
DP1134694	Easement for padmount substation by Endeavour Energy, and restrictions on the use of land relating to a fire rating requirement for structures adjacent to the padmount substation (refer Area H and J in Figure 13). This substation will be re-located during Stage 3. Consultation with Endeavour Energy is on-going.



TABLE 5: ENCUMBRANCES ON TITLE

Reference	Description and Location
AE847407	Restrictions on the use of land by Blacktown City Council relating to an existing overland flowpath. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AE847408	Restrictions on the use of land by Blacktown City Council relating to an existing on-site stormwater detention system. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AE847409	Restrictions on the use of land by Blacktown City Council relating to an existing stormwater quality improvement device. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AE847410	Positive covenant by Blacktown City Council relating to the maintenance of an existing on-site stormwater detention system. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AE847411	Positive covenant by Blacktown City Council relating to the maintenance of an existing stormwater quality improvement device. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AE847412	Positive covenant by Blacktown City Council relating to the maintenance of an existing overland flowpath. This relates to existing stormwater infrastructure that will be superseded by the proposed stormwater management system.
AG125366	Lease to GPC Asia Pacific Pty Limited of Building C.
DP1170205	Easement for overhead and underground electricity cables 18m wide and variable (refer Area T in Figure 13). The proposal does not involve any buildings or structures within this easement, however, includes the construction of a stormwater swale. Consultation with Endeavour Energy is ongoing.
AQ663953	Lease to Gemilang Australia Pty Ltd of Warehouse A.



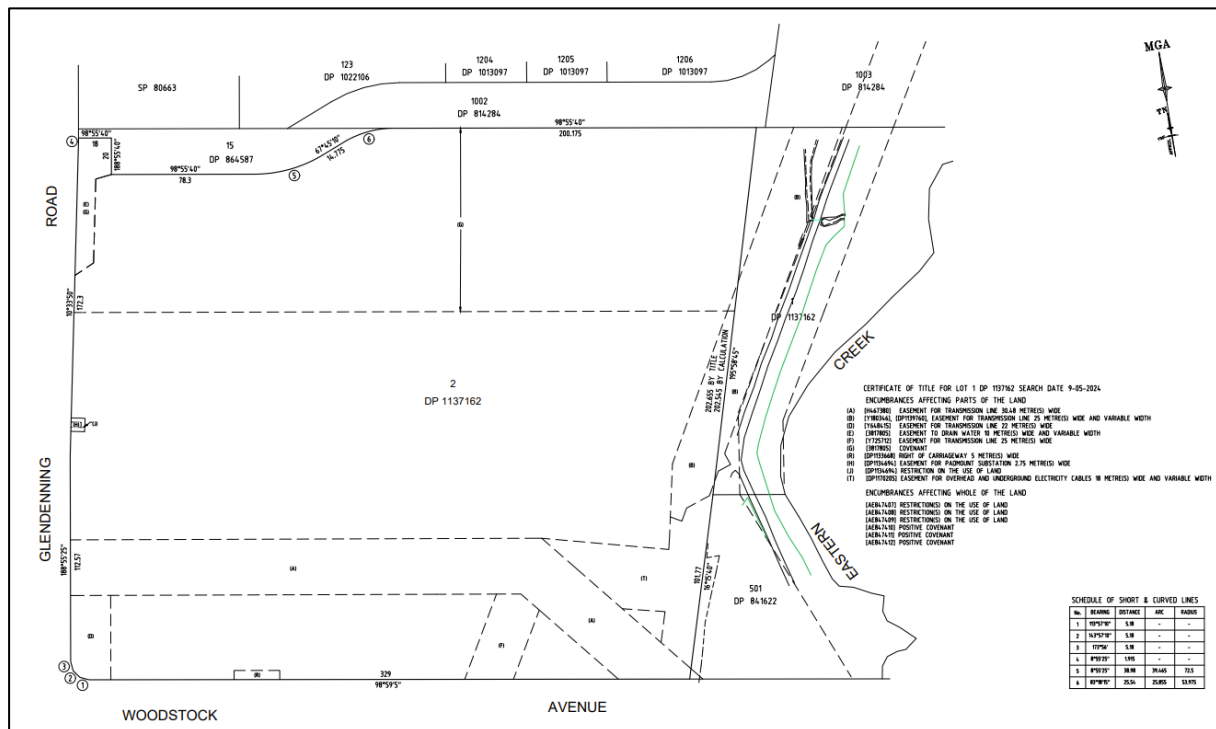


Figure 13. Location of Easements (Source: LTS Surveyors, 2024)

2.5.1 Relevant Future Projects

The following projects have been identified within the Glendenning area and have been approved by DPHI. There are no relevant projects that are currently under assessment.

- **Glendenning Liquid Waste Facility (SSD-6767, SSD6767-Mod 1 and SSD6767-Mod 2):** This application involved a liquid waste facility located at 14 Rayben Street, Glendenning (approximately 880m north of the subject site). The SSDA was approved in January 2017, with modifications approved in July 2019 and August 2020. It is understood that the waste facility is operational and therefore does not need to be considered as a “future project”.
- **Rooty Hill Materials Recycling Facility (SSD-29999239):** This application involves the construction and operation of a materials recycling facility processing up to 120,000 tonnes per annum at 600 Woodstock Avenue, Rooty Hill (approximately 20m south of the subject site). The SSDA was approved in October 2022. It is understood that this recycling facility is operational and therefore does not need to be considered as a “future project”.

There are no further applications that need to be considered in relation to the surrounding area.

The potential cumulative impacts of the project are addressed in **Section 6.2** of the EIS in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects*.

2.6 STRATEGIC PLANNING CONTEXT

2.6.1 Greater Sydney Region Plan – A Metropolis of Three Cities

The *Greater Sydney Region Plan – A Metropolis of Three Cities* (Regional Plan) divides the Sydney Region into three Cities, with a vision of growth until 2056. The Regional 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 cities puts workers and the wider community closer to an array of characteristics such as, intensive jobs, 'city-scale' infrastructure and 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. Once constructed and operational, the subject site would achieve economic growth and prosperity, as well as encourage employment-generating opportunities within an area zoned for such permissible purposes, that is considered relatively close in conjunction to residential communities, providing an ease of commute. The proposed development across the subject site considers the employment-generating outcomes that can be achieved for the immediate and wider localities.

Under the Regional Plan, the subject site is located within the Central District (discussed further in **Section 2.6.2**).

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

- Infrastructure and collaboration – the proposed development of the subject site for the purposes of a data centre would facilitate the provision of services to support the cyber security sector;
- Liveability – the proposed development encourages employment-generating opportunities and economic prosperity, which has positive influences on the wider locality;
- Productivity – the proposed development is situated within the *Central City District Plan* area (refer to **Section 2.6.2** below); and,
- Sustainability – the proposed development would not exhibit or emit any detrimental impacts to its wider ecological surroundings.

The NSW Department of Industry has identified cyber security as a sector requiring specific industry development strategies to grow and globally position this key sector of the economy. The Sector Competitiveness Plan prepared by AustCyber details the need for further cyber security infrastructure.

The proposed development most appropriately meets the description of a new economy use under the Regional Plan. The local and infrastructure requirements of such new economy land uses are identified as being:

- One or a small number of purpose-built factory buildings; and
- Typically surrounded by residential uses with some access to public transport.

The subject site reflects these requirements as the proposed development is a purpose-built facility that would assist in economic growth. The development would be located close to residential areas.

In summary, the subject site and proposed development contributes to the objectives set out in the Regional Plan by minimising environmental impacts and the promotion of technological advancements and employment-generating opportunities to the wider locality and community.

2.6.2 Central City District Plan

The subject site forms part of the Central City District, as identified in **Figure 14** below and is subject to the provisions of the *Central City District Plan* (the District Plan). The District Plan is a 20-year plan to manage growth in the context of economic, social, and environmental matters to achieve the 40-year vision of Greater Sydney.



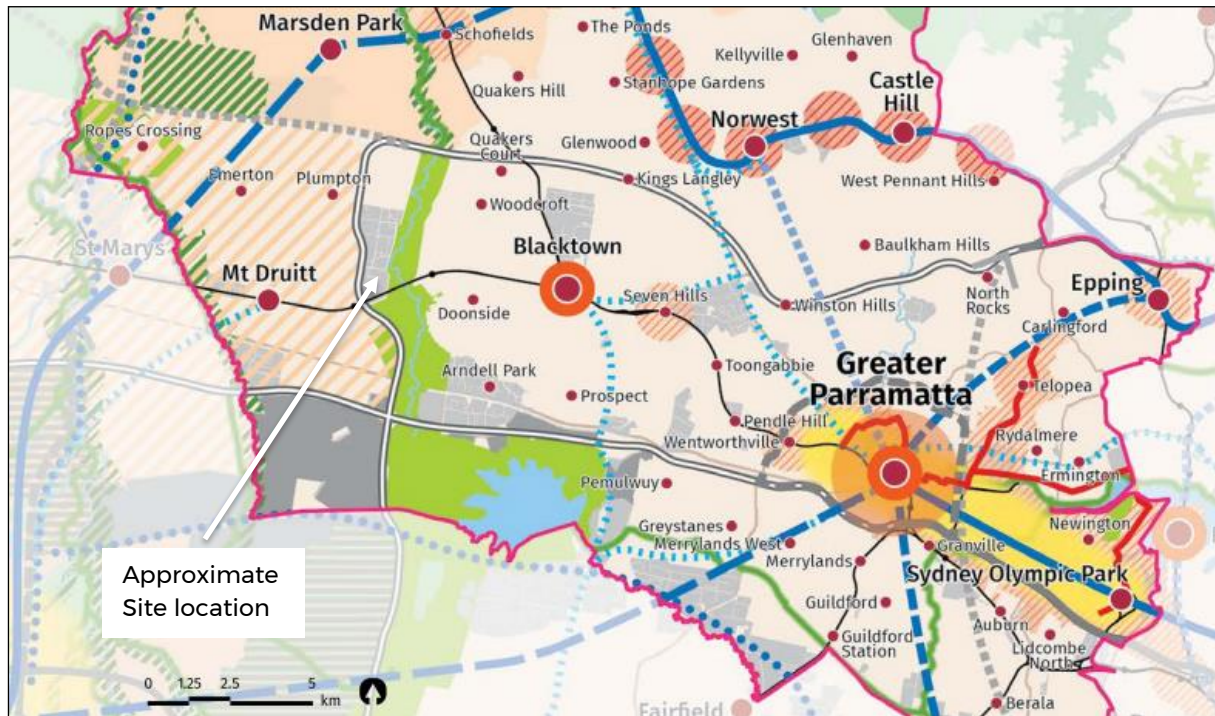


Figure 14. Central City District Plan Structure Plan (Source: Greater Sydney Commission, 2018)

The District Plan identifies the following priorities that are relevant to the proposed development:

- **Planning Priority C1:** *Planning for a city supported by infrastructure.*

The proposed development provides infrastructure in the form of a data centre, which is critical to a growing economy. Every business needs computing equipment to run its web applications, offer services to customers, sell products, or run internal applications for accounts, human resources, and operations management. As businesses grow and IT operations increase, the scale and amount of required equipment also increases exponentially. Data centres are able to provide this infrastructure in a central location, that can be accessed from anywhere.

- **Planning Priority C9:** *Delivering integrated land use and transport planning and a 30-minute city.*

The proposed development is located within an established industrial precinct, surrounded by residential land use in walking distance to the subject site. It is serviced by public transport and the M7 Motorway, meaning employees can easily access the development. This contributes to the District Plan's goal of achieving a 30-minute city.

- **Planning Priority C10:** *Growing investment, business and job opportunities in strategic centres.*

The subject site is located in between the strategic centres of Rooty Hill and Doonside. The proposal provides employment opportunities which will assist in the growth of these strategic centres.

- **Planning Priority C11:** *Maximising opportunities to attract advanced manufacturing and innovation in industrial and urban services land.*



The proposed development would support the retention and management of industrial and urban services land by locating the development within an existing industrial precinct. It would maximise the development opportunities at the subject site, through developing a multi-level data storage centre. This is important given the shortage of available industrial land across Greater Sydney.

- **Planning Priority C12:** *Supporting growth of targeted industry sectors.*

As outlined above, The NSW Department of Industry has identified cyber security as a sector requiring specific industry development strategies to grow and globally position this key sector of the economy. The proposed development will assist in the growth of this economy sector.

- **Planning Priority C13:** *Protecting and improving the health and enjoyment of the District's waterways.*

Stormwater quantity treatment has been provided for the proposed development to satisfy Blacktown City Council pollution reduction targets. Rainwater reuse through rainwater tanks (one per building) has been provided as part of the treatment train system to supply recycled water for toilet flushing and to supplement water use for the mechanical cooling system. Therefore, the surrounding waterways will be protected.

- **Planning Priority C16:** *Increasing urban tree canopy cover and delivering Green Grid connections.*

The proposal seeks to retain approximately 60% of the existing trees on the subject site and will plant a total of 317 new trees. This will increase the tree canopy cover (once the trees have reached maturity). The proposed development avoids the area identified as outstanding biodiversity value south of the transmission lines, and will revegetate the area once the southern building has been demolished. This will assist in delivering Green Grid connections.

- **Planning Priority C19:** *Reducing carbon emissions and managing energy, water and waste efficiently.*

The development would incorporate various sustainable design and construction initiatives to ensure it meets the requirements outlined in the SEARs, industry standards, and the sustainability pillars set by the NSW Government's Net Zero Plan. Embodied emissions attributed to the proposed development have been quantified. The proposed development is designed with a myriad of ESD initiatives that minimise its consumption of resources, especially energy and water. These are described in detail in **Section 6.1.8** of this EIS.

Overall, the proposed development aligns with the planning priorities and objectives of the District Plan.

2.6.3 Blacktown Local Strategic Planning Statement 2020

The *Blacktown Local Strategic Planning Statement 2020* (LSPS) applies to the subject site. It sets out a 20-year vision for the future of Blacktown City as it grows and changes. The vision is for a planned city of sustainable growth, supported by essential infrastructure, efficient transport, a prosperous economy and equitable access to a vibrant, healthy lifestyle.

The subject site is located within the Mount Druitt Precinct under the LSPS (refer **Figure 15**).

The key planning priorities under the LSPS are:

- **LPP1:** *Planning for a City supported by infrastructure;*
- **LPP9:** *Maximising opportunities to attract advanced manufacturing and innovation in industrial and urban services land;*



- **LPP10:** Growing targeted industry sectors; and
- **LPP11:** Protecting and improving the health and enjoyment of waterways.

The above planning policies are consistent with those set out in the District Plan. For the reasons outlined above, it is considered that the proposal is consistent with the objectives of the LSPS.

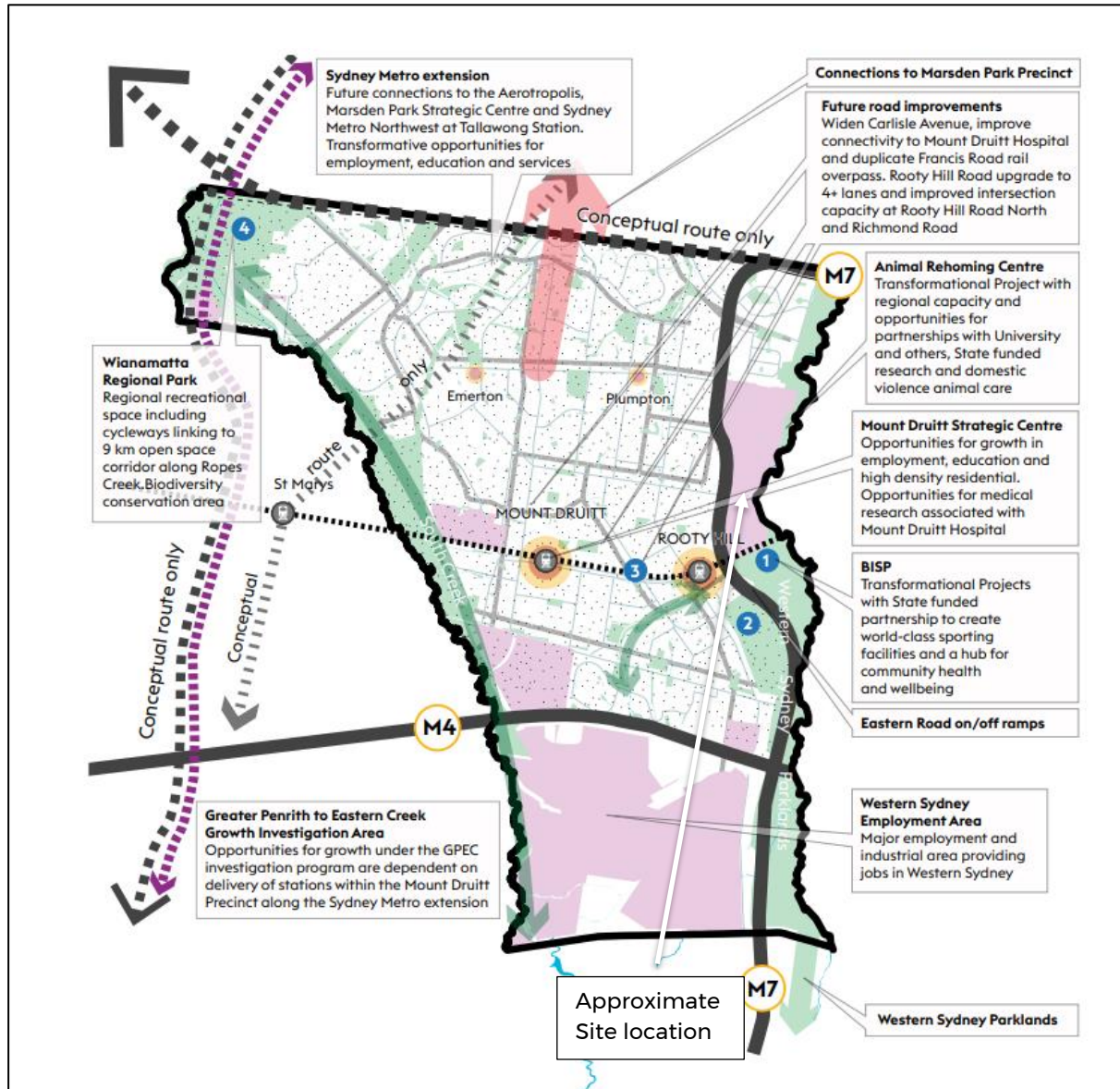


Figure 15. Mount Druitt Precinct (Source: LSPS Blacktown City Council, 2020)

2.6.4 Future Transport Strategy 2056

The *Future Transport Strategy 2056* is a 40-year strategy, supported by plans for regional NSW and for Greater Sydney. The strategy and plans focus on the role of transport in delivering movement and place outcomes that support the character of the places and communities that are desired for the future.

The proposed development aligns with the strategies of the *Future Transport Strategy 2056* on the following basis:

- The subject site has access to regular public transport services;
- The subject site is accessible by active transport;
- Parking provision is appropriate;



- Access, servicing and internal layout will be provided in accordance with Australian Standards AS2890.1-2004 and AS2890.2-2018; and
- The surrounding road network and intersections will be able to cater for the proposed development traffic and construction traffic.

2.7 SITE SUITABILITY

The subject site is located within an evolving industrial precinct and is zoned E4 General Industrial under the BLEP 2015. The proposed development would facilitate the intended use of the subject site for industrial purposes, which is consistent with the zoning and the surrounding context.

The proposed development falls within the definition of 'data centre', being '*a building or place the principal purpose of which is to collect, distribute, process or store electronic data using information technology*'. Data centres are a type of high technology industry and are a type of light industry, which is permissible with consent in the E4 Zone under the BLEP 2015, as well as the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP).

The subject site is highly suited to accommodate the intended development, based on the following factors:

- The BLEP 2015 and the Transport and Infrastructure SEPP allows for the proposed development as a permissible use;
- The subject site is readily accessible via the regional road network, given its proximity to the M7 Motorway;
- The subject site can be serviced immediately and no infrastructure upgrades are required;
- The proposed development is consistent with the strategic intent of the area;
- The proposed development minimises impacts on the environment;
- The proposed built form is located within an industrial area and more than 400m from sensitive receivers. This reduces potential impact on surrounding properties.

The following key elements of the subject site and proposed development are noted:

2.7.1 Proximity to Existing Electrical Infrastructure

The ongoing operation of data centres requires significant power, and are able to provide faster connectivity to consumers when close to high-speed networks. The proposed development would include the delivery of three internal substations, with two electricity transmission substations already proximate to the subject site. Accordingly, the subject site would be well supported by high power outputs required to operate a successful data centre.

Furthermore, on a regional basis, to be considered competitive and viable, data centres are best located near or in a region with undersea cable landing points. Undersea cables are used for international data transmission and digital connectivity. These enable access to global markets along with high speed and low latency connections. Sydney is currently linked through several landing points that reach global markets including the US and Asia Pacific and is recognised as a Tier 1 data centre market worldwide.

2.7.2 Proximity to End Users

The subject site is centrally located to serve Sydney, within reasonable distance to major business centres including Parramatta, Blacktown, Norwest and the future Bradfield City Centre. The benefit of being located close to major markets is increased response times and reduced latency to the end user, and as such is an important success factor for any data centre.

The ongoing operation of data centres is reliant on skilled labour, including technical professions. The subject site is positioned close to major markets and a growing skilled labour force in Western Sydney.



Importantly, a data centre at the subject site would support ongoing and increased employment activities within Glendenning and the Blacktown LGA.

2.7.3 Infrastructure

The subject site is suitably located with access to infrastructure and utility services. No off-site upgrades have been identified for the proposed development. Connections into the existing electricity transmission network would be subject to separate approvals by Endeavor Energy.

2.7.4 Transport and Traffic

The subject site is located within an established industrial precinct, well served by the arterial and sub arterial road networks. Glendenning Road has been purpose built to accommodate large vehicles travelling to and from surrounding industrial land holdings. The M7 Motorway is the main arterial road closest to the subject site, which provides connection to Greater Sydney via the arterial and motorway networks. The M7 Motorway can be accessed via Glendenning Road or Woodstock Avenue and therefore heavy vehicles would not be required to travel through residential areas to access the subject site.

The capacity of the existing road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The Signalised & unsignalised Intersection Design and Research Aid (SIDRA) analysis undertaken by Positive Traffic has found that the surrounding intersections provide a good level of service, with capacity to cater for the proposed development. Refer to **Section 6.1.6** for further detail.

The subject site is located directly adjacent to two existing bus stops on Glendenning Road, which provide access to morning and afternoon peak bus services. Pedestrian footpaths are provided on the eastern side of Glendenning Road and crossing facilities are provided at both controlled intersections either end of Glendenning Road. Existing off road cycle pathways are provided on Woodstock Avenue and connect to the Nurragingy Reserve.

Overall, the subject site is well served by existing transport infrastructure.

2.7.5 Contamination

A Detailed Site Investigation (DSI) has been prepared for the proposal. Potential risks to human health and ecological receptors have not been identified through contamination investigations. It has been determined that the subject site is suitable for the proposed use as a data centre and no remediation is required. Reference should be made to **Section 6.1.17** for further detail.

2.7.6 Cultural Heritage

Whilst the subject site has been identified as possessing cultural significance and value, the majority of areas identified are located south of the existing transmission lines, where works are limited to rehabilitation planting. The proposed development proposes to create exclusion zones to protect a high percentage of land within areas of moderate and high archaeological potential and Aboriginal objects areas.

Management and mitigation measures can be implemented to avoid, minimise and mitigate harm to known and likely Aboriginal objects and heritage values. Reference should be made to **Section 6.1.19** and **Section 6.1.20** of this EIS for further detail.



2.7.7 Stormwater and Flooding

Due to the nature and role of data centres holding valuable information and data for users, it is important that the centres are located on low-risk sites that are unlikely to experience any implications from natural hazards such as flooding, fires, and other weather events.

Review of Blacktown City Council flood mapping and available flood studies shows the subject site is not impacted by the 1% AEP riverine flood nor subject to potential evacuation difficulties during this flood event as detailed in the Flood Impact Risk Assessment provided.

2.7.8 Visual Impact

The sensitivity of visual receivers within the immediate context, such as views experienced from Glendenning Road, Woodstock Avenue and the M7 Motorway, is low. This is due to the industrial character of the surrounding area and the pedestrians being predominantly workers from adjacent facilities.

Residential suburbs to the east of the subject site (Doonside) are generally screened by the Nurragingy Reserve. The Colebee Centre and the majority of the pathways and recreation areas within the Nurragingy Reserve are also completely screened by the existing vegetation.

The residential suburbs directly west of the subject site (Plumpton and Rooty Hill) are elevated and therefore would receive higher visual impacts from the proposed development however the proposed façade has been specifically designed to minimise impacts. It is acknowledged that this is limited to a small viewing catchment area.

2.7.9 Summary of Site Suitability

The subject site's consistency with applicable regional and local strategies is demonstrated in the comprehensive environmental assessment, provided in **PART 6** of this EIS, which includes an analysis of all potential impacts, which has been informed by the relevant consultant reports. Accordingly, the environmental assessment prescribes recommendations and mitigation measures (where necessary), to account for all identified potential impacts, by the proposed development. The suitability of the subject site with regard to the proposed development, can be attributed to its ready ability to provide employment, its excellent access arrangements, its suitable contextual setting, and its minimal impact on the environment.

Accordingly, the EIS prescribes recommendations and mitigation measures (where necessary), to account for all identified potential impacts, by the proposed development. The suitability of the subject site to cater for the proposed development, can be attributed to:

- Its ability to provide employment;
- Its excellent access arrangements;
- Its suitable contextual setting; and
- Its minimal impact on the environment.



PART 3 PROJECT DESCRIPTION

3.1 OBJECTIVES OF THE PROPOSAL

The aim of the proposal is to provide a purpose-built development encompassing three five-storey data centre buildings, including associated infrastructure and amenities, in line with Industry Best Practice, which would:

- Support the growth and transformation of the industrial sector;
- Generate employment – during construction and once the development is operational;
- Improve access to jobs for residents of the immediate community and wider locality;
- Supplement, support and compliment the Glendenning industrial area and its strategic intent;
- Demonstrate architectural excellence, through siting and design compatibility; and
- Provide suitable mitigation measures where required, to minimise any unforeseen impacts arising in the future.

3.2 PROJECT OVERVIEW

Development consent is sought for the construction and operation of three data centre buildings, pertaining to the following scope of works:

- Site preparation and establishment works including:
 - Bulk earthworks to create proposed site levels;
 - In-ground building services and utility work;
 - Clearance of trees and vegetation within the proposed development extent;
- Construction and operation of three data centre buildings, known as DC01, DC02 and DC03, comprising:
 - A total GFA of 50,233m² (DC01 – 19,985m², DC02 – 10,263m² and DC03 – 19,985m²);
 - A maximum building height of 45.3m, including five storeys for each building;
 - Three internal substations;
 - A total IT capacity of approximately 193.6MW (DC01 – 79.2MW, DC02 – 35.2MW and DC03 – 79.2MW);
- Total diesel fuel storage of 2,736,030L within underground bulk fuel storage tanks and generator day tanks;
- 97 back-up generators across the full development;
- External plant and equipment (including water tanks and pump rooms);
- Installation of evaporative cooling units;
- Three vehicle crossovers to Glendenning Road and internal access roads;
- Security fencing surrounding the development, including a controlled entry and exit point;
- 165 on-site car parking spaces (including 6 accessible parking spaces and 12 EV parking spaces);
- Landscaping across the subject site;
- Hours of operation being on a 24 hours per day, seven days per week basis.

The proposed works would be constructed in three stages, as follows:

- **Stage 1:** The first stage would include the construction of DC01, located at the rear of the subject site. The three existing site buildings would be demolished.
- **Stage 2:** The second stage would involve the construction of DC02.
- **Stage 3:** The construction of DC03.

The proposed development is further discussed in the following sections and detailed in the architectural drawings prepared by Greenbox Architecture (**Appendix 4**) and landscape plans prepared by Geoscapes (**Appendix 12**). Photomontages of the proposed development are shown in **Figure 16** and **Figure 17** below.





Figure 16. Proposed Development Glendenning Road (Source: Greenbox Architecture, 2024)



Figure 17. Proposed Development North-West View (Source: Greenbox Architecture, 2024)

3.3 USE AND OPERATIONS

Recent times have shaped the way we live and work, resulting in an increasing demand for cloud-based services. Such demand is playing a key role in overall market growth of data centres. This proposal seeks to design, procure, construct and commission three data centre buildings and associated infrastructure which would be brand new, multi-storey, world class, highly reliable facilities suitable for the needs of retail, wholesale and hyperscale computing customers.



The proposal is expected to provide ongoing reliable and resilient service to the highest standards expected of data centre operators and customers. The proposed development would see the introduction of a new data centre facility for the greater Sydney area. The new development would be managed by a facilities management and security operations teams, operating under a centralised model, appropriately sized for this development.

From a high level, the operational process on the subject site is as follows:

- Data halls are provided with uninterruptable power and cooling to maintain the operating conditions for customer IT equipment. The facilities management team would monitor, manage, and maintain the power and cooling systems to ensure high uptime consistent with data centre requirements.
- On-site security personnel provide monitoring, patrols, event response and related security operations function.
- Waste generated predominantly comprises packaging materials for new equipment, and old electronic components. These materials are transported internally through the facility to the waste collection areas adjacent to loading bays for collection by contracted recycling and waste services. E-waste would be stored and collected separately.

3.4 KEY PROJECT DETAILS

The key project details regarding the proposed development are outlined in **TABLE 6** below.

TABLE 6: PROPOSED DEVELOPMENT PARTICULARS	
Project Element	Development Particular
Site Area	10.44ha
General	The proposed development is considered SSD, pursuant to Schedule 1, Section 25 of the Planning Systems SEPP
Primary Land Use	Industrial
Operation	Data centre
Total GFA	50,233m ²
Floor Space Ratio	0.48:1
Maximum Building Height	45.3m (from existing ground level to roof plant)
Number of Stories	Five storeys
Building Setbacks	▪ Glendenning Road (west): 44m - 51.5m ▪ Woodstock Avenue (south): 103m - 125m ▪ Nurragingy Reserve (east): 40m - 58.5m ▪ Drainage Reserve (north): 13m - 27m
Tree Removal	247 trees and partial removal of three stands of trees
Proposed trees	317
Landscaping	20,300m ² (19.43% site coverage)
Proposed canopy cover	10,460.3m ² (10% site coverage)
Car parking	165 carparks (including 6 accessible spaces and 12 EV spaces)
Bicycle parking	4
Vehicular access	3 vehicle crossings from Glendenning Road (two new crossings and retention of one existing crossing)
EDC	\$2,168,267,746
Power consumption	235MW
IT capacity	193.6MW



Construction Jobs	1,076 FTE
Operational Jobs	106 FTE

3.5 STAGING DETAILS

The proposed development would be constructed in three stages, as set out in the following sections.

3.5.1 Stage 1

Stage 1 involves the construction of DC01, which is the building located towards the eastern boundary. This involves the following scope of works:

- Tree removal within the proposed development extent;
- Demolition of the existing building and cessation of the use of the tenancies;
- The southern vehicle crossing on Glendenning Road would be retained to allow Endeavour Energy to access the transmission corridor;
- Earthworks across the Stage 1 and Stage 2 area, including temporary earthworks surface for DC02;
- Construction of DC01 building and associated infrastructure services and underground bulk fuel storage;
- Construction of a new vehicle crossing off Glendenning Road and internal access road that would service DC01 and DC02;
- Construction of carparking to serve DC01;
- Construction of external plant and equipment including water tanks, and pump rooms relating to DC01; and
- Landscaping.

Demolition of the southern building off Woodstock Avenue and the central building off Glendenning Road would be undertaken during this stage, however, would be subject to a Complying Development Certificate and does not form part of this scope. Any demolition not captured in the Complying Development Certificate will be undertaken as part of the proposed development such as the removal of piling, underground services and related infrastructure.

The vehicle crossing off Woodstock Avenue would be retained during this stage, as the area of the demolished building may be used as a laydown area during construction.

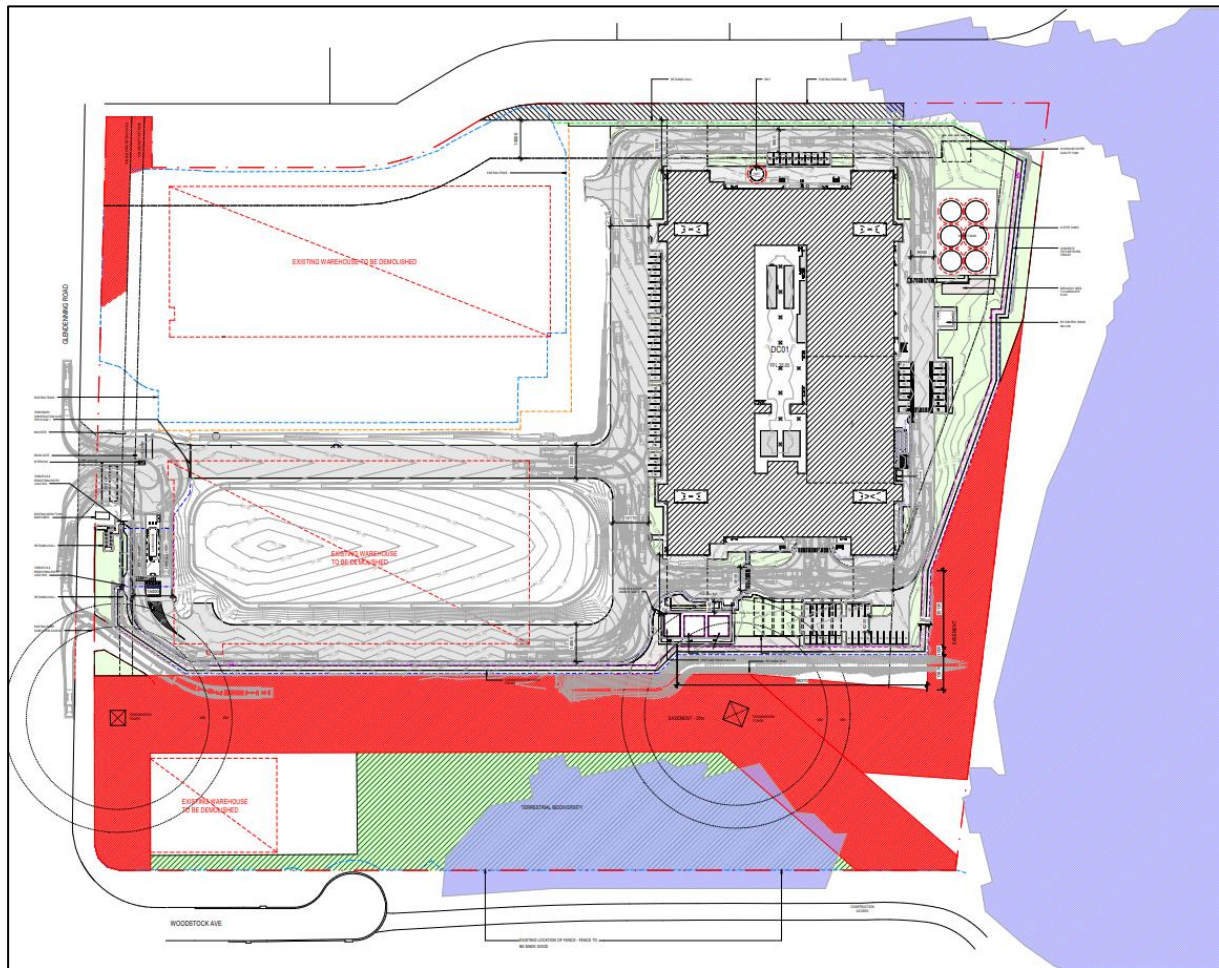


Figure 18. Stage 1 Construction (Source: Greenbox, 2024)

3.5.2 Stage 2

Stage 2 involves the construction of DC02, which is the building located south off Glendenning Road. This involves the following scope of works:

- Construction of DC02 building and associated infrastructure services including bulk fuel storage;
- Construction of carparking to serve DC02; and
- The existing southern vehicle crossing on Glendenning Road would be used as construction access, whilst the new vehicle crossing constructed in Stage 1 would be used as operational access for both DC01 and DC02; and
- Landscaping.

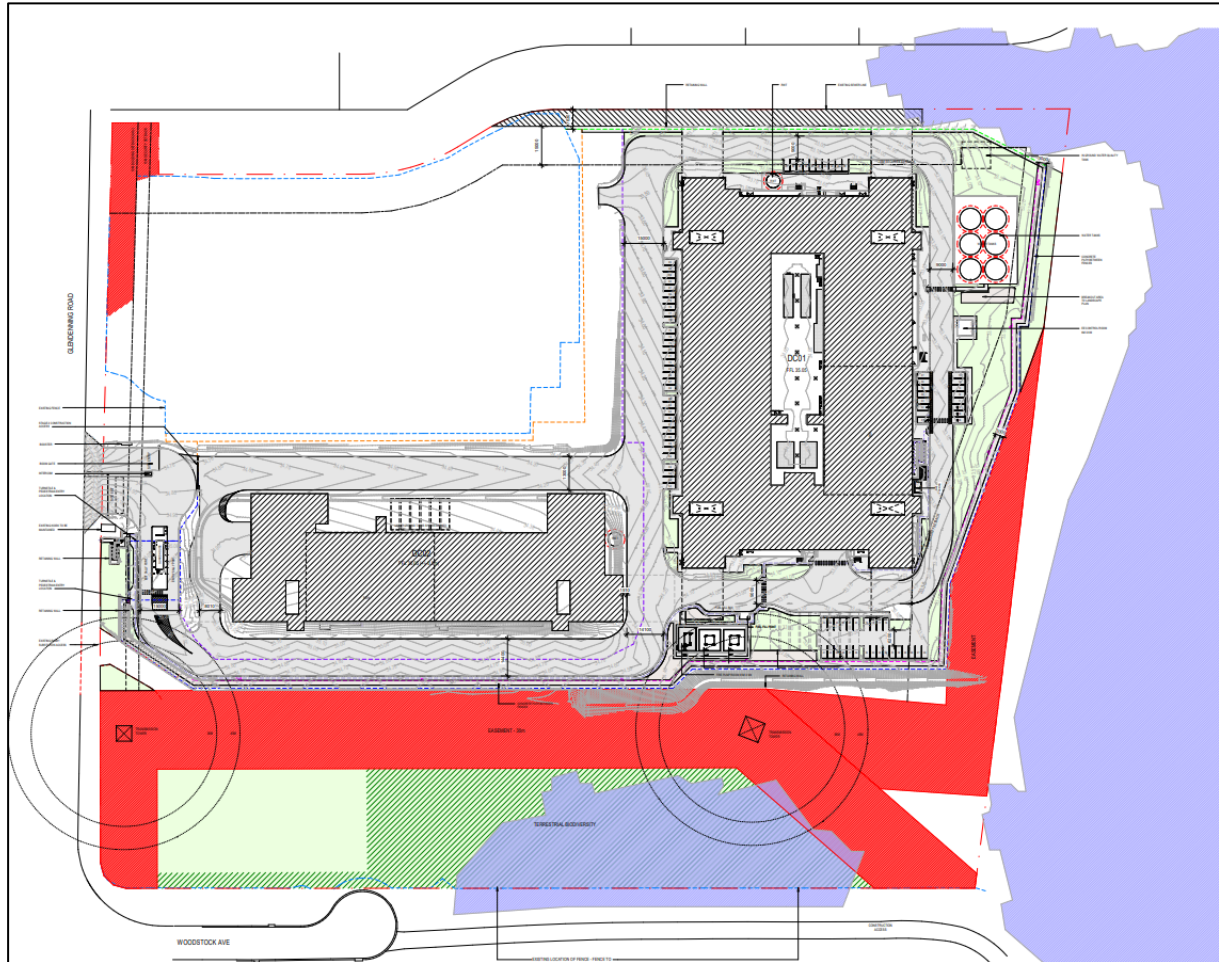


Figure 19. Stage 2 Construction (Source: Greenbox, 2024)

3.5.3 Stage 3

Stage 3 involves the construction of DC03, which is the building located towards the northern boundary. This involves the following scope of works:

- Tree removal within the proposed development extent;
- Construction of DC03 building and associated infrastructure services;
- Construction of carparking to serve DC02;
- The existing northern vehicle crossing on Glendenning Road would be used as construction access, whilst the new vehicle crossing constructed in Stage 1 would be used as operational access for DC01, DC02 and DC03; and
- Landscaping.



