Environmental Impact Statement

78 Lockwood Road, Erskine Park

November 2025
Prepared for: STACK Infrastructure

Urbis staff responsible for this report were:

Director	Jacqueline Parker
Associate Director	Christopher Croucamp
Senior Consultant	Anthony Kilias
Project Code	P56868
Report Number	For Lodgement

Acknowledgment of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.
We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.
We pay our respects to First Nations Elders, past and present.

Urbis is committed to incorporating our respect for First Nations cultures, peoples and storytelling in our work across the Country. We are proud to have partnered with Darug Nation artist, **Hayley Pigram**, and to profile her artwork - **Sacred River Dreaming**.

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

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EIS Declaration

Project Details	
Project name	STACK SYD01
Application number	SSD-82211208
Address	78 Lockwood Road, Erskine Park, NSW 2759
Applicant details	
Applicant name	STACK Infrastructure APAC
Applicant address	L14, 627 Chapel Street, South Yarra, VIC 3141
Environment Impact Statement (EIS) prepared by	
Name and professional qualification	**Jacqueline Parker (Partner – Urbis)** Bachelor of Planning (Hons 1), UNSW Master of Urban Development and Design, UNSW **Christopher Croucamp (Associate Director – Urbis)** Master of Planning, UTS **Anthony Kilias (Senior Consultant – Urbis)** Master of Urban and Regional Planning, University of Sydney
Declaration	
Name	Jacqueline Parker
Qualification	Bachelor of Planning (Hons 1), UNSW Master of Urban Development and Design, UNSW
Registration number	68278
Organisation registered with	Planning Institute of Australia

The undersigned declares that this EIS:

- has been prepared in accordance with Part 8 Division 5 of the *Environmental Planning and Assessment Regulation 2021*;
- 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 *State Significant Development Guidelines - Preparing an Environmental Impact Statement*;
- 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.

Signature

Jacqueline Parker, Director (REAP)

Glossary and Abbreviations

Reference	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACM	Asbestos Containing Material
AEP	Annual Exceedance Probability
AHD	Australia Height Datum
AHIMS	Aboriginal Heritage Information Management System
ANEF	Australian Noise Exposure Forecast
AQIA	Air Quality Impact Assessment
ASS	Acid Sulphate Soils
APZ	Asset Protection Zone
BC Act	*Biodiversity Conservation Act 2016*
BC Reg	*Biodiversity Conservation Regulation 2017*
BC SEPP	*State Environmental Planning Policy (Biodiversity and Conservation) 2021*
BCA	Building Code of Australia
BDAR	Biodiversity Development Assessment Report
CBD	Central Business District
CEEC	Critically Endangered Ecological Community
CEMP	Construction Environmental Management Plan
CMP	Construction Management Plan
COPC	Contaminants of Potential Concern
CTMP	Construction Traffic Management Plan
CWC	Connecting with Country
CWMP	Construction Waste Management Plan
DCP	Development Control Plan
DP	Deposited Plan
DPHI	New South Wales Department of Planning, Housing and Infrastructure
DSI	Detailed Site Investigation
EDC	Estimated Development Cost
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA Regulation	*Environmental Planning and Assessment Regulation 2021*

Reference	Description
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EIS	Environmental Impact Statement
EPA	New South Wales Environment Protection Authority
EPI	Environmental Planning Instrument
EPL	Environmental Protection Licence
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
GANSW	Government Architect New South Wales
GFA	Gross Floor Area
GPT	Gross Pollutant Trip
HIPAP	Hazardous Industry Planning Advisory Paper
I&E SEPP	*State Environmental Planning Policy (Industry and Employment) 2021*
LAeq	A frequency-weighted Equivalent Continuous Sound Level
LEP	Local Environmental Plan
LGA	Local Government Area
LSPS	Local Strategic Planning Statement
MNES	Matters of National Environmental Significance
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
NML	Noise Management Level
NRAR	Natural Resource Access Regulator
NSW	New South Wales
NVIA	Noise and Vibration Impact Assessment
OWMP	Operational Waste Management Plan
OLS	Obstacle Limitation Surface
R&H SEPP	*State Environmental Planning Policy (Resilience and Hazards) 2021*
PBP	Planning for Bushfire Protection
PCT	Plant Community Type
PMF	Probable Maximum Flood
Planning Systems SEPP	*State Environmental Planning Policy (Planning Systems) 2021*
Precincts SEPP	*State Environmental Planning Policy (Precincts—Western Parkland City) 2021*
PUE	Power Usage Effectiveness
SEARs	Secretary's Environmental Assessment Requirements

Reference	Description
SEPP	State Environmental Planning Policy
SIA	Social Impact Assessment
SIDRA	Signalised & Unsignalised Intersection Design and Research Aid
Site	78 Lockwood Road, Erskine Park NSW 2759 (Lot 101 / DP1268632)
SSD	State Significant Development
SSDA	State Significant Development Application
T&I SEPP	*State Environmental Planning Policy (Transport and Infrastructure) 2021*
TfNSW	Transport for New South Wales
TIA	Traffic Impact Assessment
VIA	Visual Impact Assessment
VPA	Voluntary Planning Agreement
WSEA	Western Sydney Employment Area
WSUD	Water Sensitive Urban Design

Summary

Overview

This Environmental Impact Statement (**EIS**) has been prepared by Urbis Ltd (**Urbis**) on behalf of STACK Infrastructure (**the applicant**). The EIS is submitted to the NSW Department of Planning, Housing and Infrastructure (**DPHI**) in support of a State Significant Development Application (**SSDA**) for the construction and operation of a data centre at 78 Lockwood Road, Erskine Park (**the site**).

Specifically, the SSDA seeks consent for the following:

- Site preparation and bulk earthworks.
- Temporary construction access from Lenore Drive.
- Construction of a three-storey data centre comprising two buildings, with a maximum height of 26.5 metres and a total gross floor area (**GFA**) of approximately 55,651m², including technical data halls, office and administrative areas, and ancillary circulation space.
- At-grade under-croft car parking (34 spaces) within the building footprint, plus an additional 44 on-site spaces, providing a total of 78 parking spaces.
- Separate generator gantry accommodating 170 backup generators.
- Landscaping and associated public domain works.
- Extension and augmentation of physical infrastructure and utilities as required, including an on-site substation and water storage tanks integrated within the building footprints.

An aerial photograph of the site is provided at **Figure 1**.

Figure 1 Aerial Photograph

Source: Urbis, 2025

The proposed data centre has a total power consumption of 450 megawatts and, as such, is classified as a State Significant Development (**SSD**) under Schedule 1, Clause 25(1) of the *State Environmental Planning Policy (Planning Systems) 2021*. This report has been prepared to address the Secretary's Environmental Assessment Requirements (**SEARs**) issued for the project (**SSD-82211208**). The project is generally consistent with that which was originally described in the Scoping Report submitted to request the SEARs

The site is located in the Penrith Local Government Area (**LGA**) within the land comprising the former 'Fitzpatrick Industrial Estate' and is approximately 40km west of the Sydney Central Business District (**CBD**), 20km west of the Parramatta CBD, and 10km north-east of the future Western Sydney International Airport. The site comprises an irregularly shaped 7.7-hectare lot, bounded to the north by Lenore Drive and to the east by the Ropes Creek biodiversity corridor. The site relies upon access from a cul-de-sac at the eastern end of Lockwood Road at the site's southern boundary.

Previous approvals for site have granted consent for preparation works, including the creation of development pads, the construction of precinct wide stormwater infrastructure and the removal of most vegetation from the site.

The Project

The project seeks to deliver a new data centre with ancillary office space to address the growing demand for digital infrastructure. The project is designed to deliver a high-quality built form that is consistent with the existing and future character of the Erskine Business Park. The layout and design have been carefully considered to avoid adverse environmental impacts on sensitive receivers, including residential areas to the north.

Erskine Business Park is an emerging employment precinct that supports a range of industrial, warehousing, logistics, and distribution uses. The project will contribute to broader employment activity across nearby established and growing employment areas, including Eastern Creek and Huntingwood to the east, Wetherill Park to the south-east, and Mamre Road to the west.

The site forms part of the broader Western Sydney Employment Area (**WSEA**), which has been identified as the largest greenfield industrial precinct in the Sydney Metropolitan Area, intended to accommodate the growing need for employment land over the next 20 to 30 years. Given the site's location within the WSEA, *State Environmental Planning Policy (Industry and Employment) 2021* (**I&E SEPP**) is the primary planning instrument applicable to the proposal.

Environmental impacts associated with traffic, noise, air quality, visual amenity, bushfire and flooding have been assessed and are considered acceptable with the application of the proposed mitigation measures.

The proposal represents an orderly and efficient use of serviced employment land, is consistent with applicable strategic and statutory planning controls, and will deliver critical infrastructure to support the continued growth of the digital economy in New South Wales.

The key elements of the project are described in **Table 1** below and detailed within the Architectural Drawings and Architectural Design Report prepared by Genton and provided at **Appendix E** and **Appendix F** respectively. A render of the proposal at **Figure 2.**

Table 1 Project Overview

Project Element	Summary
Project Summary	▪ Site preparation and bulk earthworks. ▪ Temporary construction access from Lenore Drive. ▪ Construction of a three-storey data centre comprising two buildings, with a maximum height of 26.5 metres and a total GFA of approximately 55,651m², including technical data halls, office and administrative areas, and ancillary circulation space.

Project Element	Summary
	▪ At-grade under-croft car parking (34 spaces) within the building footprint, plus an additional 44 on-site spaces, providing a total of 78 parking spaces. ▪ Separate generator gantry accommodating 170 backup generators. ▪ Landscaping and associated public domain works. ▪ Extension and augmentation of physical infrastructure and utilities as required, including an on-site substation and water storage tanks integrated within the building footprints.
Site/Project Area	The data centre development relates to Lot 101 in Deposited Plan (**DP**) 1268632 which comprises an area of approximately 77,241.97m^2
Proposed uses	Data centre with ancillary office space
Data halls	32 data halls
GFA	55,651m^2
Floor Space Ratio (**FSR**)	0.72:1
Site Coverage	44,062.38m^2 (57.04% of site)
Utilities	Provision of required utilities including: ▪ 170 x diesel generators accommodated with generator gantry structure. ▪ 23 x water tanks for industrial water. ▪ Two x above-ground water tanks for fire water. ▪ 330/132/11kV switching station.
Power consumption	450 MW
Maximum height	26.5m over three storeys
Vehicular Access	Vehicle access via Lockwood Road
Parking	78 car spaces including two accessible spaces
Bicycle Parking	30 spaces
Motorbike Parking	Three spaces
Deep Soil Area	14,733.8m^2 (19.07% of site)
Tree Canopy Coverage	8,856m^2 (11.46% of site)
Earthworks/Cut and Fill	Net fill of approximately 39,780m^3
Hours of Operation	The facility will be operated on a 24-hour, 7 day a week basis.
Jobs	Construction: 1,100 Operation: 200
Staging and Construction	The project is to be constructed over two stages:

Project Element	Summary
	▪ Stage 1 – Eastern data centre building, on-site substation, generator gantry, external plant and equipment, new Lockwood Road access, internal roads, car parking, and landscaping. ▪ Stage 2 – Western data centre building, gantry expansion, external plant and equipment, additional car parking and landscaping.
Estimated Development Cost	$ 1,502,051,858.30

Figure 2 Photomontage – View from Lenore Drive facing south-west

Source: Genton, July 2025

Intended Outcomes

The intended outcomes of this project are to:

- Deliver a next-generation data centre providing critically needed, secure and reliable digital infrastructure for NSW.
- Capitalise on the site's strategic location within Erskine Business Park and the WSEA to support precinct growth, attract investment, and contribute to regional and state employment targets.
- Generate significant employment opportunities, including ancillary office floorspace, in a location well-suited to large-scale technology and business uses.
- Minimise environmental and amenity impacts through responsible design, construction and operation, in full compliance with legislative and policy requirements.
- Achieve high-quality built form, urban design and landscaping that enhances visual amenity, respects site context, and positively contributes to the emerging precinct character.
- Incorporate best-practice sustainability measures to optimise energy and water efficiency, integrate renewable technologies, and ensure climate-resilient operations.
- Strengthen the public domain and local environment with landscaped setbacks, deep soil planting and substantial tree canopy cover.

Feasible Alternatives

Various project alternatives were considered for the required data centre development. A 'do nothing' approach was dismissed as the objectives of the project would not be met. If the project was not to proceed, the site would remain vacant, and the delivery of critically needed data storage space would not be realised.

Consideration was given to carrying out the development on alternative sites, however, these sites were dismissed based on their potential impacts which could not be mitigated, other site constraints, site servicing issues and operational inefficiencies. Alternative design options for the site were considered and dismissed based on substandard design, operational, and public amenity outcomes.

The siting and design of the proposed development was resolved through a comprehensive analysis of the site opportunities and constraints in consultation with key stakeholders. It was identified as being the most suitable option to achieve the project objectives as:

- The site is strategically located within Erskine Business Park which is identified as a key employment precinct with access to major arterial roads and the future Western Sydney International Airport.
- The proposal is compatible with the local context and will result in minimal impacts to the environment through the implementation of suitable mitigation measures where required.
- The site presents the most orderly and economic use and development of the land to deliver a new data storage facility.
- Existing infrastructure is readily available or can be augmented to cater for the utility needs of the proposal.
- The development can be achieved without having unacceptable environmental impacts in relation to traffic, noise, air quality, biodiversity, and visual impacts, including management and mitigation measures to avoid adverse impacts to sensitive receivers.

Community and Stakeholder Engagement

Community and stakeholder engagement has been undertaken by Urbis and the Project Team in the preparation of the SSDA. This includes direct engagement and consultation with:

- Adjoining landowners and occupants,
- Registered Aboriginal Parties including the Metropolitan Local Aboriginal Land Council,
- Government, agency and utility stakeholders as listed within the SEARs.

The outcomes of the community and stakeholder engagement have been incorporated into the project and are discussed in detail at **Section 4** and **Appendix D** of this EIS.

Strategic Justification

The EIS has assessed the project against the requirements of the Secretary's Environmental Assessment Requirements (**SEARs**) (**Appendix A**), and the relevant planning instruments and policies (**Section 4** and **Appendix B**).

The key issues identified within the SEARs have been assessed in **Section 5** of the EIS. This assessment has been informed by specialist reports which include recommendations and mitigation measures. The assessment of key issues includes the mitigation measures which can be adopted to ensure the project does not result in any significant impacts. These mitigation measures are included at **Appendix C.**

The project is a positive development outcome for the site and surrounding area for the reasons outlined in **Table 2**.

Table 2 Summary of Development Outcomes

Matter	Response
Better Placed	The proposed development aligns with the Better Placed design principles, delivering a high-quality built form suited to its industrial setting. The design responds to the character of the Erskine Business Park through appropriate scale, materials, and site planning, and enhances the Lenore Drive frontage with substantial landscaping and visual integration. Sustainability measures include durable, low-maintenance materials, energy-efficient building systems, and adaptable floorplates. The layout ensures safe and functional operations through clear separation of vehicle and pedestrian movements, integrated end-of-trip facilities, and a landscape strategy that incorporates principles of social inclusion and Caring for Country. The project will provide a purpose-built data centre that delivers critical infrastructure, supports local employment, and contributes to the WSEA.
The project is consistent with strategic planning policies	The proposed development is consistent with the relevant strategic planning policies, including: ▪ *Greater Sydney Region Plan – A Metropolis of Three Cities* ▪ *Our Greater Sydney 2056: Western City District Plan* ▪ *Greater Sydney Region Plan: A Metropolis of Three Cities* ▪ *Our Greater Sydney 2056: Western City District Plan* ▪ *Penrith Local Strategic Planning Statement 2020* ▪ *Penrith Employment Lands Strategy 2021* ▪ *Penrith Economic Development Strategy* ▪ *GANSW Better Placed* ▪ *Future Transport Strategy 2056*
The project is consistent with State and local development controls	The development is permissible with consent and meets the relevant statutory requirements of the relevant environmental planning instruments, including: ▪ *State Environmental Planning Policy (Planning Systems) 2021* ▪ *State Environmental Planning Policy (Resilience and Hazards) 2021* ▪ *State Environmental Planning Policy (Industry and Employment) 2021* ▪ *State Environmental Planning Policy (Transport and Infrastructure) 2021* ▪ *State Environmental Planning Policy (Biodiversity and Conservation) 2021* ▪ *State Environmental Planning Policy (Sustainable Buildings) 2022* ▪ *Penrith Development Control Plan 2014*
The project minimises impacts on the natural environment	The proposal has been assessed in relation to the following key natural environment impacts: ▪ **Contamination:** A DSI confirmed the site is suitable for the proposed use. No significant contamination was identified, and the risk to human health and the environment is low, subject to standard construction and site management measures. ▪ **Flooding:** The south-eastern portion of the site is mapped as being within the 1% AEP flood extent; however, no built form is proposed in this area. Stormwater will be managed by connecting to the adjacent detention basin within the Ropes Creek catchment. The proposal will not alter flood behaviour or increase risk to surrounding land.

Matter	Response
	▪ **Bushfire:** While the site is not mapped as bushfire prone land, existing vegetation to the east associated with the Ropes Creek corridor presents a potential bushfire hazard. To address this, the proposal incorporates an APZ consistent with the recommendations of the Bushfire Hazard Assessment. The APZ ensures adequate separation between the development and the hazard, thereby mitigating bushfire risk and ensuring compliance with relevant NSW RFS guidelines. ▪ **Biodiversity:** The site has been previously cleared and is highly disturbed, with no native vegetation communities or threatened species habitat present. The proposal will not result in the removal of native vegetation or impact on any threatened species, populations, or ecological communities. Landscaping with locally appropriate species will provide incidental ecological benefits and contribute to precinct greening objectives. ▪ **Salinity:** A Salinity Management Plan identifies moderate to high salinity across parts of the site. The proposal incorporates recommended mitigation measures, including suitable construction materials, subsoil drainage, and salt-tolerant landscaping. With these measures, salinity risks to buildings, services, and landscaping will be effectively managed. ▪ **Aboriginal cultural heritage:** An Aboriginal Cultural Heritage Assessment confirmed no Aboriginal objects or places will be impacted. The risk of unexpected finds is low and can be managed through an Unexpected Finds Protocol.
The project minimises impacts on the built environment	The proposal has been assessed in relation to the following key built environment impacts: ▪ **Bulk and Scale**: The proposed built form is compatible with the existing and planned future industrial context of the Erskine Park Employment Area. The design incorporates façade articulation, varied materials, and recessed office elements to break down visual massing, complemented by substantial landscape buffers. This ensures the overall scale and presentation are appropriate for the precinct and consistent with the emerging built character. ▪ **Trees and Landscaping**: No tree removal is required. The proposal delivers over 14,700m² of deep soil landscaping (approximately 19% of the site area) and new canopy plantings along Lockwood Road, Lenore Drive, and site boundaries. These measures will provide visual screening, enhance the streetscape, improve local amenity, support biodiversity, and mitigate urban heat island effects. ▪ **Visual Impacts**: The proposal is visually compatible with the desired future character and land uses within the locality. The visual impacts range from nil to medium-low. The proposal does not impact on views to any heritage items or areas of unique scenic quality. The proposal can therefore be supported on visual impact grounds. ▪ **Traffic**: The development will generate up to 37 peak-hour vehicle trips. The TIA confirms that the surrounding road network and intersections are forecast to continue operating satisfactorily, with safe and efficient site access provided from Lockwood Road. Internal circulation arrangements accommodate both light and heavy vehicle movements without conflict, supported by security-controlled entry.

Matter	Response
	▪ **Noise and Vibration**: The construction and operational noise impacts are generally below the relevant noise criteria. Any exceedances will be temporary during construction and appropriate mitigation measures have been recommended to manage construction noise. Overall, the proposal has been assessed as appropriate from an acoustic perspective. ▪ **Air Quality**: Construction-related air quality impacts, primarily from dust and emissions generated by plant and equipment, will be temporary and can be effectively managed through standard site controls and mitigation measures. During operation, emissions are limited to periodic testing of standby generators. Dispersion modelling confirms that these emissions will remain well within the relevant criteria at all sensitive receivers, with no adverse cumulative effects anticipated. On this basis, the proposal is considered appropriate from an air quality perspective.
The project has positive social impacts	▪ The proposal will create employment opportunities during both the construction and operational phases. During construction, jobs will be generated in various trades and services, benefiting local contractors and suppliers. In operation, the data centre will provide ongoing roles in areas such as facility management, IT infrastructure, research and development, and administration. These roles contribute to regional economic growth and local workforce development. ▪ The development of a contemporary data centre addresses the increasing demand for digital infrastructure and data storage in the Sydney region. By enabling businesses to securely store and process data, the proposal aligns with the strategic goals of WSEA to position itself as a hub for employment, technology and innovation. ▪ The inclusion of generous landscaped setbacks and green spaces will enhance the visual and functional quality of the streetscape and mitigate against the urban heat island effect. These enhancements will create a more pleasant and accessible environment for local workers and visitors, contributing to community well-being and urban amenity. ▪ The proposal incorporates a range of sustainability measures to reduce energy consumption while minimising environmental and amenity impacts
The project has positive economic impacts	▪ The proposal will facilitate the orderly and economic development of a highly strategic site. ▪ The proposal will provide employment opportunities during both the construction and operational phases of the development. ▪ The proposal will meet the growing demand for data storage space in a highly suitable location.
The site is suitable for the project	▪ The proposal is consistent with the IN1 zone objectives, is permitted with consent and satisfactorily addresses the relevant provisions in I&E SEPP and the Penrith DCP 2014. ▪ The site is a large, consolidated land holding which is vacant and has been previously cleared of all structures and vegetation to accommodate future development. ▪ There are no significant environment constraints that would limit the project being developed on the site.