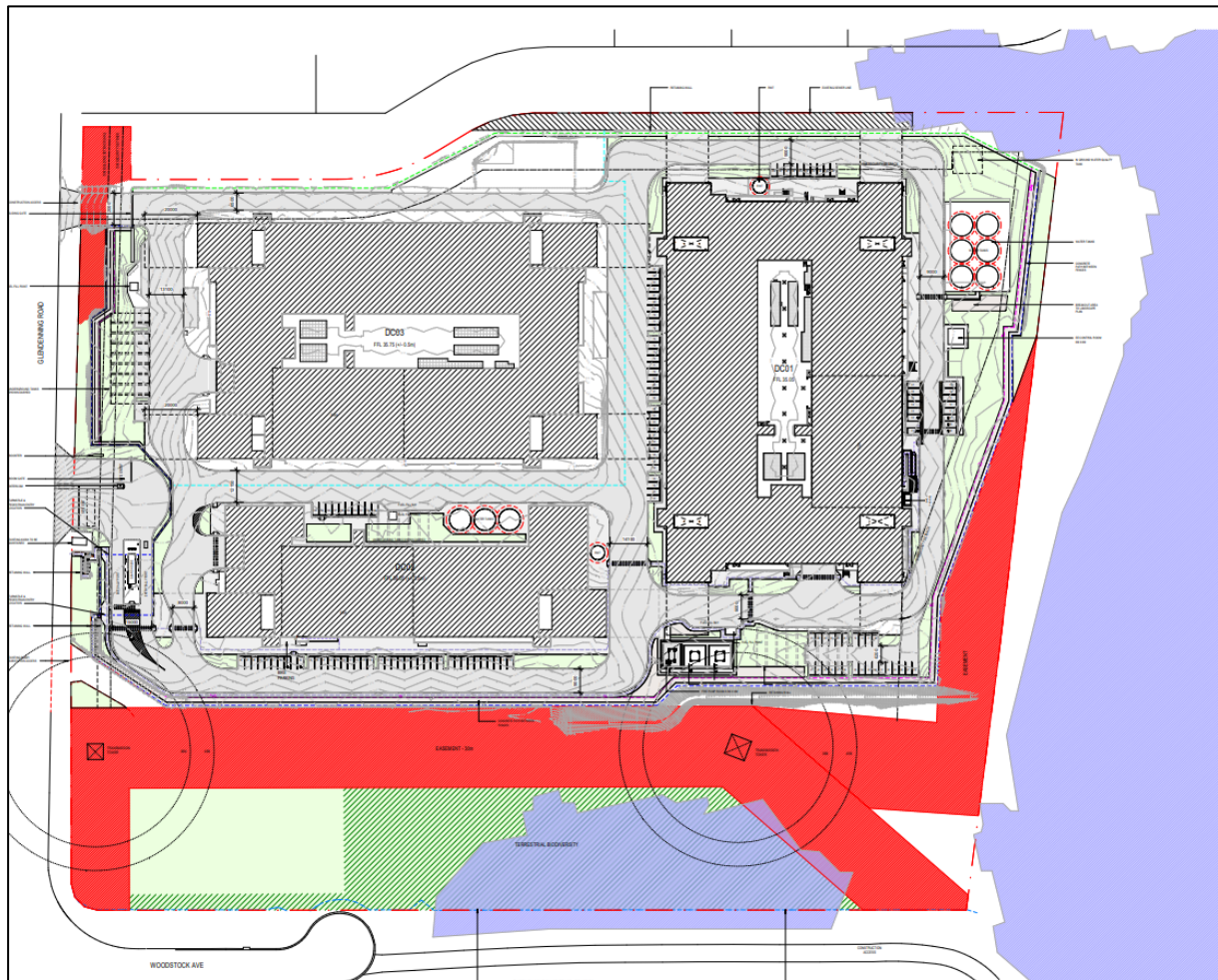


Figure 20. Stage 3 Construction (Source: Greenbox, 2024)

3.6 SITE PREPATATION AND ESTABLISHMENT WORKS

Site preparation activities are proposed to facilitate the proposed development. This includes demolition, tree removal, and earthworks.

3.6.1 Demolition and Tree Removal

The ultimate development involves the demolition of all existing buildings and structures, including existing hardstand and infrastructure. A total of 247 trees and partial removal of three stands of trees are proposed to be removed due to project impacts. This comprises:

- 13 high retention value trees and partial removal of two stands of trees;
- 164 medium retention value trees (including six street trees along Glendenning Road); and
- 70 low retention value trees and partial removal of one stand of trees.

The following trees are proposed to be retained and protected:

- 196 high retention value trees and partial retention of two stands of trees;
- 101 medium retention value trees; and
- 56 low retention value trees.

Overall, approximately 60% of existing trees on the subject site will be retained. The vegetation impact plan is depicted in **Figure 21**, with the trees proposed to be retained shown in green and the trees proposed to be removed shown in red.



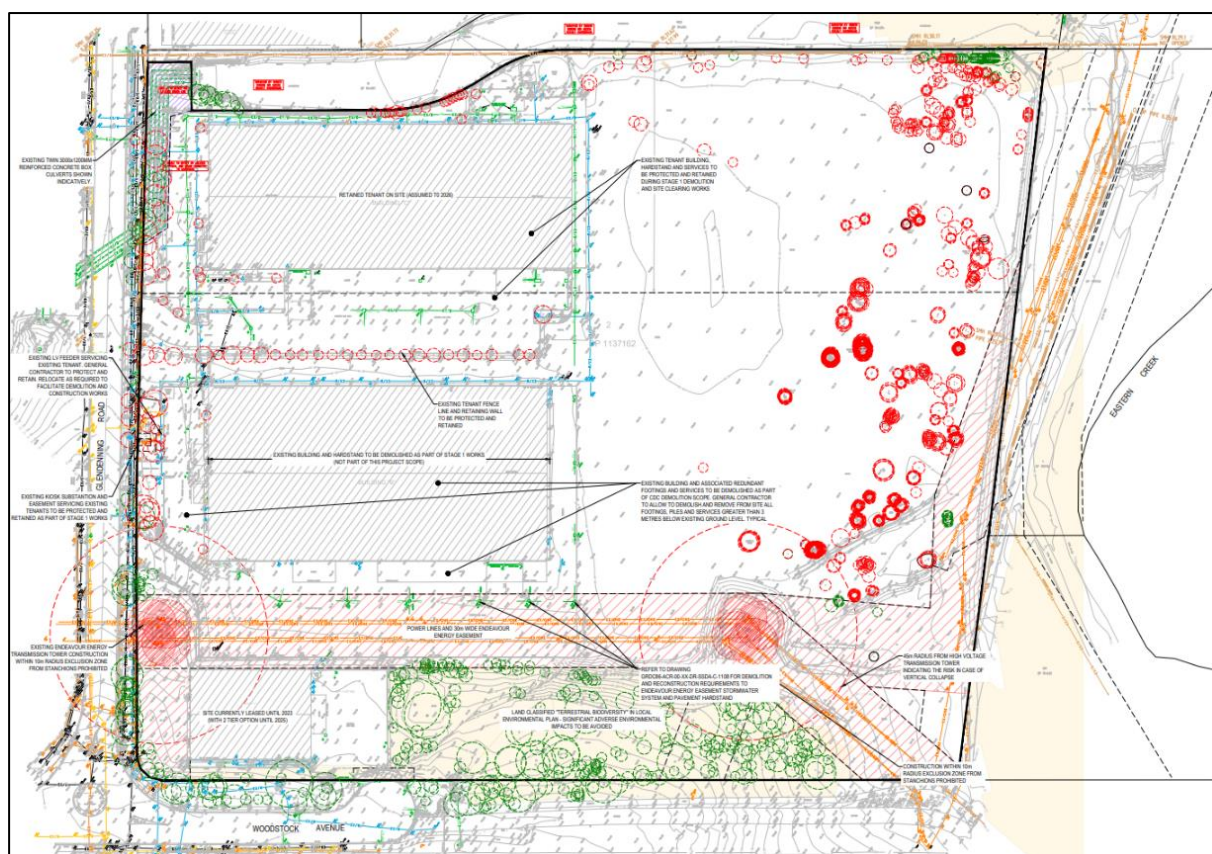


Figure 21. Tree Removal (Source: Acor, 2024)

3.6.2 Earthworks

Bulk earthworks are required to provide large flat building pads, hardstand areas, and carparking areas around the subject site. A detailed earthworks plan has been prepared and is provided within the Civil Engineering Report at **Appendix 20**. The extent of cut and fill is described in **TABLE 7** and depicted in **Figure 22**.

TABLE 7: CUT / FILL QUANTITIES	
Area	Volume
Stripped topsoil	-27,100m ³
Total cut (from stripped surface to final bulk earthworks level)	-10,520m ³
Total fill (from final bulk earthworks level to stripped surface excluding data centre building areas)	13,630m ³
Cut / fill balance (excluding stripped topsoil)	3,110m ³
Imported fill material (from final bulk earthworks level to stripped surface below data centre building areas)	40,610m ³
Total imported fill material (from final bulk earthworks level to stripped surface level)	43,720m ³

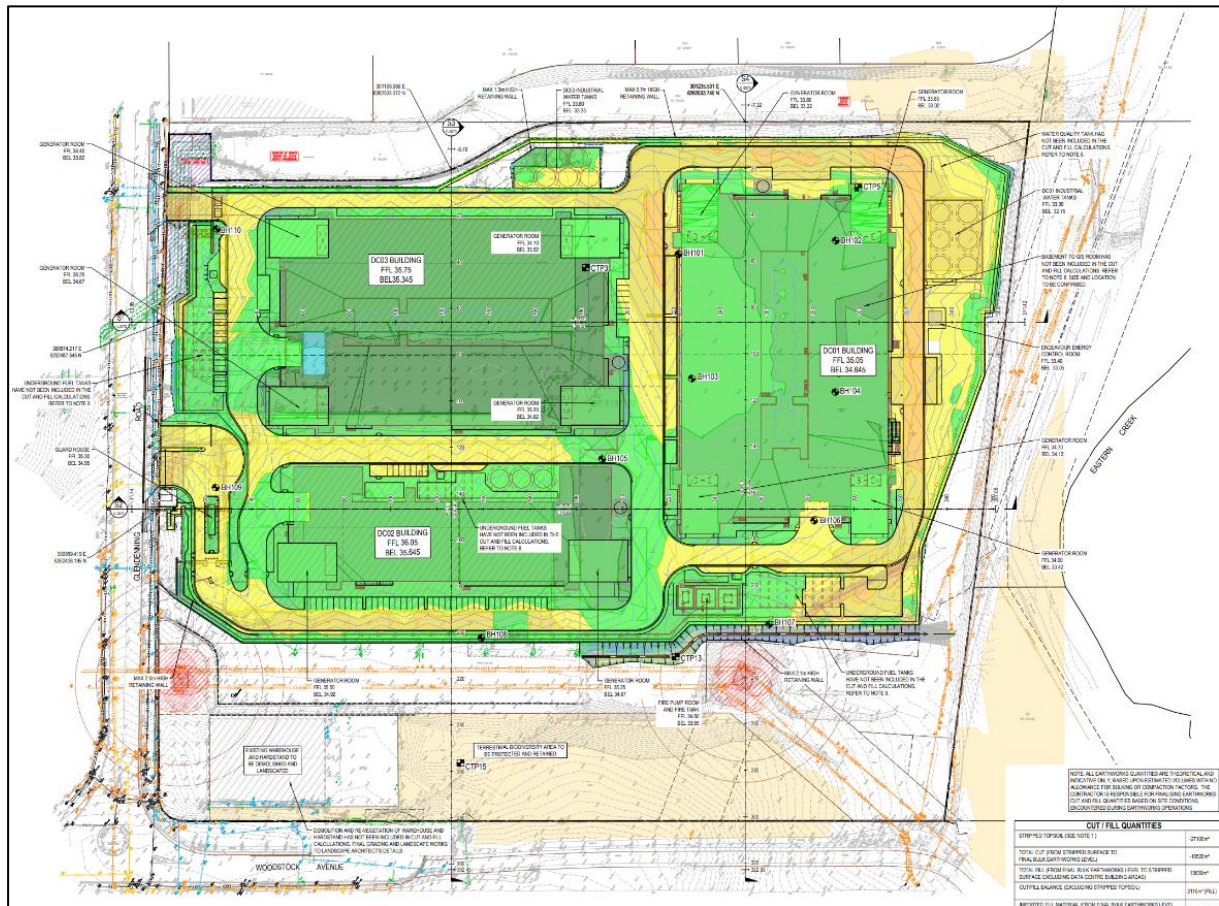


Figure 22. Bulk Earthworks (Source: Acor, 2024)

3.6.3 Retaining Walls

Gravity retaining walls are proposed at six locations around the subject site, at heights varying up to a maximum of approximately 2.2m. Subsurface conditions along the proposed retaining wall alignment will likely vary along each wall alignment, likely comprising uncontrolled fill or natural clay soil at wall base level. Retaining wall locations are depicted in **Figure 23** and further details are included within the Civil Engineering Report attached as **Appendix 20**.

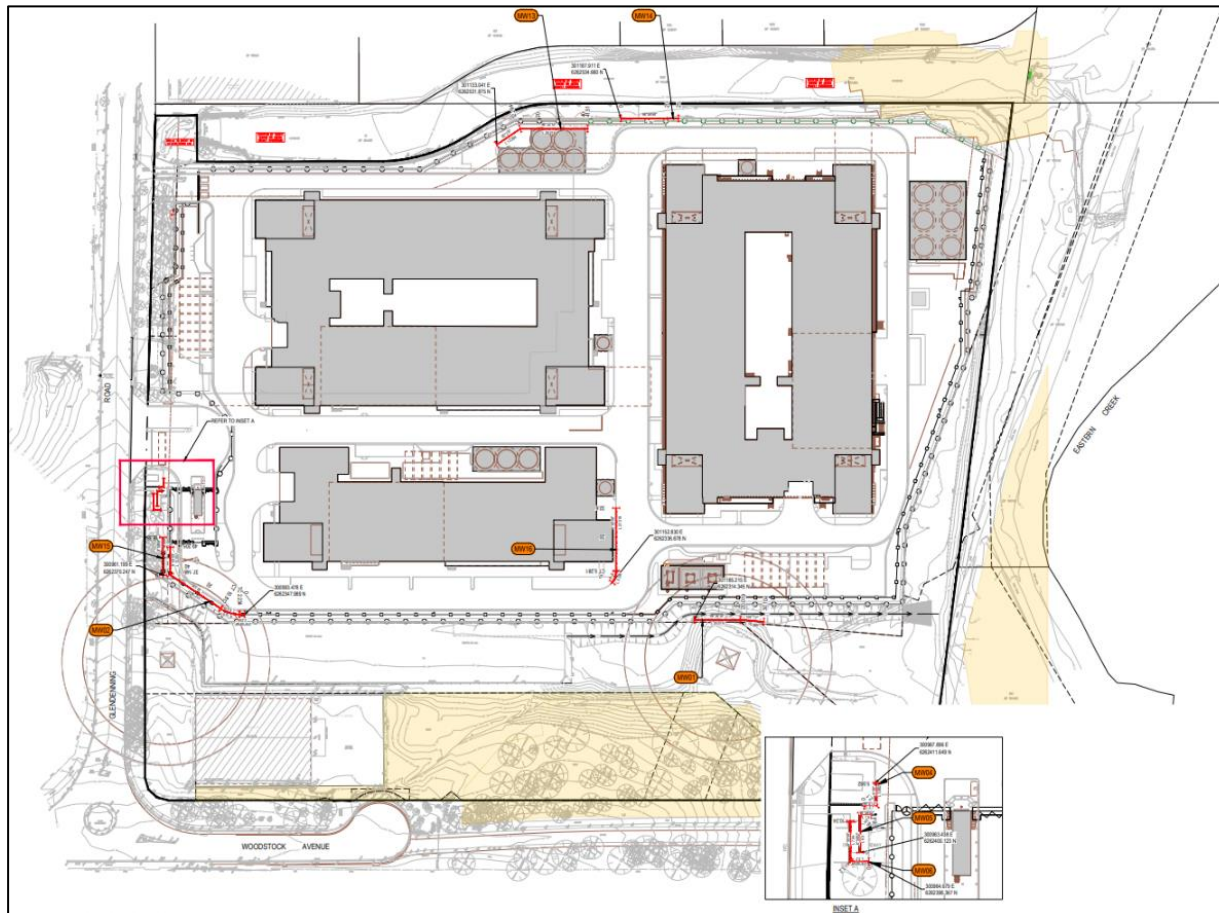


Figure 23. Retaining Walls (Source: Acor, 2024)

3.7 SITE SERVICING AND UTILITIES

3.7.1 Electricity

The subject site is within the authority of the Endeavour Energy network. Preliminary negotiations with Endeavour Energy have been commenced, with an estimated electrical maximum demand forecast to be approximately 235MW. This is currently being reviewed by Endeavour Energy who will determine if any upgrades are required to the upstream 132kV Endeavour Energy network to accommodate the proposed development. Any upgrades would be undertaken via a separate approval pathway and would be completed by Endeavour Energy.

It is proposed that the development would be supplied via an underground 132kW feeder connected to the local 132kV Endeavour Energy network. This underground feeder would reticulate from the Endeavour Energy easement at the south of the subject site, along the eastern site boundary and into the GIS switchroom located within the first data centre building (DC01). The final location and arrangement of the incoming 132kV feeder is subject to further design development and coordination with Endeavour Energy. This would be undertaken via a separate approval pathway by Endeavour Energy.

Within the subject site, there will be separate 132kV and 22kV underground feeders to provide High Voltage (HV) electrical supplies from DC01 to DC02 and DC03. These underground feeders would be privately owned and operated by the Proponent and not managed by Endeavour Energy.

Each data centre building would contain the following 132/22kV transformer arrangement, which will supply multiple 22kV switchboards within each building:



- DC01: 2 x 80/100MVA 132/22kV oil type transformers;
- DC02: 1 x 60/65MVA 132/22kV oil type transformer; and
- DC03: 1 x 80/100MVA 132/22kV oil type transformer.

The 22kV network within each building would be arranged in a ring topology, supplying multiple ring main units and 22kV/0.4kV dry type transformers on each floor.

3.7.2 Telecommunications

Multiple carrier point-of-entries (POEs) would be provided at the eastern and western boundaries of the proposed development. Multiple POEs are required for capacity and resiliency.

These POEs act as a telecommunications pathway demarcation point between the private property and the telecommunications carriers. Telecommunications carriers will meet and connect into these POEs for regional connectivity between the proposed development and other major telecommunications facilities including exchanges, gateways, other data centres. A total of four POEs would be provided at the front of the development, with two at Glendenning Road and two along the eastern boundary. The pathways are provided via underground telecommunications pit and pipe. This lead-in pipe is owned by the carrier up until the POE at the property boundary. A sub-duct may then be provided with a carrier cable contained within it. This is routed via the private pathways to the appropriate termination point within the campus.

Some telecommunications pathways are adjacent to easements, and the proponent's telecommunications team will coordinate these pathways in conjunction with utilities providers outside of the property boundary.

Initial pit and pipe carrier connectivity will be provisioned to enable the facility. Where increased capacity and resiliency is required to meet the operational demand during the operation of the facility, subsequent further connections to the POE may be made.

Carrier connectivity usually ties into already available infrastructure routed along the road reserve nearby. To meet resiliency or capacity requirements, runs of new conduit pathways may be made between the existing carrier pit and pipe within the road reserve, and to the point of demarcation/POEs. External reticulation to the POEs will require careful carrier planning. This is typically handled by the telecommunications carriers on application for connection.

All the internal reticulation between the POEs to the building structure is via private infrastructure, consisting of telecommunication vaults and communications conduits spanning between these vaults. These pathways will be sized to minimise subsequent on-site excavation activities during the life of the facility.

3.7.3 Water and Sewer

A detailed breakdown of the water and sewer demands for the subject site at different stages of development has been completed for the project.

TABLE 8 below details the water usage and sewer discharge rates at each stage. The usage and discharge are separated into domestic water usage which is water for amenities, irrigation and general cleaning, and industrial water usage which is water that serves the evaporative cooling equipment within each data centre. Each building shall have a rainwater harvesting system which supplements the subject sites potable water usage. These figures have been subtracted from the annual water usage to accurately represent the estimated potable water usage.



TABLE 8: WATER AND SEWER DEMAND

Stage	Usage	Instantaneous Peak Water Flow Rate (l/s)	Instantaneous Peak Sewer Flow Rate (l/s)	Peak Day Water Usage (l/day)	Peak Day Sewer Discharge (l/day)	Annual Water Usage (l/year)	Annual Sewer Discharge (l/year)
Stage 1	Domestic Water	0.84	0.50	2,000	1,600	730,000	584,000
	Industrial Water	31.89	13.04	2,755,296	511,059	21,897,000	4,379,400
	Rainwater Supplement	N/A	N/A	N/A	N/A	2,542,000	N/A
	TOTAL	32.73	13.54	2,757,296	512,659	20,085,000	4,963,400
Stage 2	Domestic Water	1.17	0.70	3,000	2,400	1,095,000	876,000
	Industrial Water	46.04	18.79	3,990,000	798,000	31,531,680	6,306,336
	Rainwater Supplement	N/A	N/A	N/A	N/A	3,660,480	N/A
	TOTAL	47.21	19.49	3,993,000	800,400	28,966,200	7,182,336
Stage 3	Domestic Water	1.52	0.91	5,000	4,000	1,825,500	1,460,000
	Industrial Water	78.48	31.83	6,750,000	1,350,000	53,428,680	10,685,736
	Rainwater Supplement	N/A	N/A	N/A	N/A	6,202,480	N/A
	TOTAL	80.00	32.74	6,755,000	1,354,000	49,051,700	12,145,736

Calculations have been completed to determine the suitable size of the new potable water connection and new sewer connection to the Sydney Water infrastructure. The calculations have been completed based on the peak flow rates described above.

It has been determined that that a 250mm potable water connection would be required to the Sydney Water trunk water main on the near side of Glendenning Road and a 225mm sewer connection would be required to the Sydney Water trunk sewer main on the northern side of the subject site. The locations are indicated in **Figure 24** below.



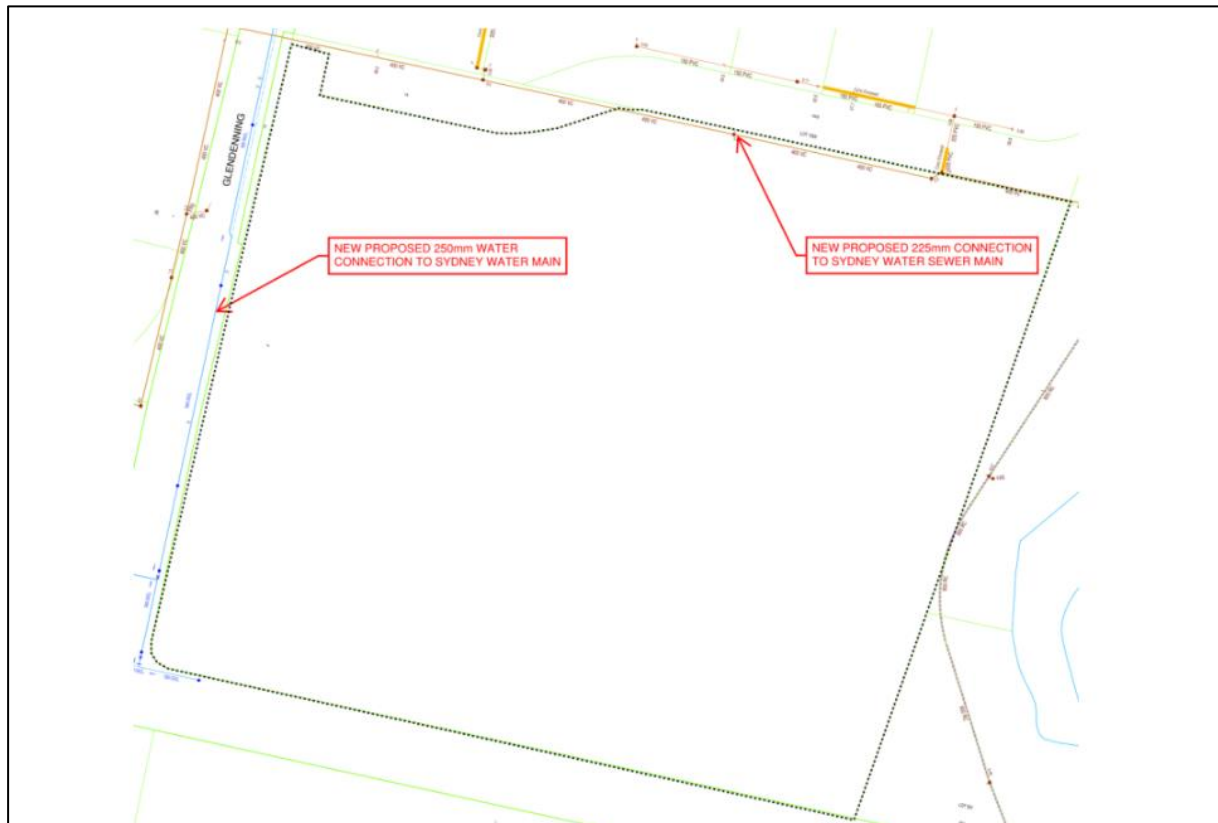


Figure 24. Water and Sewer Connection Locations (Source: LCI Consultants, 2024)

3.8 BUILT FORM

The proposed built form would comprise three separate five storey data centre buildings, external plant and equipment, security fencing, internal access roads, carparking, infrastructure and landscaping.

The proposed development is divided into three buildings (DC01, DC02, and DC03). DC02 and DC03 have frontage to Glendenning Road, whilst DC01 is positioned at the rear of the subject site, adjacent to the Nurragingy Reserve. The buildings are each five stories and include a maximum building height of 45.3m from existing ground level, including the mechanical roof plant and lift overruns. The predominant roofline of the buildings is 38.7m from Finished Floor Level (FFL).

Each building would comprise front of house admin and office areas at the ground floor, and data halls, plant and services areas on all five floors. Generators are located on the corners of each building, as well as steel flues.

The layout of the proposed development is depicted in **Figure 25** below. Elevations are depicted in **Figure 26** and **Figure 27**.

ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707

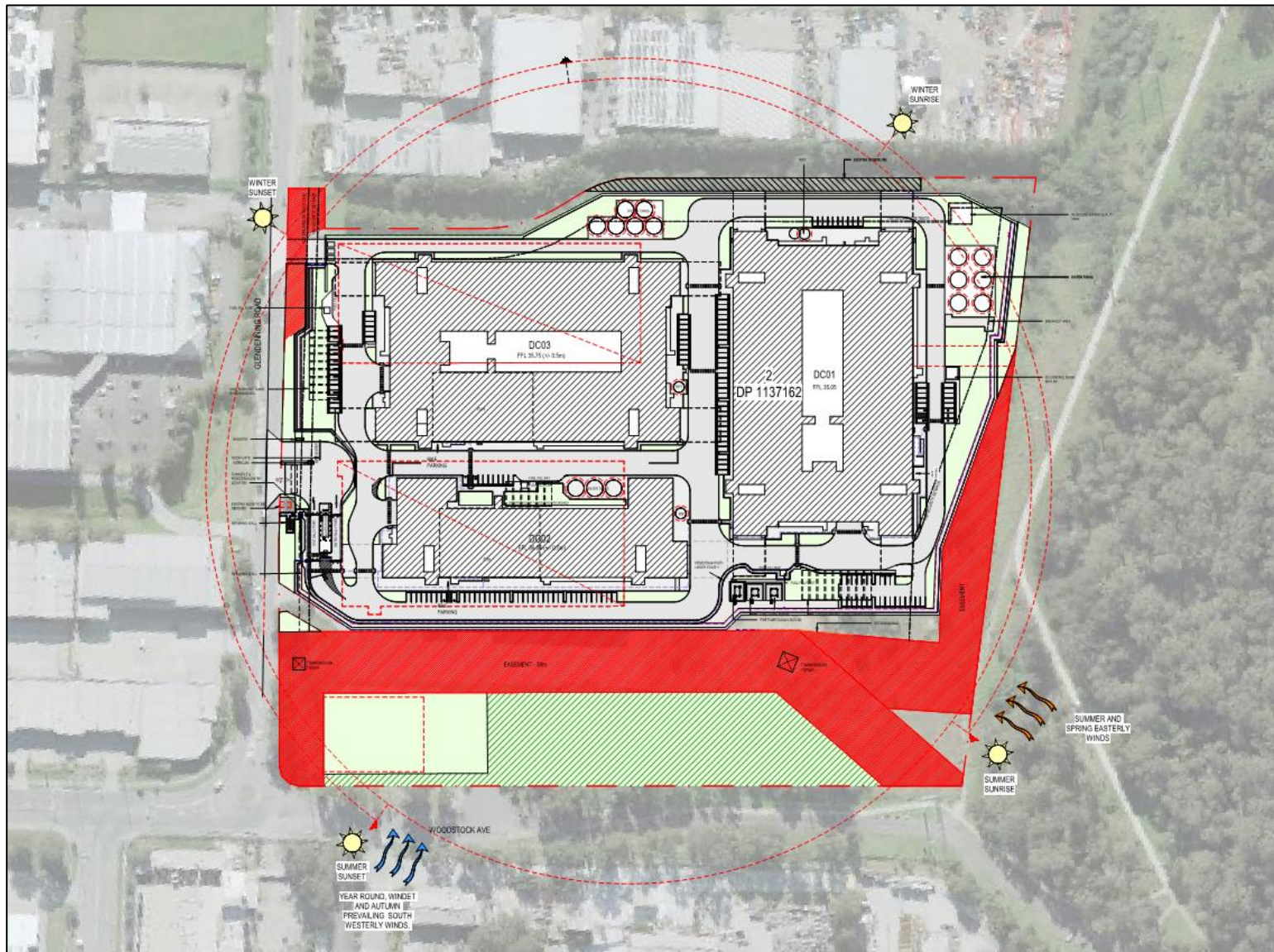


Figure 25. Proposed Site Plan (Source: Greenbox Architecture, 2024)



ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707



Figure 26. North and West Elevations (Source: Greenbox Architecture, 2024)

ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707



Figure 27. South and East Elevations (Source: Greenbox Architecture, 2024)

The predominant façade treatment proposed for the development is Kingspan Dri-Design as indicated in **Figure 28**. Concrete panels are also proposed including patterns that draw inspiration from the bushland of Nurragingy Reserve. This is demonstrated in **Figure 29**. Louvre panels would be located on the corners of the building to screen the proposed generators.

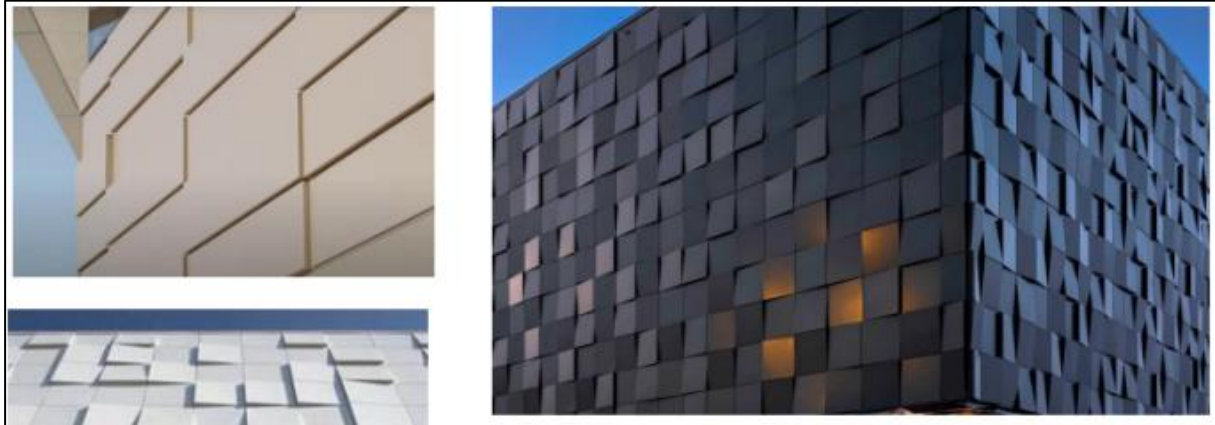


Figure 28. Façade Treatment (Source: Greenbox Architecture, 2024)



Figure 29. Façade Treatment (Source: Greenbox Architecture, 2024)

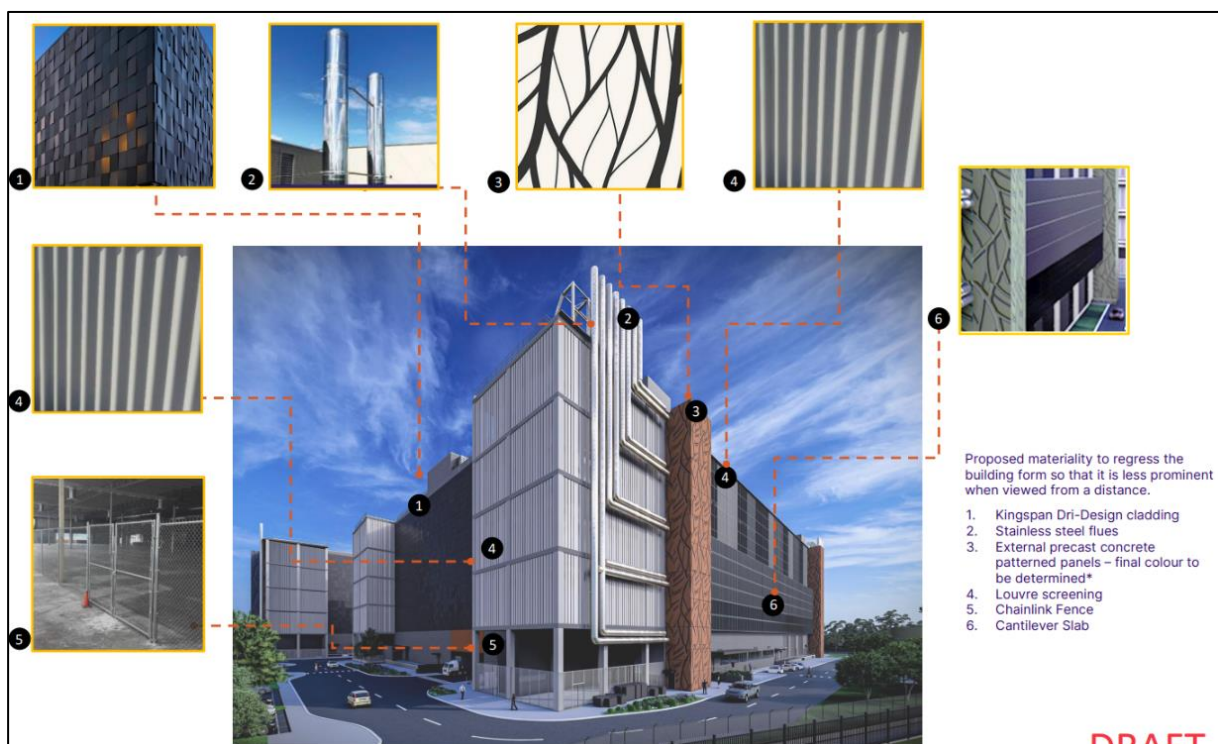


Figure 30. Façade Treatment (Source: Greenbox Architecture, 2024)

3.9 BACK-UP POWER SUPPLY

3.9.1 Overview

The emergency power supply for the proposed development is comprised of 97 x 2,800kW diesel generators, each with 990L day tanks and supported by 24 x 110kL double skinned underground diesel bulk storage tanks. The storage infrastructure will be constructed in a staged manner and the total capacity will not exceed 2,000 tonnes until DC03 has been constructed. Fuel is transferred from bulk storage to the day tanks via a duty / standby pumping system located within an internal fuel pump room set at the ground level of each building.

Diesel is supplied via a fuel tanker that is to be parked within an offloading area adjacent to the underground bulk storage tank area within each building. The access roadway is designed to accommodate a fuel tanker and allow other vehicles to pass. Decanting (ie. offloading) of fuel to bulk storage is facilitated by a duty / standby pumping system with corresponding filtration units. Fuel piping is located within concrete trenches equipped with hydrocarbon leak detection and watertight openable cover all throughout. The diesel storage capacities are outlined in **TABLE 9** below.

As part of the emergency power supply, the facility is also equipped with UPS battery systems for IT lineup. Each battery system is comprised of one battery cabinet with 17 x 2.04kWh lithium-ion battery modules and each building has a total of two dedicated battery rooms located at the ground level.

In the event that the main power supply is lost, these batteries provide a time limited power supply to support each data centre building, whilst the generators come online to pick up the data centre load. The batteries remain connected to a circuit, charging continuously to be ready for deployment, if required. Hence, they are considered to be 'in use' and not stored dangerous goods.

3.9.2 Maintenance testing

For standby generators to be ready to operate should an unexpected interruption to mains power occur, a regular maintenance schedule is required. The generators to be used at the subject site are proposed to be tested under the following indicative routine maintenance arrangement:

- Up to 20 generators being tested in parallel under no-load (0% load) conditions; and
- Up to 3 generators being tested at any given time, under full load (100% load) conditions.

The preliminary generator testing schedule is understood to have a cumulative total of not more than the 200-hour exemption limit outlined in Schedule 1, Clause 17 of the *Protection of the Environment Operations Act 1997* (POEO Act).

3.9.3 Alternatives

As part of the design development process, the project team has considered alternatives to diesel fuel for providing the requisite standby power which is fundamental to ensuring the buildings redundancy requirements. The investigation concluded that given the scale of the electrical power demand of the site, coupled with redundancy requirements and risk associated with any failure, a diesel generator standby power provision is justified and the most appropriate.

The reality is that diesel generator technology is a mature industry with minimal risk given the level of expertise present and proven reliability of a well maintained installation. Alternative technologies with any comparable energy diesel fuel are still in their infancy, and it is not reasonable to apply the risk to the continuity of operations for the life of the project.

Alternative technologies which have been considered in some form are described below.



- **PV Solar System:** Whilst PV systems are a common renewable technology, they are unable to provide continuous power availability, or the reliability required by the project without some form of battery storage. The site electrical demand is approximately 230 megawatts, with a 48 hour back up availability. The scale of any installation required to store and recharge a battery solution via a PV system is not feasible from a spatial, cost or infrastructure perspective.
- **Alternative Fuel Generators (Hydrogen):** One of the more promising technologies is the substitution of diesel with hydrogen as a fuel source for generators. A large benefit of this is that the infrastructure downstream of the engine is essentially the same as a typical diesel generator. However, the engines would require a reliable source of fuel in large quantities. The current market or industry does not offer any known supplier which could cater for the demand. Additionally, the size of each engine would need to be equivalent to the current diesel engines, which cannot be procured in the required scale at this stage. Another issue to consider is the safety implication of introducing such an energy dense, explosive fuel which must be stored under pressure. A benefit of diesel fuel is that it is not flammable, but combustible under the classification of AS1940. This means it is relatively difficult to ignite.
- **Diesel rotary uninterruptible power supply devices (DRUPS).**
- **Biofuel generator.**

An Energy and Water Report has been prepared for the proposal and is attached as **Appendix 35**. This provides a comprehensive options analysis of all commercially available cooling and back-up power systems. The report confirms that diesel generators have the lowest total impact and are the preferred option for the development.

Multiple cooling system options are available for the proposed data centre hall cooling. As part of the assessment, the following cooling options for the data halls were considered:

- Direct evaporative coolers;
- Indirect evaporative coolers;
- Air-cooled chiller system; and
- Water-cooled chiller system.

For cooling system selection, the following criteria were used to select an appropriate cooling system for the development.

- Energy consumption;
- Water consumption;
- Capital expenditure (Capex); and
- Refrigerant impact.

The selection of the cooling system will be undertaken post-approval.

3.10 DANGEROUS GOODS

The proposal involves the storage and handling of the following dangerous goods:

- Diesel (C1 Combustible Liquid); and
- Lithium-ion batteries.

A summary of the dangerous goods and their location is outlined in **TABLE 9**.

TABLE 9: PROPOSED DANGEROUS GOODS STORAGE						
Storage Area	Storage Type	Chemical	Class / Division	Quantity	Unit Capacity	Total Capacity
DC01	Bulk storage tank (underground)	Diesel	C1	9	110,000L	990,000L



	Generator day tank			39	990L	38,610L
	Battery room	Lithium-ion	Non-DG	2	~490kg	~980kg
DC02	Bulk storage tank (underground)	Diesel	C1	6	110,000L	660,000L
	Generator day tank			19	990L	18,810L
	Battery room	Lithium-ion	Non-DG	2	~490kg	~980kg
DC03	Bulk storage tank (underground)	Diesel	C1	9	110,000L	990,000L
	Generator day tank			39	990L	38,610L
	Battery room	Lithium-ion	Non-DG	2	~490kg	~980kg
Total Underground Diesel Quantity						2,640,000L
Total Above Ground Diesel Quantity						96,030L
Total Lithium-ion Battery Quantity						2,940kg

Additionally, the following proposed battery systems would be installed within the server racks. These lithium-ion batteries are not considered as dangerous goods as they are in-use. They remain connected to a circuit, charging continuously to be ready for deployment.