Matter	Response
	▪ The character and scale of the development is compatible and consistent with its existing and likely future context, being an emerging industrial employment area. ▪ The proposed development will optimise use of a vacant site and deliver strategic objectives located within a developing employment precinct with high amenity and employment outcomes and support business activity that occurs in other nearby established and emerging employment-generating precincts. ▪ The site is highly accessible to the regional road network and all necessary infrastructure can be accommodated, allowing operations to commence at no cost to Government. ▪ The proposed development is found to generate no adverse impacts on the established residential land to the north (approximately 300 metres away from the site), based on the environmental assessments undertaken. .
The project is in the public interest	▪ The proposal is consistent with relevant State and local strategic plans and complies with the relevant State and local planning controls including the relevant provisions in the I&E SEPP and Penrith DCP 2014. ▪ Subject to the implementation of the recommended mitigation measures, no adverse social or environmental impacts result from the proposal in terms of traffic, noise and vibration, air quality or views during construction and operation of the development. ▪ The potential impacts of this development are significantly reduced compared to traditional industrial land uses, e.g. warehousing and distribution, which have greater potential noise and traffic impacts. ▪ The proposal directly contributes to the important role that the WSEA plays as an employment generating precinct within the broader Western Parkland City, as identified in the Greater Sydney Region Plan (**Region Plan**). ▪ The proposal provides critical infrastructure which will support the growth for the digital economy within NSW and more broadly. ▪ The proposal will protect and enhance employment lands and increase job numbers. ▪ No major issues relating to the construction and operation of the development were raised during the pre-lodgement consultation with the local community, Council, Government and agency stakeholders.

The EIS demonstrates that the project has significant merit and should be approved subject to the implementation of the mitigation measures described in this report and supporting documents.

1 Introduction

1 Introduction

This Environmental Impact Statement (**EIS**) has been prepared by Urbis Ltd (**Urbis**) on behalf of STACK Infrastructure (the **applicant**). The EIS is submitted to the NSW Department of Planning, Housing and Infrastructure (**DPHI**) in support of a State Significant Development Application (**SSDA**) for the development of a new data centre at 78 Lockwood Road, Erskine Park, NSW 2759 (the **site**).

The site is located on Dharug Country, and we acknowledge the Dharug people, their elders past and present, and their deep and continuing connection to their land.

1.1 Applicant Details

The applicant details for the proposed development are listed in the **Table 3**.

Table 3 Applicant Details

Descriptor	Applicant Details
Name	STACK Infrastructure Australia (78 Lockwood Road) Pty Ltd atf the STACK Infrastructure (78 Lockwood Road) Unit Trust
Postal Address	L14, 627 Chapel Street, South Yarra, VIC 3141
ACN	683 088 495
Nominated Contact	Michael Dyer Vice President – Delivery (Australia)

1.2 The Project

The SSDA seeks consent for:

- Site preparation and bulk earthworks.
- Temporary construction access from Lenore Drive.
- Construction of a three-storey data centre comprising two buildings, with a maximum height of 26.5 metres and a total GFA of approximately 55,651m², including technical data halls, office and administrative areas, and ancillary circulation space.
- At-grade under-croft car parking (34 spaces) within the building footprint, plus an additional 44 on-site spaces, providing a total of 78 parking spaces.
- Separate generator gantry accommodating 170 backup generators.
- Landscaping and associated public domain works.
- Extension and augmentation of physical infrastructure and utilities as required, including an on-site substation and water storage tanks integrated within the building footprints.

The project is generally consistent with that which was originally described in the Scoping Report submitted to request the SEARs (**SSD-82211208**).

The key objectives for the project are as follows:

- Deliver a state-of-the-art facility that meets market demands for data storage, complemented by ancillary office spaces for tenants and clients.
- Leverage the strategic location of the site to support the growth of Erskine Business Park and the wider WSEA as an emerging employment precinct and make a significant contribution to the delivery of strategic policy objectives.

- Optimise efficiencies by capitalising on the site's proximity to existing digital infrastructure and data centre uses, fostering growth of the digital economy in New South Wales.
- Create diverse employment opportunities during both construction and operational phases.
- Achieve design quality through a high-quality architectural, urban and landscape design outcome.
- Incorporate sustainability initiatives that reduce energy consumption and minimise environmental and amenity impacts.

Society's reliance on digital technology for commercial, social and essential services continues to rapidly grow. The proposed development supports this transformation by:

- Delivering a secure, purpose-built facility for data storage within the Sydney metropolitan area, strategically located to support key digital infrastructure.
- Enhancing the speed and reliability of digital access for users across Sydney and NSW.
- Strengthening data sovereignty by enabling sensitive information to be hosted locally rather than offshore.
- Providing additional redundancy and backup capacity for data storage across NSW, improving service continuity.
- Contributing to national and global resilience by locating critical infrastructure in an area with low exposure to natural hazards and underpinned by stable governance.
- Supporting everyday digital service use by NSW residents, businesses and government clients.

1.3 Project Background

1.3.1 Previous Approvals

The site forms part of the former 'Fitzpatrick Industrial Estate', which comprised an approximately 140-hectare landholding at 147–300 Lenore Drive, 158–204 Lenore Drive, 2–14 Templar Road, 57–59 Lockwood Road, and 1–21 Grady Crescent, Erskine Park.

The Fitzpatrick Estate land is bound by Ropes Creek biodiversity corridor to the east, the Erskine Park residential area to the north, and the Sydney Catchment Authority pipeline to the south. Lenore Drive runs through the centre of the Fitzpatrick Estate. The Fitzpatrick Estate was, prior to subdivision, legally defined as Lots 1, 2, 3 and 4 in DP 1253870.

78 Lockwood Road forms part of the original Lot 3 of the Fitzpatrick Estate and was created following the approval of DA20/0493 which granted consent for subdivision of Lot 3 into two Torrens-titled lots (including Lot 101 in DP 1268632). An extract of the approved subdivision plan is provided at **Figure 3.**

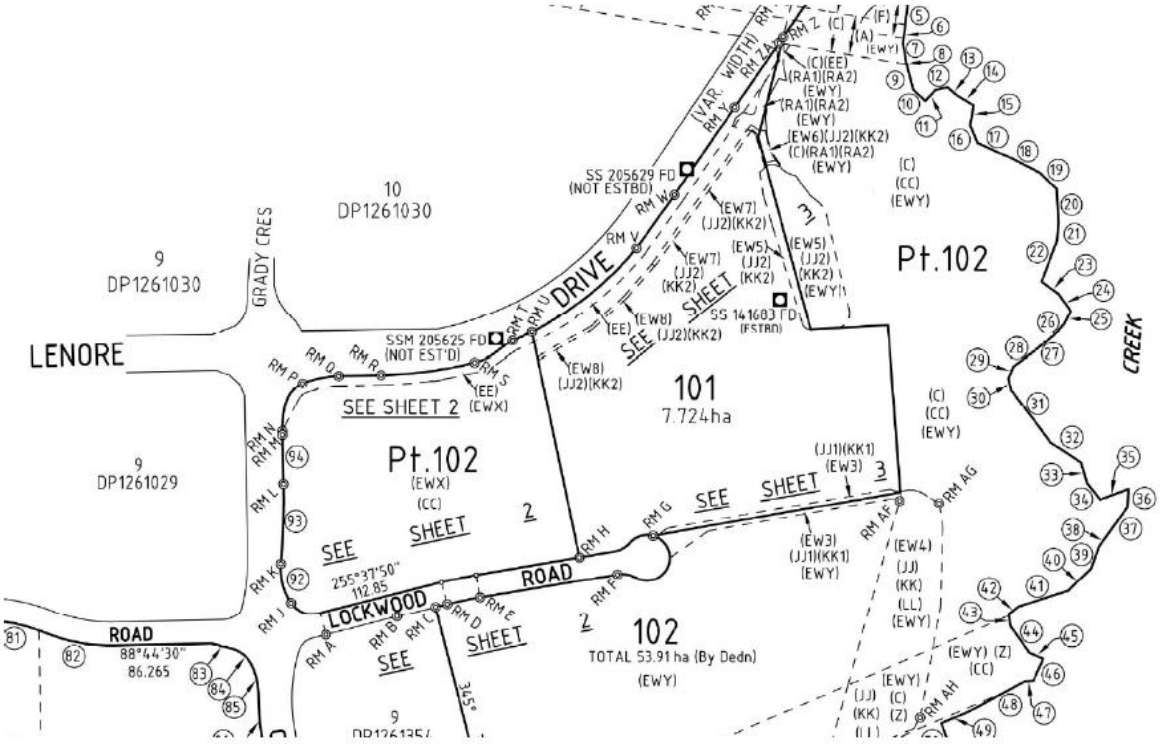
Importantly, the Fitzpatrick Industrial Estate has been the subject of a Biodiversity Management Plan and a Voluntary Planning Agreement (**VPA**) which resulted in the establishment of the Erskine Park Biodiversity Corridor. This is in place to offset the losses in biodiversity from the overall development of the Estate lands and forms part of the Ropes Creek biodiversity corridor. Previous approvals for site have granted consent for preparation works, including the creation of development pads, the construction of precinct wide stormwater infrastructure and the removal of most vegetation from the site.

A summary of previous development consents for the site, including those prior to the creation of the subject allotment, is provided in **Table 4**.

Table 4 Previous Development Consents

DA Number	Description	Date of issue	Relevance to project
DA06/1646	Remediation of contamination land	Approved by Penrith City Council in 2006	This DA resolved contamination issues on the site and across the broader, original landholding (being, the Fitzpatrick Estate). A Validation Report dated 2007 outlined remediation works required and confirmed that the Fitzpatrick Estate lands could be made suitable for industrial uses. A later Validation Report, dated November 2008, was commissioned subsequent to site remediation. This report confirmed that the risk of contamination on the site was greatly reduced following the remediation works.
DA19/0817	Construction of an artificial water body (detention basin) and civil and earth works	Approved by Penrith City Council on 8 September 2020	This DA involved the construction of the existing dam within the C2-zoned land adjoining the site to the east. The purpose of the artificial waterbody was to provide detention storage and tertiary water quality treatment for three future development sites, including the subject site.
DA19/0818	Bulk earthworks and stormwater infrastructure	Approved by Penrith City Council on 15 September 2020	This DA involved cut and fill earthworks across approximately 12.6ha of land to establish new site levels for three future development sites, including the subject site. The stormwater works included a pit and pipe network which include future connection points in the form of a stub and overland catch drains to address drainage to facilitate future development on the subject site.
DA20/0493	Torrens Title subdivision of 2x lots	Approved by Penrith City Council on 2 October 2020	This DA created the existing Torrens Titled lots within a residual parcel of the Fitzpatrick Estate, including 78 Lockwood Road. As part of this consent, a drainage easement was created to benefit Lot 102 and burden Lot 101 of the Fitzpatrick Estate, to enable the land west of 78 Lockwood Road to drain to the detention basin created by the artificial waterbody approved under DA19/0817.

Figure 3 DA20/0493 Approved Plan of Subdivision



Source: Land Registry Services, 2021

1.3.2 Restrictions and Covenants

The certificate of title for the site lists the relevant easements and dealings that apply to the site. These matters are detailed in **Table 5** with the proposed action listed against each.

Table 5 Restrictions, covenants

Reference	Description	Action
HH	Refers to the Planning Agreement which created the conservation land to the east of the subject site. Fitzpatrick (the former landowner) has advised that it resulted in the planting of 38,000 trees and establishment of bio-banking credits.	Maintain
VPA	Refers to the VPA relating to the provision of State Infrastructure. The then-DPE and the Fitzpatrick Industrial Estate entered into SVPA-2017-8407 on the 30 August 2019. It is understood that the developers' obligations under the VPA have been satisfied.	Maintain
EW3	An easement created to drain water 8.8 wide and variable width to the bio-retention swale created under DA18/0549. This is to be released or realigned once stormwater infrastructure is available.	Maintain
EW7 and EW8	Drainage easements created to benefit Lot 102 DP 1268632 (the western neighbouring lot) and burden Lot 101 (the site) to ensure that land to the west of Lot 101 can drain to the detention basin to the sites east.	Maintain

1.3.3 Supporting Documentation

This EIS should be read in conjunction with the following drawings and technical reports:

Table 6 Supporting Documentation

Document	Author	Appendix
SEARs Compliance Table	Urbis	**Appendix A**
Statutory Compliance Table	Urbis	**Appendix B**
Mitigation Measures	Urbis	**Appendix C**
Engagement Summary Table	Urbis	**Appendix D**
Architectural Drawings	Genton	**Appendix E**
Architectural Design Report	Genton	**Appendix F**
Estimated Development Cost	Linesight	**Appendix G**
Survey Plan	Genton	**Appendix H**
BCA Compliance Report	Bm+g	**Appendix I**
Access Capability Report	STACC	**Appendix J**
Landscape Design Report	Habit8	**Appendix K**
Air Quality Impact Assessment	Northstar	**Appendix L**
Noise and Vibration Impact Assessment	Acoustic Logic	**Appendix M**
Infrastructure Requirements and Utility Report	LCI Consultants	**Appendix N**
Backup Power System Report	LCI Consultants	**Appendix O**
Social Impact Assessment	Urbis	**Appendix P**
Detailed Site Investigation	Douglas Partners	**Appendix Q**
Groundwater Impact Assessment	Douglas Partners	**Appendix R**
Salinity Management Plan	Douglas Partners	**Appendix S**
Geotechnical Investigation	Douglas Partners	**Appendix T**
Transport Impact Assessment	Positive Traffic	**Appendix U**
Construction Traffic Management Plan	Positive Traffic	**Appendix V**
Green Travel Plan	Positive Traffic	**Appendix W**
Operational Waste Management Plan	Nuloop	**Appendix X**
Construction Waste Management Plan	Nuloop	**Appendix Y**
Bushfire Hazard Assessment	Blackash	**Appendix Z**
Aboriginal Cultural Heritage Assessment Report	Urbis	**Appendix ZA**
BDAR Waiver Request	écologique	**Appendix ZB**

Document	Author	Appendix
Community Engagement and Consultation Outcomes Report	Urbis	**Appendix ZC**
Flood Impact Risk Assessment	Acor Consultants	**Appendix ZD**
ESD Report	LCI Consultants	**Appendix ZE**
Hazards and Risk Screening Report	Acor Consultants	**Appendix ZF**
Dangerous Goods Report	Acor Consultants	**Appendix ZG**
Visual Impact Assessment	Urbis	**Appendix ZH**
Greenhouse Gas Assessment	LCI Consultants	**Appendix ZI**
Civil Engineering Plans	Acor Consultants	**Appendix ZJ**
Integrated Water Management Plan	Acor Consultants	**Appendix ZK**
Embodied Emissions Materials Form	Linesight	**Appendix ZL**
BDAR Waiver	DPHI	**Appendix ZM**

2 Strategic Context

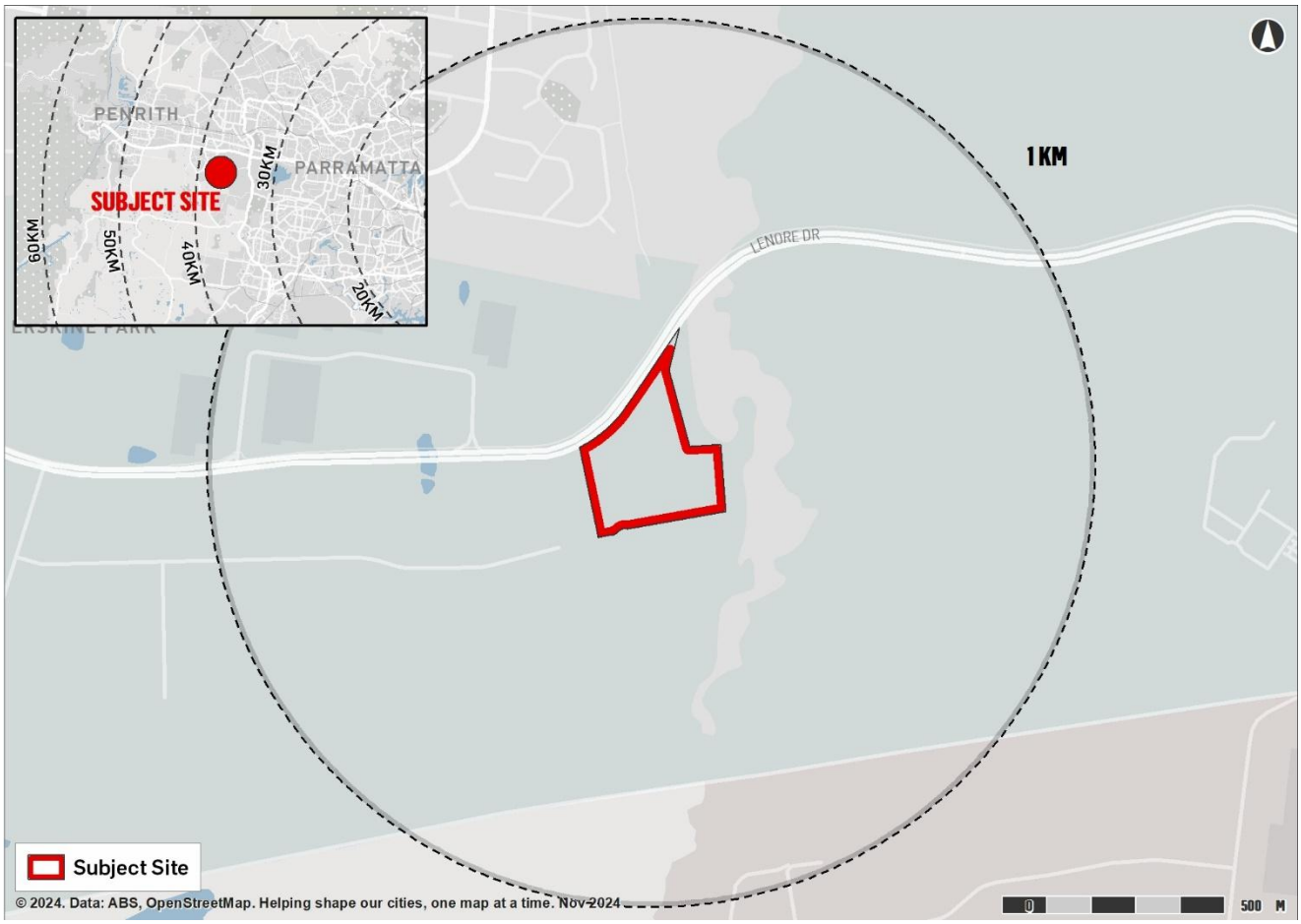
2 Strategic Context

This section of the EIS describes the key features of the site and its relationship to its local context. It also discusses how the project aligns with relevant strategic planning policy. It identifies other projects that should be considered in assessing the cumulative impacts of the project and also outlines the potential feasible alternatives explored by the applicant.

2.1 Key Features of Site and Locality

The location of the site is illustrated in **Figure 4.** The key features of the site are described in **Table 7**. Photographs of the current site condition are provided in **Figure 5**.

Figure 4 Regional Context Map



Source: Urbis, 2024

Table 7 Site and Locality Description

Characteristic	Description
Key Site Features	
Country	Dharug
Address	78 Lockwood Road, Erskine Park, NSW, 2759
Legal Description	Lot 101 in DP 1268632
Zoning	IN1 General Industrial

Characteristic	Description
Existing Use / Structures	The site is currently vacant, with no existing structures or built form, and has been largely cleared of vegetation. A landscaped berm runs along the Lenore Drive frontage, which also accommodates drainage and underground cable easements.
Site Area	77,241.97m^2
Frontages	▪ **North** (approx. 357m) ▪ **East** (approx. 498m) ▪ **South** (approx. 292m) ▪ **West** (approx. 207m)
Existing Vehicular/Site Access	An informal crossover currently exists on the northern frontage to Lenore Drive at the site's north-east corner, providing the only existing vehicle access. Access via gate is also provided at the Lockwood Road cul-de-sac.
Adjacent land	▪ **North:** The site is bounded by Lenore Drive and the adjoining AutoNexus automotive logistics facility, with the Erskine Park residential area located approximately 300 metres further north. ▪ **East:** Adjoins the Ropes Creek biodiversity corridor, which contains an artificial wetland designed to manage stormwater runoff from surrounding industrial development. ▪ **South:** Fronted by Lockwood Road, which terminates in a cul-de-sac at the site's south-west corner, with residual industrial land extending along the remaining southern frontage. ▪ **West:** Borders the balance of the Fitzpatrick Industrial Estate, comprising warehouse and logistics operations.
Topography	The site is generally flat, however exhibits a fall of approximately three metres from the west to the east.
Vegetation	The site has been largely cleared of vegetation and is not identified as having any significant biodiversity or environmental qualities.
Flooding/Overland Flow	The site adjoins Ropes Creek, with a small portion of the south-eastern corner identified as flood-prone within the 1% AEP flood fringe.
European Heritage	The land is not affected by any heritage listings or draft heritage listings. The site is not located within any listed or draft Heritage Conservation Area.
Aboriginal Archaeology	An Aboriginal Cultural Heritage Assessment Report (**ACHAR**) prepared for this project confirms the site has a low potential for containing any potential Aboriginal Heritage.
Bushfire	The site is not identified as bushfire prone land. Although there is some vegetation to the east of the site, it has been assessed as low risk and is not classified as bushfire prone.
Biodiversity	The site is predominantly cleared of vegetation.
Acid Sulfate Soils	The land is not mapped as containing Acid Sulfate Soils.
Contamination	A Detailed Site Investigation (**DSI**) has been prepared by Douglas Partners for this project which concludes that the site is suitable for the proposed data centre use.

Characteristic	Description
Salinity	The 'Salinity Potential of Western Sydney' map prepared in 2002 by the then-Department of Infrastructure, Planning and Natural Resources identifies the site is an Area of Moderate Salinity Potential.
Surrounding Locality	
Regional Context	The site is located approximately 40 km west of the Sydney CBD, 20 km west of Parramatta CBD, and 12 km north-east of the future Western Sydney International Airport, within the Penrith LGA. It forms part of the former Fitzpatrick Industrial Estate and is situated within the WSEA which is the largest designated greenfield industrial precinct in metropolitan Sydney. The WSEA has been identified by Government as a critical driver of economic growth, supporting the delivery of industrial and employment lands to meet demand over the next 20–30 years. The WSEA benefits from excellent regional connectivity, with direct links to the M4 and M7 Motorways, the future WSI Airport, and the St Marys Intermodal Terminal (approximately 10km north-west). This strategic positioning underpins its role as a hub for employment-generating land uses that rely on efficient access to both local and global markets. The proposed data centre will leverage this locational advantage, providing state-of-the-art digital infrastructure in close proximity to emerging freight, logistics and aviation assets. In doing so, it will support the growth of Erskine Business Park, contribute to the evolution of the WSEA as a next-generation employment precinct, and strengthen Sydney's capacity to attract and accommodate high-technology industries.
Public Transport	The site is not directly served by heavy rail or frequent bus services. The nearest bus stops are located along Erskine Park Road, approximately 1.2 km to the north, providing limited local services to St Marys Station on the T1 Western Line. Given the industrial context and limited public transport accessibility, the majority of trips to and from the site are expected to be by private vehicle.
Roads	The site is located within the established Erskine Park industrial area and is well connected to the regional road network. Primary access is from Lockwood Road, which links to Lenore Drive and Erskine Park Road, providing direct connections to the M4 and M7 Motorways. This network facilitates efficient freight and employee access to the wider metropolitan area, with no through-traffic routes through sensitive residential areas.
Open Space	The eastern boundary of the site adjoins the Ropes Creek biodiversity corridor, a major spine of conservation land which includes areas of publicly accessible open space including to the north of the site. The Erskine Park residential area to the site's north contains a number of local parks.
Social Infrastructure	Erskine Park and surrounding suburbs contain a number of primary and secondary schools to accommodate population needs. The Western Sydney University Werrington and TAFE NSW – Nepean, Kingswood campuses are located approximately 9km north-west of the site. Nepean Hospital is located approximately 10km north-west of the site.