TABLE 10: BATTERY STORAGE IN SERVER RACKS

Battery Type	Power Shelves per Rack	Rating (kW)	Output Voltage (V)	Total Battery Capacity
WMW Samsung	2	2.131	49	4.262
WMW Panasonic	2	2.9	50.4	5.8
RP Panasonic	2	2.7	12	5.4
RP Flextronic	2	2.72	50.4	5.44
RP Lite-on	2	2.557	49	5.114

3.11 LANDSCAPE DESIGN

In line with the NSW Government Architect's *Greener Places Framework*, the proposed development has been designed to be a high performing, multi-functional landscape which seeks to maintain existing landscape features (where possible). Through its design considerations, the proposal has managed to retain approximately 60% of the existing trees on the subject site.

Landscaping plans propose a mixture of large and medium evergreen indigenous and native trees, shrubs and groundcovers throughout the subject site. The proposed design has taken into consideration the *Western Sydney Parklands Design Manual*.

Specifically, this involves:

- A landscape setback to Glendenning Road with a typical width of 15m-20m. This comprises retention of existing mature trees and planting of new native trees capable of growing to between 5m – 15m in height.
- The area of the demolished building south of the transmission line is proposed to be re-vegetated with tree, shrub, herb and groundcover species from the locally occurring plant communities of the Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (refer **Figure 32**). This is approximately 2,500m² and will extend the existing patch of vegetation



that is identified as outstanding biodiversity value, resulting in a total area of 10,280m². This extensive patch of vegetation will provide some screening of the development when viewed from the southern aspect, whilst providing a green grid connections to the Nurragingy Reserve.

- Along the eastern boundary of the subject site, a line of dense evergreen trees is proposed to be planted to screen the proposed water tanks. Further south, the eastern boundary is constrained by existing transmission infrastructure. Supplementary planting of indigenous native shrub and groundcovers with a maximum height of 3m will be planted within this Endeavour Energy easement area.

The resulting landscape characteristics of the proposed development include:

- A landscaped area of 20,300m², representing 19.43% site coverage;
- A total of 317 new trees to be planted; and
- A total tree canopy cover of 10,460.3m², representing 10% site coverage.

The Landscape Plans are attached as **Appendix 12** and depicted in **Figure 31** below. **Figure 32** includes a section showing the proposed landscape area adjacent to Woodstock Avenue.

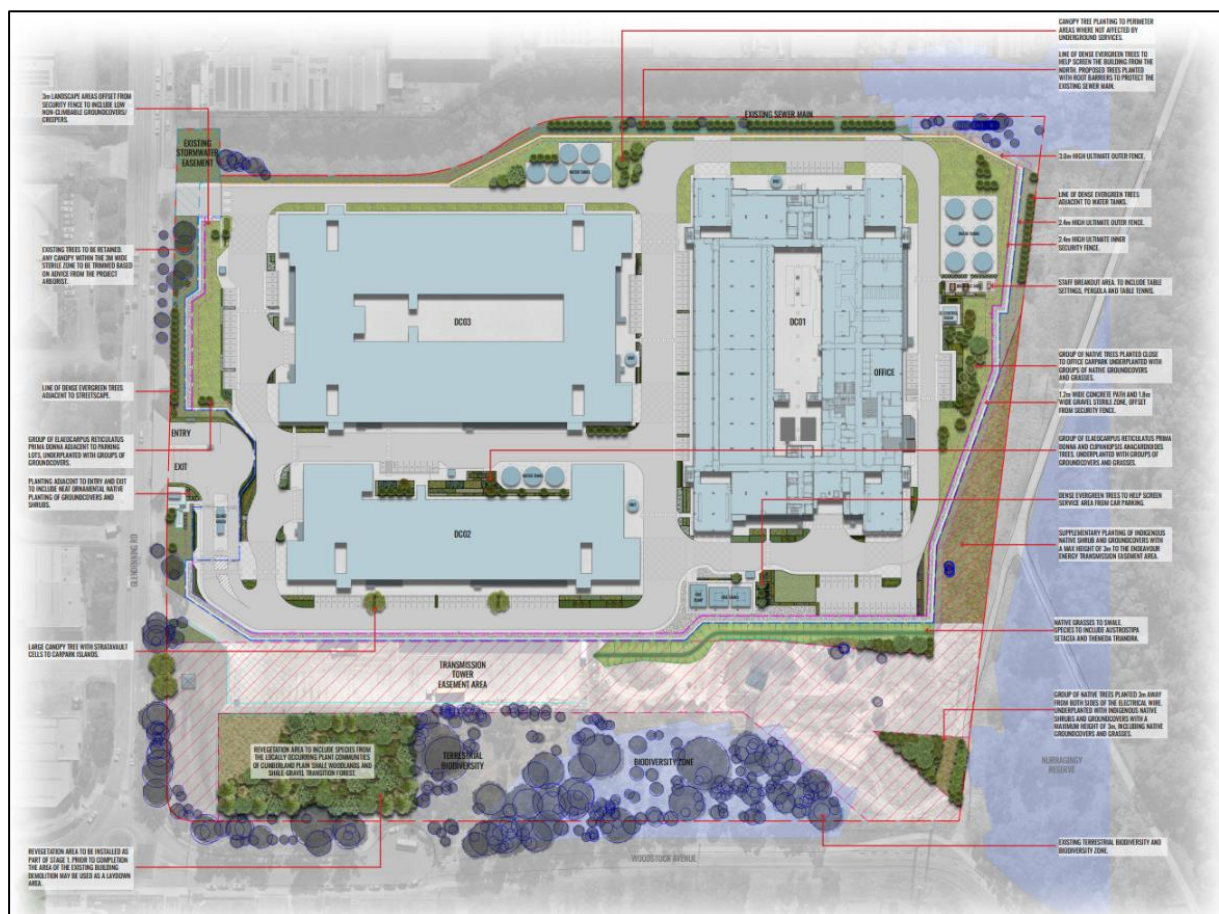


Figure 31. Proposed Landscape Plan (Source: Geoscapes, 2024)

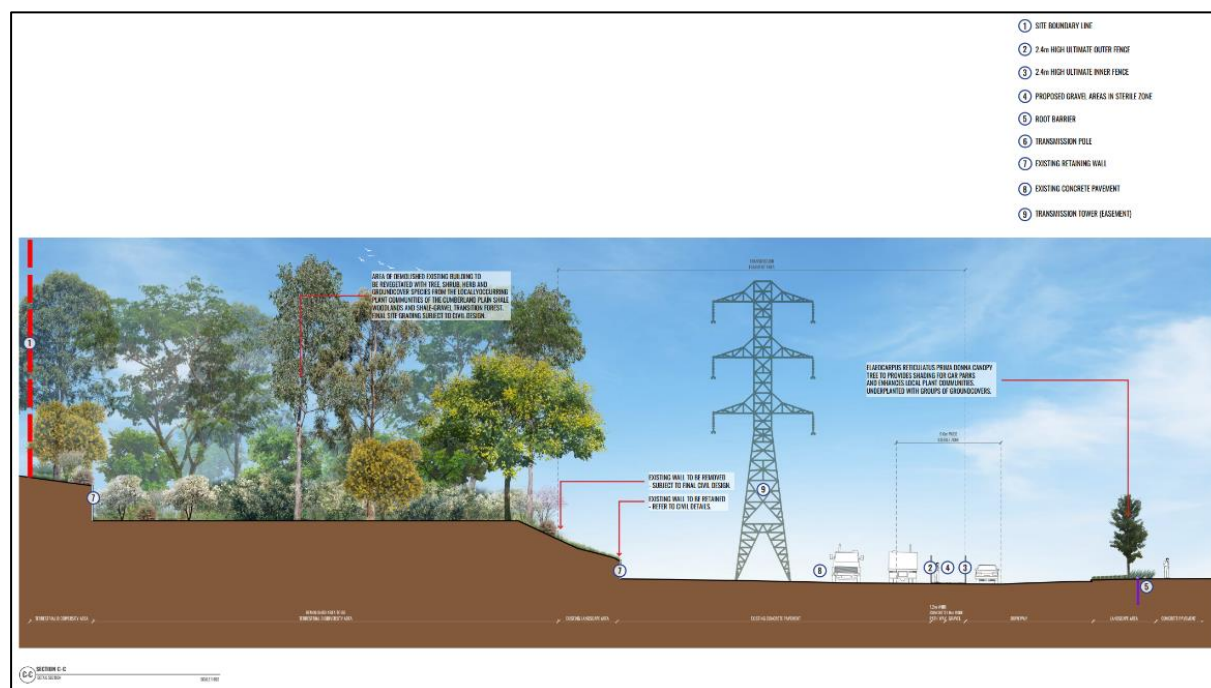


Figure 32. Proposed Landscape Section (Source: Geoscapes, 2024)

3.12 TRANSPORT, PARKING AND ACCESS

3.12.1 Vehicle Access and Loading

The following vehicle crossings are proposed for the subject site:

- One vehicle crossing off Glendenning Road (central location): This will be the main entrance and exit for the proposed development and includes controlled security via a sally port. This access allows for the largest potential vehicle to access the subject site (a 19m semi-trailer) to wait wholly within the development site.
- One vehicle crossing off Glendenning Road (north): This is an existing vehicle that crossing will be used for the construction of DC03 and will be used as an emergency vehicle access route once the development has been completed.
- One vehicle crossing off Glendenning Road (south): This is an existing vehicle crossing that will be retained for Endeavour Energy to access their existing infrastructure. Access will not be available to the proposed development from this vehicle crossing.

As a result, there will be three vehicle crossings off Glendenning Road. The existing vehicle crossing on Woodstock Avenue will be utilised during construction phases and will be decommissioned once the full development has been completed.

3.12.2 On-Site Parking

Car-parking areas are located at-grade and directly adjacent to the buildings, meaning adequate parking is provided for each stage of the development. A total of 165 car parks are provided, including 6 accessible spaces and 12 EV spaces. 4 bicycle parks are also proposed as part of the development.

3.13 STORMWATER MANAGEMENT

As per general engineering practice and the guidelines of Council, the proposed stormwater drainage system for the development will comprise a minor and major system to safely and efficiently convey collected stormwater run-off from the development to the legal point of discharge. The drainage system can be summarised as follows:



- Stormwater pits and pipes designed with sufficient capacity to collect and convey the 5% AEP storm event, including the nominated climate change factor for increase in rainfall intensity;
- Overland flow paths through the circulation and open spaces areas, for all flows in excess of the minor system capacity above the 5% AEP and up to 1% AEP storm events;
- Treatment of stormwater through rainwater harvesting tanks, Ocean Protect OceanGuards located in grated stormwater pits, and Ocean Protect StormFilters cartridges;
- Site discharge to the drainage reserve to the north; and
- Rainwater re-use through 3 x 100kL rainwater tanks (one per building) to supply recycled water for toilet flushing and to supplement water use for the mechanical cooling system.

An On-Site Detention (OSD) system has not been provided for the proposed development as the subject site is located in an OSD-exempt location as confirmed by Blacktown City Council.

Further detail is provided in **Section 6.1.14** and **Appendix 20** of this EIS.

3.14 CONSTRUCTION

3.14.1 Construction Management

A detailed Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor prior to the commencement of construction for each stage.

In terms of traffic management during construction, potential construction traffic management measures have been identified by the preliminary Construction Traffic Management Plan (CTMP) (**Appendix 11**).

All necessary access arrangements will be in place for construction vehicles as they enter and exit the site. A detailed CTMP will establish site access arrangements during the construction phase. The CTMP will comply with the relevant standards and guidelines that relate to construction traffic management.

3.14.2 General Erosion and Sediment

A Soil and Water Management Strategy has been prepared for the proposed construction works and is included as part of the Civil Engineering Report (**Appendix 20**). This includes the following to be implemented during construction works:

- Establish sediment fencing to the downstream perimeter of the zone of disturbed works to protect downstream assets and properties;
- Installation of stabilised construction entry and exit grids to prevent construction vehicles tracking debris into adjacent Authority roadways and stormwater systems;
- Construction of “clean water” diversion drains with rock check dams to divert unpolluted water to the existing stormwater system in a controlled manner;
- Construction of “dirty water” catch drains with rock check dams to divert sediment-laden and silt-laden water to proposed sedimentation basin;
- Construction of appropriately sized and maintained sedimentation basins to promote settling of gross pollutants and suspended solids. Dosing and flocculation of fine suspended particulates will also be undertaken depending on tested water quality profiles within the sedimentation basin;
- Protection of materials stockpiles by suitable wind protection fencing and / or temporary covering of stockpiles;
- Protection of existing and recently constructed surface inlet pits with temporary sediment traps using geotextile filter fabric and sandbags;
- Protection of existing and recently constructed overland flow paths with vegetated ground cover; and



- General expedited revegetation and stabilisation of exposed earthworks to prevent sedimentation of stormwater runoff.

3.15 PROJECT NEED

The intention of the proposed development is to construct and operate three data centre buildings which would provide secure, reliable and scalable solutions for cloud, content and large enterprise customers to house their high and rapidly growing volumes of data and information. Increasing the capacity and capability of secure data storage and cloud infrastructure is of regional and national significance.

The proposal is a new economy use which facilitates a rapidly growing demand for data storage and processing. The Australian Government has identified cyber security as one of the key growth industry sectors. The cyber security sector is forecast to have an annual cyber security revenue growth of 5.5% by 2026. Cyber Security Growth Centre, AustCyber, has prepared *Australia's Cyber Security Sector Competitiveness Plan 2022* (Sector Competitiveness Plan). The Sector Competitiveness Plan notes three key actions to grow revenue for the Australian cyber security sector. The proposed development is aligned with Key Action 2: *Bolster domestic procurement and export capacity*. The proposed development would assist in growing the domestic cyber security market and facilitating increased export capacity.

Data centres are critical infrastructure for supporting secure regional and national government and business. The proposed development is aligned with the Greater Sydney Commission's standardised elements, objectives, and priorities, as demonstrated in **Section 2.6**.

Additionally, the proposed development would generate the following benefits:

- Supporting a distributed work model and the ability to 'work from anywhere'. Liveability is benefited from enabling digital infrastructure that extends beyond the precinct, supporting people to work flexibly if it suits their circumstances;
- Reduced travel distances, leading to savings in time and fuel for local working residents, due to much better access to the site, as opposed to other dense employment areas 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 that can be spent either working, socialising or undertaking other activities;
- New employment opportunities from other industries enabled by increased capacity and capability; and
- Job creation near homes and consequent economic multiplier impacts, which boosts the local economy.

3.16 CONSIDERATION OF ALTERNATIVES

The purpose of the proposed development is to facilitate the provision of infrastructure to provide solutions for the storage and distribution of data. The proposal contributes towards the intended industrial character and nature of the E4 Zone; providing data centre buildings and associated infrastructure and amenities, which encourages employment opportunities and promotes the economic development of the Glendenning industrial area. The proposed development seeks to ensure:

- It is compatible with surrounding development and the local context;
- It would provide increased operational efficiencies for storage and distribution of data;
- It would result in minimal impacts on the environment; and
- It would allow for the implementation of suitable mitigation measures, where required.



Overall, the built form proposed would completely enhance and renew an underutilised land portion into a modernised data centre development. The site design and layout of the built form proposed, seeks to maintain consistency with the zone objectives under the BLEP 2015 and enhance the underlying industrial character intended for the site, which is zoned for such permissible land uses. Furthermore, this would be achieved by the resultant built form that would reinforce the nature of the land use and is sensitive to the surrounding environment.

The options considered and subsequently dismissed, in arriving to the current proposal with regard to the proposed development included:

(a) 'Do Nothing' Scenario

This option was dismissed as the objectives of the proposal would not be met, including the objective of facilitating an employment-generating development. If the proposed development was not to proceed, the site would continue to remain as a warehouse and distribution centre, or be developed for another industrial-related development.

(b) Development on an Alternative Site

Consideration was given to carrying out development on alternate sites, these were dismissed as the subject site resulted in the most beneficial outcomes for the proposed development.

Beneficial characteristics of the subject site for the proposed development include:

- It's location, being subject to the provisions of the E4 General Industrial zone pursuant to the provisions of BLEP 2015;
- It's proximity to existing electrical infrastructure;
- The proximity to the regional road network provides accessibility and linkages to the broader Western Sydney area and wider regions;
- The capability for providing employment-generating opportunities (both directly and indirectly), during both the construction and operational phases; and
- It's large proximity to sensitive receivers.

(c) Different Site Configuration

The configuration of the proposed development was chosen based on the subject site's topography, existing easement areas, road access, the requirements of the end user, as well as the need to minimise environmental impacts. It is noted that a different site configuration would not have been able to respond to the site opportunities and constraints. This option was therefore not considered appropriate.

A design options analysis has been included as part of the Architectural Design Report attached as **Appendix 5**. Some of the key considerations with regard to site configuration included:

- The subject site is traversed by a number of existing transmission lines and towers and Endeavour Energy does not permit any buildings or structures within these easement areas. This also results in access constraints. Endeavour Energy must be able to access their easement areas, whilst the data centre development must have secure access around the perimeter. These areas of the subject site have therefore been avoided.
- An existing Sydney Water sewer main is located within the subject site along the northern boundary. This area is required to be avoided to meet Sydney Water requirements.
- Avoidance of impacts to native vegetation was a key consideration in the design process, resulting in the avoidance of significant biodiversity values, including fully retaining the existing area of high biodiversity value and rehabilitating areas currently subject of development, along the southern boundary of the subject site. Key design features adopted to avoid native vegetation include:



- Effectively reducing the available land within the subject site for development and the capacity of the proposed development. By siting the data centre as proposed, approximately 2.2ha within the southern portion of the subject site is located outside of the development footprint, representing 21% of the total subject site area. As a result, 0.69 hectares of low and moderate condition listed Cumberland Plain Woodland, represents approximately 37% of the total native vegetation within the subject site. A total of 0.04ha of Swift Parrot Important Habitat within the subject site is also proposed to be cleared as a result of the project, representing 9% of the total 0.52ha of Important Habitat located within the subject site. The majority of this habitat exists within the southern portion of the subject site. This habitat will be retained and remains contiguous with further mapped important habitat for the species, located immediately south of the subject site. This contiguous patch of vegetation to be retained within and adjacent to the development site comprises a total of 0.64ha of Swift Parrot important Habitat.
- A retaining wall, located at the southwest of the subject site, is incorporated into the design to enable the construction of the perimeter security fencing in a position that avoids impact to high-value trees. Security fencing positioning throughout the remainder of the subject site has also been reviewed to avoid impacts to existing native vegetation in appreciation of project objectives and site constraints, including electrical easements, infrastructure standards and services locations and standoff requirements.
- Drainage infrastructure, located to the northeast of the subject site, has been the subject of significant review and refinement to avoid impacts to identified Swift Parrot habitat. This has included optimising the position of culverts and the discharge point to reduce the required disturbance associated with construction and allow for the maximum retention of trees. This has enabled the maximum possible avoidance of native vegetation in the area in respect of the topography of the subject site and required storm water discharge location.
- Roadways traversing the north and east of DC01 have been reduced in width to minimise encroachment into native vegetation area.
- Water tanks and the underground tank have been located so as to avoid interaction with native vegetation as far as possible.
- As a priority, the proposed development has sought to avoid areas of high Aboriginal heritage significance. These areas are predominantly located south of the existing transmission lines.
- Glendenning Road is zoned as SP2 Infrastructure under the BLEP 2015. Clause 7.9 of the BLEP 2015 requires that access is obtained via a secondary road where practicable. Access from Woodstock Avenue was considered but dismissed as this would require crossing under transmission infrastructure.
- The subject site adjoins the Nurragingy Reserve along the eastern boundary. Large setbacks have been included in this location to mitigate the scale of the proposed development. Development along the eastern boundary has also been subject to design review following consultation with Blacktown City Council. This has involved, relocating carparking, increasing landscaping and relocating water tanks.
- A portion of the subject site along the eastern boundary has been identified as bushfire prone land (vegetation buffer). An Asset Protection Zone (APZ) of 12m is required to be established surrounding the buildings.
- As a priority, the proposed development has sought to retain high value trees. The Arboricultural impact Assessment (**Appendix 13**) identifies that only 13 high value trees and two stands of high value trees are to be removed. 191 high value trees will be retained. Whilst approximately 40% of trees on the subject site are proposed to be removed, a replacement ratio of more than 1:1 will be provided, which would increase canopy coverage at the subject site.
- In regard to façade treatment, the architectural design incorporates a thoughtfully chosen colour palette and materials that harmonise with the surrounding environment. Different panels have been included to provide interest on the façade, including patterns that draw inspiration from the Nurragingy Reserve. The generators have also been suitably screened



ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre
2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707

through the use of louvres. The design team have considered finishes on the building facades to help reduce visual impacts of the proposed development as much as possible. The proposed building adopts darker colours which are naturally more recessive, material finishes which create interest through texture and reflecting light, and horizontal highlights to the ends of slab floors. All have been included to articulate building facades and reduce the appearance of bulk and scale.

In light of the above information, the proposal for a data centre development at the subject site would allow for the site and tenant objectives to be suitably met, whilst taking into consideration the constraints.



PART 4 STATUTORY CONTEXT

4.1 CONTROLS AND POLICIES OVERVIEW

This part of the EIS aims to highlight and address the relevant statutory requirements that are related to the proposed development, as noted below.

Commonwealth Planning Context

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*

State Planning Context

- *Environmental Planning and Assessment Act 1979*
- *Environmental Planning and Assessment Regulation 2021*
- *Water Management Act 2000*
- *Biodiversity Conservation Act 2016*
- *Rural Fires Act 1997*
- *Protection of the Environment Operations Act 1997*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy (Planning Systems) 2021*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Sustainable Buildings) 2022*

Local Planning Context

- *Blacktown Local Environmental Plan 2015*
- *Blacktown Development Control Plan 2015*

This proposal has been carefully assessed against the requirements and objectives of all of the above planning statutory and policy documents, as detailed within this EIS. A full assessment against the legislation is provided within **Appendix C** of this EIS.

In accordance with Clause 2.10 of the Planning Systems SEPP, development control plans do not apply to SSD. Nonetheless, an assessment against the key controls of BDCP 2019 relating to the E4 zone is provided at **Appendix 34**.

4.1.1 Commonwealth Planning Context

Under the *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" for which formal Commonwealth approval is required.

One threatened flora and one threatened fauna species listed under the EPBC Act were recorded or assumed to be present within the subject site. Significant Impact Criteria (SIC) assessments have been prepared for two threatened species:

- Downy Wattle, recorded within the subject site.
- Swift Parrot, assumed present within the subject site based on important habitat mapping.



Detailed assessment of the impacts to these species is undertaken in **Appendix 16**. It is concluded that Downy Wattle is unlikely to be significantly impacted by the proposed development. This conclusion was made on the basis that the proposed works:

- Is unlikely to lead to the long-term decrease in the size of an important population, reduce the areas of occupancy or fragment an existing population – the individuals within the subject site form an isolated sub-population and therefore their removal will minimally decrease the size and reduce the areas of occupancy of the important population. However, due to the isolated nature of this sub-population and low count of individuals, the removal of these plants is unlikely to lead to a long term decrease in the size of the population. Additionally, due to the isolated nature and positioning on the outskirts of the important population, the removal of these individuals is unlikely to fragment an existing population.
- Is unlikely to disrupt the breeding cycle of an important population – the individuals within the subject site an isolated sub-population and therefore their removal is unlikely to disrupt the breeding cycle of the rest of the important population.
- Is unlikely to modify the species habitat or introduce invasive species/diseases – Mitigation measures are to be implemented to mitigate any potential weed incursion/disease spread.
- Is unlikely to interfere with the recovery of the species.

It is concluded the proposed development is unlikely to lead to a significant impact to Swift Parrot, as:

- Small numbers of individuals may occasionally forage within the vegetation within the subject site, however, there are higher-quality resources located adjacent to the subject site.
- The removal of 0.04ha of mapped as important habitat for the Swift Parrot and a total of 1.02ha of native vegetation from the subject site is not likely to constitute a significant impact to an important population, considering the lack of feed trees for the species present.
- No breeding habitat will be impacted.
- Mitigation measures will be implemented to minimise risk of indirect impacts.

A Commonwealth referral is not required for impacts to this species.

No threatened ecological communities (TECs) listed under the EPBC Act are proposed to be impacted by the proposed development. Migratory species are considered unlikely to occur within the subject site given its location within an industrial setting and lack of suitable habitat features. Migratory species may occasionally stopover on the subject site; however, this would likely be enroute to the Nurranginy Reserve to the east of the subject site.

There are no National Heritage Places within the subject site. There are no wetlands of international importance within or in close proximity to the subject site.

Given the above, the proposed development will not result in any significant impacts having regard to the EPBC Act.

4.1.2 Statutory Requirements

The following categories are used to identify the statutory requirements of the project.

TABLE 11: STATUTORY REQUIREMENTS OVERVIEW

Power to grant approval	In accordance with Schedule 1 of the Planning Systems SEPP, development for data centres with a total power consumption of more than 15 megawatts constitutes SSD. As noted in Section 3.2 of the EIS, the total power consumption of the proposed development is in excess of 15 megawatts. The power to grant approval lies with the Minister for Planning (NSW DPHI) as
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	the consent authority for SSD, pursuant to Section 4.5 of the EP&A Act.												
Permissibility	The subject site is zoned E4 General Industrial, under the BLEP 2015. The proposed development aligns with the definition of 'data centre' which falls under the definition of 'light industries' and is permitted with consent in the E4 Zone. Furthermore, pursuant to Section 2.31 of the Transport and Infrastructure SEPP, development for the purposes of data centres is permitted with consent in the E4 Zone.												
Approvals not required for SSD	Section 4.41 of the EP&A Act stipulates that certain authorisations are not required for SSD. The following legislative approvals would otherwise be required if the proposal was not SSD. <table> <tr> <th>Act</th><th>Approval Otherwise Required</th></tr> <tr> <td>A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i></td><td>No</td></tr> <tr> <td>An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i></td><td>Yes – refer to Appendix 28 and Appendix 29 for further detail.</td></tr> <tr> <td>An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i></td><td>Yes – refer to Appendix 27 for further detail.</td></tr> <tr> <td>A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i></td><td>No</td></tr> <tr> <td>A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i>.</td><td>No</td></tr> </table>	Act	Approval Otherwise Required	A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i>	No	An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i>	Yes – refer to Appendix 28 and Appendix 29 for further detail.	An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i>	Yes – refer to Appendix 27 for further detail.	A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i>	No	A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> .	No
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A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> .	No												
Consistent approvals	Section 4.42 of the EP&A Act stipulates that certain authorisations cannot be refused if they are necessary for carrying out SSD and must be substantially consistent with the consent. <table> <tr> <th>Legislation</th><th>Approval Required</th></tr> <tr> <td>An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i></td><td>No</td></tr> <tr> <td>An approval under section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i></td><td>No</td></tr> <tr> <td>A mining lease under the <i>Mining Act 1992</i></td><td>No</td></tr> <tr> <td>A production lease under the <i>Petroleum (Onshore) Act 1991</i></td><td>No</td></tr> </table>	Legislation	Approval Required	An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i>	No	An approval under section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i>	No	A mining lease under the <i>Mining Act 1992</i>	No	A production lease under the <i>Petroleum (Onshore) Act 1991</i>	No		
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An approval under section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i>	No												
A mining lease under the <i>Mining Act 1992</i>	No												
A production lease under the <i>Petroleum (Onshore) Act 1991</i>	No												



	An environment protection licence under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i> (for any of the purposes referred to in section 43 of that Act)	Yes – The proposed development requires an Environmental Protection Licence (EPL) in accordance with Clause 9, Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act), as it is proposed to store more than 2,000 tonnes of diesel once DC03 has been constructed. Refer Appendix C for further detail.
	A consent under section 138 of the <i>Roads Act 1993</i>	Yes – approvals will be required for the vehicle crossing works to Glendenning Road. Such approval will be obtained after consent is issued.
	A licence under the <i>Pipelines Act 1967</i>	No
Pre-condition to exercising power to grant approval	Pre-conditions to exercising the power to grant approval are outlined in TABLE 12 below.	
Mandatory matters for consideration	Mandatory matters of consideration by the consent authority are outlined in Appendix C of this EIS.	

4.1.3 Pre-conditions

TABLE 12 outlines the pre-conditions to exercising the power to grant approval which are relevant to the project and the section where these matters are addressed within the EIS.

TABLE 12: PRE-CONDITIONS OVERVIEW			
Statutory Reference	Pre-condition	Relevance	Addressed in EIS
State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP)	Remediation of Land: The consent authority must not grant consent unless (as stipulated by Clause 4.6 of the SEPP): (a) <i>it has considered whether the land is contaminated, and</i> (b) <i>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</i>	A DSI has been prepared which confirms that the subject is suitable for the proposed land use and Clause 4.6 of the Resilience Hazards SEPP is satisfied.	Refer to Section 6.1.17 and Appendix 24 of this EIS.



	<i>purpose for which the development is proposed to be carried out, and</i> <i>(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.</i>		
State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP)	Development likely to affect an electricity transmission or distribution network: <i>Pursuant to Clause 2.48 of the Transport and Infrastructure SEPP, before determining the application the consent authority must –</i> <i>a) give written notice of the application to the electricity supply authority for the area in which the development is to be carried out, and</i> <i>b) take into consideration any response to the notice that is received within 21 days after the notice is given, and</i> <i>c) be satisfied that any safety risks associated with the development or modification to which the application relates have been identified, and</i> <i>d) take those risks into consideration.</i>	The proposed development involves works within 5m of an existing exposed overhead electricity power line. It is acknowledged that the consent authority must provide notice to the electricity supply authority and incorporate any feedback received. Preliminary engagement has been undertaken with Endeavour Energy in relation to the proposed works and is ongoing.	Refer to Appendix 31 of this EIS.
	Traffic-generating development:	The proposed development involves an industrial building with a site area greater than	Refer to Section 6.1.6 and Appendix 10 of the EIS.



	Pursuant to Clause 2.122 of the Transport and Infrastructure SEPP, before determining an application, the consent authority must: (a) <i>give written notice of the application to TfNSW within 7 days after the application is made, and</i> (b) <i>take into consideration-</i> <i>i. any submission that RMS provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, TfNSW advises that it will not be making a submission), and</i> <i>ii. the accessibility of the site concerned, including—</i> <i>(A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and</i> <i>(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and</i>	5,000m², which constitutes traffic-generating development, as described in Schedule 3 of the Transport and Infrastructure SEPP. It is acknowledged that the consent authority must provide notice to TfNSW and incorporate any feedback received.	
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	iii. any potential traffic safety, road congestion or parking implications of the development.		
State Environmental Planning Policy (Biodiversity and Conservation) 2021 <i>(Biodiversity and Conservation SEPP)</i>	Approval of Native Vegetation Panel for clearing native vegetation in non-rural areas: Pursuant to Clause 2.14 of the Biodiversity and Conservation SEPP: 1) An application may be made to the Native Vegetation Panel by or on behalf of the landholder for approval to clear native vegetation in any non-rural area of the State. 2) The Native Vegetation Panel may, in accordance with this Part, grant an approval to clear the native vegetation under this Part or refuse the application. 3) An application for approval for the clearing of native vegetation may only be dealt with under this Part if the clearing exceeds the biodiversity offsets scheme threshold.	The proposed development seeks consent for the clearing of vegetation.	Refer to Section 6.1.9 and Appendix 16 of the EIS.
State Environmental Planning Policy (Sustainable Buildings) 2022 <i>(Sustainable Buildings SEPP)</i>	Non-residential development:	Non-residential development is proposed which requires consideration of Clause 3.2(1) of the Sustainable Buildings SEPP.	Refer to Section 6.1.8 and Appendix 14 of the EIS.



	Pursuant to Clause 3.2(1) of the Sustainable Buildings SEPP, in deciding whether to grant development consent, the consent authority must consider whether the development is designed to enable the following: (a) <i>the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,</i> (b) <i>a reduction in peak demand for electricity, including through the use of energy efficient technology,</i> (c) <i>a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,</i> (d) <i>the generation and storage of renewable energy,</i> (e) <i>the metering and monitoring of energy consumption,</i> (f) <i>the minimisation of the consumption of potable water.</i>		
	Non-residential development: Pursuant to Clause 3.2(2) of the Sustainable Buildings SEPP, development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.	Non-residential development is proposed, which therefore requires consideration of Clause 3.2(2) of the Sustainable Buildings SEPP. The embodied emissions attributable to the development have been quantified.	Refer to Appendix 15.
Blacktown Local Environmental Plan 2015 (BLEP 2015)	Terrestrial Biodiversity: Pursuant to Clause 7.2(3), in deciding whether to grant development consent, the consent authority must consider-		Refer to Section 6.1.9 and Appendix 16 of the EIS.



	(a) <i>whether the development is likely to have—</i> (i) <i>any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and</i> (ii) <i>any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and</i> (iii) <i>any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and</i> (iv) <i>any adverse impact on the habitat elements providing connectivity on the land, and</i> (b) <i>any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.</i>	Clause 7.2 applies to areas mapped as “terrestrial biodiversity” under the BLEP 2015. The proposed development has been designed and sited to minimise impacts to existing biodiversity where applicable. Appropriate measures have been imposed to mitigate impacts where necessary.	
	Terrestrial Biodiversity: Pursuant to Clause 7.2(4), development consent must not be granted unless the consent authority is satisfied: (a) <i>the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or</i> (b) <i>if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or</i>		



	(c) <i>if that impact cannot be minimised—the development will be managed to mitigate that impact.</i>		
	Development with frontage to certain roads in Zone SP2: Pursuant to Clause 7.9, development consent must not be granted to land that has a frontage to a road within Zone SP2 Infrastructure, unless the consent authority has considered the following: (a) <i>where practicable, whether vehicular access to the land is provided by a road other than the road referred to in subclause (2),</i> (b) <i>whether the safety, efficiency and ongoing operation of the road will be adversely affected by the development as a result of—</i> (i) <i>the design of the vehicular access to the land, or</i> (ii) <i>the emission of smoke or dust from the development, or</i> (iii) <i>the nature, volume or frequency of vehicles using the road to gain access to the land,</i> (c) <i>whether the development is of a type that is sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the road.</i>	The subject site has a primary frontage to Glendenning Road, which is zoned as SP2 Infrastructure, and has a secondary frontage to Woodstock Avenue. It is not practicable to provide primary access from Woodstock Avenue as there is an existing transmission line that transects the subject site, as well as an area zoned as containing outstanding biodiversity value. Therefore, vehicle access is provided only from Glendenning Road. It is acknowledged that the proposal includes a reduction in the vehicle crossings off Glendenning Road, compared to the existing situation.	Refer to Appendix 10 of the EIS.



PART 5 ENGAGEMENT

5.1 OVERVIEW

An application to receive Industry-specific SEARs was submitted to NSW DPHI, with the SEARs (reference: SSD-73761707) subsequently issued on 25 July 2024.

A copy of the issued SEARs is included in **Appendix 1**.

As required by item 26, project specific consultation was required with the following stakeholders:

- The relevant Department assessment team;
- The relevant local Councils;
- Any relevant agencies;
- The community; and
- If the development would have required an approval or authorisation under another Act but for the application of s4.41 of the EP&A Act or requires an approval or authorisation under another Act to be applied consistently by s4.42 of the EP&A Act, the agency relevant to that approval or authorisation.

Further, the SEARs outlined additional consultation with the Western Sydney Parklands and Blacktown City Council regarding the design of the development and potential visual impacts on 'The Colebee' events venue.

A comprehensive level of community and stakeholder engagement has been undertaken for the proposed development. This has included numerous meetings and notification letters to both agencies and all potentially impacted stakeholders.

A comprehensive Engagement Report (located in **Appendix 33** of this EIS) has been prepared by Willowtree Communications, in support of this SSDA, and in line with the *NSW DPE's Undertaking Engagement Guidelines for State Significant Projects*. It committed to the delivery of a considered, open and evidence-based approach to the engagement. Some key components of the engagement plan are summarised below.

5.2 APPROACH TO ENGAGEMENT

The analysis of the proposal, stakeholders and the surrounding area informed a tiered approach to engagement. The approach aimed to undertake engagement that was proportionate to the likely impacts of the project on different stakeholders and provide open and transparent channels for feedback. These included:

- Formal engagement with council and relevant agencies and authorities including Blacktown City Council, Greater Sydney Parklands, Local Aboriginal Land Councils and RAPs involved in the ACHA, relevant agencies and authorities;
- Targeted engagement with key stakeholders in the surrounding industrial area, including adjoining landowners; and
- Raise awareness and provide opportunities for the local business community and local residential community within the engagement area to participate in engagement.

A community newsletter was designed to support the pre-lodgement engagement phase and inform the preparation of the detailed proposal that will be subject to assessment stage of engagement. It set out the location and key features of the proposal, an overview of the SSD process, including stages of engagement, and avenues for further enquiries. Almost 1900 Community Newsletters were distributed



throughout the surrounding area to residents, industries and businesses. The distribution area is included at **Figure 33**.



Figure 33. Community Newsletter Distribution (Source: Willowtree Communications, 2024)

The community newsletter directed stakeholders to provide feedback via a dedicated email address. It also included a QR code link to an online survey which comprised five questions with responses recorded online and collated by Ethos Urban as part of the community engagement for Social Impact Assessment.

The survey was designed to capture both quantitative and qualitative data to ensure that results could be measured, the community had the opportunity to voice their concerns, and any issues that may not have been initially apparent could be identified. The survey design required the respondents to answer questions to determine their standard demographics, baseline activity, and commercial and lifestyle concerns. Stakeholder feedback was incorporated into the survey to ensure impartial and independent data was captured. Survey questions below and detailed in Social Impact Assessment Report.

5.3 ENGAGEMENT UNDERTAKEN

5.3.1 Greater Sydney Parklands

Greater Sydney Parklands identified issues to be addressed as part of the EIS including:

- The building and landscape setbacks from boundary with Nurraringy Reserve;
- Consideration of biodiversity values within Nurraringy Reserve – including considerations outlined in the Western Parkland City Precinct SEPP;
- Noted no visual impacts form Colebee Centre;
- Discussion of visual impacts for perimeter pathway noting planning controls for the subject site and Proponent design approach;
- Discussion of site boundary interface including height differences, location of secure fencing and vegetated berms;
- Noted stormwater interface between the subject site and Nurraringy Reserve.

The landscape design has been prepared in accordance with the Western Sydney Parklands Design Manual. Although the subject site itself is not located within the jurisdiction of the *State Environmental*



Planning Policy (Precincts – Western Parkland City) 2021 (Western Parkland City SEPP), consideration is provided within **Appendix C** of this EIS.

5.3.2 Council

There was a high level of interest from Blacktown City Council through the Coordinator Planning Assessment. A formal Pre-Application Meeting (PAM) was held based on the Reference Scheme in the SEARs Scoping Report. The PAM included representatives from planning, traffic, city architect and development engineering branches of Council.

Key considerations included:

- Design and visual impact considerations including setbacks and build heights, site layout, location of tanks, landscape design;
- Demolition and use of CDC pathways;
- Water tank locations and buffer areas;
- Staging development and key considerations such as site access and traffic circulation with the site as part of staging, construction management plan;
- Traffic, including parking provision for technicians and visitors;
- Biodiversity related to protection of two areas of recognised biodiversity value;
- Detailed consideration under Part 4 of the EP&A Act;
- Proposed early works; and
- Further work on visual analysis.

Following the August PAM meeting, Council engaged further across branches and provided comprehensive minutes and additional information in response to the PAM meeting. The minutes and a summary 'proponent response' is provided in the Engagement Report (**Appendix 33**).

A follow up meeting to discuss urban design, architecture and visual impacts with the City Architect was arranged in mid-October which provided a more in-depth discussion of visual impact. This highlighted:

- Areas where the proposal had responded to Council PAM issues, including increased setbacks to the Nurraging Reserve and detailed landscaping;
- Landscape plans, including biodiversity protection and tree planting to screen visual impacts; and
- Engagement activities with community and Western Sydney Parklands.

Council noted the proposal had been refined and ongoing considerations to address visual impacts particularly adjacent to the perimeter pathway parallel to the eastern boundary with the Glendenning industrial area and site boundary. Design enhancements to address views from surrounding areas were also discussed, noting height considerations for emerging industrial forms such as data centres need careful consideration.

There was a low level of interest in the proposal from the Blacktown Council community asset operators, including Colebee Centre in Nurraging Reserve. Multiple requests for meetings were made via email, however the open space planner provided advice that PAM process provides comprehensive coverage of council considerations.

5.3.3 Aboriginal Community

The Aboriginal Community were confirmed through the ACHA with over 25 RAPs including representatives of:

- Deerubbin Local Aboriginal Land Council; and
- Dharug Aboriginal Resource Centre and Dharug Custodian Aboriginal Corporation.



Outcomes on engagement included input into enhancing the cultural values of the site area such as increasing visual connections, landscaping, land care and garden beds that use native species local to the area and improve habitat for native wildlife. It was also advised to connect people with the site area's long and continuing heritage (refer ACHA at **Appendix 27** for more detail).

5.3.4 Community

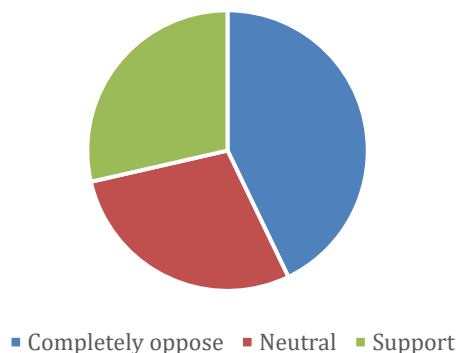
The survey was made available to approximately 1,890 recipients and was completed by 10 community members, all of whom identified as local residents of the area, which is a response rate of less than 1%. All community responses were via the community survey, with no enquiries made directly through email channels. A review of similar proposals in Blacktown LGA shows a similar low response rate by the community.

This low response rate means the survey can only provide inferences based on the feedback provided and identify themes, as the data is not robust enough to indicate attitudes and behaviours for the represented group. Overall, the survey results showed support for the development is varied (refer **Figure 34** and **TABLE 13** following).

When questioned regarding support for the proposed development, there were seven responses and just over half of these expressed support or were neutral in regard to the development, and the remaining were strongly opposed to the project. To mitigate negative impacts, the highest rated mitigation measures included implementation of a construction transport management plan, as well as landscaping and sensitive facade materials to reduce noise and visual impacts (refer charts below).

Benefits for increased employment have been recognised by several respondents as likely, however in open ended responses it is suggested that jobs will be specialised and likely to come from outside the area.

Q3.a) Respondent support for the proposed development



Q4.a) Respondent views on mitigation approach to reduce negative impacts

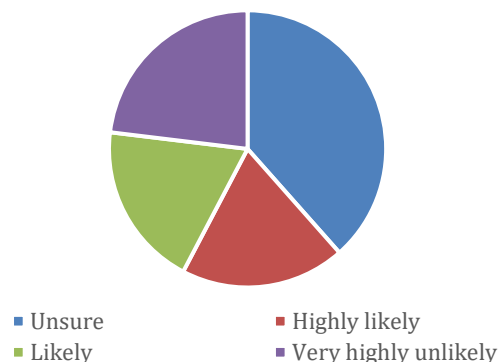


Figure 34. Survey Responses (Source: Willowtree Communications, 2024)

Note: In the following table, **bold** represents multiple responses.

TABLE 13: SURVEY RESPONSES				
Local values	Future needs	Negative	Benefits	Mitigation
Roads not busy	Local business	Huge and ugly	Specialist skills will come from outside of the area therefore no benefit to locals	Build further towards the reserve

Quiet, safe and peaceful area	Prosperity	Not light industrial		Give community access to improved data connection
Parklands and open space	Preserve the Nurragingy Reserve	Don't understand what is being proposed		Run training streams for local schools / youth
Industrial area provides jobs and opportunities	More jobs	Increased heavy vehicle traffic		Should not be 5 stories high
Views of trees and the city	More housing	Loss of light from bulk and scale		Build it elsewhere
	Views should not be taken away, development should be relocated.	Pressure on electrical grid		Already too many powerlines
	Can't block locals wanting to access the reserve from Woodstock Ave.	Impact to Nurragingy Reserve		

5.4 RESPONSE TO ENGAGEMENT FEEDBACK

Drawing on the agency, Council and community stakeholder feedback through engagement activities, the proposal was able to be refined and areas requiring enhanced technical reporting addressed. A synthesis of engagement feedback identified six key themes. These are summarised with responses in the following table.

TABLE 14: SUMMARY OF ENGAGEMENT AND PROJECT RESPONSE

Issue	Response
Traffic and Parking <u>Stakeholders:</u> Community and Council <u>Considerations:</u> Parking is the primary concern, particularly any impacts in the Glendenning industrial area as Glendenning Rd acts as a major thoroughfare to the M7, M4 and adjoining infrastructure. Other feedback raised concerns with implications on existing heavy traffic in the area.	Traffic parking concerns in industrial areas presents unique challenges and safety concerns due to the mix of heavy vehicles, commercial trucks, machinery, workers needs and pedestrian activity. Due to the locality of this site, and the regional road links to the area, construction traffic is able to be appropriately managed through a Construction Traffic Management Plan. Analysis of the surrounding intersections confirms there is adequate capacity to cater for the proposed development and no traffic upgrades are required. Appropriate levels of parking are provided on site including workers, technical service providers and visitors.
Landscape and loss of trees <u>Stakeholders:</u> Community, Council and Western Sydney Parklands	Biodiversity assessment and detailed landscape plans make provisions for retention of majority of protected areas as well as provision for



<u>Considerations:</u> Biodiversity areas requiring protection, recognition of biodiversity areas in adjoining Western Sydney Parklands and loss of trees due to development footprint	enhancement through landscape boundaries. A new and large revegetated area on Woodstock Avenue adjacent to high value biodiversity area will enhance biodiversity values following demolition of existing warehouse.
Interface with Nurranginy Reserve <u>Stakeholders:</u> Western Sydney Parklands, Council, <u>Detail:</u> Impacts on the perimeter pathway that runs parallel to eastern boundary of Glendenning Industrial area and site between Power Street and Woodstock Avenue	The key consideration is the visual impacts on the interface with perimeter road in the Reserve which is experienced as an intermittent impact with the pathway largely being used to provide access between the Reserve and industrial areas adjoining Woodstock Avenue and Powers Road. Additional landscape screening and façade treatment have included colour scheme inspired by environmental features of Nurranginy Reserve.
Visual Impact – surrounding residential areas <u>Stakeholders:</u> Council and Community <u>Detail:</u> The proposed building is in the visual field of existing residential neighbourhoods	Design considerations have been refined and enhanced throughout the preparation phase of the EIS and include: ▪ Modulation and architectural features to reduce mass of building; and ▪ External facades including colour and texture have been designed and proposed to reduce to visual impacts of development.
Operational Energy and Safety <u>Stakeholders:</u> Agency SEARs considerations <u>Detail:</u> Data centres consume large amounts of electricity and need to manage heat load	Operational management systems include: ▪ Filtration where required; ▪ Regular maintenance and real time temperature monitoring; and ▪ Back-up systems for power.
Construction/Staging – traffic, dust and noise <u>Stakeholders:</u> Community and Council <u>Considerations:</u> Onsite parking provision and staging considerations for traffic as well as dust and noise associated during construction	Detailed plans that delineate traffic circulation and parking provisions in of each of the three stages in the development have been established as part of the comprehensive EIS. Dust and noise generated by construction phase will be managed to acceptable levels through current industry standard construction management requirements and adhere to permissible construction hours including implementation of a CEMP.

5.5 ONGOING ENGAGEMENT

The Proponent is committed to ongoing community consultation following the submission of the EIS.

In accordance with the EP&A Regulation, DPHI will exhibit the EIS on the Major Projects NSW website and invite submissions from both government agencies and the public. Once the exhibition period is complete, DPHI may require the Proponent to prepare a Response to Submissions Report addressing the issues raised. The Proponent will continue to liaise with DPHI and stakeholders during the assessment of this SSDA to address queries that may arise.



PART 6 ASSESSMENT OF IMPACTS

6.1 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The SEARs (reference: SSD-73761707), issued by the NSW DPHI on 25 July 2024, identify the following assessment matters:

1. Statutory Context
2. Estimated Development Cost and Employment
3. Design Quality
4. Built Form and Urban Design
5. Visual Impact
6. Traffic, Transport and Accessibility
7. Trees and Landscaping
8. Ecologically Sustainable Development (ESD)
9. Biodiversity
10. Back-up Power System
11. Air Quality
12. Noise and Vibration
13. Ground and Water Conditions
14. Water Management
15. Flood Risk
16. Hazards and Risks
17. Contamination and Remediation
18. Waste Management
19. Aboriginal Cultural Heritage
20. Environmental Heritage
21. Social Impact
22. Infrastructure Requirements and Utilities
23. Bush Fire Risk
24. Construction, Operation and Staging
25. Contributions and Public Benefit
26. Engagement

The abovementioned matters, and other necessary matters, are addressed in the following sections.

6.1.1 Statutory Context

This section of the EIS evaluates the statutory and strategic context of the proposed development, in relation to the SEARs and addresses its specific matters.

In response to item 1 of the SEARs (statutory context), **TABLE 15** specifies the location of each assessment of the relevant statutory and strategic documents.

TABLE 15: STATUTORY CONTEXT REVIEW	
Document	Response / Location of Assessment
<i>Address all relevant legislation, environmental planning instruments (EPIs) (including drafts), plans, policies, guidelines and planning circulars.</i>	Refer to PART 4 and Appendix C of this EIS.
<i>Identify compliance with applicable development standards and provide a detailed justification for any non-compliances.</i>	Refer to Appendix C of this EIS.
<i>Provide an explanation of how the development as described in the EIS is consistent with the</i>	The proposed development is consistent with the development as described in the



TABLE 15: STATUTORY CONTEXT REVIEW

Document	Response / Location of Assessment
<i>development as was described in the request for SEARs (including any components that were not SSD) and provide a justification for any differences.</i>	SEARs, being a data centre development involving three five-storey buildings. As the development has progressed, there has been minor amendments in the design, resulting in small changes to data capacity, GFA, and carparking numbers. There are no components associated with the proposal that are not SSD.
<i>Address the requirements of any approvals applying to the site, including any concept approval or recommendation from any Gateway determination.</i>	Refer to Section 2.3 of this EIS for the subject site's development history. There are no concept approvals or gateway determinations applicable to the subject site.

6.1.2 Estimated Development Cost and Employment

Details of EDC and employment numbers associated with the proposal have been calculated. Reference should be made to **Section 1.5** and **Section 1.6** of this EIS.

6.1.3 Design Quality

6.1.3.1 Assessment of Impacts

The proposed development achieves good design in accordance with the seven (7) objectives for good design in *Better Placed*, as addressed below and documented in Greenbox Architecture's Design Report, attached as **Appendix 5**. This is summarised below.

1. Better Fit

The proposed development is strategically situated within an industrial zone and away from residential areas. The proposed design promises to inject environmental vibrancy and social interest within the Glendenning area and surrounding built environment.

The buildings have been thoughtfully designed to engage with the street and other surrounding areas, featuring quality landscaping along the street frontages. This includes large building setbacks, and landscape buffers. The proposed generators are fully enclosed with louvres to minimise visual impact and aid in the reduction of noise pollution.

2. Better Performance

The building lifecycle analysis and functionality responds back to the built environment through a series of implemented objectives, as described below:

- Thoughtful layout: Designed to maximise environmental impacts and integrate with the natural landscape.
- Resilient design: Constructed with high-quality reputable materials to ensure longevity and reduce the need for constant maintenance.
- Waste reduction: Ensure waste is minimised during construction and operational phases by raising awareness on recycling and the benefits of efficient waste management.
- Energy efficiency: Incorporate the latest technology to reduce harmful gas emissions and pollution by utilising renewable energy resources like PV panels and green aluminium louvres and concrete.



- Low embodied carbon: Uses materials and methods that lower the carbon footprint, focusing on low embodied energy.
- Pre-finished elements: Utilises prefabricated parts to streamline construction and reduce on-site waste and emissions.
- Enhanced green areas: Introduce greenery and enhance flora and fauna biodiversity whilst maintaining connection with Nurraging Reserve and its surrounding natural landscape.

3. Better for Community

The suburb of Glendenning is well-connected with significant infrastructure like the M7 Motorway. This connectivity is crucial for data centres that require robust telecommunications.

The proposed development would provide employment opportunities for the local community during construction and operational phases. This will create a chain reaction by supporting the surrounding neighbours and creating a notion of a connected society.

4. Better for People

The proposed development is designed to prioritise safety, comfort and collaboration. The buildings are tactically positioned to improve pedestrian and vehicular access in and out of the site, whilst ensuring access for people with disabilities.

The administrative component is strategically positioned away from the main street to ensure privacy for those working within the facility. Car parking and bicycle parking are also situated next to all admin and front of house entry points. Heavy vehicles have clear paths to discreet loading docks, keeping them safely away from building users and visitors.

5. Better Working

The proposed design is tailored to incorporate administration, office space, data hall storage, and plant and equipment services within a first-class data centre facility. The new buildings would seamlessly connect the landscape spaces and advanced service infrastructure, creating a flexible and efficient facility designed to assist future growth within the community. This approach ensures the building remains robust, economically viable and well-utilised over time.

6. Better Value

The building would offer long-term value to the community by providing resilient infrastructure. It supports the latest digital economy and the foreseeable future providing digital, economic and social benefits to businesses.

7. Better Look and Feel

The building façade features a mix of grey and green painted concrete, creating a dynamic and articulated appearance along Glendenning Road. The louvre treatment to the generators and external façade would achieve a seamless aesthetic, adding an element of attraction and interest to the visuals without changing colours.

6.1.4 Built Form and Urban Design

6.1.4.1 Existing Environment

The subject site is adjoined by existing industrial development and is currently occupied by several warehouse buildings, structures and hardstand. Analysis of the subject site is provided in **PART 2** of this EIS.



6.1.4.2 Assessment of Impacts

Architectural Drawings and an Architectural Design Report have been prepared by Greenbox Architecture and are attached as **Appendix 4** and **Appendix 5** respectively.

The proposed development is divided into three buildings (DC01, DC02, and DC03). DC02 and DC03 have frontage to Glendenning Road, whilst DC01 is positioned at the rear of the subject site, adjacent to the Nurragingy Reserve. The buildings are each five stories, and include a maximum building height of 45.3m from existing ground level, including the mechanical roof plant and lift overruns. The predominant roofline of the buildings from FFL is 38.7m.

The BLEP 2015 does not provide a maximum building height control or maximum FSR for the subject site. Therefore, the bulk and scale of the proposed development has been considered in relation to the context of the surroundings, as well as the need to provide sufficient IT capacity. The subject site is located within an established industrial area, with nearby residential areas over 400m away, making it a suitable location for such development.

Although the development is larger in scale to existing developments, the proposal includes significant setbacks to mitigate the scale at a local level. This comprises the following:

- Glendenning Road (west): 44m – 51.5m
- Woodstock Avenue (south): 103m – 125m
- Nurragingy Reserve (east): 40m – 58.5m
- Drainage Reserve (north): 13m – 27m

To further mitigate the bulk and scale, the proposal includes a landscaped setback along Glendenning Road with a width of 15m – 20m. At Woodstock Avenue, the area of the demolished building would be revegetated with tree, shrub, herb and groundcover species. As this frontage is the gateway to the Western Parklands, it will assist in softening the building and providing a connection to the tree canopy of the Nurragingy Reserve.

It is acknowledged that the buildings will introduce a new visual element to the landscape when viewed from surrounding areas. The architectural design incorporates a thoughtfully chosen colour palette and materials that harmonise with the surrounding environment. Different panels have been included to provide interest on the façade, including patterns that draw inspiration from the Nurragingy Reserve. The generators have also been suitably screened through the use of louvres.

Building Code of Australia

A BCA Compliance Report has been prepared by MBC Group for the proposal and is attached as **Appendix 7**. The report provides an assessment of the Architectural Drawings against the Deemed-to-Satisfy provisions of the *Building Code of Australia 2022* (BCA).

The report identifies that the proposed development can readily achieve compliance with the BCA, subject to resolution of the matters identified in the report. This can be achieved by way of fire engineered performance solutions or plan amendments prior to the Construction Certificate stage.

Accessibility

An Accessibility Report has been prepared by MBC Group for the proposal and is attached as **Appendix 8**. The report provides an assessment of the Architectural Drawings against the Deemed-to-Satisfy provisions of the BCA, and the *Australian Standards for Access and Mobility*.



The report identifies that the proposed development is capable of complying with the relevant accessibility requirements, subject to detailed design. This can be achieved prior to the Construction Certificate stage.

6.1.5 Visual Impact

Geoscapes has prepared a Visual Impact Assessment (VIA) for the proposed development, which is included as **Appendix 9** of this EIS.

6.1.5.1 Existing Environment

The subject site is zoned E4 General Industrial under the BLEP 2015. Developments immediately adjacent to the west, north and south have the same zoning. Immediately to the east, land is unzoned and forms part of the Nurragingy Reserve.

Low density residential areas are present to the west within Plumpton and Rooty Hill and these generally rise in elevation further west. The M7 Motorway divides these areas from the Glendenning Industrial area. Further east is the residential area of Doonside, and there is a small rise in elevation towards this area. Knox Road, Nurragingy Reserve and dense bushland separates Doonside from Glendenning.

6.1.5.2 Assessment of Impacts

Geoscapes has provided a VIA of the proposed development from 20 viewpoints surrounding the subject site, as outlined below and in **Figure 35**.

- **VP1:** Wolseley Street, Rooty Hill
- **VP2:** Woodstock Avenue, Rooty Hill
- **VP3:** Beverley Place, Plumpton
- **VP4:** Cheryl Place, Plumpton
- **VP5:** Waring Crescent, Plumpton
- **VP6:** Dexter Place, Plumpton
- **VP7:** Glendenning Road south, Glendenning
- **VP8:** Public footpath north, Nurragingy Reserve
- **VP9:** Public footpath south, Nurragingy Reserve
- **VP10:** Woodstock Avenue, Glendenning
- **VP11:** M7 Motorway, Glendenning
- **VP12:** Public Cycleway, Glendenning
- **VP13:** Jannawi Garden, Nurragingy Reserve
- **VP14:** Entrance to Colebee, Nurragingy Reserve
- **VP15:** Lakeside viewing point, Nurragingy Reserve
- **VP16:** Rooty Hill Historic site, Rooty Hill
- **VP17:** Eastern Road and Garmarada Avenue, Doonside
- **VP18:** Earle Street, Doonside
- **VP19:** Cameron Street, Doonside
- **VP20:** St Peters and Paul Church, Doonside

The viewpoints were selected following consultation with Blacktown City Council and analysis of drone photography. Key areas of concern raised by Council included residential areas in Doonside and Rooty Hill, the Colebee centre and the Rooty Hill Heritage Item.



ENVIRONMENTAL IMPACT STATEMENT

Glendenning Road Data Centre

2 Glendenning Road, Glendenning (Lot 2 DP1137162)

SSD-73761707

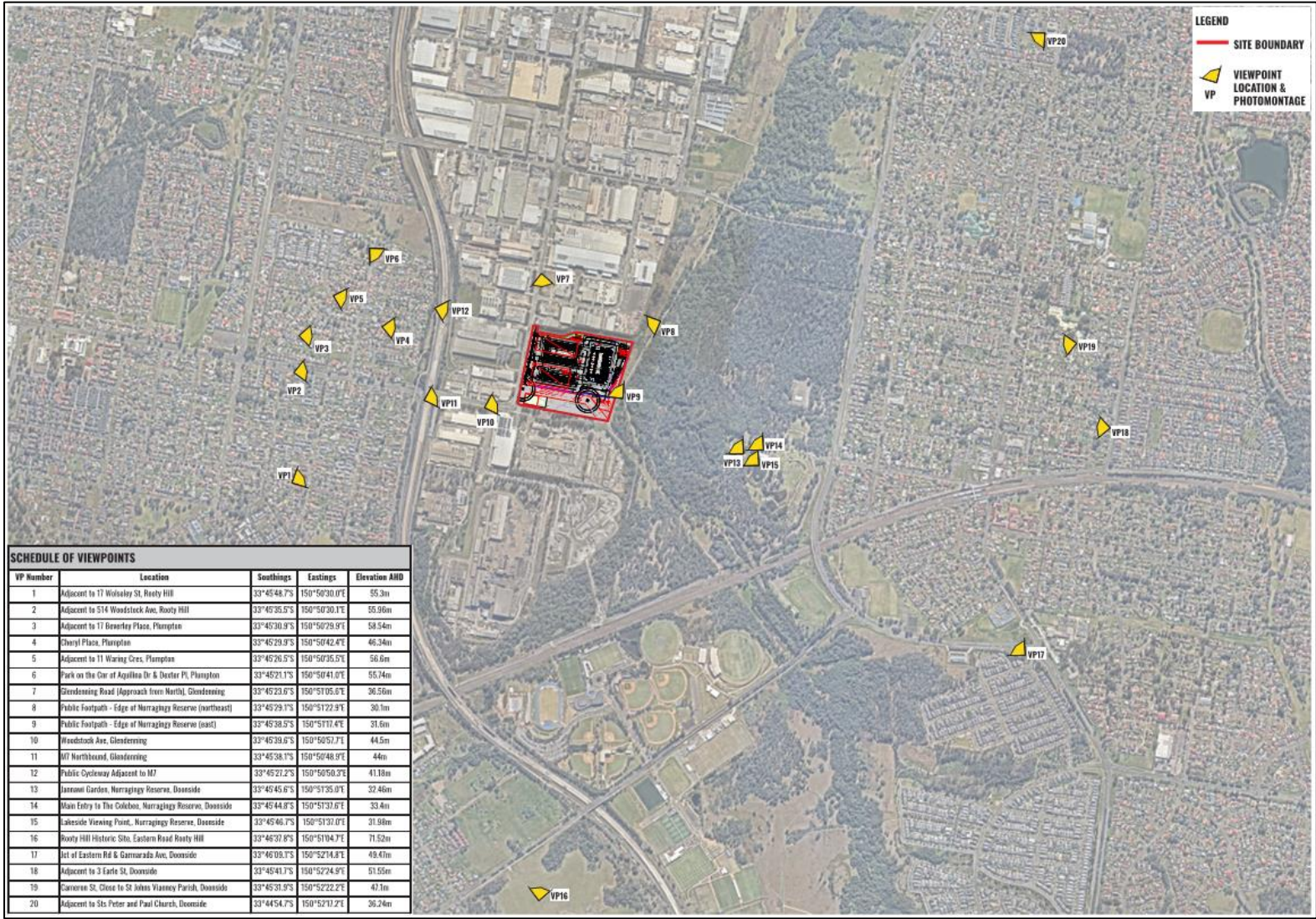


Figure 35. Visual Impact Assessment Viewpoint Locations (Source: Geoscapes, 2024)

A summary of the analysis is provided below:

Local context: Industrial (VP7, VP10, VP11, VP12)

The surrounding context is characterised by large and small-scale industrial development. Numbers of pedestrians are likely to be low and more limited to workers of adjacent commercial and industrial units. Views of the surrounding landscape are unlikely to be of importance to these types of receptors. Therefore, receptor sensitivity is judged to be low - very low. Motorists travelling along the M7 Motorway would be travelling at 100km per hour and experience the view for a short time. Those using the public cycleway would have limited visibility due to the presence of vegetation and the M7 Motorway.

The proposal will form a new element above development seen in the foreground and would be recognised by the receptor. Although much larger than surrounding developments, the data centre buildings do not appear out of context. The views experienced from the M7 Motorway and the public cycleway would also be transient, therefore reducing the significance of the visual impact.

TABLE 16 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.

TABLE 16: VISUAL IMPACT ASSESSMENT INDUSTRIAL CONTEXT			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP7: Glendenning Road north	Very low	High	Minor
VP10: Woodstock Avenue	Very low	Medium	Minor negligible
VP11: M7 Northbound	Very low	Medium	Minor negligible
VP12: Public cycleway adjacent to M7	Low	Low	Minor negligible

The magnitude of change for each viewpoint is shown in **Figure 36 – Figure 39** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years.



Figure 36. Magnitude of Change for Viewpoint 7 (Source: Geoscapes, 2024)



Figure 37. Magnitude of Change for Viewpoint 10 (Source: Geoscapes, 2024)



Figure 38. Magnitude of Change for Viewpoint 11 (Source: Geoscapes, 2024)



Figure 39. Magnitude of Change for Viewpoint 12 (Source: Geoscapes, 2024)

Local context: Nurragingy Reserve (VP8, VP9, VP13, VP14, VP15)

A public pathway exists directly adjacent to the subject site, within the Nurragingy Reserve. Views from this pathway would be transitional and experienced for a limited time only. Though not visible within the photographs, other points along the pathway experience views of industrial land use (including large cranes). Views are contained to the foreground and there are landscape detractors in the form of electricity transmission infrastructure. Therefore, receptor sensitivity on the pathway has been judged to be medium.

The proposed development will be clearly noticeable and would cause a substantial change to the baseline. Views are direct and very close range with changes over a horizontal and vertical extent. It is judged that the magnitude of change is high to very high.

Viewpoints have also been captured adjacent to the Colebee Centre. As this location is used as a wedding venue, views of the surrounding landscape are of high importance. Gardens and bushland surround the view and are used for photographic backdrops. Nurragingy Reserve and the Colebee Centre are advertised as scenic wedding venues. Therefore, the sensitivity has been judged to be very high. As demonstrated within **Figure 42 - Figure 44**, at this location the proposed development would be hidden behind existing bushland and would not be visible.

TABLE 17 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.

TABLE 17: VISUAL IMPACT ASSESSMENT NURRAGINGY RESERVE			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP8: Public footpath north	Medium	High	Moderate
VP9: Public footpath south	Medium	Very High	High / Moderate
VP13: Jannawi Garden	Very high	No change	No impact
VP14: Main entrance to The Colebee	Very high	No change	No impact
VP15: Lakeside viewing point	Very high	No change	No impact

The magnitude of change for each viewpoint is shown in **Figure 40 - Figure 41** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years. **Figure 42 - Figure 44** show viewpoints from within the reserve, where the development cannot be seen due to existing vegetation. An outline of the proposed development has been shown within the images.



Figure 40. Magnitude of Change for Viewpoint 8 (Source: Geoscapes, 2024)

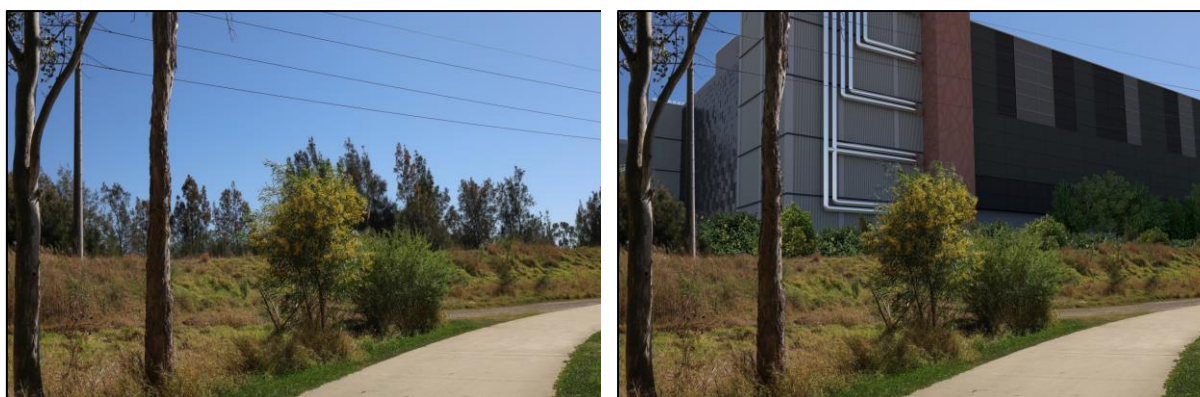


Figure 41. Magnitude of Change for Viewpoint 9 (Source: Geoscapes, 2024)



Figure 42. Magnitude of Change for Viewpoint 13 (Source: Geoscapes, 2024)



Figure 43. Magnitude of Change for Viewpoint 14 (Source: Geoscapes, 2024)



Figure 44. Magnitude of Change for Viewpoint 15 (Source: Geoscapes, 2024)

Residential context: Doonside (VP17, VP18, VP19, VP20)

Viewpoints around Doonside are from residential receptors, as well as the rear of a church. Existing views are restricted by existing housing and vegetation and are over 1km from the subject site.

In some locations, the proposed development would form a new and recognisable element within the view which will be visible above the Nurragingy Reserve tree line and is likely to be recognised by the receptor. Views are at longer range with a small horizontal and vertical extent of the view affected. In other locations, the proposed development would form a barely noticeable component of the view.

TABLE 18 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.

TABLE 18: VISUAL IMPACT ASSESSMENT DOONSIDE

Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP17: Eastern Road and Garmarada Avenue	Low	Low	Minor negligible
VP18: Earle Street	Medium	Low	Minor
VP19: Cameron Street	Medium	Low	Minor
VP20: St Peters and Paul Church	Low	Very low	Negligible

The magnitude of change for each viewpoint is shown in **Figure 45 – Figure 48** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years.

**Figure 45. Magnitude of Change for Viewpoint 17 (Source: Geoscapes, 2024)****Figure 46. Magnitude of Change for Viewpoint 18 (Source: Geoscapes, 2024)****Figure 47. Magnitude of Change for Viewpoint 19 (Source: Geoscapes, 2024)**



Figure 48. Magnitude of Change for Viewpoint 20 (Source: Geoscapes, 2024)

Residential context: Rooty Hill (VP1 and VP2)

Existing industrial development to the northeast and east is generally not visible due to the presence of other residential dwellings and vegetation. These views are fairly typical of what would be seen from residential streets at this elevation with views contained to the foreground.

The proposal will form a new and recognisable element to the left of the view which would be recognised by the receptor. Views are oblique and at medium range with a moderate horizontal and vertical extent of the view affected. The proposed data centre building would be partially hidden by existing vegetation.

TABLE 19 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.

TABLE 19: VISUAL IMPACT ASSESSMENT ROOTY HILL			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP1: Wolseley Street	Medium	Medium	Moderate / minor
VP2: Woodstock Avenue	Medium	Medium	Moderate / minor

The magnitude of change for each viewpoint is shown in **Figure 49** – **Figure 50** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years.



Figure 49. Magnitude of Change for Viewpoint 1 (Source: Geoscapes, 2024)



Figure 50. Magnitude of Change for Viewpoint 2 (Source: Geoscapes, 2024)

Residential context: Plumpton (VP3, VP4, VP5 and VP6)

Due to the elevation of these viewpoints, distant views are possible over bushland to Nurraging Reserve. These views over the landscape are likely given some importance for local residents. Some existing industrial development can be seen in the distance. Viewpoints VP3 and VP4 are partially obscured by existing vegetation in the foreground.

The proposed development would become focal to the centre of the view and there would be a significant change to the baseline. Views are elevated at medium range with changes over a wide horizontal and vertical extent.

TABLE 20 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.

TABLE 20: VISUAL IMPACT ASSESSMENT PLUMPTON			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP3: Beverley Place	High	High	High / moderate
VP4: Cheryl Place	Medium	High	Moderate
VP5: Waring Crescent	High	High	High / moderate
VP6: Dexter Place	Medium	High	Moderate

The magnitude of change for each viewpoint is shown in **Figure 51** – **Figure 54** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years.



Figure 51. Magnitude of Change for Viewpoint 3 (Source: Geoscapes, 2024)



Figure 52. Magnitude of Change for Viewpoint 4 (Source: Geoscapes, 2024)



Figure 53. Magnitude of Change for Viewpoint 5 (Source: Geoscapes, 2024)



Figure 54. Magnitude of Change for Viewpoint 6 (Source: Geoscapes, 2024)

Surrounding context: Rooty Hill (VP16)

Rooty Hill Historic site experiences expansive views of the surrounding landscape due to the elevation. However, other industrial development is noticeable when looking towards the development area. The most prominent of which is the InfraBuild Steel works on Kellogg Road. Views looking towards the Blue Mountains are likely to be given higher importance from this location.

The proposed development will form a new element within the view that would be recognised by the receptor. However, at this particular view corridor it is seen in conjunction with other industrial development and the lower half is partially hidden by existing tree canopy. It would also not be visible at the very crest of the hill due to the presence of existing vegetation in the north.

TABLE 21 provides an assessment of the visual impacts from each viewpoint surrounding the subject site.



TABLE 21: VISUAL IMPACT ASSESSMENT ROOTY HILL			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP16: Rooty Hill Historic site	Medium	Medium	Moderate / minor

The magnitude of change for each viewpoint is shown in **Figure 55** below. Images on the left are pre-development scenarios and images on the right are post-development scenarios which incorporate landscaping after 15 years.



Figure 55. Magnitude of Change for Viewpoint 16 (Source: Geoscapes, 2024)

6.1.5.3 Management and/or Mitigation Measures

The design team have considered finishes on the building facades to help reduce visual impacts of the proposed development as much as possible. The proposed building adopts darker colours which are naturally more recessive, material finishes which create interest through texture and reflecting light, and horizontal highlights to the ends of slab floors. All have been included to articulate building facades and reduce the appearance of bulk and scale.

6.1.6 Traffic, Transport and Accessibility

Positive Traffic has prepared a Traffic and Accessibility Impact Assessment (TAIA), including a Green Travel Plan (GTP) which is included as **Appendix 10**. A preliminary Construction Traffic Management Plan (CTMP) has also been prepared and included as **Appendix 11**.

6.1.6.1 Existing Environment

The subject site is bound by Glendenning Road to the west and Woodstock Avenue to the south. Glendenning Road is a key local road which provides direct access to properties within the Glendenning Industrial Precinct. It also provides a direct link to the M7 Motorway, a key arterial road corridor. Woodstock Avenue is a local east-west collector road, linking Glendenning Road / Nurragingy Reserve in the east with Rooty Hill Road and Carlisle Avenue in the west. The street also includes southbound on and off ramps with the M7 Motorway.

The existing site has three separate industrial landholdings, with approximately 21,050m² of existing GFA. An estimate of existing traffic generation for the subject site is 110 peak hour trips in the AM and 118 peak hour trips in the PM.

There are currently four existing vehicle crossings from Glendenning Road and one existing vehicle crossing from Woodstock Avenue.



6.1.6.2 Assessment of Impacts

Operational Access

The following vehicle crossings are proposed for the subject site:

- One vehicle crossing off Glendenning Road (central location): This will be the main entrance and exit for the proposed development and includes controlled security via a sally port. This access allows for the largest potential vehicle to access the subject site (a 19m semi-trailer) to wait wholly within the development site.
- One vehicle crossing off Glendenning Road (north): This is an existing vehicle that crossing will be used for the construction of DC03 and will be used as an emergency vehicle access route once the development has been completed.
- One vehicle crossing off Glendenning Road (south): This is an existing vehicle crossing that will be retained for Endeavour Energy to access their existing infrastructure. Access will not be available to the proposed development from this vehicle crossing.

As a result, there will be three vehicle crossings off Glendenning Road. The existing vehicle crossing on Woodstock Avenue will be utilised during construction phases and will be decommissioned once the full development has been completed. All proposed access arrangements comply with the requirements of AS2890.2 and are considered satisfactory.

Operational Parking

In accordance with the BDCP 2015, the required parking rates for industrial development is as follows:

- 1 space per 75m² of GFA; plus
- 1 space per 40m² of office GFA.

Applying the BDCP 2015 requirements to the proposed development would result in the following parking provision.

TABLE 22: BDCP 2015 PARKING REQUIREMENTS						
Building	Office GFA (m ²)	Parking rate	Number of Parks Required	Industrial GFA (m ²)	Number of Parks Required	Number of Parks Required
DC01	1,268	1/40m ²	32	18,717	1/75m ²	250
DC02	1,263	1/40m ²	32	9,000	1/75m ²	120
DC03	1,268	1/40m ²	32	18,717	1/75m ²	250
TOTAL						716

Based on the BDCP 2015 requirements, a total of 716 car parks would be required. With a peak staff demand of only 106 persons, the BDCP 2015 rate would result in 6.75 spaces per staff member. Given the proposed strategies to establish targets to minimise travel by private vehicles, as set out in the GTP, the BDCP 2015 parking provision would not be appropriate.

The nature of the development is such that whilst it includes large areas of floor space, it is managed by proportionally low numbers of staff. Thus, both published policy and guides do not account for this type of development and consideration of potential staff demands offers the best method to assess potential parking needs. 165 car parks are proposed on the subject site, which would adequately provide for the 106 staff members and any visitors. Parking is proposed directly adjacent to each building, meaning parking would be available for each stage. The design of all parking areas complies with the requirements of the Australian Standard for Off Street Car Parking Facilities AS2890.1.



The BDCP 2015 does not specify parking rates for bicycles. The *Blacktown Council Parking Management Plan 2015* states that bicycle parking should be provided in accordance with *Austrroads Guide to Traffic Management Part 11: Parking*, particularly Table C2.7 Bicycle Parking Provision Rates. This states that industrial developments should allocate a 10% mode share target provision for bicycles. Having regard to the peak staff demand of 106 persons, provision of 11 bicycle parking spaces is required. The proposed development includes 11 spaces and is therefore compliant.

Operational Traffic Generation

An estimate of traffic generation has been undertaken based on the proposed GFA of all buildings, in accordance with the *TfNSW Guide to Transport Impact Assessment*. With a proposed GFA of 50,233m², the potential peak hour traffic generation would be:

- 140 peak hour trips in the AM peak; and
- 124 peak hour trips in the PM peak.

Taking into consideration the existing industrial development at the subject site, the net increase in traffic generation would be:

- 83 peak hour trips in the AM peak; and
- 75 peak hour trips in the PM peak.

However, the nature of a data centre development is such that it includes large areas of computer network equipment served by a comparatively small number of staff. The daily operational staff demand is forecast to be 106 persons with some 15 visitors travelling to/from the subject site during business hours daily. Noting the existing mode share to private vehicle for Glendenning 95% mode share to private vehicle driver/passenger would result in some 101 vehicle trips in the AM and PM hours. This compares to the average gross site traffic generation forecast for a warehouse use of the GFA proposed of 140 and 124 peak hour trips respectively. The existing staff demands of the subject site are not known and thus application of the average traffic generation rates for a warehouse type use provides the only available method to calculate the existing traffic generation of the subject site to in turn ascertain the net impact on the road network of the proposal. With less than 50% of the gross floor area currently present on-site compared to that which is proposed, the existing site would be expected to have proportionally less staff on-site. Thus, for the purpose of modelling, adopting the net site traffic generation increases of 83 AM peak trips and 75 PM peak trips represents an appropriate conservative measure of the potential increase in site traffic generation on the surrounding road network and has been adopted.

The future traffic flows on the surrounding road network have been assessed using SIDRA modelling. SIDRA modelling determines the average delay that vehicles encounter, the degree of saturation of the intersection and the Level of Service (LOS) of the intersection. The LOS criteria is as follows (for signalised intersections and roundabouts):

- **A:** Good operation;
- **B:** Good with acceptable delays and spare capacity;
- **C:** Satisfactory;
- **D:** Operating near capacity;
- **E:** At capacity. At signals, incidents will cause excessive delays. Roundabouts will require other controls; and
- **F:** Extra capacity required.

The resulting future intersection operation is presented in **TABLE 23** below.



TABLE 23: FUTURE INTERSECTION MODELLING CONDITIONS

Intersection	Control	Weekday AM Peak		Weekday PM Peak	
		Average Delay	LOS	Average Delay	LOS
Glendenning Road / Power Street	Roundabout	26.5	B	36.5	C
Glendenning Road / Woodstock Avenue	Signalised Roundabout	13.7	A	13.7	A

From **TABLE 23** it is assessed that intersections in proximity to the subject site would continue to operate at a satisfactory level of service, following the full development. It is reiterated again that this is a highly conservative estimate, as the traffic demand based on actual staffing numbers would be much less.

Construction Traffic

A preliminary CTMP has been prepared by Positive Traffic and is included as **Appendix 11**. This is intended to be preliminary only and would be developed once a contractor has been commissioned for the construction stages.

The proposed development involves construction in three stages. During each stage, construction worker population would range from 50 – 185 persons. At peak times where large concrete pours are arranged for a particular day, worker population is anticipated to increase to a total of 450 persons. The net traffic generation of construction activities would be 290 – 298 trips at the peak.

SIDRA modelling has been undertaken for the construction period and the results are demonstrated in **TABLE 24**. It is acknowledged that on most days, construction traffic would be low, however the peak of 450 persons has been modelled. This is therefore highly conservative.

TABLE 24: CONSTRUCTION INTERSECTION MODELLING CONDITIONS

Intersection	Control	Weekday AM Peak		Weekday PM Peak	
		Average Delay	LOS	Average Delay	LOS
Glendenning Road / Power Street	Roundabout	23.5	b	54.7	D
Glendenning Road / Woodstock Avenue	Signalised Roundabout	13.6	A	11.7	A

From **TABLE 24** it is assessed that during the highly conservative construction scenario, intersections in proximity to the subject site would continue to operate at a satisfactory level of service. Thus, the traffic impacts of the peak construction activity would be considered satisfactory and would not result in detrimental traffic conditions during such times.

The construction works within the subject site would rely on the existing vehicle crossings in Glendenning Road which currently service the existing industrial development. The subject site benefits from its location within a large industrial precinct, close to the M7 Motorway where the majority of construction traffic is expected to travel to and from. Management measures for construction activities are outlined in the CTMP and shall be developed once a contractor has been appointed.



Green Travel Plan

A GTP has been prepared by Positive Traffic and is included as part of the TAIA in **Appendix 10**. The GTP aims to address travel demand and outlines potential sustainable travel initiatives for the proposed development. The key element of the GTP is reducing reliance on private vehicles and maximising the use of public transport and other sustainable modes of transport. The GTP would contribute to a healthier and higher quality of life for building tenants, staff and visitors whilst reducing air and noise pollution.

6.1.7 Trees and Landscaping

An Arboricultural Impact Assessment has been prepared by Capability Green Consulting and is attached as **Appendix 13**. A summary is provided in the following sections.

6.1.7.1 Existing Environment

A total of 600 trees were assessed on the subject site and neighbouring boundaries. Where trees occur within the eastern half of the site as regenerative or coppice growth from previous clearing, they have been included as a single tree or stand of trees of the same species, often tightly bunched together.