Figure 5 Site and Locality Photographs

Picture 1 Aerial view of site, facing south-west

Source: STACK Infrastructure, 2025

Picture 2 Vehicle crossover at Lenore Drive, providing existing site access

Source: Urbis, 2025

Picture 3 Ropes Creek biodiversity corridor, adjoining the site to the east

Source: Urbis, 2025

Picture 4 Southern frontage of the site, facing east along Lockwood Road

Source: Urbis, 2025

Picture 5 View of site from Lenore Drive, facing south west

Source: Urbis, 2025

Picture 6 Existing industrial development south of the site, along Lockwood Road

Source: Urbis, 2025

Picture 7 View of site from Lenore Drive facing south east

Source: Urbis, 2025

2.2 Site Opportunities and Constraints

The subject site's location, physical characteristics, and planning context present both design opportunities and development constraints. Key considerations are summarised below.

Constraints

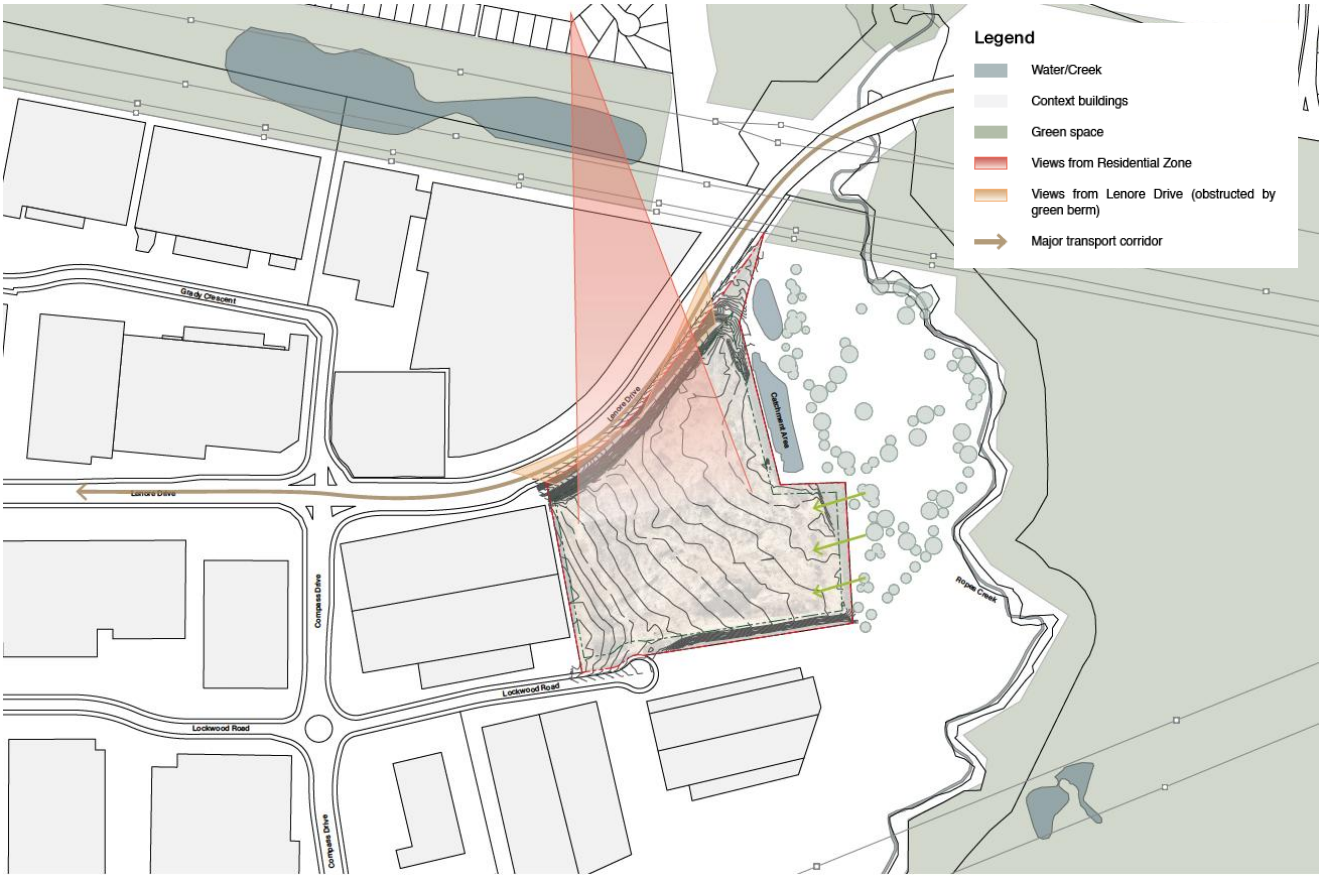
- **Setbacks and APZ:** Development must comply with Penrith DCP 2014 setback controls and provide an APZ to the Ropes Creek biodiversity corridor to meet bushfire protection standards.
- **Easements and Services:** Drainage and underground service easements along the Lenore Drive frontage constrain built form placement and require protection of existing infrastructure.
- **Flood-Prone Land:** A small area in the south-eastern corner is within the 1% AEP flood fringe and must remain largely unaltered to preserve flood storage and conveyance.
- **Vehicle Access:** Limited frontage to Lockwood Road necessitates careful planning of the primary site access and internal circulation network.

- **Height Limit:** While no statutory height limit applies, Penrith DCP controls require built form to minimise bulk, overshadowing and visual impact.
- **Topography**: While generally flat, the berm and level changes along Lenore Drive constrain drainage design and interface treatments.

Opportunities

- **Landscape Screening:** The existing landscaped berm along the Lenore Drive frontage provides effective screening of ground-level plant and services and can be reinforced through additional planting.
- **Prominent Frontage:** The Lenore Drive interface offers a high-visibility address within the Erskine Business Park, enabling a strong architectural and landscape statement.
- **Ecological Connectivity:** Landscaping and native planting can enhance linkages to the adjoining Ropes Creek biodiversity corridor.
- **Visual Sensitivity:** Proximity to residential areas to the north creates an opportunity for a high-quality façade and building presentation on the northern elevation.
- **Strategic Location:** The site is within the WSEA, benefitting from major infrastructure investment and supporting high-value employment uses.
- **Prepared Development Pad:** The site is already cleared and levelled, minimising bulk earthworks and supporting efficient construction staging.
- **Infrastructure Access:** The site has established connections to potable water, sewer, power, and telecommunications, and is well positioned to integrate with the adjoining stormwater detention basin.

Figure 6 Site Opportunities and Constraints



Source: Genton, 2025

2.3 Other development in the area

The site is located in an emerging employment precinct in Erskine Park which has been undergoing significant change over recent years, predominately with new large-format industrial manufacturing, warehousing, and logistics estates. Approved and likely future major projects which may be relevant in the cumulative impact assessment of the proposal are summarised in **Table 8**.

Table 8 Nearby Projects / Development

SSDA Reference	Development Description	Current Status
SSD-7348	Goodman Oakdale West Industrial Estate – staged DA including estate-wide earthworks, infrastructure and warehouse construction.	Approved: 2019, last modified: April 2023
SSD-10330	Roberts Road (CDC) Data Centre – expansion of existing data centre with offices, infrastructure and landscaping.	Approved: July 2020, last modified: April 2024
SSD-9522	Kemps Creek Warehouse, Logistics & Industrial Hub – 162,355m² across 8 warehouses, 744 parking spaces, subdivision.	Approved: December 2020, last modified: November 2024
SSD-10436	ESR Horsley Logistics Park – 8 warehouse/distribution tenancies, total GFA of approximately 109,000m².	Approved: March 2021, last modified: February 2022
SSD-10448	Mirvac Aspect Industrial Estate – estate earthworks/infrastructure and staged warehouses/logistics facilities (11 lots).	Approved: May 2022, last modified: August 2025
DA22/1080	CEVA Logistics – warehouse facility with offices, access, hardstand and landscaping (adjacent site).	Approved: November 2022
SSD-10479	200 Aldington Road Industrial Estate – staged DA including concept and Stage 1 warehouse.	Approved: May 2023, last modified: July 2025
SSD-10101987	Kemps Creek Data Centre – 2 data storage buildings, 61 generators, substation and ancillary works.	Approved: July 2023
SSD-37486043	Oakdale East Industrial Estate – concept masterplan and Stage 1 works including warehouses, roads and services.	Approved: October 2023, last modified: February 2024
SSD-47320208	Project Echidna Data Centre, Eastern Creek – data centre with 35 MW operational capacity, office space and generators.	Approved: April 2024
SSD-71144719	ESR Horsley Logistics Park (Stage 2) – 2 warehouses and office space (55,944m²).	Approved: July 2025
SSD-23480429	Westgate Industrial Estate, Kemps Creek – 3 warehouses (45,530 m²), earthworks, roads, services and landscaping.	Approved: August 2025
SSD-63741210	NEXTDC S4 Data Centre, Horsley Park – 6 data centre buildings (250 MW capacity), substation, car parking and landscaping.	Response to submissions

Several smaller-scale warehouse and industrial projects are also approved in the broader WSEA, however their cumulative contribution is minor compared with the large estates and data centres listed above.

The potential cumulative impacts of the project are addressed in **Section 6** of the EIS in accordance with the DPHI *Assessing Cumulative Impacts* guidelines.

2.4 Feasible Alternatives

Clause 192(1)(c) of the *Environmental Planning and Assessment Regulation 2021* (**EPA Regulation**) requires an analysis of any feasible alternatives to the proposed development, including the consequences of not carrying out the development.