6.1.7.2 Assessment of Impacts

A total of 247 trees and partial removal of three stands of trees are proposed to be removed due to project impacts. This comprises:

- 13 high retention value trees and partial removal of 2 stands of trees;
- 164 medium retention value trees (including six street trees along Glendenning Road); and
- 70 low retention value trees and partial removal of one stand of trees.

As discussed in **Section 3.16**, avoidance of impacts to native vegetation was a key consideration in the design process. The following trees are proposed to be retained and protected:

- 196 high retention value trees and partial retention of 2 stands of trees;
- 101 medium retention value trees; and
- 56 low retention value trees.

Overall, approximately 60% of existing trees on the subject site will be retained, including a large majority of the high value trees. To offset the impacts arising from the tree loss, a site-wide Landscape Plan has been prepared. The resulting landscape characteristics of the proposed development include:

- A landscaped area of 20,300m², representing 19.43% site coverage;
- A total of 317 new trees to be planted; and
- A total tree canopy cover of 10,460.3m², representing 10% site coverage.

Once the trees have reached maturity, the proposal would increase canopy coverage from the existing scenario and would provide green connections to the Nurragingy Reserve.



6.1.7.3 Management and/or Mitigation Measures

Offset Planting

The proposed demolition of the southern building and replacement with soft landscaping as part of the proposed works is expected to accommodate approximately 100 replacement trees of species that will support the adjacent Cumberland Plain Woodland Endangered Ecological Community (EEC). The replacement planting of trees, shrubs and groundcovers will promote greater diversity and create a stratum of layered vegetation similar to what would naturally occur.

The proposed consolidation of the majority of replacement planting in this area is beneficial in enhancing the presence of Cumberland Plain Woodland EEC, creating opportunities for habitat, suppressing the potential for weed infestation, creating an east to west vegetation link from Eastern Creek to existing stands of trees on Glendenning Road, contributing to a reduction in the local and broader urban heat island effect and providing screening to the built form from the southern vantage.

Furthermore, consolidated planting areas are more easily maintained and irrigated, and plants installed are far more likely to succeed in longevity when exposed to the elements compared to stand alone specimen plantings. The existing transmission easement provides a physical buffer to the proposed built form from the proposed consolidated area of replacement planting. Therefore, vegetation planted is unlikely to become a nuisance or future landscape maintenance issue.

Tree Protection

Tree protection measures are required to protect existing trees to be retained on the subject site during construction works. The AIA includes a Tree Protection Plan which must be adopted during construction works.

6.1.8 Ecologically Sustainable Development (ESD)

6.1.8.1 Assessment of Impacts

The principles of ESD as outlined in Clause 193 of the EP&A Regulation have been carefully considered in **Section 7.1.5** of this EIS.

The proposed development aims to implement sustainable design and construction practices. It would support organisational commitment to design, construct, and operate ultra-low carbon (and/or net zero carbon) buildings. The Proponent's net zero commitment will enable consumers and businesses to procure cloud services from a company which is on a net zero carbon trajectory. The Proponent provides its customers with transparent data on the carbon emissions associated with their cloud services usage and provides educational material on how to use those services in a more carbon efficient way. They have made a commitment to 100% renewable energy for all operations by 2025, meaning that all electricity would be purchased through Power Purchase Agreements for renewable energy.

The proposed development is designed with a myriad of ESD initiatives that minimise its consumption of resources, especially energy and water. These are summarised below.

Energy Use

Passive Cooling and Heating Design

- **Continuous roof and external wall insulation:** The development would maximise the use of continuous insulation wherever appropriate, which avoids the reduction of the thermal performance of the insulation from thermal bridging.



- **Optimised window to wall ratio:** Solar heat gain leads to overheating of the building, particularly for office areas. The glazing would be optimised in order to reduce the amount of sunlight penetrating into the building, which reduces the need for cooling energy and also the size of equipment to cool the building spaces.
- **High-performance glazing systems:** The building will consider the use of high-performance glazing systems which will reduce energy consumption.

Mechanical Services

- **Temperature control:** Mechanical systems are used to cool and heat the air in a building and generally constitute a large proportion of the building's energy consumption. While passive design elements in the building envelope reduce the cooling and heating required, it doesn't completely remove all of the cooling and heating demand due to the presence of internal heat sources, such as equipment, lighting and people. The evaporative cooling system would only be switched on when ambient temperature is higher than 28.4°C. The cooling system will supply ambient air directly, without providing any form of cooling and hence not using water, when ambient temperature is less than 28.4°C.
- **Provision of high-efficiency cooling system:** The development is designed to operate at elevated operating temperatures of 35°C, which reduces cooling energy as the system needs to reduce temperatures of the treated air to a less extreme temperature.
- **Building management control system:** A Building Management Control System (BMCS) with automatic intelligent controls to control cooling equipment will be used. This allows plant efficiency to be optimised as cooling equipment are brought online only when required.
- **Building-level metering:** Building-level energy meters will enable ongoing tracking of energy consumption and identification of targeted energy management strategies to reduce consumption.

Electrical Services

- **Solar panels:** Design and specification of the solar photovoltaic (PV) system will be investigated throughout detailed design, and if feasible, the size of the PV system will be increased.
- **Energy-efficient IT equipment:** The proposed development would use IT equipment that is highly efficient compared to standard equipment used in the data centre industry. This allows less energy to be consumed for the provision of the same services. As energy consumption for IT equipment constitutes the most significant portion of energy consumption by the site, this would have a large impact on the energy consumption by the proposed development.
- **Lighting:** The proposed development would use robust, long-life LED lighting throughout the building. This would reduce the power demand and energy consumption. The long life of LEDs also reduces the need for replacement, which further reduces waste and its associated impact on the environment.
- **Generators:** The low voltage generator system is intended to provide back-up power to each electrical line up. The generators are a containerised design to suite project specific fire-fighting systems, seismic zone, noise levels, altitude, ventilation and water ingress requirements.

Water Use

- **Water efficient construction practices:** The proposed development would include identification of opportunities to reduce water consumption and potential uses for non-potable water. The water efficient construction practices would include monitoring and recording of all water utilised by construction equipment (mobile and fixed), and any project offices located on the project site (e.g. trailers), for the duration of construction. Water Sensitive Urban Design (WSUD) principles would be adopted to minimise stormwater runoff and control runoff pollution loads.



- **Rainwater capture and re-use:** The buildings would be served with a rainwater harvesting and re-use system. Rainwater from roofs can be harvested with the expected rainwater usage for industrial water top-up, toilet flushing and irrigation.
- **Low-irrigation demand plant selection:** Plants with low irrigation demand will be considered to reduce water consumption for irrigation. The potential for plants that require low irrigation will contribute strongly towards water usage reduction.
- **Strategic water metering:** Building-level and sub-metering would be provided to monitor and record the water consumption by the overall development, as well as irrigation systems, water fixtures and water use for the mechanical systems. The meters would be connected to the BMCS system to enable monitoring and recording of water use data and to facilitate troubleshooting and improve water use efficiency.

Waste Minimisation

Construction and demolition waste will be reduced by diverting waste from going to landfill. This is discussed further in **Section 6.1.18, Appendix 25** and **Appendix 26** of this EIS.

Greenhouse Gas Emissions and Embodied Carbon

- **End of trip facilities:** The proposed development would include facilities to allow for active transport (e.g. cycling, walking) to and from the subject site, including showers and bicycle racks.
- **EV charging:** Charging facilities for EV's have been included in parking bays, encouraging the use of EV's, and reducing local pollution. The EV installation shall encourage occupants to purchase and drive electric vehicles. The development would also use hybrid or fully electric vehicles for its fleet vehicles to reduce direct emissions by drivers. As the energy grid becomes greener and renewable energy is further adopted, the greenhouse gas emissions of electric vehicles will be reduced further.
- **Materials procurement:** The proposed development will investigate the feasibility of sourcing precast concrete with >25% lower embodied carbon. Durable materials, including reinforced and pre-stressed concrete, would be used for the primary structural frame and non-louvered facade in order to achieve a 50-year design life without replacement and with minimal maintenance.

6.1.9 Biodiversity

A BDAR has been prepared by Biosis and is provided in **Appendix 16** of this EIS.

6.1.9.1 Existing Environment

Extensive vegetation clearing has been undertaken at the subject site, which occurred in the early 2000s. As a result, native vegetation is limited, primarily consisting of scattered patches of regenerating canopy species and planted native vegetation in the eastern, undeveloped portion of the subject site. In areas of regrowth, there is a lack of midstory vegetation, and the ground layer is predominantly made up of exotic weeds and grasses. However, higher-quality remnant vegetation is present along the southern boundary of the subject site, which may provide a refuge for mobile fauna species. Along the drainage line neighbouring the northern boundary of the subject site, a vegetation corridor provides additional habitat connectivity. Vegetation within the subject site is sparsely connected to larger, intact patches to the east, including those associated with Eastern Creek and Nurragingy Reserve.

The Eastern Creek, a Strahler order 4 system, is located within the reserve and runs along the eastern boundary of the subject site. No waterways exist within the subject site.

One ephemeral wetland depression exists within the centre of the subject site, however, no areas within, adjacent or downstream of the subject site, are mapped as an important wetland.



There are no areas of outstanding biodiversity or biodiversity values mapped within the subject site. The subject site contains areas mapped as Swift Parrot Important Habitat.

Non-Native Vegetation

A total of 3.81 ha of the subject site is mapped as exotic vegetation, which had no native over-storey or mid-storey cover and met the definition of non-native vegetation.

Plant Community Types (PCTs)

The following PCTs were assessed as present within the subject site:

- PCT 3320 – *Cumberland Shale Plains Woodland*.
- PCT 3975 – *Southern Lower Floodplain Freshwater Wetland*.
- PCT 4032 – *Coastal Valleys Swamp Oak Riparian Forest*.

In addition to the above, planted native vegetation was recorded within the subject site. This includes vegetation that could not be reasonably assigned to a PCT but comprises of plants native to NSW.

Threatened Ecological Communities

Vegetation to be impacted within the subject site was found to represent two TECs listed under the BC Act and were not consistent with any TECs listed under the EPBC Act including *Cumberland Plain Woodland* and *Swamp Oak Floodplain Forest*.

One patch of PCT 3320 along the southern lot boundary, consisting of areas of low and moderate condition, was found to be consistent with *Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest*, however, this patch is not proposed to be impacted by the development.

Planted Native Vegetation

The planted native vegetation within the subject site has been assessed for habitat use by threatened species. The planted native vegetation is considered likely to be utilised as part of foraging movements by several threatened species, including the Large-eared Pied Bat, Little Bent-wing Bat and Large Bent-wing Bat. The planted native vegetation may also be utilised on occasion as part of foraging and dispersal movements by mobile ecosystem credit species listed in Section 4 of the BDAR. Actions to avoid and minimise impacts to the threatened species, as well as retained vegetation and general fauna within the subject site are detailed below.

6.1.9.2 Assessment of Impacts

Action to Avoid/Minimise Impacts

Avoidance of impacts to native vegetation was a key consideration in the design process, resulting in the avoidance of significant biodiversity values, including fully retaining the existing area of high biodiversity value and rehabilitating areas currently subject of development, along the southern boundary of the subject site. Key design features adopted to avoid native vegetation include:

- Effectively reducing the available land within the subject site for development and the capacity of the proposed development. By siting the data centre as proposed, approximately 2.2ha within the southern portion of the subject site is located outside of the development footprint, representing 21% of the total subject site area. As a result, 0.69 hectares of low and moderate condition listed Cumberland Plain Woodland, represents approximately 37% of the total native vegetation within the subject site. A total of 0.04ha of Swift Parrot Important Habitat within the subject site is also proposed to be cleared as a result of the project, representing 9% of the total 0.52ha of Important Habitat located within the subject site. The majority of this habitat exists within the southern portion of the subject site. This habitat will be retained and remains contiguous with further mapped important habitat for the species, located immediately south



of the subject site. This contiguous patch of vegetation to be retained within and adjacent to the development site comprises a total of 0.64ha of Swift Parrot important Habitat.

- A retaining wall, located at the southwest of the subject site, is incorporated into the design to enable the construction of the perimeter security fencing in a position that avoids impact to high-value trees. Security fencing positioning throughout the remainder of the subject site has also been reviewed to avoid impacts to existing native vegetation in appreciation of project objectives and site constraints, including electrical easements, infrastructure standards and services locations and standoff requirements.
- Drainage infrastructure, located to the northeast of the subject site, has been the subject of significant review and refinement to avoid impacts to identified Swift Parrot habitat. This has included optimising the position of culverts and the discharge point to reduce the required disturbance associated with construction and allow for the maximum retention of trees. This has enabled the maximum possible avoidance of native vegetation in the area in respect of the topography of the subject site and required storm water discharge location.
- Roadways traversing the north and east of DC01 have been reduced in width to minimise encroachment into native vegetation area.
- Water tanks and the underground tank have been located as to avoid interaction with native vegetation as far as possible.

Approximately 0.25 hectares of land within the south-western corner of subject site will also be revegetated following demolition of existing infrastructure, to allow for a 1:1 ratio replacement of all trees proposed to be removed from the subject site. The land is proposed to be landscaped utilising locally native species characteristic of PCTs identified within the subject site, including PCT 3320 and PCT 4023.

Direct Impacts

Direct impacts include vegetation clearing calculated from the area of boundaries, roads and easements for service infrastructure. Direct impacts arising from the project include:

- Removal of 0.06 ha of *Cumberland Plain Woodland in the Sydney Basin Bioregion*.
- Removal of 0.54 ha of *Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions*.
- Removal of 1.02 ha of native vegetation comprising:
 - 0.06 ha of Planted condition PCT 3320.
 - 0.19 ha of Low condition PCT 3975.
 - 0.54 ha of Low condition PCT 4023.
 - 0.22 ha of Planted Natives which could not be assigned a PCT.
- Removal of 3.41 ha of exotic vegetation.
- Removal of 0.04 ha of Swift Parrot foraging habitat (Important Area), associated with Low condition PCT 4023.
- Removal of eight Downy Wattle individuals, and 0.54 ha of potential Downy Wattle dispersal habitat associated with Low condition PCT 4023.
- Removal of potential foraging and breeding habitat for threatened flora and fauna species.

These impacts will be permanent and will occur from the outset of the development. Mitigation measures outlined in **Section 6.1.9.3** below above will help to minimise the potential impacts to biodiversity values that remain present within the subject site.

Indirect Impacts

Potential indirect impacts from the proposed development are outline in **TABLE 25** below.



TABLE 25: ASSESSMENT OF INDIRECT IMPACTS

Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
Inadvertent impacts on adjacent habitat or vegetation	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: - Up to 0.001 ha of planted condition PCT 3320. - Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.	Ongoing	Medium-term	Construction / Operation	Impacts to adjacent vegetation during construction and operational phase can be prevented or minimised through appropriate exclusion fencing, implementation of a Construction Environmental Management Plan (CEMP) detailing best practice environmental protection measures, and stormwater controls, and by ensuring any lighting is directed towards the developed area, rather than towards the adjacent retained habitats.
Reduced viability of adjacent habitat due to edge effects	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: - Up to 0.001 ha of planted condition PCT 3320. - Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.	Ongoing	Medium-term	Construction / Operation	Adjacent habitats are currently subject to a high degree of edge effects due to prior clearing and surrounding existing residential and industrial land use. Since vegetation within the subject site is highly fragmented, and little (1.02 ha) vegetation is to be removed from the subject site, an increase to edge effects is not expected to occur to the remnant vegetation surrounding the subject site as a result of the proposed development. This is primarily due to the already fragmented state of these small vegetation patches. The removal of vegetation from the development footprint will result in minimal new interfaces for the remaining vegetation patches from which edge effects may occur.



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Reduced viability of adjacent habitat due to noise, dust or light spill	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: - Up to 0.001 ha of planted condition PCT 3320. - Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.	Ongoing	Medium-term	Construction / Operation	It is predicted that the adjacent habitat will be impacted in a small way by noise, dust and light spill, during construction and operation of the future development of the subject site. However, this will be managed via best practices outlined in a CEMP. The subject site also already occurs as an industrial area, and light and noise pollution are most likely moderate. This will likely not substantially increase due to the proposed future development.
Transport of weeds and pathogens from the subject site to adjacent vegetation	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: - Up to 0.001 ha of planted condition PCT 3320. - Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.	Ongoing	Medium-term	Construction / Operation	Weeds occurring within the subject site are common with those occurring within adjacent vegetation to be retained. Increased transport of pathogens and weeds is unlikely to occur but will be managed by biosecurity measures outlined in the CEMP.
Increased risk of starvation, exposure and loss of shade or shelter	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: - Up to 0.001 ha of planted condition PCT 3320. - Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.	Ongoing	Medium-term	Construction / Operation	The habitat present in the subject site is considered marginal for most fauna species given the disturbed condition. The proposed development will not result in an increased risk of starvation, exposure and loss of shade or shelter to native species due to the small total area of vegetation being removed, and the sub-optimal proportion of the habitats available within the subject site, compared to the broader locality.



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Loss of breeding habitats	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	No specialist breeding habitat will be indirectly impacted by the proposed development. Retained vegetation in adjacent lots provides higher quality habitat and will not be reduced by the proposed works.
Trampling of threatened flora species	Downy Wattle	8 individuals	Infrequent - During construction	Short-term	Construction	One threatened flora species (Downy Wattle) was recorded within the subject site and will be directly impacted by the proposed works. Impacts to the species have been considered. Pre-work toolbox talks which educate staff on the ID characteristics of Downy Wattle can also be completed so that workers can identify any individuals that may be encountered on the subject site.
Inhibition of nitrogen fixation and increased soil salinity	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Any future excavations or soil disturbance resulting from the future development of the subject site would be largely restricted to the development footprint of the existing warehouses and concrete hardstand, or areas having undergone significant previous disturbance through historical vegetation clearance. As such, it is not considered likely that the future development of the subject site would result in substantial changes to the level of nitrogen fixation or soil salinity in the locality.
Fertiliser drift	PCT 3320 and PCT 4023	Up to 0.43 ha of indirect impacts to native vegetation, including: Up to 0.001 ha of planted condition PCT 3320.	Infrequent - during landscape setup	Short-term	Construction	Widespread fertiliser use is not expected as part of the proposed project except within initiation of proposed newly landscaped areas, and as such, works are not expected to significantly contribute to fertiliser drift into surrounding areas, as landscaped



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		- Up to 0.01 ha of low condition PCT 3320. - Up to 0.38 ha of low condition PCT 4023.				areas are designed to be low maintenance long-term. However, works associated with vegetation management should be undertaken in accordance with the proposed Landscaping Plan, as well as a site-specific Vegetation Management Plan (VMP) or Operations Environmental Management Plan (OEMP), including the use of fertilisers.
Rubbish Dumping	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The subject site is currently partially cleared and located within an industrial area, adjacent to a publicly accessible Reserve. This presents an opportunity for people to illegally dump rubbish. It is likely that the heightened security of the subject site following development, including double fencing with a secure zone between, as well as increased video surveillance, would lead to a decrease in the potential for illegal dumping. Standard environmental controls for the development would ensure potential impacts are minimised.
Wood collection	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The proposed development is unlikely to increase access to any retained vegetation, beyond current access capacity. Based on the industrial use of the subject site, future landholders are not expected to be likely to undertake wood collection within the retained vegetation to a level that it will have a detrimental effect. Unauthorised access and collection of wood is expected to be minimal due to the proposed high security measures employed within the subject site following development.



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Removal and disturbance of rocks including brush rock	Not applicable	Not applicable	Not applicable	Not applicable	Construction	Based on the field investigations undertaken for the proposed development, the subject site does not support natural bush rock, however, large sandstone boulders were observed in a pile adjacent to the northern boundary; likely left on-site following bush regeneration of the drainage line adjacent to the subject site. While these large boulders do not make for highly suitable fauna habitat, they should be managed via best practice mitigation measures outlined in a CEMP, including re-use where possible.
Increase in predators	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The subject site already occurs within an urbanised setting with pets, such as dogs and cats, being common. The proposed development would not "open up" large areas of habitat that may encourage predatory species to move into the area. There is potential for lighting during construction and operation of the proposed development to attract predators and/or prey; however, it is not expected that this would be substantial given the current and proposed land use.
Increase in pest animal populations	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The proposal occurs in an urbanised area with impacts including introduced domestic pets such as cats <i>Felis catus</i> currently occurring within the locality. Pest animals such as Rats <i>Rattus rattus</i> and European Rabbit <i>Oryctolagus cuniculus</i> are also widely spread within the Blacktown region and are likely to occur across the locality. The proposal will not result in an increase in available habitat for these species and is unlikely



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						to lead to an increase in pest animal populations. Suitable waste disposal implemented during and post construction will further reduce the resources available for pest species.
Changed fire regimes	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The proposal occurs in an existing industrial area, with industrial activities already undertaken within the subject site. As such, future land use is unlikely to see an increased risk of fire. The proposal includes the implementation of appropriate asset protection zones, as well as the construction of 15 water tanks, Fire Pump Room, and roadways of a minimum 6m width to allow for entry of emergency service vehicles into the subject site, if required. Given the fire mitigation systems proposed, fire regimes are unlikely to be changed as a result of the proposed development.
Disturbance to specialist breeding and foraging habitat, e.g. Beach nesting for shorebirds	Swift Parrot	0.15 ha of Swift Parrot Important Habitat within the subject site to be impacted, with 0.10 hectares of this to be indirectly impacted.	Ongoing	Long-term	Construction/ Potential to be long-term	Mapped Important Areas for Swift Parrot pertains to foraging habitat within the region. No breeding habitat for the species occurs within NSW. The proposal will impact a small amount (0.15ha) of mapped habitat within the subject site, with only 0.04ha of this being directly cleared under the proposed development. No other specialist breeding or foraging habitat is proposed to be impacted by the proposed development
Fragmentation of movement corridors	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	The major movement corridor within the locality occurs to the north, south and east of the subject site, connecting vegetation within the northern portion of the subject site to the vegetation within the Nurranginy Reserve immediately east of the subject site.



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						Movement corridors are somewhat limited in availability across the locality due to substantial development within the locality, which has the potential to disrupt the flow of genetic material. The proposed development would result in the removal of 1.02ha of low-quality native vegetation; however, much of this vegetation occurs in an already fragmented state. Impacts to native vegetation would not fragment any habitat corridors or create a barrier to dispersal of species across the landscape.
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Prescribed Impacts

Identification and assessment of prescribed biodiversity impacts are outlined and addressed in **TABLE 26** below.

TABLE 26: IDENTIFICATION OF INDIRECT IMPACTS			
Prescribed Impact	Description of Relevant Habitat Features	Threatened Species Likely to Utilise Habitat Features	Importance of Habitat Feature to Impacted Species
Karst, caves, crevices, cliffs, rocks and other geological features of significance	No karst, caves, crevices, or cliffs exist within the subject site. A pile of sandstone boulders exists within close proximity to the northern boundary of the subject site.	Threatened microbat species may utilise karst, caves, cliffs and rocks within the broader landscape, however, no threatened microbats which are reliant on these habitat features were recorded within the subject site during targeted surveys.	These features provide habitat for threatened microbats who utilise caves/karsts/crevices as roosting and breeding habitat. No such habitat was detected within the subject site during this assessment.
Occurrences of human-made structures and non-native vegetation	A total of three separate buildings (enclosed structures with four walls and a roof) are found in the development footprint. These will be demolished to allow for landscaping and the construction of three new data warehouses. Non-native vegetation, comprising mostly exotic grasslands, is the dominant vegetation type within the subject site.	Threatened microbat species may utilise man-made structures, however, no threatened microbats were recorded within the subject site during targeted surveys and active monitoring surveys. Non-native vegetation within the subject site is not considered to support any threatened species.	Human-made structures can provide potential for roosting habitat for threatened microbat species. No such habitat was detected during this assessment.
Corridors or other areas of connectivity linking habitat for threatened entities	The removal of 1.02ha of native vegetation is expected to have little impact on the connectivity of threatened species habitat. The subject site is highly fragmented and subject to previous disturbance associated with past and current land uses. The subject site is located adjacent to the following vegetated areas: ▪ Eastern Creek riparian corridor to the east. ▪ Remnant native vegetation to the east, spanning the	Green and Golden Bell Frog may utilise corridors along riparian areas as foraging and dispersal habitat. Cumberland Plain Land Snail, threatened birds, and Koala may also utilise vegetation, which is present within vegetation corridors. These species have not been detected within the subject site.	The vegetated areas create potential foraging habitat for ecosystem and candidate bird and bat species. However, the project is not likely to result in the isolation or fragmentation in habitat connectivity for any threatened or non-threatened fauna species.



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	majority of the Nurragingy Reserve. ▪ Regenerating vegetation corridor along the drainage line directly north of the development site. ▪ Remnant Cumberland Plain Woodland along the southern boundary of the development site, outside of the development footprint.		
Water bodies or any hydrological processes that sustain threatened entities	A wetland occurs within the subject site, which has developed in a land depression developed as a result of previous bulk earthworks within the subject site to accommodate prior construction activities.	Green and Golden Bell Frog and threatened wetland birds may utilise the wetland as foraging and dispersal habitat. As this wetland is ephemeral in nature, holding water only after substantial rain events and drying up in dry weather, it is unlikely that Green and Golden Bell Frog is utilising the wetland as breeding habitat given their Spring and Summer breeding period. These species have not been detected within the subject site.	This wetland may provide foraging and dispersal habitat for Green and Golden Bell Frog, or wetland birds. It is unlikely that this ephemeral wetland is significant for any population of these which exist within the locality, particularly due to the subject site's proximity to the perennial Eastern Creek, and its vegetated riparian corridor within Nurragingy Reserve directly east of the subject site.
Protected animals that may use the proposed wind farm development site as a flyway or migration route	There are no wind turbines involved in this project.	Not applicable.	Not applicable.
Where the proposed development may result in vehicle strike on threatened fauna or on animals that are part of a threatened ecological community	A large portion of the proposed internal roadways and carparks within the development footprint occur along existing driveways and carparks. Given the subject site is already largely cleared of vegetation and includes existing driveways and carparks to service the existing warehouses, it is unlikely that many species are utilising the subject site for dispersal. However, it is	Threatened amphibian or wetland bird species, microbats, and Koala, may traverse through the subject site on occasion, likely from the adjacent Nurragingy Reserve or Eastern Creek.	Wetland birds are generally alert when in open spaces and highly mobile, capable of moving out of the way of vehicles. Threatened microbats, amphibians, and Koala are at very low risk of vehicle strike at speeds less than 15km/hr.



	possible that such species as wetland birds, microbats, Koala or Green and Golden Bell Frog are entering the subject site, most likely from the high-quality habitat to the east of the subject site boundary, within Nurragingy Reserve and the Eastern Creek riparian corridor, and traversing through the site. However, the instance of this is likely to be quite low, and posted speed limits of 15km/hr across the subject site will ensure risk of vehicle strike is not increased.		
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Serious and Irreversible Impacts

Cumberland Plain Woodland CEEC proposed to be impacted by the proposed development, is considered a SAIL entity under Principles 1 and 4. Swift Parrot is also considered an SAIL entity under principle 1 and is proposed to be impacted by the project through the clearance of mapped Important Habitat for the species. As these two entities are considered to be at risk of a potential SAIL, detailed SAIL assessments for the entities are provided in Appendix 5 of the BDAR.

Offsets are required for vegetation zones 3320_Planted, 3975_Low, and 4023_Low, as all three have a vegetation integrity score greater than 20 and would result in a total credit requirement of 19. An offset is also required for the impacts of the proposals on the habitat of threatened species assessed for ecosystem credits and associated with a PCT in a vegetation zone with a vegetation integrity score of ≥ 17 . 12 credits are required for such as part of the proposed development.

6.1.9.3 Management and/or Mitigation Measures

Construction and operational management plans will all contain an adaptive management component. Adaptive management strategies will be receptive to any new and relevant data that may arise through ongoing assessment and monitoring and are key to the successful implementation of crucial objectives yet also allow flexibility to changing dynamics and ongoing feedback and results. This includes measures to monitor predicted and uncertain impacts which will trigger adaptive management actions and allow for effective and quick responses and relate to the following:

- Displacement of resident fauna including:
 - Landscape plantings are to consist of native species and canopy trees are to be replaced at a 1:1 ratio;
 - Any human-made structures to be removed are to be inspected prior;
 - Pre-clearance surveys are to be undertaken;
- Protection of biodiversity during construction including:
 - A CEMP should be implemented including a Vegetation Management Plan (VMP), clearance protocol, fauna injury protocol and weed management plan;
- Indirect impacts on native vegetation and habitat including:
 - Implementation of appropriate stormwater and erosion controls;
 - Mulching and re-use of vegetation where appropriate;
 - Work areas are to be wet down;
 - Installation of appropriate fencing around trees and vegetation;
 - Appropriate location of stockpiles, parking, storage, etc.
 - Implementation of hygiene measures;

- Reduction of impacts from lighting;
- Mitigation prescribed biodiversity impacts including:
 - Construction hours are to be limited to daylight hours;
 - Implementation of appropriate signage;
 - Implementation of stormwater and sediment and erosion controls;
 - Appropriate herbicides are to be used; and
- Adaptive management strategies proposed to monitor and respond to impacts on biodiversity value that are uncertain including implementation of the CEMP.

6.1.10 Back-up Power System

The back-up power system proposed for the development is described in detail in **Section 3.9** of this EIS. This includes the scale and capacity of the system, associated testing procedures, as well as alternatives considered. Further detail is provided within the Infrastructure Report attached as **Appendix 31**, as well as the Energy and Water Report attached as **Appendix 35**.

6.1.11 Air Quality

An AQIA has been prepared by Northstar for the proposal and is attached as **Appendix 17** of this EIS.

The assessment methodology includes the modelling of local meteorology and the dispersion of potential emissions from the proposed operations to predict potential air quality impacts on the surrounding environment, as summarised below.

6.1.11.1 Existing Environment

The subject site is situated within an existing industrial area. The land use immediately surrounding the subject site includes industrial zoned land as well as RE1 Public Recreation to the southwest, R2 Low Density Residential further east and west. Unzoned land is adjacent to the subject site along the eastern boundary.

The AQIA has identified 'discrete receptor locations' which are intended to represent a selection of locations that may be susceptible to changes in air quality. These are outlined in **TABLE 27** and **Figure 56** below.

TABLE 27: SENSITIVE RECEPTOR LOCATIONS

Receptor ID	Location	Land use
R1	Glendenning Road, Glendenning	Industrial
R2	Kilto Crescent, Glendenning	Industrial
R3	Kilto Crescent, Glendenning	Industrial
R4	Kilto Crescent, Glendenning	Industrial
R5	Western Sydney Parklands, Glendenning	Recreational
R6	Glendenning Road, Glendenning	Industrial
R7	Glendenning Road, Glendenning	Industrial
R8	Glendenning Road, Glendenning	Industrial
R9	Glendenning Road, Glendenning	Industrial
R10	Woodstock Avenue, Glendenning	Industrial
R11	Woodstock Avenue, Glendenning	Industrial
R12	Woodstock Avenue, Glendenning	Industrial
R13	Kellogg Road, Rooty Hill	Industrial
R14	Blacktown International Sportspark	Recreational
R15	Western Sydney Parklands, Doonside	Recreational
R16	Coghlan Crescent, Doonside	Residential
R17	Cross Street, Doonside	Residential



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R18	Knox Road, Doonside	Residential
R19	Knox Road, Doonside	Residential
R20	Knox Road, Doonside	Residential
R21	Knox Road, Doonside	Residential
R22	Knox Road, Doonside	Residential
R23	Glendenning Road, Glendenning	Industrial
R24	Woodstock Avenue, Rooty Hill	Residential
R25	Station Street, Rooty Hill	Residential
R26	Station Street, Rooty Hill	Residential
R27	Polonia Avenue, Plumpton	Residential
R28	Haleluka Crescent, Plumpton	Residential
R29	Parkwood Street, Plumpton	Residential
R30	Power Street, Plumpton	Residential
R31	Carroll Crescent, Plumpton	Recreational
R32	Darice Place, Plumpton	Recreational
R33	The Colebee Function Venue	Commercial

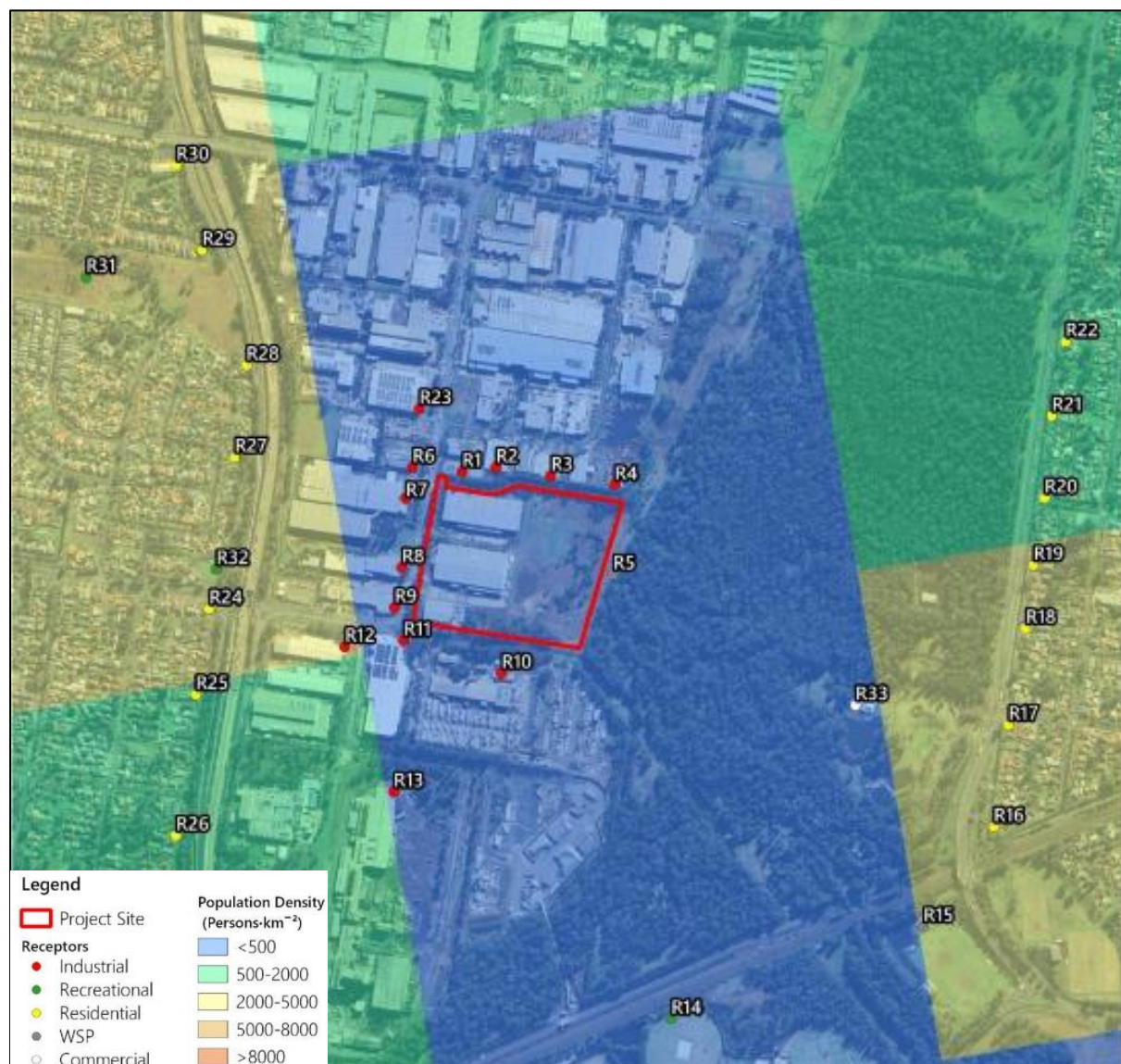


Figure 56. Location of Sensitive Receptors (Source: Northstar AQIA, 2024)

6.1.11.2 Assessment of Impacts

Construction Phase

Construction phase activities have the potential to generate short-term emissions of particulates. Generally, these are associated with uncontrolled (or 'fugitive') emissions and are typically experienced by neighbours as amenity impacts, such as dust deposition and visible dust plumes, rather than associated with health-related impacts. Localised engine-exhaust emissions from construction machinery and vehicles may also be experienced, but given the scale of the proposed works, fugitive dust emissions would have the greatest potential to give rise to downwind air quality impacts.

The construction phase impacts associated within the proposal have been assessed using a risk-based assessment procedure. The air quality impacts *without* mitigation have been assessed at each stage, as indicated in **TABLE 26**.

TABLE 28: RISK OF AIR QUALITY IMPACTS DURING CONSTRUCTION							
Dust Emission Magnitude				Preliminary Risk			
Earthworks	Construction	Track-out	Construction traffic	Earthworks	Construction	Track-out	Construction Traffic
Stage 1 - Dust Soiling							
Med.	Large	Med.	Large	Med.	Med.	Med.	Med.
Stage 1 - Human Health							
Med.	Large	Med.	Large	Low	Low	Low	Low
Stage 2 - Dust Soiling							
Low	Large	Med.	Large	Low	Med.	Med.	Med.
Stage 2 - Human Health							
Low	Large	Med.	Large	Negligible	Low	Low	Low
Stage 3 - Dust Soiling							
Med.	Large	Med.	Large	Med.	Med.	Med.	Med.
Stage 3 - Human Health							
Med.	Large	Med.	Large	Low	Low	Low	Low

The table indicates that Stage 1 and Stage 3 are assessed as having the highest risks, with dust soiling impacts associated with medium risks for other construction phase activities, while human health impacts are associated with low risks for other activities.

The AQIA includes a comprehensive suite of recommended mitigation measures to control dust emissions and impacts during construction. Considering the size of the subject site, the distance to sensitive receivers, and the nature of activities involved, residual impacts related to fugitive dust emissions from the project are considered to be *negligible* if the mitigation measures are implemented appropriately. It is anticipated that these measures will form part of a CEMP and would ultimately form a condition on the development consent.

Operational Phase

The air emissions assessment for the operational phase of the proposal has utilised quantitative dispersion modelling techniques. The following modelling scenarios have been completed to determine the potential impact under the anticipated operational conditions of the emergency standby generators.

- **Scenario 1 (justified worst case scenario):** Operating all 97 generators at 100% load:
 - This is an unlikely scenario which would result from an unexpected power outage event. In reality, a component of the installed 97 generators is provided as design



redundancy and a full load would be equivalent to typically 80% of the installed capacity. As such, this scenario is highly conservative.

- Each generator has been modelled as operating for all 8,760 hours of the year. Should such a power outage event occur, this is likely to be for a period of 10 to 15 minutes and therefore the modelling presents a conservative assessment of the potential impacts.
- Given that the likely duration of operation of the back-up generators would be short-term in nature, only assessment of impacts against short-term criteria has been performed, and no assessment against annual average criteria is presented, as the results would be essentially meaningless.
- The AQIA provides context around how likely any exceedances of air quality criteria would be, given the likelihood of such catastrophic failure.

- **Scenario 2 (realistic operations - maintenance testing):** The on-duty standby generators would undergo routine maintenance and testing to ensure they would be operational if required during a power outage. It is anticipated that up to 20 generators would be tested concurrently at any one time under 'no-load' and up to 3 generators would be tested under 100% load.

- Notwithstanding the above, the dispersion modelling for this maintenance testing scenario has assessed the potential impacts of 20 generators operating between the hours of 7am and 6pm, and one generator operating between the hours of 6pm and 10pm. This scenario has been modelled to be consistent with that assessed within the Noise and Vibration Impact Assessment (NVIA).
- The back-up generators being tested under this modelled scenario have been assumed to be distributed across the three data centre buildings. This is considered to represent an appropriate approximation of potential maximum impacts on surrounding sensitive receptors.
- Comparison of impacts against short- and longer-term criteria is performed, with concentrations predicted based on all 20 generators being tested for all hours between 7am and 6pm, and one generator between the hours of 6pm and 10pm on each and every day of the year. This is highly conservative and not likely to occur in reality.
- The modelling testing regime has been informed by the findings of the NVIA (refer **Section 6.1.12** and **Appendix 17**), which indicated that this testing regime can be performed to result in compliance with the relevant noise criteria at surrounding locations. The NVIA indicated that no generator testing could be performed during nighttime hours (ie. 10pm to 7am) and therefore the AQIA is consistent with these conclusions.

○

Scenario 1

Under the justified worst-case standby generator operational scenario (Scenario 1), a number of additional exceedances of the short-term air quality criteria for PM₁₀, PM_{2.5} and NO₂ are predicted. The scenario assumes that all 97 generators would be operational at one time. The predicted incremental concentrations under Scenario 1 show exceedances of particulate matter and NO₂ at sensitive receptor locations if a power outage occurred, and all 97 emergency generators were operating at 100% load continuously.

To predict the likelihood of exceedances under the worst-case scenario, the reliability of the power network was considered against the latest information supplied in the 2023 Distribution Annual Planning Report (DAPR) from Endeavour Energy. Based on this information, the average unplanned outage duration per year is approximately 82 minutes. Correspondingly, the likelihood of power interruptions occurring is approximately 0.016% of the time per year.

The probability of both the interruption to the power supply, and an exceedance of the relevant air quality criteria occurring has been assessed and ranges from 0.01% - 3.98%, which is considered very low.



Scenario 2

Predicted incremental concentrations for Scenario 2 show that exceedances of the 24-hour criterion for PM_{2.5} are predicted to occur at nine receptors, including:

- R2 (industrial)
- R3 (industrial)
- R8 (industrial)
- R9 (industrial)
- R10 (industrial)
- R11 (industrial)
- R12 (industrial)
- R13 (industrial)
- R28 (residential)

However as outlined above, the results are conservative for a number of reasons:

- The generator testing has been assumed to occur for all hours between 7am and 10pm (15 hours). The proposed testing regime indicates that the longest test would occur for 90 minutes (1.5 hours). Should one test only be performed each day, the results would be conservative by a factor of 10 times.
 - Should only one test be performed each day (1.5 hours), then incremental concentrations would be reduced such that the cumulative criterion would not be exceeded at any surrounding sensitive receptor location.
 - The results indicate that this test could be performed during either the daytime or evening period.
 - Further analysis of the results indicates that generator testing could occur over a period of approximately 5 hours in any one day, to ensure that the cumulative concentrations of PM_{2.5} would be below the criterion.
- The emissions data adopted in dispersion modelling has assumed the most conservative PM_{2.5} emission rate from the types of generators. Installation of a generator with a lower emission rate than the worst-case assumption adopted would ensure that the cumulative criterion would be achieved during the generator testing program.

Based on the above, it is considered that any predicted exceedances of the 24-hour PM_{2.5} criterion during generator testing can be easily managed, either through generator selection, or through the limiting of testing hours in any day.

6.1.11.3 Management and/or Mitigation Measures

Construction Phase

The AQIA includes a comprehensive suite of recommended mitigation measures to control dust emissions and impacts during construction. These measures would be implemented as part of the CEMP.

Operational Phase

Based on the findings of the dispersion modelling assessment under Scenario 2, it is considered that the operation of the maintenance testing schedule would not result in exceedances being experienced at sensitive receptor locations surrounding the subject site, if the hours of testing are limited to 5 hours or less each day. Should an increase in the number of hours of generator testing be required (up to 15 hours), then a generator with a lower particulate matter emission rate should be installed.

Operation of the emergency generators should be minimised as practicably possible.



6.1.12 Noise and Vibration

A NVIA has been prepared by Pulse White Noise Acoustics for the proposal and is attached as **Appendix 18** of this EIS.

6.1.12.1 Existing Environment

The NVIA has identified surrounding noise receivers, which are outlined in **TABLE 27** and **Figure 57** below.



TABLE 29: NOISE RECEIVER LOCATIONS

Receptor ID	Location	Land use
R01	29 Glendenning Road, Glendenning	Industrial
R02	1 Glendenning Road, Glendenning	Industrial
R03	600 Woodstock Avenue, Rooty Hill	Industrial
R04	604 Woodstock Avenue, Rooty Hill	Industrial
R05	26 Kildo Crescent, Glendenning	Recreational
R06	10 Kildo Crescent, Glendenning	Industrial
R07	42 Polonia Avenue, Plumpton	Suburban Residential
R08	38 Polonia Avenue, Plumpton	Suburban Residential
R09	34 Polonia Avenue, Plumpton	Suburban Residential
R10	30 Polonia Avenue, Plumpton	Suburban Residential
R11	46 Polonia Avenue, Plumpton	Suburban Residential
R12	50 Polonia Avenue, Plumpton	Suburban Residential
R13	54 Polonia Avenue, Plumpton	Suburban Residential
R14	11 Gilpin Place, Plumpton	Suburban Residential
R15	26 Polonia Avenue, Plumpton	Suburban Residential
R16	28 Polonia Avenue, Plumpton	Suburban Residential
R17	75 Knox Road, Doonside	Suburban Residential
R18	71 Knox Road, Doonside	Suburban Residential
R19	67 Knox Road, Doonside	Suburban Residential
R20	61 Knox Road, Doonside	Suburban Residential
R21	59 Knox Road, Doonside	Suburban Residential
R22	55 Knox Road, Doonside	Suburban Residential
R23	51A Knox Road, Doonside	Suburban Residential
R24	45 Knox Road, Doonside	Suburban Residential
R25	39 Knox Road, Doonside	Suburban Residential
R26	33 Knox Road, Doonside	Suburban Residential
R27	29 Knox Road, Doonside	Suburban Residential
R28	38 Cross Street, Doonside	Suburban Residential
R29	59 Coghlan Crescent, Doonside	Suburban Residential
R30	53 Coghlan Crescent, Doonside	Suburban Residential
R31	47 Coghlan Crescent, Doonside	Suburban Residential
R32	43 Coghlan Crescent, Doonside	Suburban Residential
R33	15 Cheryl Place, Plumpton	Suburban Residential
R34	69 Graham Street, Doonside	Suburban Residential
R35	556 Woodstock Avenue, Rooty Hill	Suburban Residential
R36	132 Station Street, Rooty Hill	Suburban Residential
R37	130 Station Street, Rooty Hill	Suburban Residential
R38	126 Station Street, Rooty Hill	Suburban Residential
R39	122 Station Street, Rooty Hill	Suburban Residential
R40	114 Station Street, Rooty Hill	Suburban Residential
R41	106 Station Street, Rooty Hill	Suburban Residential
R42	100-102 Station Street, Rooty Hill	Suburban Residential
R43	2A Wolseley Street, Rooty Hill	Suburban Residential



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R44	86 Station Street, Rooty Hill	Suburban Residential
R45	78 Station Street, Rooty Hill	Suburban Residential
R46	9 Derby Street, Rooty Hill	Suburban Residential
R47	Nurragingy Reserve, Doonside	Passive Recreation
R48	Nurragingy Reserve, Doonside	Passive Recreation
R49	Nurragingy Reserve, Doonside	Passive Recreation
R50	The Colebee Function Venue	Commercial



Figure 57. Location of Sensitive Receptors (Source: Pulse White Noise Acoustics NVIA, 2024)

6.1.12.2 Assessment of Impacts

Construction

Background noise logging was undertaken in three locations between 8th April and 17th April 2024 to establish the existing noise environment at noise sensitive receivers near the subject site.

Appropriate construction noise management noise levels have been established in accordance with the EPAs *Interim Construction Noise Guideline* and the background noise logging. Appropriate vibration criteria were derived from the EPAs *Assessing vibration: a technical guideline*. The EPAs *Road Noise Policy* provided appropriate noise criteria for the assessment of construction traffic noise associated with the site.

A range of construction noise scenarios were modelled using SOUNDPLAN v9.0 and assessed against the derived project specific Noise Management Levels (NMLs). The assessment identified that there were no noise sensitive receivers which would be Highly Noise Affected or significantly above the project NMLs. A limited number of nearby industrial receivers were predicted to exceed the NMLs by up to 5dB at time. This includes:



- R01 (industrial); and
- R05 (industrial).

It is acknowledged that these receivers would not experience constant exceedances, but only at specific stages of the project. Appropriate construction noise management and mitigation measures have been recommended to reduce the potential for impacts on the surrounding community.

Construction Vibration

An assessment of the potential for vibration generated as part of the required construction activities on the project (excluding demolition) have been undertaken based on the project safe working distances. Dependant on the location of the vibration intensive work and size of the equipment, exceedances of the vibration safe working distances are possible at nearby industrial receivers. Residential receivers will not be subject to vibration levels that may exceed the relevant vibration criteria.

Construction vibration has been assessed based on a range of equipment that could be used on the project. The most significant vibration impacts would be experienced during excavation activities. Generally, exceedances of the cosmetic damage vibration criteria for industrial receivers are unusual, however exceedances of the human comfort criteria can occur. Vibration management measures are included as part of the NVIA and should be developed as part of a Construction Noise and Vibration Management Plan (CNVMP).

Construction Traffic

Construction traffic movements will occur on Power Street, Glendenning Road, and Woodstock Avenue, which are all classed as sub-arterial roads. Residential receivers are located along Woodstock Avenue and Power Street to the west of the subject site only. As such, traffic noise impacts to the industrial receivers located along Glendenning Road have not been considered.

Noise impacts from construction traffic are predicted to increase road traffic noise levels by less than 1dB as a result of the additional construction vehicle movements. A change in noise of less than 2 or 3 dB is typically not considered discernible. It is therefore not considered reasonable, nor feasible to provide noise mitigation to reduce road traffic noise impacts as part of this proposal.

Operation

Operational noise emission criteria have been derived from the background noise logging in accordance with the EPAs *Noise Policy for Industry* and background noise logging undertaken for this project.

An operational noise model has been developed using SOUNDPLAN v9.0. The noise model assessed the dominant noise sources generated from the operation of the subject site (including major mechanical equipment such as: data hall air handling units (DAHU), exhaust fan units and generators). Modelling of generator testing is consistent with modelling undertaken as part of the AQIA.

The following scenarios have been modelled:

- **Scenario 1:** Standard operations with standard metrological conditions (daytime, evening and night-time periods);
- **Scenario 2:** Standard operations with noise enhancing metrological conditions (daytime, evening and night-time periods);
- **Scenario 3:** In addition to the standard operations and noise sources listed in Scenario 1 and 2, back-up generator testing has been modelled for standard metrological conditions (evening);



- **Scenario 4:** In addition to the standard operations and noise sources listed in Scenario 1 and 2, back-up generator testing has been modelled for noise enhancing metrological conditions (evening);
- **Scenario 5:** In addition to the standard operations and noise sources listed in Scenario 1 and 2, back-up generator testing has been modelled for noise enhancing metrological conditions (daytime); and
- **Scenario 6:** This scenario considers all 97 emergency generators operating at full capacity. The worst-case scenario is to simulate the unlikely event of a full systems power outage. There are no applicable noise limits for this scenario for any time period.

The results of the modelling is set out in **TABLE 30** to **TABLE 35** below. The green columns indicate compliance with the noise criteria, and the orange columns indicate non-compliance with the noise criteria.

TABLE 30: NOISE MODELLING - SCENARIO 1

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68	49	49	49
R02	68	68	68	54	54	54
R03	68	68	68	39/40	39/40	39/40
R04	68	68	68	50	50	50
R05	68	68	68	53	53	53
R06	68	68	68	57	57	57
R07	53	45	41	38	38	38
R08	53	45	41	35	35	35
R09	53	45	41	36	36	36
R10	53	45	41	37	37	37
R11	53	45	41	40	40	40
R12	53	45	41	40	40	40
R13	53	45	41	36	36	36
R14	53	45	41	33	33	33
R15	53	45	41	38	38	38
R16	53	45	41	38	38	38
R17	53	50	38	31	31	31
R18	53	50	38	31	31	31
R19	53	50	38	31	31	31
R20	53	50	38	31	31	31
R21	53	50	38	31	31	31
R22	53	50	38	31	31	31
R23	53	50	38	31	31	31
R24	53	50	38	31	31	31
R25	53	50	38	31	31	31
R26	53	50	38	31	31	31
R27	53	50	38	31	31	31
R28	53	50	38	32	32	32
R29	53	50	38	33	33	33
R30	53	50	38	31	31	31
R31	53	50	38	30	30	30



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R32	53	50	38	26	26	26
R33	53	45	41	34	34	34
R34	53	50	38	31	31	31
R35	53	45	42	36/37	36/37	36/37
R36	53	45	42	35/36	35/36	35/36
R37	53	45	42	31	31	31
R38	53	45	42	30	30	30
R39	53	45	42	30	30	30
R40	53	45	42	30	30	30
R41	53	45	42	28	28	28
R42	53	45	42	26	26	26
R43	53	45	42	27	27	27
R44	53	45	42	25	25	25
R45	53	45	42	24	24	24
R46	53	45	42	33	33	33
R47	48	48	48	43	43	43
R48	48	48	48	36	36	36
R49	48	48	48	39	39	39
R50	63	63	63	34	34	34

TABLE 31: NOISE MODELLING - SCENARIO 2

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68	50	50	50
R02	68	68	68	55	55	55
R03	68	68	68	40	40	40
R04	68	68	68	51	51	51
R05	68	68	68	53	53	53
R06	68	68	68	58	58	58
R07	53	45	41	39	39	39
R08	53	45	41	37	37	37
R09	53	45	41	37	37	37
R10	53	45	41	38	38	38
R11	53	45	41	41	41	41
R12	53	45	41	41	41	41
R13	53	45	41	37	37	37
R14	53	45	41	35	35	35
R15	53	45	41	40	40	40
R16	53	45	41	39	39	39
R17	53	50	38	33	33	33
R18	53	50	38	33	33	33
R19	53	50	38	33	33	33
R20	53	50	38	33	33	33
R21	53	50	38	33	33	33
R22	53	50	38	32	32	32
R23	53	50	38	32	32	32



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R24	53	50	38	33	33	33
R25	53	50	38	33	33	33
R26	53	50	38	33	33	33
R27	53	50	38	33	33	33
R28	53	50	38	34	34	34
R29	53	50	38	34	34	34
R30	53	50	38	33	33	33
R31	53	50	38	32	32	32
R32	53	50	38	28	28	28
R33	53	45	41	35	35	35
R34	53	50	38	32	32	32
R35	53	45	42	37/38	37/38	37/38
R36	53	45	42	36/37	36/37	36/37
R37	53	45	42	33	33	33
R38	53	45	42	32	32	32
R39	53	45	42	32	32	32
R40	53	45	42	32	32	32
R41	53	45	42	30	30	30
R42	53	45	42	28/29	28/29	28/29
R43	53	45	42	29	29	29
R44	53	45	42	27	27	27
R45	53	45	42	26	26	26
R46	53	45	42	35	35	35
R47	48	48	48	43	43	43
R48	48	48	48	37	37	37
R49	48	48	48	40	40	40
R50	63	63	63	40	40	40

TABLE 32: NOISE MODELLING - SCENARIO 3

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68	-	58	-
R02	68	68	68	-	56	-
R03	68	68	68	-	49	-
R04	68	68	68	-	50	-
R05	68	68	68	-	54	-
R06	68	68	68	-	59	-
R07	53	45	41	-	42	-
R08	53	45	41	-	42	-
R09	53	45	41	-	41	-
R10	53	45	41	-	42	-
R11	53	45	41	-	44	-
R12	53	45	41	-	34	-
R13	53	45	41	-	41	-
R14	53	45	41	-	34	-
R15	53	45	41	-	43	-



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R16	53	45	41	-	42	-
R17	53	50	38	-	32	-
R18	53	50	38	-	33	-
R19	53	50	38	-	33	-
R20	53	50	38	-	33	-
R21	53	50	38	-	33	-
R22	53	50	38	-	32	-
R23	53	50	38	-	32	-
R24	53	50	38	-	33	-
R25	53	50	38	-	33	-
R26	53	50	38	-	33	-
R27	53	50	38	-	33	-
R28	53	50	38	-	34	-
R29	53	50	38	-	34	-
R30	53	50	38	-	33	-
R31	53	50	38	-	32	-
R32	53	50	38	-	27	-
R33	53	45	41	-	40	-
R34	53	50	38	-	32/42	-
R35	53	45	42	-	41	-
R36	53	45	42	-	41/42	-
R37	53	45	42	-	39	-
R38	53	45	42	-	39	-
R39	53	45	42	-	38	-
R40	53	45	42	-	37	-
R41	53	45	42	-	33	-
R42	53	45	42	-	29	-
R43	53	45	42	-	28	-
R44	53	45	42	-	27	-
R45	53	45	42	-	28	-
R46	53	45	42	-	36	-
R47	48	48	48	-	43	-
R48	48	48	48	-	36	-
R49	48	48	48	-	40	-
R50	63	63	63	-	36	-

TABLE 33: NOISE MODELLING - SCENARIO 4

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68	-	58	-
R02	68	68	68	-	57	-
R03	68	68	68	-	50	-
R04	68	68	68	-	51	-
R05	68	68	68	-	54	-
R06	68	68	68	-	59	-
R07	53	45	41	-	43	-



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R08	53	45	41	-	43	-
R09	53	45	41	-	42	-
R10	53	45	41	-	43	-
R11	53	45	41	-	45	-
R12	53	45	41	-	35	-
R13	53	45	41	-	42	-
R14	53	45	41	-	35	-
R15	53	45	41	-	44	-
R16	53	45	41	-	43	-
R17	53	50	38	-	34	-
R18	53	50	38	-	34	-
R19	53	50	38	-	34	-
R20	53	50	38	-	34	-
R21	53	50	38	-	34	-
R22	53	50	38	-	34	-
R23	53	50	38	-	34	-
R24	53	50	38	-	34	-
R25	53	50	38	-	34	-
R26	53	50	38	-	34	-
R27	53	50	38	-	34	-
R28	53	50	38	-	35	-
R29	53	50	38	-	36	-
R30	53	50	38	-	35	-
R31	53	50	38	-	34	-
R32	53	50	38	-	29	-
R33	53	45	41	-	40/41	-
R34	53	50	38	-	34	-
R35	53	45	42	-	41/42	-
R36	53	45	42	-	42	-
R37	53	45	42	-	40	-
R38	53	45	42	-	40	-
R39	53	45	42	-	39	-
R40	53	45	42	-	38	-
R41	53	45	42	-	34	-
R42	53	45	42	-	30	-
R43	53	45	42	-	29	-
R44	53	45	42	-	29	-
R45	53	45	42	-	29	-
R46	53	45	42	-	37	-
R47	48	48	48	-	43	-
R48	48	48	48	-	37	-
R49	48	48	48	-	40	-
R50	63	63	63	-	37	-



TABLE 34: NOISE MODELLING - SCENARIO 5

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68	64	-	-
R02	68	68	68	64	-	-
R03	68	68	68	60	-	-
R04	68	68	68	62	-	-
R05	68	68	68	66	-	-
R06	68	68	68	66	-	-
R07	53	45	41	52	-	-
R08	53	45	41	52	-	-
R09	53	45	41	51	-	-
R10	53	45	41	52	-	-
R11	53	45	41	51	-	-
R12	53	45	41	43	-	-
R13	53	45	41	49	-	-
R14	53	45	41	38	-	-
R15	53	45	41	53	-	-
R16	53	45	41	52	-	-
R17	53	50	38	42	-	-
R18	53	50	38	43	-	-
R19	53	50	38	43	-	-
R20	53	50	38	43	-	-
R21	53	50	38	43	-	-
R22	53	50	38	43	-	-
R23	53	50	38	43	-	-
R24	53	50	38	44	-	-
R25	53	50	38	44	-	-
R26	53	50	38	44	-	-
R27	53	50	38	44	-	-
R28	53	50	38	44	-	-
R29	53	50	38	45	-	-
R30	53	50	38	44	-	-
R31	53	50	38	44	-	-
R32	53	50	38	38	-	-
R33	53	45	41	48	-	-
R34	53	50	38	43	-	-
R35	53	45	42	51	-	-
R36	53	45	42	52	-	-
R37	53	45	42	50	-	-
R38	53	45	42	49	-	-
R39	53	45	42	44	-	-
R40	53	45	42	48	-	-
R41	53	45	42	41	-	-
R42	53	45	42	35	-	-



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R43	53	45	42	36	-	-
R44	53	45	42	42	-	-
R45	53	45	42	40	-	-
R46	53	45	42	49	-	-
R47	48	48	48	50	-	-
R48	48	48	48	48	-	-
R49	48	48	48	50	-	-
R50	63	63	63	46	-	-

TABLE 35: NOISE MODELLING - SCENARIO 6

Receptor ID	Noise Criteria (dB(A))			Predicted Noise Levels (dB(A))		
	Day	Evening	Night	Day	Evening	Night
R01	68	68	68			71
R02	68	68	68			64
R03	68	68	68			67/67
R04	68	68	68			62
R05	68	68	68			73/73
R06	68	68	68			73/73
R07	53	45	41			52
R08	53	45	41			52
R09	53	45	41			51
R10	53	45	41			52
R11	53	45	41			51
R12	53	45	41			43
R13	53	45	41			49
R14	53	45	41			38
R15	53	45	41			53
R16	53	45	41			52
R17	53	50	38			42
R18	53	50	38			43
R19	53	50	38			43
R20	53	50	38			43
R21	53	50	38			43
R22	53	50	38			43
R23	53	50	38			43
R24	53	50	38			44
R25	53	50	38			51/51
R26	53	50	38			44
R27	53	50	38			44
R28	53	50	38			44
R29	53	50	38			45
R30	53	50	38			44
R31	53	50	38			44
R32	53	50	38			38
R33	53	45	41			55/55
R34	53	50	38			50/50



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R35	53	45	42			58/58
R36	53	45	42			59/59
R37	53	45	42			50
R38	53	45	42			49
R39	53	45	42			44
R40	53	45	42			48
R41	53	45	42			41
R42	53	45	42			42/42
R43	53	45	42			36
R44	53	45	42			42
R45	53	45	42			40
R46	53	45	42			56/56
R47	48	48	48			50
R48	48	48	48			48
R49	48	48	48			50
R50	63	63	63			45

Note: There are no applicable noise criteria for the emergency scenario.

The predicted noise levels identified compliance at all noise sensitive receivers during both standard and adverse meteorological weather conditions. A minor exceedance of up to 2dB is predicted to occur at some passive recreation receiver locations within close proximity to the boundary of the Nurragingy Reserve during periods of emergency back-up power system testing during adverse weather conditions. These potential exceedances are considered negligible due to the less sensitive nature of the receiver type (passive recreational), magnitude of exceedance (a difference of 1-2 dB is difficult to perceive for most receivers), and the fact that potential exceedance is restricted to periods of testing only, which are not highly regular / sources of continuous noise.

6.1.12.3 Management and/or Mitigation Measures

Construction

The construction predicted noise levels identified in the NVIA indicate that the noise impacts have the potential occur from the proposed works. These impacts are typical for construction such as this and highlight the importance for appropriate noise management and mitigation measures. The NVIA includes a suite of management measures that should be developed as part of a Construction Noise and Vibration Management Plan (CNVMP).

Operation

Majority of the noise emissions from the proposed data centre campus consists of constant, continuous mechanical plant operations. As such, minimal operational management measures are available / relevant. However, operational management measures for light / heavy vehicles and delivery of goods via trucks, whilst not required, are recommended to minimise the impact on nearby receivers outside the daytime period.

Noise management measures can be effective to control noise impacts associated with behaviours. The corner stone to noise management measures is making employees and people accessing the site aware of their site requirements and obligations. Clear signage should be provided for drivers to limit noise, and all conversations should be encouraged to be completed inside where the building fabric can reduce the transmission of noise.

The majority of the mitigation measures for the proposed development have been achieved by careful selection of mechanical equipment that do not require additional, extensive noise



mitigation/treatments. Additionally, the proximity of the proposed development to the nearest noise sensitive receivers provides significant noise pathway mitigation. Therefore, this assessment has integrated the 'best practice' noise mitigation strategies that are presented within the NPfI under Section 3.4.

6.1.13 Ground and Water Conditions

A Geotechnical Assessment has been completed by Martens for the proposal and is attached as **Appendix 19**. A summary is provided in the following sections.

TABLE 36: GROUND AND WATER CONDITIONS SUMMARY

Matter	Assessment
Topography	Within undulating terrain, lower to mid slope of a northeast facing approximately 40m to the west of Eastern Creek. An approximately 6m high steep cut batter extends east-west along the eastern site boundary.
Typical slopes, aspect, elevation	The subject site generally has a north easterly aspect with grades less than approximately 5% towards the Eastern Creek. The cut batter along the eastern site boundary has steeper grades of between approximately 20% and 30%. Site elevation ranges between approximately 30.5m AHD in the northeastern corner and 45m AHD at the crest of the cut batter in the southwestern corner of the subject site.
Expected soil landscape	The NSW Office of Environment and Heritage's (OEH) information system (eSPADE) indicates the southern portion of the site to be located in the Blacktown soil landscape and the northern portion of the site to be located in the South Creek soil landscape. Blacktown soil landscape is characterised by > 100 cm of hard setting mottled texture contrast soils, Red and Brown Podzolic Soils. This soil landscape often is associated with localised seasonal waterlogging, localised water erosion hazard, moderately reactive highly plastic subsoil and localised surface movement potential. South Creek soil landscape consists of floodplains, valley flats and drainage depressions of the channels on the Cumberland Plain. This soil landscape is characterised by often very deep layered sediments over bedrock or relict soils. This soil landscape often is associated with flood hazard, seasonal waterlogging, localised permanently high-water tables, localised water erosion hazard, localised surface movement potential.
Expected geology	The northwestern and southwestern portions of the subject site are mapped in the Bringelly Shale outcrop zone, consisting of shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone and rare coal and tuff. The remainder of the subject site is underlain by Quaternary deposits comprising fine-grained sand, silt and clay.
Salinity	Laboratory test results indicate that the salinity of the tested soil / weathered rock samples typically varies between non-saline to moderately saline. It is recommended that saline soil management strategies are prepared at construction certificate stage following review of proposed development levels. Further testing may need to be undertaken depending on the proposed cut / fill and final development levels, to delineate extent of saline soils and salinity risk. Preliminary saline soil management strategies are included as part of the Geotechnical Assessment (Appendix 19).
Acid sulfate soils (ASS)	The Site is not mapped within any ASS risk land. Considering site elevation, topographic and geology maps and encountered subsurface conditions, it is expected that the natural soil / rock profile is not associated with ASS.



	Further site investigations for an ASS assessment or preparation of an ASS management plan are considered not required.
Groundwater	Groundwater inflow was encountered during drilling of BH101 and BH102 at 7.7mbgl (26.6m AHD) and 9mbgl (24.8m AHD), respectively. Given the proximity to Eastern Creek, this groundwater level may fluctuate due to seasonal variation in creek water level. Groundwater was not encountered in other boreholes up to drilling depth and could not be observed below drilling depth due to during the introduction of drilling fluids during rock coring. Ephemeral perched groundwater may be present within soil profile and / or at the soil / rock interface, originating from infiltration of surface water during prolonged or intense rainfall events. Consequently, water bearing layers may be encountered during excavation, however inflow into excavation is expected to be limited and may be managed by sump and pump methods. Based on the groundwater observations at the subject site during investigations, the proposed development is unlikely to intercept the permanent groundwater table at the site and an aquifer interference approval in accordance with the WM Act is unlikely to be required.

6.1.14 Water Management

ACOR Consultants has prepared a Civil and Stormwater Design Report in response to the SEARs, which is appended in **Appendix 20** of this EIS.

6.1.14.1 Existing Environment

Stormwater

An open drainage channel on the western side of Glendenning Road (opposite the subject site) conveys stormwater to 3/2000mm (wide) x 1200mm (high) reinforced concrete box culverts that pass under Glendenning Road. These culverts discharge stormwater to the open drainage channel to the north of the subject site, which conveys the stormwater towards Eastern Creek to the east of the subject site.

Sewer

A 400mm branch sewer is located within the subject site along the northern boundary. The 400mm branch sewer drains to a 900mm sewer carrier within the Eastern Creek riparian zone. The development constructed on the subject site currently connects the internal site wastewater drainage to the 400mm branch sewer.

6.1.14.2 Assessment of Impacts

Stormwater Quality – Construction

Water quality would be maintained throughout construction through the implementation of a Soil and Water Management Strategy as provided within the Civil and Stormwater Design Report (appended in **Appendix 20** of this EIS). The following general principles of soil and water management have been applied:

- Minimise the area of soil disturbed and exposed to erosion;
- Conserve topsoil for later site rehabilitation/revegetation;
- Control water flows from the top of, and through the development area;



- Rehabilitate disturbed lands quickly; and
- Maintain soil and water management measures appropriately during the construction phase.

The following measures would be implemented during construction works and would be developed further as part of a CEMP:

- Establish sediment fencing to the downstream perimeter of the zone of disturbed works to protect downstream assets and properties;
- Installation of stabilised construction entry and exit grids to prevent construction vehicles tracking debris into adjacent Authority roadways and stormwater systems;
- Construction of “clean water” diversion drains with rock check dams to divert unpolluted water to the existing stormwater system in a controlled manner;
- Construction of “dirty water” catch drains with rock check dams to divert sediment-laden and silt-laden water to proposed sedimentation basin;
- Construction of appropriately sized and maintained sedimentation basins to promote settling of gross pollutants and suspended solids. Dosing and flocculation of fine suspended particulates will also be undertaken depending on tested water quality profiles within the sedimentation basin;
- Protection of materials stockpiles by suitable wind protection fencing and / or temporary covering of stockpiles;
- Protection of existing and recently constructed surface inlet pits with temporary sediment traps using geotextile filter fabric and sandbags;
- Protection of existing and recently constructed overland flow paths with vegetated ground cover; and
- General expedited revegetation and stabilisation of exposed earthworks to prevent sedimentation of stormwater runoff.

With the implementation of the above measures, impacts on surrounding waterways would be minimised during construction activities.

Stormwater Quantity Control

As per general engineering practice and the guidelines of Council, the proposed stormwater drainage system for the development will comprise a minor and major system to safely and efficiently convey collected stormwater run-off from the development to the legal point of discharge. The drainage system can be summarised as follows:

- Stormwater pits and pipes designed with sufficient capacity to collect and convey the 5% AEP storm event, including the nominated climate change factor for increase in rainfall intensity;
- Overland flow paths through the circulation and open spaces areas, for all flows in excess of the minor system capacity above the 5% AEP and up to 1% AEP storm events;
- Treatment of stormwater through rainwater harvesting tanks, Ocean Protect OceanGuards located in grated stormwater pits, and Ocean Protect StormFilters cartridges;
- Site discharge to the drainage reserve to the north; and
- Rainwater re-use through 3 x 100kL rainwater tanks (one per building) to supply recycled water for toilet flushing and to supplement water use for the mechanical cooling system.

Stormwater Quality - Operation

The proposed design incorporates the principles of WSUD to target pollutants that are present in the stormwater, to minimise the adverse impact these pollutants could have on receiving waters, and to meet the requirements specified by Blacktown City Council. The Civil and Stormwater Design Report at **Appendix 20** of this EIS recommends the following water quality control measures, which can be broken down into two different treatment train sub-catchments outlined as follows:



- **WSUD Treatment Train 1:** DC01, DC02 and DC03 roof, roads and hardstand areas, and landscaped areas draining to Eastern Creek; and
- **WSUD Treatment Train 2:** driveway bypass draining to Glendenning Road due to site level constraints.

Each treatment train is to consist of:

- **WSUD Treatment Train 1:**
 - 3 x 100kL rainwater harvesting tanks;
 - 70 x OceanGuards by Ocean Protect, located in grated stormwater pits; and
 - 140 x 690 ZPG StormFilters by Ocean Protect.
- **WSUD Treatment Train 2:**
 - 5 x OceanGuards by Ocean Protect

Further details on the measures proposed as part of each treatment train are set out below:

- **Rainwater Tanks:**
 - Three 100kL rainwater tanks (one rainwater tank for each building) are proposed to collect all roof runoff from data centre buildings DC01, DC02 and DC03. Overflow from the rainwater tanks will also be able to be treated by StormFilters within the proposed Stormfilter chamber.
- **StormFilter:**
 - The Ocean Protect StormFilter cartridges are designed and sized to remove fine solids, soluble heavy metals, oil and soluble nutrients using a variety of media;
 - There will be a total of 140 of the 690 ZPG Ocean Protect StormFilter cartridges installed inside the StormFilter chamber to treat stormwater.
- **OceanGuards:**
 - The OceanGuard pit basket is designed to fit within the stormwater pits to remove pollution from stormwater runoff. It intercepts stormwater as it enters the pits throughout a site. The OceanGuard has diversion panels that are placed flush with the pit walls, which ensures that stormwater entering at the top of the pit is directed to the middle of the insert where the filtration bag is located;
 - WSUD Treatment Train 1 uses 70 OceanGuards to provide primary treatment to the roads and hardstand, and landscaped area, before secondary treatment by filtration cartridges; and
 - WSUD Treatment Train 2 uses 5 OceanGuards to provide primary treatment to the driveway bypass areas.

Model for Urban Stormwater Improvement Conceptualisation (MUSIC) modelling has been undertaken by ACOR Consultants to assess the effectiveness of the proposed water quality measures. The MUSIC modelling has concluded that the proposed water quality measures are expected to meet reduction targets and Council's objectives for key stormwater pollutants, including Nitrogen, Suspended Solids, Phosphorus, and Gross Pollutants.

6.1.15 Flood Risk

ACOR Consultants has prepared a Flood Impact Assessment Report in response to the SEARs, which is appended in **Appendix 21** of this EIS.

6.1.15.1 Assessment of Impacts

The subject site is located outside of the riverine medium flood risk precinct, which is equivalent to the Flood Planning Area, and therefore above the Flood Planning Level. All proposed buildings on the subject site have minimum floor levels that provide at least 500mm freeboard above the 0.2% AEP riverine flood levels and 1% AEP flood levels.



The subject site and proposed development are not located within the flood fringe hydraulic category of the 1% AEP event, however, are within the flood fringe category of the Probable Maximum Flood (PMF) event. An assessment against the controls listed in section 9.4.3 of the BDCP 2015 for development within the flood fringe is detailed within the Flood Impact Assessment Report prepared by ACOR Consultants (**Appendix 21**).

Flood mapping shows the subject site is not directly impacted up to and including the 0.2% AEP riverine flood event. Proposed buildings are therefore located outside areas affected by inundation up to and including the 0.2% AEP riverine flood event. Overland flow in the 1% AEP event only occurs on the subject site in low points of the terrain. Investigation of available data shows that overland flow in Glendenning Road adjacent to the subject site does not exceed 0.2m deep and deemed not to overtop the road and enter the subject site in the 5% AEP, 2% AEP or 1% AEP overland flow events. The proposed internal road network provides conveyance of overland flows through the site towards the eastern boundary, towards Eastern Creek.

6.1.15.2 Management and/or Mitigation Measures

The subject site has been determined to be an area with 'rising road access'. An area with rising road access is defined as 'areas where access roads rise steadily uphill and away from the rising floodwaters' where 'evacuation can take place by vehicle or on foot along the road as floodwater advances'. Vehicular and pedestrian evacuation routes along rising roads to areas outside the floodplain (local evacuation point) have been identified in **Figure 58** below.

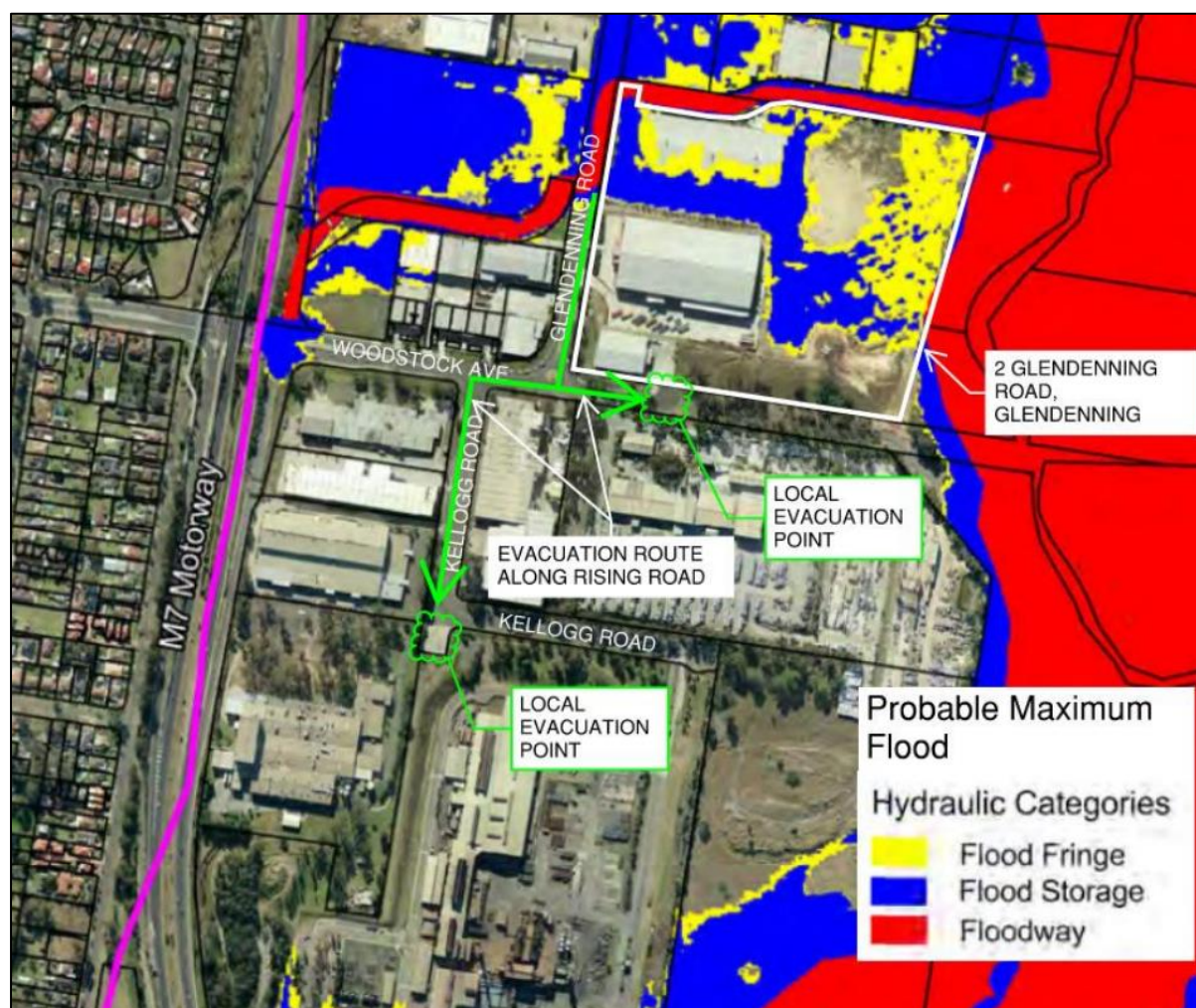


Figure 58. Evacuation Routes (Source: ACOR Consultants, 2024)

6.1.16 Hazards and Risks

Dangerous goods proposed to be stored at the subject site are described in **Section 3.10** of this EIS. A Preliminary Risk Screening report has been prepared for the proposed works and is attached as **Appendix 22** of this EIS. A Dangerous Goods Compliance Report has also been prepared for the proposed works and is attached as **Appendix 23** of this EIS.

6.1.16.1 Assessment of Impacts

In order to determine whether the proposed development is a potentially hazardous development, the risk screening method described in *Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines* (Applying SEPP 33) was applied to the proposed development. The risk screening is based on the potential for, and consequences of, an explosion, fire, or release of toxic substances. It takes the following factors into account:

- The properties of the substances being handled or stored;
- The conditions of storage or use;
- The quantity involved;
- The location in respect to the site boundary; and
- The surrounding land use.

The risk screening assessment determined that there are no dangerous goods on the subject site that are included in the threshold values as described in *Applying SEPP 33*. Therefore, the proposed development is not a potentially hazardous industry and does not require a Preliminary Hazard Analysis to be conducted. Fuel storage capacity for DC03 would cause the subject site to exceed the scheduled activity threshold as capacity for more than 2,000 tonnes of diesel would then be developed on the subject site. An EPL would therefore be sought prior to construction of DC03. A Dangerous Goods Compliance Report has been prepared to review the proposed diesel storage system, ensure compliance with relevant regulations and provide design recommendations to ensure compliant and safe storage and handling of dangerous goods. It is anticipated that the recommendations within this report will form a condition of development consent.

6.1.17 Contamination and Remediation

A DSI has been undertaken by Martens in response to the SEARs, which is appended in **Appendix 23** of this EIS. The DSI included a desktop assessment of the entire site, and soil sampling in the vacant portion to the east. The soil sampling locations are depicted in **Figure 59** below.





Figure 59. Sampling Locations (Source: Martens DSI, 2024)

6.1.17.1 Assessment of Impacts

The DSI soil sampling program reported low concentrations of metals and organic contaminants in fill and natural soils, below adopted human health and ecological criteria. These findings are generally consistent with chemical contaminant results reported by AECOM previously, except for Asbestos Contaminating Material (ACM) that was reported in one fill material stockpile by AECOM.

Previous desktop study reporting on site history by AECOM indicated fill material was imported during industrial subdivision of the land in the late 2000s, and this material is the most probable source of aesthetic constituents observed in fill during the field investigation. Anthropogenic materials were reported in fill across much of the Investigation Area (IA), however, the quantity present is not expected to pose any aesthetic constraints.

One fragment of ACM was visually identified within the fill at test location TP229 and confirmed as asbestos containing through laboratory analysis. Subsequent soil sample analyses showed asbestos concentrations well below the adopted assessment criteria for commercial/industrial land use.

Given these results, the potential for asbestos or other contaminants in the fill material to pose risks to human health or environmental receptors under the proposed commercial/industrial land use scenario is considered minimal.