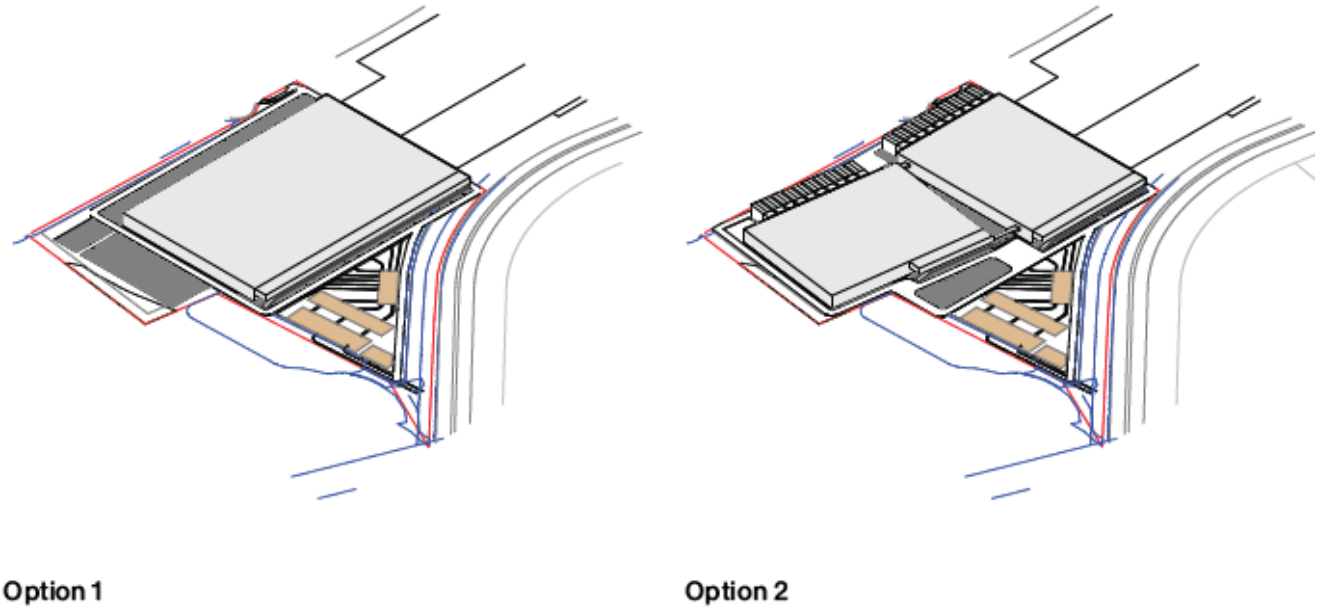
The project team examined several feasible alternatives to the proposed development as outlined in **Table 9.**

Table 9 Project Alternatives

Option	Discussion
Option 1 Do Nothing	A 'do nothing' approach was dismissed as the objectives of the project would not be met. If the project was not to proceed, the site would remain vacant and idle, and the delivery of critically needed data storage space would not be realised. A 'do nothing' scenario would mean that the considerable social and economic benefits would not be realised through the delivery of employment generating development on land intended for industrial purposes. Specifically, the consequences of not carrying out the proposal would result in a failure to align with the existing planning controls for the site. The site does not currently adequately utilise its available development capacity, noting its location within a major planned industrial precinct. This scenario would not adhere to the principle of orderly planning and economic use of land as per the objectives of section 1.3(c) of the EP&A Act. This option was therefore discounted by STACK Infrastructure.
Option 2 - Alternative Location	Consideration was given to carrying out development on alternative sites, however, these were dismissed as follows: ▪ The sites were not close to other data centre infrastructure or adequate transport infrastructure. ▪ The sites were physically constrained and could not accommodate the required scale of development. ▪ The sites were constrained by environmental sensitive areas, including heritage, biodiversity, contamination, flooding or bushfire. ▪ The sites were not adequately serviced by the critical utility infrastructure including power and water required to support a data centre.
Option 3 - Alternative Design	A range of alternative design options and site layouts were explored (refer **Figure 7**), as detailed in the Architectural Design Report (**Appendix F**) prepared by Genton and submitted with the SSDA. These included: ▪ Option 1: A single large massing form that maximised site coverage but resulted in clashes with the internal road and the green berm in the north-west corner, and restricted space in the south-east corner near the site entrances. The building read as visually bulky and lacked articulation, presenting an unacceptable urban design outcome. ▪ Option 2: Buildings aligned more closely with site boundaries, improving efficiency; however, issues remained with clashes to the green berm and restricted space in the south-west. The eastern building encroached into the site's flood-affected area, presenting construction challenges. ▪ Option 3: Separation of the office mass from the data hall to utilise the south-east corner more efficiently. While this screened the generators and improved spatial

	distribution, the split form reduced operational efficiency and retained the berm and entry clashes seen in previous options. ▪ Option 4: Similar to Option 3 but shifting the data hall towards the east boundary to relieve clashes in the north-west and south-west corners. This gained some additional space, but the split form again compromised operational efficiency. These alternatives were ultimately dismissed as they did not meet the operational requirements of a hyperscale data centre, would have reduced functional efficiency, and in some cases presented unacceptable design, construction, or environmental constraints. The selected design achieves a more efficient, functional, and visually integrated outcome while responding appropriately to site constraints and opportunities.
Option 4 – The Proposal	The siting and design of the data centre was resolved through a comprehensive analysis of the site opportunities and constraints. The project has been developed in consultation with key stakeholders and with regards to minimising impacts, while achieving a good urban design outcome. Overall, the proposal was identified as being the most suitable option to achieve the project objectives as: ▪ The site is strategically located within an emerging employment precinct proximate to major arterial road networks which will allow for easy access. ▪ The site is a large, consolidated land holding and has been cleared of all vegetation and levelled to accommodate future development. ▪ The proposal is compatible with the local context and will result in minimal impacts to the environment through the implementation of suitable mitigation measures where required. ▪ The development can be achieved without having unacceptable environmental impacts in relation to traffic, noise, air quality, biodiversity, and visual impacts. ▪ Management and mitigation measures can be implemented to avoid adverse impacts to any sensitive receivers identified on adjoining residential land uses to the north. ▪ The site presents the most orderly and economic use and development of the land to deliver a new data storage facility.

Figure 7 Previous Massing Options



Source: Genton, 2025

2.5 Strategic Planning Alignment

The proposed development is aligned with the State, district and local strategic plans and policies applying to the site as outlined in **Table 10** below.

Table 10 Strategic Planning Consistency

Strategic Plan	Project Alignment
State and Regional Plans	
Greater Sydney Region Plan – A Metropolis of Three Cities	The Greater Sydney Region Plan (**Region Plan**) provides the overarching strategic plan for growth and change in Sydney. It is a 20-year plan with a 40-year vision that seeks to transform Greater Sydney into a metropolis of three cities - the Western Parkland City, Central River City and Eastern Harbour City. It identifies key challenges facing Sydney including increasing the population to eight million by 2056, 817,000 new jobs and a requirement of 725,000 new homes by 2036. The site is located within the Western Parkland City. The project aligns with the vision of the Western Parkland City in that the development will facilitate the provision of jobs and economic activity within the WSEA which is identified as a developing industrial and employment area well connected to transport links. Specifically, the Project will deliver on the following key objectives set out in the Region Plan: ▪ **Objective 1: Infrastructure supports the three cities.** The proposal will improve accessibility and supply of new digital storage infrastructure to Erskine Park, which is an emerging employment precinct. The proposal supports the major economic driver of digital technology and constitutes critical support infrastructure within a rapidly evolving, digitally dependent society. The proposed data centre development would provide cloud storage to available clients, allowing for more efficient operations on end-to-end business models. ▪ **Objective 7: Jobs and skills for the city.** The proposal encourages employment-generating opportunities and economic prosperity, which has positive influences on the wider locality. The site is zoned for industrial purposes. Industrial zoned land is identified as vital in providing increased employment opportunities within the Western Parkland City and integrating new and existing employment precincts with transport infrastructure that will attract business investment and activity. The proposal will provide approximately 1,100 full-time equivalent construction jobs and approximately 200 full-time operational jobs. ▪ **Objective 24: Economic sectors are targeted for success.** The proposal aligns with the vision of the objective as it will support the continued growth of the WSEA as a hub of employment activity through co-location of key digital infrastructure with innovative technology businesses. Increased storage capacity responds to changing technologies, embracing opportunities to expand startup and digital innovation that allow people to work remotely.
Western City District Plan	The Western City District Plan (**District Plan**) is a 20-year plan to manage growth in the context of economic, social and environmental matters to implement the objectives of the Greater Sydney Region Plan. The project aligns with the vision of the Western Parkland City in that the development will facilitate the provision of jobs and economic activity within the WSEA which is identified as a developing industrial and employment area well

	connected to transport links. Specifically, the project will deliver on the following Planning Priorities set out in the Region Plan: ▪ **Planning Priority W1: Planning for a city supported by infrastructure.** The proposal delivers critical new digital infrastructure within the Western Parkland City, improving accessibility to high-capacity data services for businesses, institutions, and government agencies. This directly supports the City's growth as a nationally significant hub for employment, health, and education, providing the digital backbone required for advanced research, innovation, and service delivery. ▪ **Planning Priority W3: Providing services and social infrastructure to meet people's changing needs.** As the Western City District's population will continue to intensify, there will be an increasing need for additional community infrastructure including educational establishments (including the expansion of tertiary institutions), hospitals, libraries, etc. The development of a data centre in the WSEA will help enable the viable development of these important facilities. ▪ **Planning Priority W7: Establishing the land use and transport structure to deliver a liveable, productive and sustainable Western Parkland City**. Development of a data centre in this strategic location will enhance productivity by supplying essential digital infrastructure within a major employment area, complementing planned land use and transport integration. ▪ **Planning Priority 11: Growing investment, business opportunities and jobs in strategic centres.** Erskine Park is identified as a Local Centre which will provide increased employment-generating land uses. Development of a data centre on the site will help grow business opportunities in the District including smart work hubs as the employment-generating floorspace of Greater Sydney becomes more decentralised and focused on providing employment opportunities closer to people's homes. The zoning of the land and the WSEA for industrial uses is identified as vital in providing these increased employment opportunities within the Western City District. Overall, the proposal aligns with the vision of the District Plan as it will support the continued growth of the WSEA as a hub of employment activity through the co-location of key digital infrastructure near to innovative technology businesses.
Future Transport Strategy 2056	The *Future Transport Strategy 2056* (the **Strategy**) was released by Transport for NSW (**TfNSW**) in March 2018. The Strategy provides a 40-year vision for the NSW transport system aligned with the land use planning initiatives outlined within the Region and District Plans. The Strategy seeks to support a productive economy, through the delivery of transport that enables business to reach new markets, attract new investment, while presenting more jobs and training opportunities. Transport is recognised as a significant importance in the creation of liveable communities in association with its ability to transform the public domain, activate centres and unlock new commercial and housing developments, renewing existing neighbourhoods and spaces. The proposal is consistent with the Strategy as it will deliver high-tech infrastructure within a strategic employment area, leveraging existing and planned transport connections to support economic growth, create skilled jobs, and enable the integration of emerging technologies in line with the State's long-term vision.

NSW Government Architect Better Placed	Better Placed is an integrated design policy for the built environment developed by the NSW Government Architect. The policy aims to enhance the quality of life for the people of New South Wales by promoting good design in the planning, design, and construction of buildings, spaces, landscapes, and neighbourhoods. The project is consistent with the seven key Better Placed objectives, for the following reasons: ▪ **Better fit – contextual, local and of its place:** The proposal responds appropriately to its industrial context within the Erskine Business Park and the broader WSEA. The built form has been designed with consideration of the surrounding large-format industrial typologies, incorporating a scale and massing that is compatible with neighbouring development. Building orientation, material selection, and landscape integration have been informed by site-specific opportunities and constraints, including interface with Lenore Drive and the retention of existing green corridors. ▪ **Better performance – sustainable, adaptable and durable:** The development incorporates sustainability initiatives that support environmental performance and long-term resilience. Key features include energy-efficient systems, durable and low-maintenance materials, and construction methods that reduce operational and embodied carbon. The design enables adaptability through a large-span structural grid that allows for future reconfiguration of internal floorplates, ensuring the facility can respond to evolving operational requirements. ▪ **Better for community – inclusive, connected and diverse:** While the proposal is primarily a private data infrastructure facility, it contributes to broader community objectives by supporting digital connectivity and economic development. The design enhances the public realm along Lenore Drive through landscape treatments and articulation of built form. The project provides employment opportunities during construction and operation and contributes to the broader role of the WSEA as a key economic precinct. ▪ **Better for people – safe, comfortable and liveable:** The development prioritises safety, clarity of movement and occupant amenity. The site layout provides clear delineation between public and service areas, with safe and legible circulation for staff and visitors. End-of-trip facilities and access to landscaped open space areas contribute to workplace wellbeing. The office components have been designed to maximise daylight access, outlook, and internal amenity. ▪ **Better working – functional, efficient and fit for purpose**: The facility has been purpose-designed to accommodate the operational needs of a high-security, high-performance data centre. Internal layouts support efficient equipment handling, clear circulation, and streamlined servicing. Back-of-house functions are separated from office and administrative areas to ensure operational efficiency and security. Site access and servicing arrangements have been carefully considered to facilitate 24/7 operation with minimal disruption. ▪ **Better value – creating and adding value**: The project delivers economic, environmental, and social value. It enhances the local employment base, supports NSW's digital infrastructure capacity, and introduces a high standard of built form and landscape design into the precinct. The use of robust, low-maintenance materials ensures whole-of-life value and reduces the need for future interventions.

	▪ **Better look and feel – engaging, inviting and attractive**: Despite its industrial function, the building is designed with a strong architectural response that contributes positively to the streetscape. The articulation of the primary façade, thoughtful materiality, and integration of native landscaping create a visually appealing development that complements the broader setting. Plant and services have been screened or concealed to minimise visual clutter and enhance the overall presentation of the site.
Local Plans	
Penrith Local Strategic Planning Statement	Implementation of the Planning Priorities as set out in the Region Plan and the District Plan is addressed at the local level through the Penrith Local Strategic Planning Statement (**LSPS**). The LSPS sets out the 20-year vision for land use in the Penrith LGA, recognises the special characteristics which contribute to Penrith's local identity, and articulates how growth and change will be managed in the future. The proposed use of the land to develop a data centre aligns with the aims and objectives of the LSPS as it will facilitate jobs and economic activity within the LGA and provide an essential piece of digital infrastructure to help it grow sustainably. Specifically, a data centre proposal on the site will deliver on the following key Planning Priorities as set out in the LSPS: ▪ **Planning Priority 1: Align development, growth and infrastructure.** The LSPS recognises the need to harness digital infrastructure and smart city technologies in delivering better service, public realm, and environmental outcomes for the LGA. The development of a data centre within this key employment area will help achieve this aim. The LSPS includes an action for Council to prepare a SMART City Strategy in the short to medium term. Although this document is yet to be prepared, development of a data centre within the WSEA is well aligned with this intended action, as it will provide enhanced digital infrastructure within this key growth area. ▪ **Planning Priority 9: Support the North South Rail Link and emerging structure plan.** The LSPS identifies existing and emerging areas to concentrate employment-generating land use clusters within the LGA. This includes land at the LGA's southern end which will both leverage and support the Western Sydney Aerotropolis – namely, the Sydney Science Park and the Northern Gateway Centre. These areas are in close proximity to the WSEA and are anticipated to take on greater importance in the innovation and knowledge sectors. Development of a data centre on the site would provide essential digital infrastructure to help facilitate growth of these precincts. ▪ **Planning Priority 12: Enhance and grow Penrith's economic triangle.** The WSEA is situated adjacent to the eastern axis of Penrith's economic triangle (refer figure below). This axis is anticipated to accommodate new centres which will be built on the principles of innovation and sustainability. Digital infrastructure will be key to supporting the growth of these new centres and, as such, the development of a data centre within the WSEA will provide significant benefits as this part of the LGA grows.
Penrith Employment Lands Strategy	The Penrith Employment Lands Strategy supports the LSPS by providing clarity on the development of Penrith's employment centres, addressing the community's priorities to grow the local economy, attract investment, and ensure a greater number and diversity of jobs in the right locations.

	Development of a data centre on the site will help deliver the following Strategic Direction of the Employment Lands Strategy: ▪ **Strategic Direction 3: Build on our strengths and facilitate new enterprise.** The Employment Lands Strategy identifies the importance of Erskine Park as an emerging, specialised freight and logistics hub, in which the development and adoption of new digital technologies create new opportunities for new start-up tech firms. Providing the right digital infrastructure, in the form of a centralised data centre within the Erskine Park employment area, is therefore commensurate with the established and emerging character of the locality and will also help drive innovation and deliver a diversity of business opportunities. The strategy identifies significant opportunity for the growth of employment-generating floorspace within the southern end of the LGA, adjacent to the Western Sydney Aerotropolis. The proximity of the Erskine Park employment area to these future precincts means that having the right digital infrastructure in place will become an increasingly urgent necessity.
Penrith Economic Development Strategy	The Penrith Economic Development Strategy sets out a plan of action to support economic growth and sustainable development within the LGA, with the aim of creating 23,000 new jobs by 2031. The Strategy identifies that Penrith is well-positioned to accommodate this growth, given that the LGA has the largest area of zoned employment land within the Greater Sydney region (including 22% of Greater Sydney's existing zoned and serviced land, 40% of Greater Sydney's zoned and un-serviced land, and 37% of Greater Sydney's potential future employment land). The proposed use of the land for the development of a data centre is consistent with the following Strategic Priorities within the Economic Development Strategy: ▪ **Strategic Priority 1: Attracting investment.** The establishment of critical digital infrastructure within a key growth area will be vital for attracting new business investment into the WSEA and Penrith more broadly. ▪ **Strategic Priority 3: Leveraging employment lands.** Development of a digital storage facility within an established employment precinct, and in the vicinity of existing and emerging precincts, will help to attract investment and new businesses to the area. ▪ **Strategic Priority 4: Nurturing jobs of the future.** The strategy includes a target of 7,000 new jobs in the Health and Social Care, Education and Research sectors by 2031. These will largely comprise knowledge-intensive jobs which are reliant on the right digital infrastructure. The development of data centres, in appropriate locations, will therefore be central to achieving this priority. ▪ **Strategic Priority 5: Inspiring innovation.** Council seeks to leverage and grow the critical mass of knowledge and technical jobs in the Quarter Health and Education Precinct, and to enhance and strengthen Penrith's economic triangle. The growth of economic activity in these areas will depend on having the right digital infrastructure, including data centres, in place.

2.6 Justification Summary

The project is aligned with the overall strategic context for these reasons:

- **Response to site characteristics and constraints:** The design is informed by a detailed analysis of site opportunities and constraints. The site is zoned IN1 General Industrial under the I&E SEPP, located within the WSEA, and has previously been subject to multiple approvals. It comprises a large, cleared, level development pad with no heritage listings, low Aboriginal archaeological potential, and no significant environmental constraints or risks. Previous remediation has addressed contamination risks, with the latest DSI confirming suitability for the proposed use.
- **Site-responsive design and mitigation of impacts:** The proposal responds to topography, existing frontage treatments, and the surrounding context, with measures to minimise visual and amenity impacts on sensitive receivers. The landscaped berm along Lenore Drive will be retained and enhanced to screen operational elements and improve the site's presentation. Flood-affected land in the south-eastern corner and landscaped setbacks have been accommodated within the layout, ensuring compliance with planning controls while maintaining efficient functionality.
- **Integration with locality, infrastructure and cumulative context:** The project has been designed with regard to the locality, surrounding infrastructure, and cumulative impacts in line with DPHI's guidelines. The site benefits from direct access to Lenore Drive, the M7 Motorway, and major freight routes, and is strategically located 12 km from the future Western Sydney International Airport. Although public transport access is currently limited, connectivity is improving. Importantly, the proposal ties into the established regional stormwater network, supporting flood resilience and minimising the need for additional on-site infrastructure. Cumulative impacts from nearby data centres, freight hubs, and industrial estates have been assessed, with the project designed to operate compatibly within this context and without unacceptable impacts on infrastructure, amenity, or the environment.
- **Consideration of feasible alternatives:** Feasible alternatives including the 'do nothing' scenario, alternative sites and different design layouts were assessed. Other sites were discounted due to inadequate infrastructure, environmental constraints, or insufficient scale, while alternative designs could not meet operational requirements. The 'do nothing' scenario would leave a strategically located industrial site underutilised and fail to deliver the critical digital infrastructure required to support NSW's growing digital economy. The chosen site and design represent the most efficient and orderly use of the land.
- **Consistency with strategic planning policy:** The proposal aligns with State and local planning policies by supporting job creation, infrastructure investment, and the evolution of a modern employment precinct. It advances the Region Plan and District Plan objectives for a productive Western Parkland City, strengthens the digital economy, and contributes to innovation and resilience. Locally, it is consistent with the Penrith LSPS, Employment Lands Strategy, and Economic Development Strategy. The project is expected to generate approximately 1,100 construction jobs and 200 ongoing operational roles, while contributing to broader economic growth through expanded data storage capacity and improved digital resilience.

3 Project Description

3 Project Description

The following section of the EIS summarises the key numeric components of the proposed development and describes the site preparation, construction and operational phases in further detail.

3.1 Project Overview

The key components of the proposed development are summarised in **Table 11**. A copy of the Architectural Drawings is provided as **Appendix E**. Renders are provided at **Figure 8** and **Figure 9**.