With due consideration to the investigation limitations, potential risks to human health and ecological receptors from land contamination were not identified by the investigations undertaken. Martens consider the investigation provides a suitable assessment of the IA for proposed commercial / industrial land use, and the IA is suitable for the proposed end land use, with respect to land contamination, in accordance with Section 4.6 of the Resilience and Hazards SEPP.

6.1.17.2 Management and/or Mitigation Measures

The DSI recommends the following measures to ensure potential land contamination risks are appropriately managed:

- Preparation of an Unexpected Finds Protocol (UFP) that outlines the necessary actions for implementation should soil materials display signs of potential contamination (e.g., asbestos fragments, extensive anthropogenic inclusions, gross staining, odours). The UFP may include protocols for segregation of materials, further assessment, and inspection.
- Waste classification and offsite disposal of all stockpiled material present within the IA, prior to development earthworks.
- Due to the ground surface being concealed by vegetation cover during the investigation, an inspection should be completed following the removal of existing vegetation to make observations of the ground surface with respect to ACM.

To assist proposed development activities within the western portion of the subject site (proposed locations for Buildings DC02 and DC03), Martens recommend completion of the following:

- Preparation of a Sampling and Analysis Quality Plan (SAQP) to define the requirements of additional testing to be completed in the western portion of the subject site. The SAQP should provide a detailed plan of all fieldworks, sampling methods and laboratory testing required as part of future investigative works. Additional testing works are to be developed in accordance with NSW EPA (2022) *Sampling Design Guidelines* and a risk-based assessment.
- Following demolition of existing site structures, investigative works outlined in the SAQP are to be completed and an addendum to the DSI prepared.
- In the event contamination is identified by further investigation works, preparation of a Remedial Action Plan would be required to manage identified contamination to ensure suitability for proposed commercial land use.

6.1.18 Waste Management

APC Waste Consultants Pty Ltd have prepared a Construction and Demolition Waste Management Plan and an Operational Waste Management Plan in response to the SEARs, which are appended in **Appendix 25** and **Appendix 26** of this EIS respectively.

6.1.18.1 Assessment of Impacts

Construction and Demolition

The likely waste streams to be generated during construction and demolition activities across each stage of the proposed development are set out in **TABLE 37**.

TABLE 37: DEMOLITION AND CONSTRUCTION FLOOR AREA FOR EACH DEVELOPMENT STAGE			
Activity/Stage	Stage 1	Stage 2	Stage 3
Demolition	13,000m ²	-	10,000m ²
Construction	21,500m ²	13,950m ²	21,500m ²

The construction and demolition activities will be managed in an effective and environmentally aware manner. Specifically:

- To maximise the re-use and recycling of demolition and construction materials;
- To reduce the volume of materials going to landfill;
- To maximise waste material avoidance and reuse on site;



- To ensure that where practicable, an efficient recycling procedure is applied to waste materials;
and
- To ensure efficient storage and collection of waste.

TABLE 38 details the expected waste materials and management systems for the demolition phase of the project, which is based across the entire project.



TABLE 38: ESTIMATED CONSTRUCTION WASTE GENERATION

Material	Onsite re-use by weight (t)	Offsite recycling by weight (t)	Offsite disposal by weight (t)	Potential processing/ disposal site	Method of management
Timber	-	14.2	-	A – Bingo Recycling Centre, St Marys 25 Dunheved Circuit, St Marys	Delivered to off-site to timber recycler. Onsite reuse options include reuse as floorboards, fencing, furniture, or mulch as appropriate.
Concrete	-	119.6	-	D – Cleanaway 48 Quarry Road, Erskine Park	Separated where possible and taken to concrete recycling facility – deposited onsite directly into skips or trucks to be removed from site. Onsite reuse options include filling, levelling or road base.
Bricks	-	94.0	-	A – Bingo Recycling Centre, St Marys 25 Dunheved Circuit, St Marys D – Cleanaway 48 Quarry Road, Erskine Park	Stockpiled onsite then transported to brick recycling facility. Onsite reuse options include cleaned for reuse, rendered over or crushed for landscaping or driveways.
Gyprock	-	25.6	-	A – Bingo Recycling Centre, St Marys 25 Dunheved Circuit, St Marys	Stockpiled onsite and collected by plasterboard supplier/recycler or taken to appropriate recycling facility.
Sand/Soil	-	273.4	-	A – Bingo Recycling Centre, St Marys 25 Dunheved Circuit, St Marys	Delivered to off-site to sand/soil recycler.
Steel/ Metal	-	34.2	-	A – Bingo Recycling Centre, St Marys 25 Dunheved Circuit, St Marys B – Veolia Seven Hills Resource Recovery Centre 29 Powers Road, Seven Hills C – Veolia Wetherill Park Resource Recovery Centre 20 Davis Road, Wetherill Park	Stockpiled and collected as required by specialty metal recycler or taken to appropriate C&D facility for separation and recycling.
Other/ Residual general waste	-	-	28.5	-	Collected by contractor and disposed at appropriate landfill



A designated waste storage area will be established for the collection of all waste and recyclables. This area will feature appropriate signage to clearly identify it to construction workers and prevent unauthorised access.

The Construction and Demolition Waste Management Plan details skip bins of various sizes to be ordered by a nominated waste contractor to ensure the suitable management of waste on the subject site. To minimise stockpile size, waste will be regularly removed from the subject site.

During any demolition and material recovery activities, contractors should beware of potentially hazardous materials. Hazardous construction materials should be disposed of in accordance with WorkSafe NSW and Environment Protection Authority requirements.

Operation

The proposed development relates to a data centre and as such the key waste generation areas will be in the office and administration areas. Generation rates have been adopted based on the commercial waste generation rates (on average) enclosed in the *NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* (2012). These rates are considered appropriate for an industrial development located within the Blacktown LGA. Waste generation rates are shown in **TABLE 39** and calculations are based on a 7 day per week operation for the proposed data centre facility.

TABLE 39: WASTE GENERATION RATES		
Use	Garbage (L/week)	Paper/Cardboard Recycling (L/week)
DC01	1005	754
DC02	947	710
DC03	1010	757

Secure paper recycling will be managed on the office floors at the discretion of the tenants' requirements. Additional smaller waste streams may include toner cartridge recycling and battery recycling.

TABLE 40 details the recommended systems and collection frequencies required to manage the estimated waste volumes for each of the three proposed data centres.

TABLE 40: BIN QUANTITY, SIZE AND FREQUENCY OF COLLECTION							
Waste Stream	Bin Type	No. of Bins/units	Clearance Frequency Per Week	Capacity (L)	Estimated Volume/Week	Footprint per bin (m²)	Total Bin Footprint (m²)
General Waste	MGB - 1100L	1	1	1,100	1,005	1.33	1.33
Mixed Recycling	MGB - 1100L	1	1	1,100	754	1.33	1.33
Total bin footprint							2.66
Recommended Room Size - including circulation space							3.99
Bin room size							18.00



In addition, the following waste streams are unlikely to be generated regularly but can be collected on call as needed:

- E-waste: Collected by facilities management staff and consolidated for collection by specialty e-waste contractor for recycler (usually provided by the appointed waste contractor on an oncall basis).
- Bulky waste: It will be the duty of tenants to inform facilities management staff of any bulky waste that will be required to be removed from site, including material generated during defit/refurbishments.

6.1.18.2 Management and/or Mitigation Measures

The Construction and Demolition Waste Management Plan and the Operational Waste Management Plan have identified internal management protocols to ensure waste is suitably managed as part of the proposed development.

Construction and Demolition

- All site employees and sub-contractors will be required to attend a site-specific induction that will outline the components of waste management procedures for the proposed development and explain the site-specific practicalities of the waste reduction and recycling strategies.
- All employees are to have a clear understanding of which products are being reused/recycled on site and where they are stockpiled. They are also to be made aware of waste reduction efforts regarding packaging.
- If hazardous and/or contaminated wastes are identified on-site during the stages of construction and excavation, the Site Supervisor is to immediately stop all works and contact a qualified hazardous/contaminated waste contractor before continuing all on-site activities.
- The site manager will post educational signage in relation the recycling activities on site in breakout areas and lunchrooms.
- Any disposal and off-site transfer of classified hazardous waste and contaminated materials must be recorded in the Waste Data File and or tracked in accordance with Part 4 of the *Protection of the Environment Operations (Waste) Regulation 2014*.

Operation

- The facility manager will be responsible for overseeing operational waste management within the development.
- The office and administration area tenants will be responsible for separating their waste and recyclables into the correct bin provided on their floor. Tenants will manage the disposal of secure paper through dedicated secure 240L bins on their office floors which be collected by the tenant-managed secure paper contractor.
- Cleaners will be responsible for regular collection of the material in the bin-hubs located on each office floor. They will transfer all material to the waste storage area adjacent to the dock via the goods lift after the close of business each night as part of their daily cleaning activities. All materials will be decanted into the larger bins provided within the waste storage area.
- The main waste and recycling storage room is required to be suitably ventilated to external air or mechanically exhausted in accordance with AS 1668.2-2002.
- The main waste and recycling storage room will be designed with a suitable water supply including a cold tap and hose connection.
- The main waste and recycling storage room will be designed with clear and prominent signage identifying the various streams and appropriate use.



6.1.19 Aboriginal Cultural Heritage

An ACHA has been prepared by Virtus Heritage and is included as **Appendix 27**. Consultation with Aboriginal stakeholders has been completed in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*.

6.1.19.1 Existing Environment

Six Aboriginal cultural heritage sites containing stone artefacts are registered within AHIMS and are located within the project area:

- Southeast Plumpton 6 Rooty Hill (45-5-0483) an artefact scatter, also known as SEP/6. This site was partially salvaged in 2001 under AHIP 941. Kohen (2001) reports part of this site was buried during earthworks.
- Southeast Plumpton 5 (45-5-0456), an artefact scatter, also known as SEP/5. The site was partially salvaged by Kohen in 2001 under AHIP 941. Subsequent artefacts were recorded at and near this site (McDonald 2005, Brown 2008).
- South Plumpton 4 (45-5-0474) an artefact scatter, also known as SEP/4. This site was partially salvaged by Kohen in 2001 under AHIP 941.
- WN1f1 (45-5-2461), an isolated artefact.
- WN2 (45-5-2462), an artefact scatter.
- Glendenning Road 1 (45-5-2776), an artefact scatter.

Over 140 stone artefacts have been recorded in the project area across surveys and salvage surface collections, including artefacts identified during monitoring of earthworks, in cuts, fill and spoil heaps. The southern portion of the project area and its associated ridge line and spur has previously been assessed as having a high likelihood of Aboriginal objects, with archaeological integrity ranging from low to high. Brown (2008) identified the land within 150m of Eastern Creek and 100m from known sites as having archaeological potential.

Archaeological investigations and testing by Jo McDonald (1999, 2001) and salvage by Kohen (2001) indicate that the low ridge line and spur in the project area were part of a much larger site complex once containing culturally modified trees and is thought to have extended from Eastern Creek to the top of the low ridge. This site complex is considered of high archaeological significance and value.

A pedestrian archaeological survey was undertaken on Tuesday 17 September 2024 by representatives of Virtus Heritage. Deerubbin LALC and Darug Custodians Aboriginal Corporation confirmed their attendance prior to fieldwork, however, were unable to attend on the day. An additional site survey was undertaken on 1 October 2024 by representatives of Virtus Heritage, Kamilaroi-Yankuntjatarra Working Group and LCI Consultants. Uncle Steven Randall (Deerubbin LALC) also attended site and shared his knowledge of previous work and many sites in the local area.

Six additional Aboriginal objects were identified within the project area during the archaeological assessment. As with stone artefacts identified within the project area by McDonald (2005) and Brown (2008), the stone artefacts during the survey were identified in areas that had previously been surveyed or salvaged, indicating there remains a high likelihood of Aboriginal objects within parts of the project area that have been heavily disturbed. Revised areas of low, moderate and high archaeological potential were mapped across the project area. This is depicted in **Figure 60**.



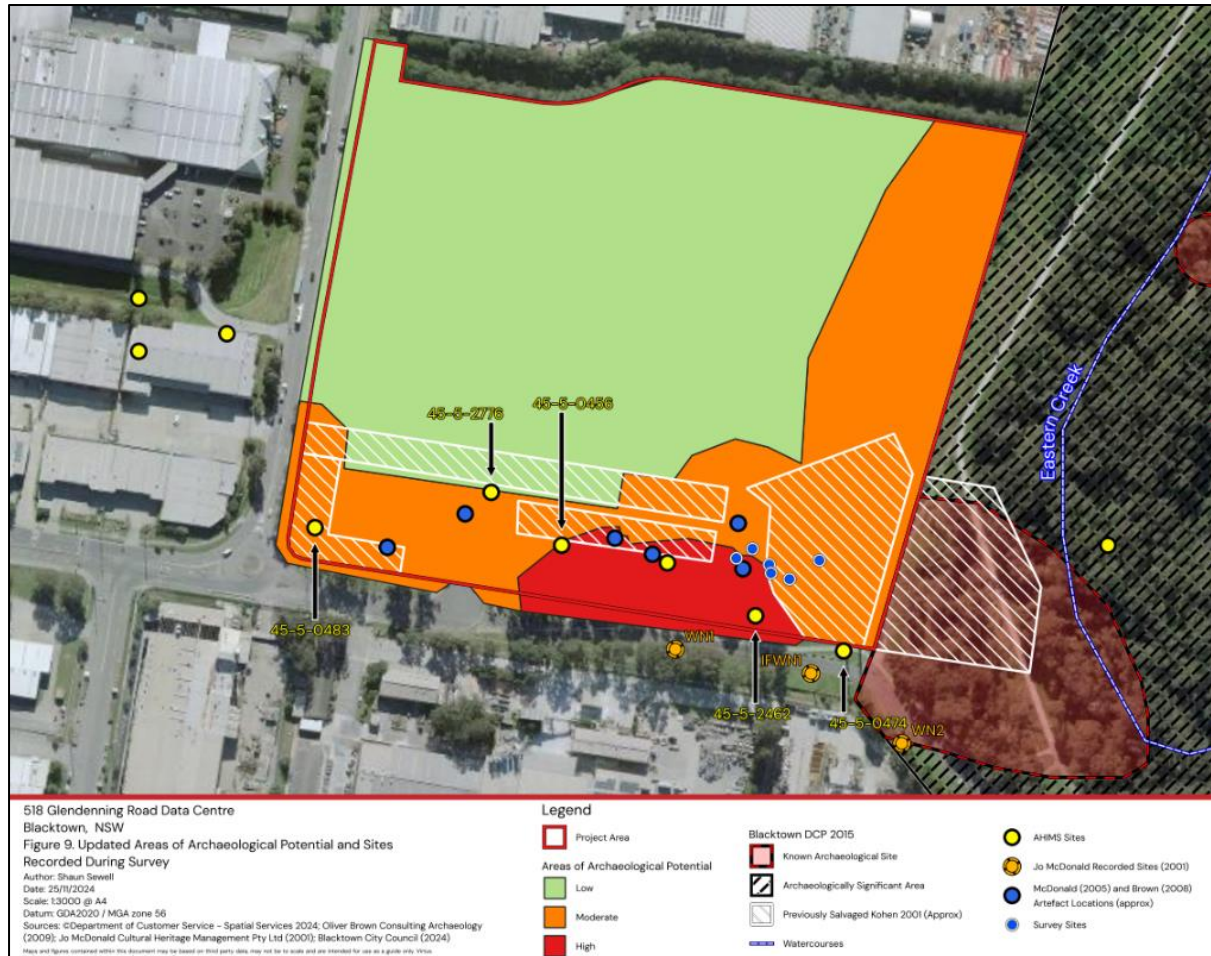


Figure 60. Areas of Archaeological Potential (Source: Virtus Heritage, 2024)

6.1.19.2 Assessment of Impacts

The design of the proposed development has sought to minimise impacts to heritage sites. Buildings, hardstand surfaces and disturbance works have largely been located outside areas of high and medium archaeological potential, where feasible.

Figure 61 identifies the proposed project impacts against the areas of mapped archaeological potential. The areas of high and medium archaeological potential are mostly stormwater and transmission tower easements, and the development includes demolition of an existing building in this area and revegetation with locally occurring plant communities.

Positive aspects of the development and design considerations to avoid areas of heritage value were considered by the Proponent, including re-vegetation and land care. The proposed activity will directly and indirectly impact on known Aboriginal cultural heritage sites and known Aboriginal objects (45-5-0483, 45-5-0456, 45-5-0474, 45-5-2776, 45-5-2461, 45-5-2462) and areas of low, moderate and high archaeological potential. Currently, limited works are proposed in areas of high archaeological potential. It is anticipated this would be limited to fencing, re-vegetation and land care. The proposed activity has the opportunity to create exclusion zones to protect a percentage of land within areas of moderate and high archaeological potential and Aboriginal objects areas (i.e. 45-5-0483, 45-5-0456, 45-5-0474, 45-5-2776, 45-5-2461, 45-5-2462). Areas of moderate potential will be harmed by the extensions to existing pipelines and headwater drain. Management and mitigation measures are required to avoid, minimise and mitigate harm to known and likely Aboriginal objects and heritage values.

Additional sites and areas of archaeological potential are located immediately adjacent the project area (45-5-0475, Blacktown DCP 2015 Known Archaeological site and Area of Archaeological Sensitivity, Area of Archaeological Potential (Brown 2008) and areas of archaeological potential associated with Woodstock Avenue). Proposed works must be managed in order to avoid and minimise impacts to these sites.



Figure 61. Project Impacts (Source: Virtus Heritage, 2024)

6.1.19.3 Management and/or Mitigation Measures

Detailed management options and recommendations are included as part of the ACHA. This includes:

- Development of an Aboriginal Cultural Heritage Management Plan;
- Development of a CEMP; and
- Provide copies of the ACHA to other land users of the project area (for example, Endeavour Energy and Sydney Water).

An Archaeological Research Design and Methodology (ARDM) has also been prepared by Virtus Heritage for the salvage of impacted Aboriginal cultural heritage, methods for recording sites, methods for fencing exclusion zones and the options for repository of salvaged Aboriginal objects. This must be complied with, prior to works commencing and during construction works.

6.1.20 Environmental Heritage

6.1.20.1 Existing Environment

A Statement of Heritage Impact has been prepared by Virtus Heritage and is attached as **Appendix 28**. An Archaeological Assessment is also included at **Appendix 29**.

Searches have determined that there are no statutory or non-statutory listed heritage items in, or in the vicinity of the project area for historical archaeology. However, background archival research has determined that there is potential for historical archaeological resources within the project area. This includes the following:

- **1894 cottage:** A dwelling most likely associated with the pastoral pursuits and orcharding of Walter Lamb and John de Villiers Lamb and may have been a caretakers cottage or home to one of the many families who maintained orchards in the area to supply Lamb's cannery. There is evidence that the former cottage site and associated outbuildings, gardens, fences and features may still be extant within and adjacent to the project area.
- **1909 cottage:** There is also the possibility that a second cottage may have existed in the eastern portion of the subject site, which was home to a Danish immigrant family. While this family may have lived in the original c. 1894 cottage, there is no information available to rule out that a second cottage was built by the immigrant family on the site. Therefore, archaeological resources relating to this cottage may also be extant within the project area.
- **Owens farm:** Numerous sheds and buildings located in the centre of the project area, as seen in maps and aerial photos, have been identified as a farm belonging to the Owen family (c.1918 onwards). There is archival evidence suggesting it was used for poultry production, which was a common form of small-scale agriculture practiced in Rooty Hill in the early twentieth century. Features relating to the Owen family farm may still be extant within the project area.

The potential areas for the above heritage items are identified in **Figure 62** below.





Figure 62. Historic Heritage Potential (Source: Virtus Heritage, 2024)

6.1.20.2 Assessment of Impacts

The proposed development may have an adverse impact to the identified heritage values of potential relics relating to three historical items (c.1894 cottage, c.1909 cottage and the Owen farm), if extant. The development will involve earthworks and construction across the area identified as the site of the former Owen farm and the potential area of the c.1909 cottage. Fence construction, at a minimum, and other additional earthworks for clearing and site establishment may impact in the vicinity of the c.1894 cottage, if extant. Fence construction will include piling to an approximate depth of 1.3m or greater if infrastructure is placed in this area. Therefore, adverse impacts will occur to any potential relics in this area, if extant.

6.1.20.3 Management and/or Mitigation Measures

Prior to project works commencing, it is recommended that an archaeological test excavation is undertaken to determine the presence of relics. This would be carried out under a section 139(4) excavation permit exception as provided by the *Heritage Act 1977*. Exception 2(d) allows for the archaeological testing of relics of local heritage significance, with the condition that state-significant relics will not be impacted.

6.1.21 Social Impact

Ethos Urban has prepared a Social and Economic Impact Assessment (SIA) in response to the SEARs, which is appended in **Appendix 30** of this EIS.

6.1.21.1 Assessment of Impacts

The assessment of social impacts has been prepared in accordance with the DPE's *Social Impact Assessment Guidelines for State Significant Projects* (2023) (SIA Guideline). The SIA involves the analysis of social changes and impacts on communities that are likely to occur as a result of a particular development. The SIA has been based on the information available to date, and is a desktop study, informed by a review and analysis of available documents relevant to the proposal and community and stakeholder engagement outcomes. **TABLE 41** provides a summary of the evaluation of social impacts identified within the SIA. Evaluation of impacts is calculated through the identification of the likelihood of impact and the magnitude of impact.

TABLE 41: EVALUATION OF SOCIAL IMPACTS		
Area of influence	Details	Evaluation of impact
Construction and Operation		
Livelihoods	The construction of the proposed data centres will increase the quantity of local employment opportunities temporarily. This will improve access to and availability of local jobs, and potentially increase the viability nearby businesses. The ongoing operation of the data centres will also increase availability of jobs.	Likely + Moderate = High
Way of life/ Accessibility/ Surroundings	Establishment of a construction site, generating noise, dust, vibration, and traffic. This may result in congestion of roads, increased travel times, inconvenience, and frustration for surrounding residents, workers, and visitors. Dust and odour generated by construction activities have the potential to impact health and wellbeing by exacerbating respiratory conditions and reducing enjoyment of outdoor activities. It is noted that the site is currently being used for warehousing and logistics and therefore there is existing vehicle movements to the site.	Possible + Minor = Medium
Operation		
Accessibility	The proposal will contribute to the ongoing demand for data centres which are becoming increasingly important in enabling our digital lives and critical business and employment.	Almost Certain + Major = Very High
Community/ Surroundings	Potential changes to local character, due to increased density on site and visual impact.	Likely + Moderate = High

6.1.21.2 Management and/or Mitigation Measures

The SIA has recommended specific mitigation/enhancement measures for this project as well as additional recommendations for consideration by the project to enhance the social benefit delivered by the project:

- Future preparation of a CEMP should contain measures to effectively communicate and engage with the surrounding community to minimise disruption, including notification requirements for periods of high impact, key contacts for enquiries and a complaints



management process. The CEMP should consider the cultural and linguistically diverse profile of the local community profile.

- Implement an Operational Plan of Management which includes monitoring of operational impacts, including operational vehicle movements, noise including managing noise non-compliance in periods of bad weather, urban heat and air pollution as well as key contacts for enquiries and a complaints management process.

Furthermore, the following are additional recommendations for consideration by the project to enhance the social benefit delivered by the project:

During Construction:

- To promote local economic benefit, efforts should be made to try and procure local employees during the construction phase of the development. Further social procurement principles could be considered to amplify social impact e.g. include and employ trainees and underrepresented groups, for example, women in construction and First Nations people.

During Operation:

- Future operator of the subject site to consider having programs in place to expand STEM education in their communities with local schools or tertiary education.
- Future operator to consider community-based investments such as improving connectivity and enhancing digital connectivity for rural areas and support for small businesses.
- To promote local economic benefit, efforts should be made to try and procure local employees during the operational phase of the development. Further social procurement principles could be considered to amplify social impact (e.g. include and employ trainees and underrepresented groups).

6.1.22 Infrastructure Requirements and Utilities**6.1.22.1 Existing Environment**

The existing infrastructure at the subject site is documented within **TABLE 3** and outlined in detail in the Infrastructure, Delivery, Management and Staging Plan attached as **Appendix 31** of this EIS.

6.1.22.2 Assessment of Impacts

The proposed infrastructure servicing is detailed within **Section 3.7** and outlined in detail in the Infrastructure, Delivery, Management and Staging Plan attached as **Appendix 31** of this EIS. This confirms that the proposed development can be adequately serviced by electricity, telecommunications, water and wastewater.

6.1.23 Bush Fire Risk

The subject site is mapped as designated bush fire prone land by Blacktown Council and is located within 100m of bush fire prone (hazardous) vegetation. **Figure 63** identifies the portion of the subject site designated as bush fire prone land.



Figure 63. Bushfire Prone Land Mapping (Source: NSW Spatial Viewer, 2024)

6.1.23.1 Assessment of Impacts

Bushfire Consulting Services has prepared a Bushfire Assessment Report in response to the SEARs, which is appended in **Appendix 32** of this EIS. The Bushfire Assessment Report recommends the following bushfire measures for the proposed development which are based upon the relevant provisions of the *Planning for Bush Fire Protection 2019* (PBP), as set out below:

- **Asset Protection Zones:** At the commencement of the development, and in perpetuity, the lot shall be managed as an Inner Protection Area Asset Protection Zone from the Data Centres, Fire Pump Room, Water Tanks and Fuel Point for a distance of 12m to the north, east, south and west.
- **Water Supply:** A 20,000 litre static water supply is to be available for firefighting purposes and suitable fittings sufficient to enable firefighting. The tank is to be concrete or metal and all exposed water pipes external to the building are metal, including any fittings. A Static Water Supply marker should be obtained from the Rural Fire Service and displayed in a prominent position at the front gate.
- **Electricity and Gas Services:** Where practicable, electrical transmission lines are underground. Where applicable, reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used. All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side, connections to and from gas cylinders are metal. Polymer-sheathed flexible gas supply lines are not used, and above-ground gas service pipes are metal, including and up to any outlets.
- **Storage of Hazardous Materials:** Wherever possible, the storage of hazardous materials will be away from the hazard.

- **Emergency and Evacuation Planning:** The need to formulate an emergency evacuation plan is suggested.

The relevant objectives of the PBP are addressed in **TABLE 42** below:

TABLE 42: COMPLIANCE WITH PBP	
Objective	Comment
Objectives of Chapter 1 (PBP Part 1.1)	
Afford buildings and their occupants protection from exposure to a bush fire	The building is separated from the hazard by a minimum of 12m in all directions. This non-habitable structure is separated from the hazard by sufficient distance which affords buildings and their occupants protection from exposure to a bush fire.
Provide for a defensible space to be located around buildings.	A defensible space of at least 10-12m is proposed around the buildings, which meets the requirements of PBP.
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings.	The available separation distance between the building and the hazard of 10-12m, is consistent with the minimum distance for APZs for the fuel type and slope, indicating that direct flame contact on the building is not anticipated.
Ensure that appropriate operational access and egress for emergency service personnel and occupants is available.	Can comply as road widths, curvatures and grades and swept paths enable appropriate operational access and egress for emergency service personnel and occupants.
Provide for ongoing management and maintenance of BPMs.	Normal property maintenance will ensure that Bushfire Protection Measures are maintained.
Ensure that utility services are adequate to meet the needs of firefighters.	Can comply, see above.
Objectives of Chapter 8 (PBP Part 8.3.1)	
Provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation	Can comply, the proposal will have vehicular access via three (3) vehicles crossings off Glendenning Road. The northern vehicle crossing will be available to emergency vehicles. Internal access provides a minimum road width of approximately 6m, with hard surfaces around the development, sufficient for fire trucks and other emergency vehicles to enter and egress the lot in a forwards direction. Suitable access for fire-fighting vehicles and evacuation is available.
Provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development	Can comply, the need to formulate an emergency evacuation plan is suggested.
Provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building	Can comply, the development includes provision of fifteen water tanks and has a reticulated water supply, which meets PBP requirements for a firefighting water supply. The tanks are located on a hardened ground surface for truck access, within 4m of the access hole. The tanks are to be concrete or metal and all exposed water pipes external to the building are metal, including any fittings, above-ground water storage tanks shall be of concrete or metal. Where practical, electrical transmission lines are underground. If applicable, reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP



TABLE 42: COMPLIANCE WITH PBP

Objective	Comment
	Gas, the requirements of relevant authorities, and metal piping is used, all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side, connections to and from gas cylinders are metal, polymer-sheathed flexible gas supply lines are not used, and above-ground gas service pipes are metal, including and up to any outlets.
Provide for the storage of hazardous materials away from the hazard wherever possible	Can comply, as wherever possible, the storage of hazardous materials will be away from the hazard

6.1.24 Construction, Operation and Staging

Details of construction, operation and staging are outlined in **Section 3.5** of this EIS.

6.1.25 Contributions and Public Benefit

The *Contribution Plan No. 1 - Plumpton, Rooty Hill & Minchinbury Release Area* is applicable to the subject site. An estimate was requested from Blacktown City Council, and they advised:

"Section 7.11 contributions have been levied and paid under previous applications for the full, subject site and therefore, no S7.11 contributions are payable for the proposed development."

Pursuant to the *Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2023*, industrial development is levied at \$15.80 per square metre of GFA (as of 1 October 2024). It is acknowledged that these costs are indexed per quarter and would be charged once development consent is granted by the consent authority. The proposed GFA is as follows:

- 50,233m² of industrial GFA

It is acknowledged that the contributions relate to new GFA, and therefore the existing development on the subject site will receive a credit.

6.1.26 Engagement

A detailed engagement plan was developed in consultation with the proponent and in line with the NSW's *Undertaking Engagement Guidelines for State Significant Projects*. This is attached as **Appendix 33** and summarised in **PART 5** and **Appendix C** of this EIS.

6.2 CUMULATIVE ASSESSMENT

6.2.1 Cumulative Visual Analysis

Visual effects of the proposed development have been discussed in detail in **Section 6.1.5** of this EIS. There are no further developments in close proximity to the subject site under assessment that need to be considered with regard to cumulative visual effects.

6.2.2 Cumulative Traffic Analysis

Additional traffic arising from the proposed development has been assessed at **Section 6.1.6** of this EIS and it has confirmed that the surrounding intersections have capacity to cater for the proposed development. There are no major projects currently under assessment by NSW DPHI that need to be considered as part of the traffic modelling.



As such, it is concluded that the proposal will have no material impact on the future operation of the external road network.

6.2.3 Cumulative Noise and Vibration Analysis

Cumulative Construction Noise Impacts

Construction noise from multiple sites has the potential to increase noise at sensitive receiver locations. Dependent on the nature of the work, multiple construction sites have the potential to:

- Increase overall noise levels by as much as 3dB greater than noise from the loudest site; and/or
- Impact sensitive receivers by generating noise on multiple sides of the property simultaneously.

Both of these impacts can increase the annoyance from construction activities. At the planning stage of the project, it is very difficult to determine the likelihood of impacts. Specific timing and noise impacts from this project can be estimated, but cannot be confirmed until a contractor has been appointed and the construction methodology and programme confirmed.

This project is currently unaware of other planned construction works that may occur at the time of this proposal, however this does not rule out the potential for cumulative noise impacts. The chance of simultaneous construction projects is potentially likely due to the geographic location of the development site (multiple adjacent industrial development lots).

The uncertainty highlights the importance of the contractors CNVMP. Construction works from other projects should be identified during the establishment of this plan, and management strategies established to minimise the potential impacts of the surrounding community. The plan will require:

- Consultation with other projects to confirm their construction schedules,
- Identification of the potential of cumulative noise and vibration impacts,
- A plan to establish how these impacts would be managed on an ongoing basis; and
- A communication strategy to provide notifications to the surrounding community.

Cumulative Operational Noise Impacts

In the designation of the operational project noise trigger levels, the NPfI requires the consideration of intrusiveness and amenity levels.

The intrusiveness level considers the existing noise environment, with existing noise generating sources active. The background noise level is measured, and the intrusiveness set 5dB above this level. For this project the intrusiveness level was not used to establish the operational noise criteria. The amenity noise level establishes noise targets for different areas and the project specific amenity noise criteria for the project specific noise trigger levels. The final design predicted site operational noise impacts of the data centre campus have been established to range from 6 – 20 dB below the existing ambient noise level for the worst-case operational scenario (residential receivers).

In summary, cumulative operational noise levels have been considered throughout the development of the project noise trigger levels by basing the noise trigger levels on:

- The existing noise generated by operational industrial noise (the intrusiveness level); and
- The potential for future developments to generate noise (the amenity noise level)

Further consideration of the potential for cumulative noise impacts is therefore not required.



6.2.4 Cumulative Air Quality Analysis

10 facilities have been identified as having the potential for cumulative impacts with the proposed development having regard to air quality, based on applicable separation distances and as shown in **TABLE 43**.

TABLE 43: FACILITIES SCREEN FOR POTENTIAL CUMULATIVE AIR EMISSION IMPACTS				
Facility Name	Location	Category	Separate Distance Guidelines (m)	Approximate Distance from Boundary (m)
Humes Blacktown	604 Woodstock Avenue, Rooty Hill	Concrete manufacturing	100	50
Rooty Hill Materials Recycling Facility	600 Woodstock Avenue, Rooty Hill	Materials recycling	300	50
Rooty Hill Regional Distribution Centre	21 Kellogg Road, Rooty Hill	Process and distribution of construction materials	300	280
InfraBuild Steel Mill	22 Kellogg Road, Rooty Hill	Steel manufacturing including casting	1,000	340
Pacmetal Services	194 Power Street, Glendenning	Metal coating	200	410
Independent Cement	200 Power Street, Glendenning	Cement or lime handling	500	520
Cleanaway Industries Pty Ltd	6/8 Rayben Street, Glendenning	Liquid waste facility	500	920
Glendenning Liquid Waste Facility	7 Rayben Street, Glendenning	Liquid waste facility	500	920
Minchinbury Community Hospital	120 Rupertswood, Rooty Hill	Hospital	-	3,035
Marsden Park Data Centre	105 & 113 Hollinsworth Road, Marsden Park	Data centre	-	4,050

While some facilities' separation distance buffers do not extend to the subject site boundary, they may still impact common sensitive receptors and have been assessed accordingly. This includes the Marsden Park Data Centre and Minchinbury Community Hospital, which lack specific separation distance guidelines, but have been included due to their relevance i.e. Marsden Park Data Centre for the similar operational characteristics and Minchinbury Community Hospital for the high level of sensitivity of land uses.

The Minchinbury Community Hospital is a private facility offering surgical, rehabilitation, and mental health services. It is currently seeking approval for an expansion that includes a new eight-story building and ancillary works. While construction activities may cause short-term air quality impacts (e.g. dust), the UK Institute of Air Quality Management (IAQM) construction dust assessment methodology assesses such impacts within a conservative 250m radius of the subject site. Operational emissions associated with the Minchinbury Community Hospital have not yet been assessed, as this project is in the early stages of planning. It is unclear whether standby diesel generators will be required to supply heat and power demand during a power outage event, but it is potentially likely that such provisions will be provided. Given that the subject site is approximately 3km from the Minchinbury Community Hospital, cumulative impacts from both construction and operation activities are unlikely. The developments at Minchinbury Community Hospital and the subject site are anticipated to implement

mitigation measures to manage air quality risks during construction, ensuring no significant cumulative risks to surrounding sensitive areas.

Although an AQIA is expected to be carried out to inform planning and ensure appropriate emission control measures to be applied, the distance between the Minchinbury Community Hospital and the subject site makes it unlikely to pose a cumulative air quality risk.

The Marsden Park Data Centre is seeking approval for a 504MW data centre located approximately 4km from the subject site. Given this distance, any cumulative air quality impacts on surrounding sensitive areas near the subject site are likely to be limited. Nonetheless, due to the nature of operations for both sites i.e. data centres, the AQIA conducted for the Marsden Park Data Centre (Todoroski Air Sciences, 2024) has been reviewed. The AQIA found that routine generator testing resulted in incremental increases of less than $0.1 \mu\text{g m}^{-3}$ for 24-hour average PM_{10} and $\text{PM}_{2.5}$ during annual testing, and less than $1.5 \mu\text{g m}^{-3}$ during monthly testing activities. Additionally, 1-hour average NO_2 concentrations remained below the respective criteria at the considered receptors. These conservative scenarios assumed continuous generator operation from 9:00am to 4:00pm over the entire modelling year, which is an unlikely occurrence, and the closest receptor relative to the subject site is over 3.5 km away. Consequently, cumulative impacts from the Marsden Park Data Centre are unlikely during operations.

The remaining eight facilities, which have established separation distances, have been further assessed for their potential cumulative air emissions impacts with the subject site. Their locations, distances to the subject site and receptors, and the influence of prevailing wind conditions. The day-to-day operational emissions from the subject site are expected to be minimal, except for potential emissions from diesel-fuelled backup generators during maintenance testing or during a power outage event. Operational emission impacts have therefore been assessed only for these scenarios.

The evaluation covers both short-term (24-hour PM_{10} and $\text{PM}_{2.5}$ and 1-hour NO_2) and long-term (annual) impacts for NO_2 , TSP, PM_{10} and $\text{PM}_{2.5}$ for the maintenance testing scenario (Scenario 2), and short-term impacts only for the worst-case scenario (Scenario 1) i.e. when a power outage event occurs, as per the scenarios in the modelling assessment.

The cumulative impact assessment considers sources that may jointly impact sensitive receptors, using conservative separation distances as buffers between facilities and sensitive land uses. Additionally, to evaluate the potential cumulative impacts, the emission profiles of each facility were reviewed to identify overlaps in emissions between these facilities and the subject site. The review found that the identified facilities generate varying scales of emissions including NO_2 , TSP, PM_{10} and $\text{PM}_{2.5}$, which coincide with emissions of concern from the subject site, but at different operational parameters and activity rates.

Since the surrounding area around the subject site is predominantly industrial, a lower level of sensitivity would be deemed appropriate given that any relevant exposure would occur during working hours and limited occupancy across the day. Although residential areas are situated to the east and west, with the closest residential receptor sited approximately 400m to the west, predominant north-easterly and south-westerly prevailing winds occur. Correspondingly, the areas in these wind directions are most likely to experience air emission impacts. Consequently, significant annual impacts are unlikely, though short-term impacts from 1-hour NO_2 and 24-hour PM_{10} and $\text{PM}_{2.5}$ may arise.

6.2.5 Cumulative Hazard Analysis

The Preliminary Risk Screening undertaken by Acor Consultants has concluded that the proposed storage and handling of dangerous goods does not exceed the relevant risk screening thresholds pertaining to the Resilience and Hazards SEPP. Therefore, off-site impacts are not expected to occur, and cumulative risks are not considered further.

6.3 PLANNED MANAGEMENT AND MITIGATION MEASURES

LCI Consultants plans to undertake the construction and operation of the proposed data centre, in accordance with the planned management and mitigation measures outlined within **Appendix E** of this EIS.



PART 7 JUSTIFICATION OF THE PROJECT

7.1 JUSTIFICATION

The proposed development is justified on environmental, social and economic grounds and is compatible with the locality in which it is proposed. The proposed development would enhance the subject site from an otherwise outdated landholding to a productive employment generating facility.

This EIS is submitted on the following basis.

7.1.1 Supports State, Regional and Local Planning Objectives

The proposed development is consistent with the objectives, provisions and vision contained within *A Metropolis of Three Cities – Greater Sydney Region Plan*; the *Central District Plan*; and BLEP 2015. The proposal would contribute to employment generation in an area already earmarked for employment through both State and Regional planning policies.

Data centres are critical infrastructure for supporting secure regional and national government and businesses. The proposed development aligns with the Greater Sydney Commission's standards, objectives, and priorities. Additionally, it offers several advantages, including facilitating a distributed work model, reducing travel distances and associated costs for local workers, creating new employment opportunities, and contributing to the local economy through job creation near residential areas.

7.1.2 Demonstrates an Appropriate Use of a Permissible Development

The proposed development would retain and contribute to the growth of new industry for the immediate locale and the wider region. The proposed development would be a highly appropriate and compatible (given its contiguousness to other existing industrial developments) response to the strategic goals and objectives of the whole region as set out in *A Metropolis of Three Cities – Greater Sydney Region Plan* and the *Central District Plan*, which all envisage employment-generating land uses at this location.

The permissibility of the subject site for development as three data centre buildings, and associated infrastructure is prescribed by the BLEP 2015, which describes such development as permitted with consent in the E4 General Industrial zone. Furthermore, pursuant to Section 2.31 of the Transport and Infrastructure SEPP, development for the purposes of data centres is permitted with consent in the E4 General Industrial zone which is a prescribed zone for the purposes of this section.

7.1.3 Minimises Environmental Impacts

Specialist consultants have assessed the potential impacts of the proposed development, determining that it could be undertaken with minimal environmental impacts. The commissioned reports (as listed in **Section 1.4**) have collectively concluded that no significant risk to the locality would result from the proposed development. Where impacts have been identified, these fully-developed strategies are set out in detail for management and mitigation. These measures are described in **Appendix E** of this EIS.

7.1.4 Creates Compatibility with Surrounding Development

Although the development is larger in scale to existing developments, the proposal includes significant setbacks to mitigate the scale at a local level. This comprises the following:

- Glendenning Road (west): 44m – 51.5m
- Woodstock Avenue (south): 103m – 125m
- Nurragingy Reserve (east): 40m – 58.5m



- Drainage Reserve (north): 13m - 27m

To further mitigate the bulk and scale, the proposal includes a landscaped setback along Glendenning Road with a width of 15m – 20m. At Woodstock Avenue, the area of the demolished building would be revegetated with tree, shrub, herb and groundcover species. As this frontage is the gateway to the Western Parklands, it will assist in softening the building and providing a connection to the tree canopy of the Nurraging Reserve.

It is acknowledged that the buildings will introduce a new visual element to the landscape when viewed from surrounding areas. The architectural design incorporates a thoughtfully chosen colour palette and materials that harmonise with the surrounding environment. Different panels have been included to provide interest on the façade, including patterns that draw inspiration from the Nurraging Reserve. The generators have also been suitably screened through the use of louvres.

7.1.5 Delivers Ecologically Sustainable Development

The principles of ESD as outlined in Clause 193 of the EP&A Regulation have been carefully considered in the formulation of this proposal and are addressed as follows:

7.1.5.1 Precautionary Principle

After careful assessment by both the project team and expert consultants, it is concluded that no unmanageable threat or irreversible damage to the environment, would result from the proposed development. The Proponent will implement a site-specific environmental management plan during construction that will minimise environmental impacts by implementing best practice processes and procedures.

7.1.5.2 Inter-generational Equity

The project team and expert consultants have examined the overall effects of the proposed development, on both the natural environment and the existing built environment within the vicinity of the subject site. The project prioritises mitigating its impact on future generations. It employs strategies to minimise Greenhouse Gas emissions, reduce non-renewable resource use and toxic chemicals, manage water responsibly, and restore native ecosystems where possible.

This detailed assessment has concluded that 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. The proposed development would improve the status of the subject site and contribute to the economies of the region through both substantial investment and new employment, thereby improving the inter-generational equity.

7.1.5.3 Conservation of Biological Diversity and Ecological Integrity

The proposed development has been carefully designed and sited to minimise impacts to the existing native vegetation. Appropriate mitigation and managements measures are proposed to maintain sufficient biological diversity and ecological integrity. Offset credit obligations will be satisfied prior to the construction of the proposed development.

7.1.5.4 Improved Valuation, Pricing and Incentive Mechanisms

The proposed development would enable operational efficiencies for the end user, through the provision of tailored design outcomes.

The Proponent has an organisational commitment to carbon neutrality, which has driven the incorporation of significant carbon reduction measures for this project, in design, construction and



material elections. The procurement of 100% offsite renewable electricity via power purchasing agreements (PPAs) by 2025 will investment in renewable energy infrastructure.

7.1.5.5 Environmental Management

The proposed development implements significant and elaborate measures that avoid, contain and address any possible air quality, noise, waste and pollution impacts, through avoidance, better design and management. This is exemplified through the measures, which would be implemented throughout both the construction and operational phases of the proposed development, outlined within **PART 6** of this EIS.



APPENDIX A
SEARS TABLE



SEARS TABLE

Glendenning Road Data Centre
2 Glendenning Road, Glendenning (Lot 2 DP1137162)

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HOW THE SEARS HAVE BEEN SATISFIED	
Issue and Assessment Requirements	Satisfied by
1. Statutory and strategic context	
Address all relevant legislation, environmental planning instruments (EPIs) (including drafts), plans, policies and guidelines.	Refer to PART 4 of this EIS.
Identify compliance with applicable development standards and provide a detailed justification for any non-compliances.	Refer to Appendix C of this EIS.
Provide an explanation of how the development as described in the EIS is consistent with the development as described in the request for SEARs (including any components that were not SSD) and provide a justification for any differences.	Refer to PART 4 of this EIS.
Address the requirements of any approvals applying to the site, including any concept approval or recommendation from any Gateway determination.	N/A – there are no concept approvals or gateway determinations that apply to the subject site.
2. Estimated Development Cost and Employment	
Provide the estimated development cost (EDC) of the development prepared in accordance with the relevant planning circular using the Standard Form of EDC Report.	Refer to Section 1.5 and Appendix 2 of this EIS.
Provide an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided.	Refer to Section 1.6 and Appendix 2 of this EIS.
3. Design Quality	
- Demonstrate how the development will achieve: - design excellence in accordance with any applicable EPI provisions. - good design in accordance with the seven objectives for good design in Better Placed.	There are no provisions within an EPI that require the development to achieve design excellence. Refer to Section 6.1.3 and Appendix 5 of this EIS.
Where required by an EPI or concept approval, demonstrate how the development has been subject to a competitive design process or reviewed by the State Design Review Panel (SDRP). Recommendations are to be addressed prior to lodgement.	N/A – the proposed development is not subject to a competitive design process, nor is it required to be reviewed by the SDRP.
4. Built Form and Urban Design	
Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.	Refer to Section 6.1.4, Appendix 4, Appendix 5 and Appendix 6 of this EIS.
Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.	Refer to Section 6.1.4, Appendix 4 and Appendix 5 of this EIS.
Demonstrate how the building design will deliver a high-quality development, including consideration of façade	Refer to Section 6.1.4, Appendix 4 and Appendix 5 of this EIS.



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design, articulation, materials, finishes, colours, any signage and integration of services.	
Assess how the development complies with the relevant accessibility requirements.	Refer to Section 6.1.4, Appendix 7 and Appendix 8 of this EIS.
5. Visual Impact	
Provide a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed and likely future development.	Refer to Section 6.1.5 and Appendix 9 of this EIS.
Where the visual analysis has identified potential for significant visual impact, provide a visual impact assessment that addresses the impacts of the development on the existing catchment.	Refer to Section 6.1.5 and Appendix 9 of this EIS.
6. Traffic, Transport and Accessibility	
- Provide a transport and accessibility impact assessment, which includes: - details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access and haul routes. - an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts on existing performance levels of nearby intersections (using industry standard modelling); - plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network. - details and plans of any proposed internal road network, loading dock provision and servicing, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards. - swept path analysis for the largest vehicle requiring access to the development. - details of road upgrades, infrastructure works, or new roads or access points required for the development if necessary.	Refer to Section 6.1.6 and Appendix 10 and of this EIS.
Provide a Construction Traffic Management Plan detailing predicted construction vehicle movements, routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated.	Refer to Section 6.1.6 and Appendix 11 of this EIS.
7. Trees and Landscaping	
- Provide a detailed site-wide landscape plan, that: - identifies the number and location of trees to be removed and retained, and how opportunities to retain significant trees have been explored and/or informs the plan.	Refer to Section 6.1.7, Appendix 12 and Appendix 13 of this EIS.



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– details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage. – demonstrates how the proposed development would: - o contribute to long term landscape setting in respect of the site and streetscape. - o mitigate the urban heat island effect and ensure appropriate comfort levels on-site. - o contribute to the objective of increased urban tree canopy cover. - o maximise opportunities for green infrastructure, consistent with Greener Places.	
8. Ecologically Sustainable Development (ESD)	
▪ Identify how ESD principles (as defined in clause 7(4) of Schedule 2 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development.	Refer to Section 6.1.8 and Appendix 14 of this EIS.
▪ Demonstrate how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards.	Refer to Section 6.1.8 and Appendix 14 of this EIS.
▪ Demonstrate how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.	Refer to Section 6.1.8 and Appendix 14 of this EIS.
▪ If Chapter 3 of SEPP (Sustainable Buildings) 2022 applies: - o Demonstrate how the development has been designed to address the provisions set out in Chapter 3.2(1). - o Provide a NABERS Embodied Emissions Material Form to disclose the amount of embodied emissions attributable to the development in accordance with section 35B of the EP&A Regulation.	Refer to Appendix C, Appendix 14 and Appendix 15 of this EIS.
9. Biodiversity	
▪ Assess any biodiversity impacts associated with the development in accordance with the <i>Biodiversity Conservation Act 2016</i> and the <i>Biodiversity Assessment Method 2020</i>, including the preparation of a Biodiversity Development Assessment Report (BDAR), unless a waiver is granted, or the site is on biodiversity certified land.	Refer to Section 6.1.9 and Appendix 16 of this EIS.
▪ If the development is on biodiversity certified land, provide information to identify the site (using associated mapping) and demonstrate the proposed development is consistent with the relevant biodiversity measure conferred by the biodiversity certification.	N/A – the subject site is not biodiversity certified land.
10. Back-up Power System	
▪ Provide a detailed overview of any proposed back-up power system, including the scale and capacity of the system, and any associated testing procedures (frequency and duration).	Refer to Section 6.1.10 and Appendix 31 of this EIS.



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Provide a detailed justification of the proposed back-up power system including alternatives considered.	Refer to Section 6.1.10 and Appendix 31 of this EIS.
11. Air Quality	
Provide an assessment of air quality impacts, prepared in accordance with the relevant NSW Environment Protection Authority (EPA) guidelines. The assessment must address construction works and include modelling of emissions and air pollutants from predicted operations (including testing of the back-up power system) and a peak emission and air pollutant scenario, and outline the proposed mitigation, management and monitoring measures that would be implemented.	Refer to Section 6.1.11 and Appendix 17 of this EIS.
12. Noise and Vibration	
Provide a noise and vibration assessment prepared in accordance with the relevant EPA guidelines. The assessment must detail construction and operational noise and vibration impacts on nearby sensitive receivers and structures and outline the proposed management and mitigation measures that would be implemented.	Refer to Section 6.1.12 and Appendix 18 of this EIS.
13. Ground and Water Conditions	
Assess potential impacts on soil resources and related infrastructure and riparian lands on and near the site, including soil erosion, salinity and acid sulfate soils.	Refer to Section 6.1.13 and Appendix 19 of this EIS.
- Provide a Surface and Groundwater Impact Assessment that assesses potential impacts on: - surface water resources (quality and quantity) including related infrastructure, hydrology, dependent ecosystems, drainage lines, downstream assets and watercourses. - groundwater resources in accordance with the <i>Groundwater Guidelines</i>.	Refer to Section 6.1.13 and Appendix 19 of this EIS. An Acid Sulfate Soils Management Plan is not required, and a Salinity Management Plan is included as part of the Geotechnical Assessment at Appendix 19 of this EIS.
14. Water Management	
- Provide an Integrated Water Management Plan for the development that: - is prepared in consultation with the local council and any other relevant drainage or water authority. - outlines the water-related servicing infrastructure required by the development (informed by the anticipated annual and ultimate increase in servicing demand) and evaluates opportunities to reduce water demand (such as recycled water provision). - details the proposed drainage design (stormwater and wastewater) for the site including any on-site detention facilities, water quality management measures and nominated discharge points, on-site sewage management, and measures to treat, reuse or dispose of water. - demonstrates compliance with the local council or other drainage or water authority requirements and avoids adverse downstream impacts.	Refer to Section 6.1.14 and Appendix 20 of this EIS.



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Where water and drainage infrastructure works are required that would be handed over to the local council, or other drainage or water authority, provide full hydraulic details and detailed plans and specification of proposed works that have been prepared in consultation with, and comply with the relevant standards of, the local council or other drainage or water authority.	Refer to Section 6.1.14 and Appendix 20 of this EIS.
15. Flood risk	
Identify any flood risk on-site having regard to adopted flood studies, the potential effects of climate change, and any relevant provisions of the <i>NSW Flood Risk Management Manual</i>.	Refer to Section 6.1.15 and Appendix 21 of this EIS.
Where the development could alter flood behaviour, affect flood risk to the existing community or expose its users to flood risk, provide a flood impact and risk assessment (FIRA) prepared in accordance with the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01.	Refer to Section 6.1.15 and Appendix 21 of this EIS.
Detail design solutions and operational procedures to mitigate flood risk where required.	Refer to Section 6.1.15 and Appendix 21 of this EIS.
16. Hazards and Risks	
Where there are dangerous goods and hazardous materials associated with the development provide a preliminary risk screening in accordance with Chapter 3 of SEPP (Resilience and Hazards) 2021.	Refer to Section 6.1.16 and Appendix 22 of this EIS.
Where required by SEPP (Resilience and Hazards) 2021, provide a Preliminary Hazard Analysis prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis and Multi-Level Risk Assessment</i>.	Refer to Section 6.1.16 and Appendix 22 of this EIS.
If the development is adjacent to or on land in a pipeline corridor, report on consultation outcomes with the operator of the pipeline, and prepare a hazard analysis.	N/A – the subject site is not adjacent to or on land in a pipeline corridor.
17. Contamination and Remediation	
In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Refer to Section 6.1.17 and Appendix 23 of this EIS.
18. Waste Management	
Identify, quantify and classify the likely waste streams to be generated during construction and operation.	Refer to Section 6.1.18 and Appendix 25 of this EIS.
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	Refer to Section 6.1.18 and Appendix 25 of this EIS.
Identify appropriate servicing arrangements for the site.	Refer to Section 6.1.18 and Appendix 25 of this EIS.
If buildings are proposed to be demolished or altered, provide a hazardous materials survey.	N/A – Demolition is not proposed as part of this application.
19. Aboriginal Cultural Heritage	



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Provide an Aboriginal Cultural Heritage Assessment Report prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts for any Aboriginal cultural heritage values on the site.	Refer to Section 6.1.19 and Appendix 26 of this EIS.
20. Environmental Heritage	
Where there is potential for direct or indirect impacts on the heritage significance of environmental heritage, provide a Statement of Heritage Impact and Archaeological Assessment (if potential impacts to archaeological resources are identified), prepared in accordance with the relevant guidelines, which assesses any impacts and outlines measures to ensure they are minimised and mitigated.	Refer to Section 6.1.20, Appendix 28 and Appendix 29 of this EIS.
21. Social Impact	
Provide a Social Impact Assessment prepared in accordance with the <i>Social Impact Assessment Guidelines for State Significant Projects</i>.	Refer to Section 6.1.21 and Appendix 30 of this EIS.
22. Infrastructure Requirements and Utilities	
- In consultation with relevant service providers: - assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site. - identify any infrastructure upgrades required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained. - provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.	Refer to Section 6.1.22 and Appendix 31 of this EIS.
23. Bush Fire Risk	
If the development is on bush fire prone land, provide a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection.	Refer to Section 6.1.23 and Appendix 32 of this EIS.
24. Construction, Operation and Staging	
If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated.	Refer to Section 6.1.24 of this EIS.
25. Contributions and Public Benefit	
Address the requirements of any relevant contribution plan(s), planning agreement or EPI requiring a monetary contribution, dedication of land and/or works-in-kind and include details of any proposal for further material public benefit.	Refer to Section 6.1.25 of this EIS.
Where the development proposes alternative public benefits or a departure from an existing contributions framework, the local council, the Department and relevant State agencies are to be consulted prior to lodgement and	N/A – the proposed development does not proposed alternative public benefit.



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details, including how comments have been addressed, are to be provided.	
26. Engagement	
- Detail engagement undertaken and demonstrate how it was consistent with the <i>Undertaking Engagement Guidelines for State Significant Projects</i>. Detail how issues raised and feedback provided have been considered and responded to in the project. In particular, applicants must consult with: - the relevant Department assessment team. - any relevant local councils. - any relevant agencies (including the Western Parkland City Authority for development within the Western Parkland City). - the community. - if the development would have required an approval or authorisation under another Act but for the application of s 4.41 of the EP&A Act or requires an approval or authorisation under another Act to be applied consistently by s 4.42 of the EP&A Act, the agency relevant to that approval or authorisation.	Refer to PART 5 and Appendix 33 of this EIS.

Additional assessment requirements of the SEARs are addressed below.

ADDITIONAL ASSESSMENT REQUIREMENTS	
Issue and Assessment Requirements	Satisfied by
1. Hazards and risk	
- The EIS must demonstrate the relevant aspects of the FM Global Property Loss Prevention Data Sheet 5-32 - Data Centres and Related Facilities have been considered and could be implemented as part of the development. It must also demonstrate the development would comply with the relevant aspects of the following standards: - AS/NSS 4681 - Storage and handling of Class 9 (miscellaneous) dangerous goods and articles - AS IEC 62619 - Storage cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications - AS 1940 - Storage and handling of flammable and combustible liquids	Refer to Appendix 23 of this EIS.
2. Design options analysis	
Identify design options considered during an iterative process and demonstrate the proposed development has been optimised to provide an integrated built-form design and to minimise amenity impacts by having regard to the relevant evaluation criteria in the Government Architect's Better Placed design policy.	Refer to Section 3.16 and Appendix 5 of this EIS.
3. Plant and equipment systems	



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▪ Include a comprehensive options analysis of all commercially available cooling and back-up power systems.	Refer to Section 3.9 and Appendix 35 of this EIS.
▪ Provide a detailed overview of the proposed data hall cooling system including number and details of associated plant and equipment, and the energy and water demands of the proposed data hall cooling system.	Refer to Section 3.9 and Appendix 35 of this EIS.
▪ Provide demonstration the development can achieve a NABERS 3 stars energy rating or higher including the Power Usage Effectiveness (PUE) calculations of plant and equipment required for the operation of a data centre.	Refer to Section 6.1.8 and Appendix 14 of this EIS.
4. Consultation	
▪ The EIS must be informed by direct consultation with Blacktown City Council and Western Sydney Parklands regarding: ○ the design of the development and potential visual impacts on 'The Colebee' events venue owned and operated by Council and Western Sydney Parklands including Nurragingy Reserve.	Refer to PART 5 and Appendix 33 of this EIS.



APPENDIX B
DETAILED MAPS
AND PLANS

STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DP1137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
Considerations under the EP&A Act and EP&A Regulation				
<i>Environmental Planning and Assessment Act 1979</i>	Section 1.3 – Objects of the Act	<i>(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,</i>	The proposed development is appropriately located in an existing industrial area of strategic importance. The suitability of the subject site and the proposed development would see social and economic benefits for the area, without impacts to the State's natural and other resources.	N/A
		<i>(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i>	The proposal facilitates ecologically sustainable development.	Refer to Section 6.1.8 of the EIS.
		<i>(c) to promote the orderly and economic use and development of land,</i>	As well as fulfilling a significant role in satisfying market needs, the proposal also demonstrates a logical redevelopment of a dated industrial site. The site's economic development is both logical and orderly for the following reasons: ▪ It delivers employment-generating opportunities in both the construction and operational phases in an area already earmarked by both State and Regional policies for employment and advancement. ▪ It provides both a new economically and ecologically sustainable development, delivering new industry-best-practice in industrial construction. ▪ It provides a genuine and obvious transition from existing industrial development, further reinforcing the notion of orderly development, within an	N/A



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
			area already designated for such purposes. - It implements best-practice sustainability measures, to promote ecologically sustainable development. - It includes increased provisions for landscaping, helping to revitalise and naturally landscape a substantial canopy cover across the site, further minimising the potential impacts of the Urban Heat Island Effect, by further reducing the site's microclimate. - It improves water-quality for stormwater in accordance with the requirements of Council's engineering guidelines.	
		<i>(d) to promote the delivery and maintenance of affordable housing,</i>	Not applicable – this objective is not applicable to the proposed development, as the proposal does not seek consent for housing.	N/A
		<i>(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,</i>	The proposed development has been appropriately sited to minimise impacts to native vegetation and mitigation and managements measures will be effectively incorporated where necessary.	Refer to Section 6.1.9 of the EIS.
		<i>(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),</i>	The proposed development has the opportunity to create exclusion zones to protect a percentage of land within areas of moderate and high archaeological potential and Aboriginal objects areas. Management and mitigation measures are required to avoid, minimise and mitigate harm to known and likely Aboriginal objects and heritage values.	Refer to Section 6.1.19 and 0 of the EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DP1137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		(g) to promote good design and amenity of the built environment,	The proposed development responds to the seven (7) objectives for good design in Better Placed.	Refer to Section 6.1.3 and 6.1.4 of the EIS.
		(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The proposed development would be implemented through best-industry practice standards and measures. The proposal has been designed in accordance with the NCC. This incorporates into the design, all statutory and functional requirements, regarding access, egress and fire, which are deemed necessary to safeguard the safety of building occupants and the longevity of the development.	N/A
		(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	This proposal is SSD, which devolves the environmental planning and assessment of the application to NSW DPHI. Notwithstanding, the proposal has also been informed by engagement with Council.	N/A
		(j) to provide increased opportunity for community participation in environmental planning and assessment.	Community and stakeholder engagement has been undertaken for the proposed development. This has included meetings and notification letters to both agencies and all potentially impacted stakeholders. Further opportunity is provided during the public exhibition phase.	Refer to Section 6.1.26 of the EIS.
	Section 4.15(1)(a) – Matters for consideration—general	(i) any relevant environmental planning instrument, and	EPIs relevant to the proposal include: ▪ <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ▪ <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> ▪ <i>State Environmental Planning Policy (Planning Systems) 2021</i>	Refer below.



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
			- State Environmental Planning Policy (Biodiversity and Conservation) 2021 - State Environmental Planning Policy (Sustainable Buildings) 2022 - Blacktown Local Environmental Plan 2015	
		(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	There are no draft instruments applicable to the subject site.	Refer below.
		(iii) any development control plan, and	Despite the relevance of Clause 2.10 of the State Environmental Planning Policy (Planning Systems) 2021, the BDCP 2015 has been considered and assessed.	Refer to Appendix 34 of this EIS.
		(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	Not applicable – no planning agreements apply to the subject site or proposed development.	N/A
		(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),	-	Refer below.
	Section 4.15(1)(b) – Matters for consideration—general	the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	-	Refer to PART 6 of this EIS.



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
	Section 4.15(1)(c) – Matters for consideration—general	<i>the suitability of the site for the development,</i>	-	Refer to Section 2.7 of this EIS.
	Section 4.15(1)(d) – Matters for consideration—general	<i>any submissions made in accordance with this Act or the regulations</i>	Submissions will be considered as part of the forthcoming exhibition and response to submissions phases.	N/A
	Section 4.15(1)(e) – Matters for consideration—general	<i>the public interest</i>	-	Refer to PART 5 of this EIS.
<i>Environmental Planning and Assessment Regulation 2021</i>	Clause 190 – Form of environmental impact statement	(1) <i>An environmental impact statement must contain the following information—</i> (a) <i>the name, address and professional qualifications of the person who prepared the statement,</i> (b) <i>the name and address of the responsible person,</i> (c) <i>the address of the land—</i> (i) <i>to which the development application relates, or</i> (ii) <i>on which the activity or infrastructure to which the statement relates will be carried out,</i> (d) <i>a description of the development, activity or infrastructure,</i> (e) <i>an assessment by the person who prepared the statement of the environmental impact of the</i>	-	Refer to WHOLE EIS.



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>development, activity or infrastructure, dealing with the matters referred to in this Division.</i>		
		<i>(2) The person preparing the statement must have regard to— (a) for State significant development—the State Significant Development Guidelines, or (b) for State significant infrastructure—the State Significant Infrastructure Guidelines.</i>	-	Refer to WHOLE EIS.
		<i>(3) An environmental impact statement must also contain a declaration by a relevant person that— (a) the statement has been prepared in accordance with this Regulation, and (b) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure, and (c) the information contained in the statement is not false or misleading, and (d) for State significant development or State significant infrastructure—the statement contains the information required under the Registered Environmental Assessment Practitioner Guidelines.</i>	-	Refer to EIS DECLARATION on page i of this EIS.



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
	Clause 191 – Compliance with environmental assessment requirements	<i>The environmental impact statement must comply with the environmental assessment requirements notified under section 176 or the Act, section 5.16(4).</i>	The SEARs (reference: SSD-73761707), issued by the NSW DPPI on 25 July 2024, identify the following assessment requirements: 1. Statutory Context 2. Estimated Development Cost and Employment 3. Design Quality 4. Built Form and Urban Design 5. Visual Impact 6. Traffic, Transport and Accessibility 7. Trees and Landscaping 8. Ecologically Sustainable Development (ESD) 9. Biodiversity 10. Back-up Power System 11. Air Quality 12. Noise and Vibration 13. Ground and Water Conditions 14. Water Management 15. Flood Risk 16. Hazards and Risks 17. Contamination and Remediation 18. Waste Management 19. Aboriginal Cultural Heritage 20. Environmental Heritage 21. Social Impact 22. Infrastructure Requirements and Utilities	Refer to PART 6 of this EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
			23. Bush Fire Risk 24. Construction, Operation and Staging 25. Contributions and Public Benefit 26. Engagement	
Considerations under EPIs				
<i>State Environmental Planning Policy (Planning Systems) 2021</i>	Part 2.2 – State Significant Development	<i>(1) Development is declared to be State significant development for the purposes of the Act if–</i> <i>(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and</i> <i>(b) the development is specified in Schedule 1 or 2.</i>	In accordance with Schedule 1, Clause 25 of the <i>State Environmental Planning Policy (Planning Systems) 2021</i> , development for the purpose of data centres that has a total power consumption of more than 15 megawatts constitutes SSD. The proposed development has a total power consumption of approximately 235 megawatts and therefore it is considered SSD.	Refer to PART 4 of this EIS.
<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>	Clause 4.6 – Contamination and remediation to be considered in determining development application	<i>(1) A consent authority must not consent to the carrying out of any development on land unless–</i> <i>(a) It has considered whether the land is contaminated, and</i> <i>(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</i> <i>(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</i>	A DSI has been prepared which confirms that the subject is suitable for the proposed land use and Clause 4.6 of the Resilience Hazards SEPP is satisfied.	Refer to Section 6.1.17 and Appendix 23 of this EIS.



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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>be remediated before the land is used for that purpose.</i>		
<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>	Division 5, Subdivision 2 – Development likely to affect an electricity transmission or distribution network	(1) <i>This section applies to a development application (or an application for modification of a consent) for development comprising or involving any of the following—</i> (a) <i>the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,</i> (b) <i>development carried out—</i> i. <i>within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or</i> ii. <i>immediately adjacent to an electricity substation, or</i> iii. <i>within 5m of an exposed overhead electricity power line,</i> (2) <i>Before determining a development application (or an application for modification of a consent) for development to which this section applies, the consent authority must—</i> (a) <i>give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and</i>	The proposal involves works within and immediately adjacent to an easement for electricity purposes. It is acknowledged that the consent authority must provide notice to the electricity supply authority and incorporate any feedback received. Preliminary engagement has been undertaken with Endeavour Energy in relation to the proposed works and is ongoing.	Refer to Appendix 31 of this EIS.



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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>(b) take into consideration any response to the notice that is received within 21 days after the notice is given.</i>		
	Division 17, Subdivision 2 – Development in or adjacent to road corridors and road reservations	<i>(1) This section applies to development specified in Column 1 of the Table to Schedule 3 that involves—</i> <i>(a) new premises of the relevant size or capacity, or</i> <i>(b) an enlargement or extension of existing premises, being an alteration or addition of the relevant size or capacity.</i> <i>(4) Before determining a development application for development to which this section applies, the consent authority must—</i> <i>(a) give written notice of the application to TfNSW within 7 days after the application is made, and</i> <i>(b) take into consideration—</i> <i>(i) any submission that RMS provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, TfNSW advises that it will not be making a submission), and</i> <i>(ii) the accessibility of the site concerned, including—</i> <i>(A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and</i>	The proposed development involves an industrial building with a site area greater than 5,000m ² , which constitutes traffic-generating development, as described in Schedule 3 of the Transport and Infrastructure SEPP. It is acknowledged that the consent authority must provide notice to TfNSW and incorporate any feedback received.	Refer to Section 6.1.6 and Appendix 10 of this EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DPI137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and</i> <i>any potential traffic safety, road congestion or parking implications of the development.</i>		
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Chapter 2 – Vegetation in non-rural areas	<i>(1) An application may be made to the Native Vegetation Panel by or on behalf of the landholder for approval to clear native vegetation in any non-rural area of the State.</i> <i>(2) The Native Vegetation Panel may, in accordance with this Part, grant an approval to clear the native vegetation under this Part or refuse the application.</i> <i>(3) An application for approval for the clearing of native vegetation may only be dealt with under this Part if the clearing exceeds the biodiversity offsets scheme threshold.</i>	A BDAR has been provided and an application to a Native Vegetation Panel is not required.	Refer to Section 6.1.9 and Appendix 16 of the EIS.
State Environmental Planning Policy (Sustainable Buildings) 2022	Chapter 3 – Standards for non-residential development, Clause 3.2	<i>(1) In deciding whether to grant development consent to non-residential development, the consent authority must consider whether the development is designed to enable the following—</i> <i>(a) the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,</i> <i>(b) a reduction in peak demand for electricity, including through the use of energy efficient technology,</i>	The proposal involves non-residential development, which warrants assessment against Chapter 3 of the Sustainable Buildings SEPP. A full assessment of these matters is included within the ESD Report. The embodied emissions attributable to the development have been quantified.	Refer to Appendix 14 and Appendix 15 of this EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DP1137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		(c) a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design, (d) the generation and storage of renewable energy, (e) the metering and monitoring of energy consumption, (f) the minimisation of the consumption of potable water. (2) Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.		
Blacktown Local Environmental Plan 2015	Clause 7.2 - Terrestrial biodiversity	(2) This clause applies to land identified as "Biodiversity" on the Terrestrial Biodiversity Map. (3) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider— (a) whether the development is likely to have— i. any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and ii. any adverse impact on the importance of the vegetation on	Clause 7.2 applies to areas mapped as "terrestrial biodiversity" under the BLEP 2015. A BDAR has been provided.	Refer to Section 6.1.9 and Appendix 16 of the EIS.



STATUTORY COMPLIANCE TABLE

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>the land to the habitat and survival of native fauna, and</i> <i>iii. any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and</i> <i>iv. any adverse impact on the habitat elements providing connectivity on the land, and</i> <i>(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.</i> <i>(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—</i> <i>(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or</i> <i>(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or</i> <i>(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.</i>		
	Clause 7.9 – Development with	<i>(5) This clause applies to land that has a frontage to a road within Zone SP2</i>	The subject site has a primary frontage to Glendenning Road, which is zoned as SP2 Infrastructure, and has a secondary frontage to Woodstock Avenue. It is not practicable to	Refer to Appendix 10 of the EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DP1137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
	frontage to certain roads in Zone SP2	<i>Infrastructure identified as "Local Road" or "Classified road" on the Land Zoning Map.</i> <i>(6) Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the following—</i> <i>(a) where practicable, whether vehicular access to the land is provided by a road other than the road referred to in subclause (2),</i> <i>(b) whether the safety, efficiency and ongoing operation of the road will be adversely affected by the development as a result of—</i> <i>i. the design of the vehicular access to the land, or</i> <i>ii. the emission of smoke or dust from the development, or</i> <i>iii. the nature, volume or frequency of vehicles using the road to gain access to the land,</i> <i>(c) whether the development is of a type that is sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the road.</i>	provide primary access from Woodstock Avenue as there is an existing transmission line that transects the subject site, as well as an area zoned as containing outstanding biodiversity value. Therefore, vehicle access is provided only from Glendenning Road. It is acknowledged that the proposal includes a reduction in the vehicle crossings off Glendenning Road, compared to the existing situation.	
Considerations under other legislation				



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DPI137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	Part 3, Division 1, Subdivision C, Clause 18 Actions with significant impact on listed threatened species or endangered community prohibited without approval	<i>A person must not take an action that:</i> <i>(1) has or will have a significant impact on a listed threatened species included in the extinct in the wild category; or</i> <i>(2) is likely to have a significant impact on a listed threatened species included in the extinct in the wild category.</i>	The proposed development will not result in any significant impacts to species or communities listed under the EPBC Act.	Refer to Appendix 16 of this EIS.
<i>Biodiversity Conservation Act 2016</i>	Section 7.9 – Biodiversity assessment for State significant development or infrastructure	<i>(3) This section applies to—</i> <i>(a) an application for development consent under Part 4 of the Environmental Planning and Assessment Act 1979 for State significant development, and</i> <i>(b) an application for approval under Division 5.2 of the Environmental Planning and Assessment Act 1979 to carry out State significant infrastructure.</i> <i>(2) Any such application is to be accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.</i> <i>(3) The environmental impact statement that accompanies any such application is to include the biodiversity assessment required by the environmental assessment</i>	A BDAR has been provided, and a biodiversity assessment has been undertaken in this EIS.	Refer to Appendix 16 and Section 6.1.9 of this EIS.



STATUTORY COMPLIANCE TABLE

Glendenning Road Data Centre
2 Glendenning Road (Lot 2 DP1137162)

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MANDATORY CONSIDERATIONS OF THE CONSENT AUTHORITY				
Statutory document	Section reference	Mandatory consideration	Relevance	Section in the EIS
		<i>requirements of the Planning Agency Head under the Environmental Planning and Assessment Act 1979.</i>		
<i>Protection of the Environment Operations Act 1979</i>	Chapter 3, Part 3.2, Clause 48 Licensing requirement—scheduled activities (premises-based)	(1) <i>Application of section This section applies to scheduled activities where Schedule 1 indicates that a licence is required for premises at which the activity is carried on.</i> (2) <i>Offence A person who is the occupier of any premises at which any such scheduled activity is carried on is guilty of an offence, unless the person is, at the time that activity is carried on, the holder of a licence that authorises that activity to be carried on at those premises.</i>	Schedule 1, Item 9 of the POEO Act details that petroleum products storage constitutes a scheduled activity where the proposed development has the capacity to store more than 200 tonnes (liquefied gases) or 2,000 tonnes (chemicals in any other form). The proposed development would have a total diesel storage capacity of 2,736,030L and therefore would constitute a scheduled activity. Schedule 1, Item 17 of the POEO Act details that general electricity works with a capacity to generate more than 30 megawatts of electrical power constitutes a scheduled activity, however does not include the generation of electricity by means of electricity plant that is emergency stand-by plant (operating for less than 200 hours per year). As the proposed generator testing will be for less than 200 hours per year, this would <u>not</u> constitute a scheduled activity under this clause.	Refer to Appendix 23 .



APPENDIX E
MITIGATION
MEASURES
TABLE

By:	Lehr Consultants International (Australia) Pty Ltd
In relation to:	State Significant Development Application (SSD-73761707) For Glendenning Road Data Centre
Site:	2 Glendenning Road, Glendenning Lot 2 DP1137162

Lehr Consultants International (Australia) Pty Ltd, plan to undertake the construction and operation of the proposed data centre, in accordance with the following planned management and mitigation measures.

PLANNED MANAGEMENT AND MITIGATION MEASURES FOR SSD-73761707		
ID	Management / Mitigation Measure	Timing
Administrative Commitments		
A1	Commitment to Minimise Harm to the Environment The Proponent will commit to 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 proposed development	Prior to construction, during construction, and during operation.
A2	Terms of Approval The Proponent will carry out the project generally in accordance with the: (a) Environmental Impact Statement; (b) Drawings; (c) Management and Mitigation Measures; (d) Any Conditions of Approval. If there is any inconsistency between the above, the Conditions of Approval shall prevail to the extent of the inconsistency.	Prior to construction, during construction, and during operation.
A3	Occupation Certificate The Proponent will ensure that Occupation Certificates are obtained prior to the occupation of the facilities.	Prior to operation.
A4	Compliance The Proponent will ensure compliance with any reasonable requirement(s) of the Secretary of the NSW DPHI arising from the assessment of: (a) Any reports, plans, programs, strategies or correspondence that are submitted in relation to 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.	Prior to construction, during construction, and during operation.
A5	Structural Adequacy The Proponent will ensure that all new buildings and structures on the site are constructed in accordance with the relevant requirements of the National Construction Code.	During construction.



PLANNED MANAGEMENT AND MITIGATION MEASURES FOR SSD-73761707		
ID	Management / Mitigation Measure	Timing
A6	Construction Environmental Management Plan Prior to the commencement of construction, the Proponent would prepare a Construction Environmental Management Plan (CEMP) that addresses the following: (a) Air Quality; (b) Noise and Vibration; (c) Waste Classification; (d) Erosion and Sediment Control; (e) Materials Management Plan; (f) Salinity; (g) Traffic Management; and (h) Community Consultation and Complaints Handling.	Prior to construction.
A7	Site Induction All staff employed on the site by the construction contractor will be required to undergo a site induction.	Prior to construction.
A8	Operation of Plant and Equipment The Proponent will ensure that all plant and equipment used on-site, is maintained and operated in proper and efficient manner, and in accordance with relevant Australian Standards.	During operation.
A9	Monitoring the State of Roadways The Proponent will monitor the state of roadways leading to and from the subject site, during construction, and will take all necessary steps to clean up any adversely impacted road pavements as directed by the Blacktown City Council.	During construction.
A10	Waste Receipts The Proponent will ensure that a permanent record of receipts, for the removal of both liquid and solid waste from the subject site, be kept and maintained up to date at all times. Such records will be made available to authorised person upon request.	During construction and operation.
A11	Complaints Handling The Proponent will prepare an Operational Complaints Handling Protocol for the development, prior to the commencement of operations.	Prior to operation.
A12	Soil and Water Management A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, will be implemented for the construction of the proposed development.	Prior to and during construction.
Specific Environmental Commitments		
Air Quality		
AQ1	Air quality mitigation and monitoring will form part of the CEMP, to be prepared for the project, as outlined in A6 .	Prior to construction.
AQ2	The Proponent will implement the dust control measures outlined in the AQIA.	During construction.



PLANNED MANAGEMENT AND MITIGATION MEASURES FOR SSD-73761707		
ID	Management / Mitigation Measure	Timing
AQ3	The Proponent will implement the air quality management measures for operations outlined in the AQIA.	During operation.
Traffic and Transport		
TT1	The Proponent will finalise and implement the Construction Traffic Management Plan (CTMP).	Prior to and during construction.
TT2	The Proponent will finalise and implement the Green Travel Plan (GTP) prior to occupation of the development.	Prior to occupation
Contamination		
C1	The Proponent will prepare a Sampling and Analysis Quality Plan (SAQP) as identified within the DSI. Should these investigations identify that remediation is required, a Remedial Action Plan shall be prepared.	Prior to and during construction.
C2	The Proponent will prepare an Unexpected Finds Protocol (UFP).	Prior to and during construction.
Hazards & Risks		
HR1	The management of each of the substances proposed to be stored on-site should be carried out in accordance with their respective safety data sheet and the Dangerous Goods Compliance Report prepared by Acor Consultants.	During operation.
HR2	The management strategies detailed within the salinity management plan prepared by Martens is to form part of the CEMP, as outlined in A6 .	Prior to construction.
HR3	The Proponent will adopt a construction stormwater management plan and associated erosion and sediment control measures in accordance with the Blue Book and Council requirements.	Prior to construction.
HR4	Dangerous goods shall be stored in accordance with the <i>Work Health and Safety Regulation 2017</i> and any documentation required by the Regulation shall be prepared prior to occupying the space with DGs.	During construction and operation
Cultural Heritage		
H1	An Unexpected Finds Policy will be developed, in the unlikely event that relics are identified during ground disturbing works.	Prior to construction.
H2	Unexpected Aboriginal objects remain protected by the <i>National Parks and Wildlife Act 1974</i> . If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity will cease immediately. A qualified archaeologist would be contacted to assess the find and Heritage NSW and Metropolitan Local Aboriginal Land Council would be notified.	During construction.
H3	If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity will cease, the site would be secured, and the NSW Police and Heritage NSW would be notified.	During construction.
H4	All relevant staff, contractors and subcontractors will be made aware of their statutory obligations for heritage under the <i>NSW Heritage Act 1977</i> and best practice as outlined in <i>The Burra Charter 2013</i> , during site inductions.	Prior to construction.



PLANNED MANAGEMENT AND MITIGATION MEASURES FOR SSD-73761707		
ID	Management / Mitigation Measure	Timing
Socio-Economic		
SE1	A Stakeholder Management Plan (SMP) will be prepared and implemented.	During construction.
SE2	A Plan of Operation and Management (POM) will be prepared and implemented	Prior to and during operation.
Waste Management		
WM1	The Construction and Demolition Waste Management Plan will be implemented and will form part of the CEMP (A6).	Prior to construction
WM2	The Operational Waste Management Plan shall be completed and implemented.	Prior to and during operation
ESD		
E1	An environmental management plan shall be completed and implemented in accordance with the recommendations made within the ESD Report.	Prior to construction, during construction, and during operation.
Biodiversity		
B1	The species credit offset obligations are to be satisfied.	Prior to construction.
B2	An adaptive management strategy shall be completed and implemented in accordance with the recommendations made within the BDAR.	Prior to construction, during construction, and during operation
Noise and Vibration		
NV1	A detailed CNVMP will be prepared and will form part of the CEMP, to be prepared for the project, as outlined in A6 .	Prior to construction and during construction
NV2	The Proponent will implement the noise and vibration management measures as outlined in the NVIA during construction.	Prior to and during construction.
NV3	The Proponent will implement the noise and vibration management measures as outlined in the NVIA during operation.	During operation.
Tree Protection		
TP1	The approved Tree Protection Management Plan shall be implemented, and tree protection measures must be installed and maintained, as required and to the satisfaction of the project arborist.	Prior to and during construction.