Table 11 Project Summary

Project Element	Summary
Project Summary	▪ Site preparation and bulk earthworks. ▪ Temporary construction access from Lenore Drive. ▪ Construction of a three-storey data centre comprising two buildings, with a maximum height of 26.5 metres and a total GFA of approximately 55,651m², including technical data halls, office and administrative areas, and ancillary circulation space. ▪ At-grade under-croft car parking (34 spaces) within the building footprint, plus an additional 44 on-site spaces, providing a total of 78 parking spaces. ▪ Separate generator gantry accommodating 170 backup generators. ▪ Landscaping and associated public domain works. ▪ Extension and augmentation of physical infrastructure and utilities as required, including an on-site substation and water storage tanks integrated within the building footprints.
Site/Project Area	The data centre development relates to Lot 101 in DP 1268632 which comprises an area of approximately 77,241.97m^2
Proposed uses	Data centre with ancillary office space
Data halls	32 data halls
GFA	55,651m^2
FSR	0.72:1
Site Coverage	44,062.38m^2 (57.04% of site)
Utilities	Provision of required utilities including: ▪ 170 x diesel generators accommodated with generator gantry structure. ▪ 23 x water tanks for industrial water. ▪ Two x above-ground water tanks for fire water. ▪ 330/132/11kV switching station.
Power consumption	450 MW
Maximum height	26.5m over three storeys
Vehicular Access	Vehicle access via Lockwood Road

Project Element	Summary
Parking	78 car spaces including two accessible spaces
Bicycle Parking	30 spaces
Motorbike Parking	Three spaces
Deep Soil Area	14,733.8m^2 (19.07% of site)
Tree Canopy Coverage	8,856m^2 (11.46% of site)
Earthworks/Cut and Fill	Net fill of approximately 39,780m^3
Hours of Operation	The facility will be operated on a 24-hour, 7 day a week basis.
Jobs	Construction: 1,100 Operation: 200
Staging and Construction	The project is to be constructed over two stages: ▪ Stage 1 – Eastern data centre building, on-site substation, generator gantry, external plant and equipment, new Lockwood Road access, internal roads, car parking, and landscaping. ▪ Stage 2 – Western data centre building, gantry expansion, external plant and equipment, additional car parking and landscaping.
Estimated Development Cost	$1,502,051,858.30

Figure 8 Project Render – View from Lenore Drive

Source: Genton, 2025

Figure 9 Project Render – View of office with under croft parking

Source: Genton, 2025

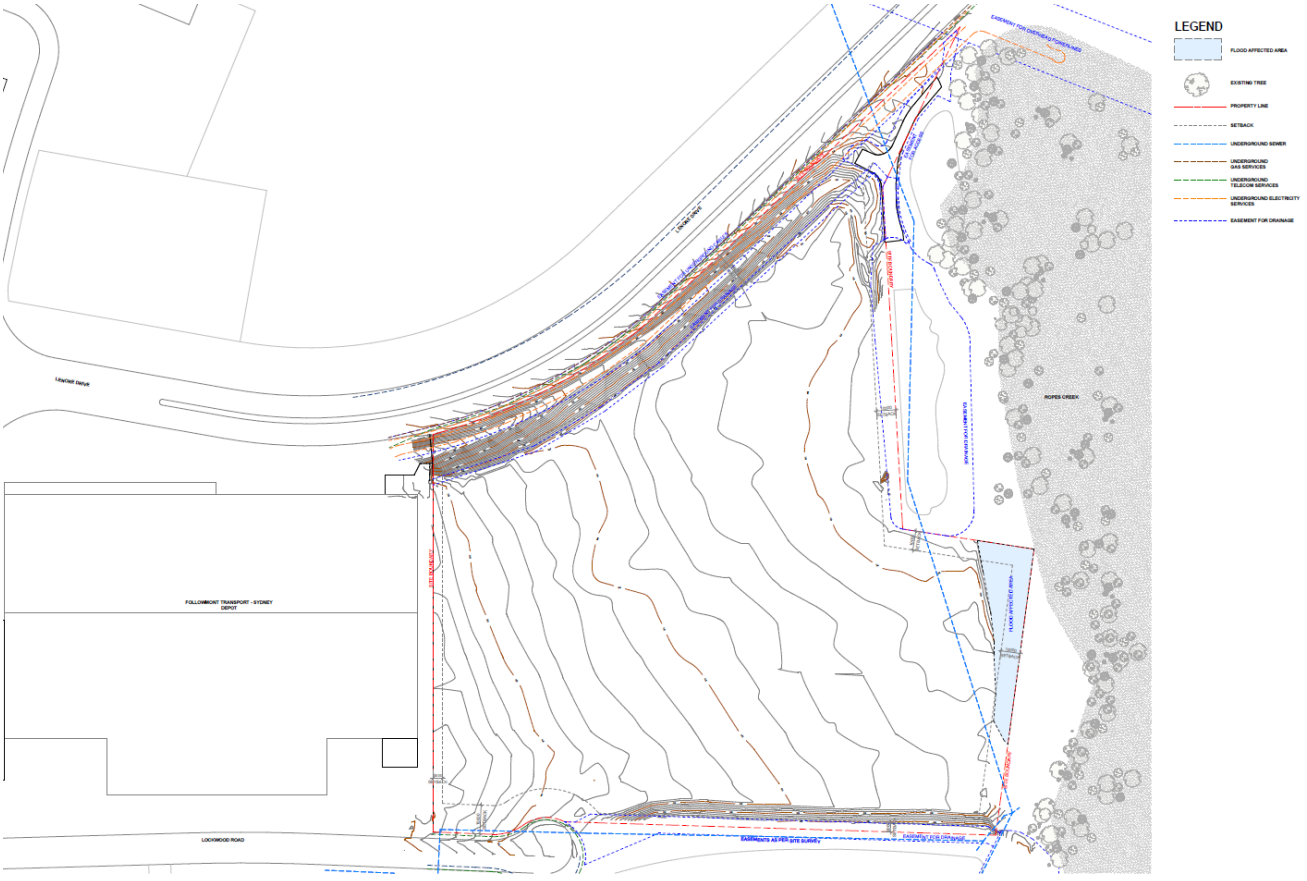
3.2 Detailed Description

3.2.1 Project Area

The project area (**Figure 10**) is defined as Lot 101 in DP 1268632 and has a total area of approximately 77,241.97m². The site is irregular in shape, currently vacant, and largely cleared of vegetation, with a levelled development pad that is ready for construction. Key existing features include the landscaped berm along the Lenore Drive frontage, which provides effective visual screening from the public domain and will be retained and enhanced as part of the proposal, and the site's eastern boundary adjoining the Ropes Creek biodiversity corridor, an important ecological asset within the broader riparian corridor.

The site will accommodate two data centre buildings, an on-site substation and generator gantry, hardstand areas, landscaping, and stormwater management works. The developable footprint has been defined through detailed site analysis and responds to the site's geometry and constraints. The layout has been carefully planned to avoid development within flood-affected land along the south-eastern portion of the site, respect existing easements, and ensure efficient use of the irregular lot configuration while maintaining appropriate buffers to the adjoining biodiversity corridor.

Figure 10 Site Analysis Plan



Source: Genton, 2025

3.2.2 Design Principles & Response

The proposed development has been shaped by a set of integrated design principles that directly respond to the site's physical conditions, operational requirements, and its prominent location within the WSEA:

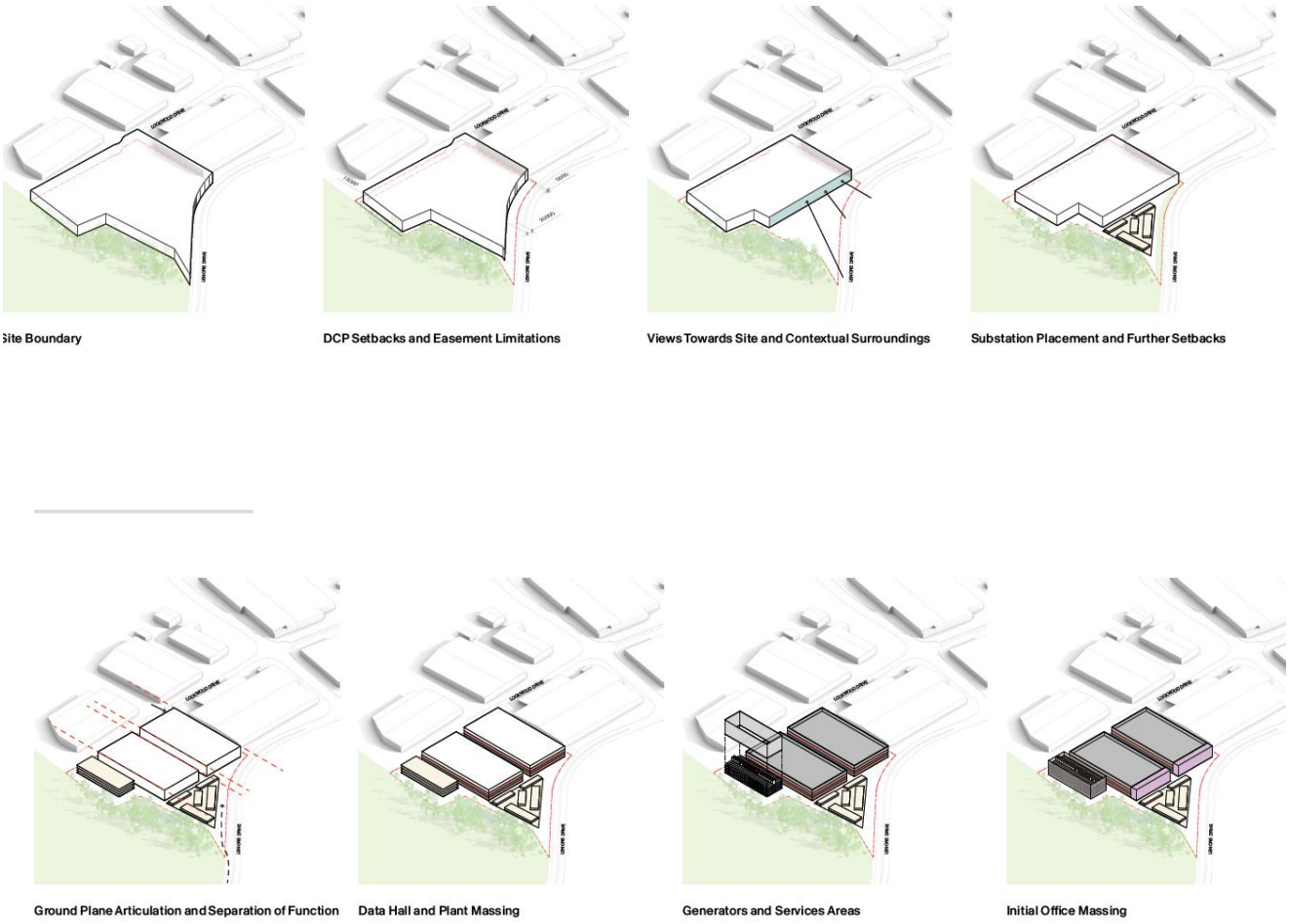
- **Functionality and technical performance:** Two hyperscale data centre buildings are arranged in a modular, rectilinear configuration to optimise operational efficiency and allow for future adaptability. Each building contains two floors of data halls (6.5m floor-to-floor) separated by a central plant floor (5m floor-to-floor) serving both levels. Internal circulation is arranged logically, with separate access

points and roadways for public, operational, and service functions. Level changes within the site physically segregate pedestrian areas from heavy vehicle movements, improving safety and streamlining deliveries. Primary site access is from Lockwood Road, with potential construction access from Lenore Drive. Internal one-way vehicle loops provide efficient truck manoeuvring, and under-croft parking at upper ground level serves staff and visitors.

- **Contextual integration:** The built form layout is informed by Penrith DCP 2014 setback controls, incorporating a 20-metre landscaped setback to Lenore Drive and a 10-metre setback to the adjoining Ropes Creek biodiversity corridor, while also avoiding development within flood-affected land in the south-east corner. The office components are positioned along Lenore Drive to establish a strong presence, activate the frontage, and screen back-of-house functions from the public domain. Service areas and loading docks are located on the lower ground level to reduce visibility and support circulation. The substation is screened behind the landscaped berm on Lenore Drive, while the generator gantry is sited at the rear of the site and concealed by built form and planting. These arrangements discreetly integrate operational elements, maintain a high-quality Lenore Drive frontage, and minimise visual and acoustic impacts.
- **Visual quality and articulation:** The northern elevation fronting Lenore Drive presents a refined industrial façade in concrete, steel, and glazing. The upper office level is recessed, creating landscaped terraces and balconies that contribute to biophilic design and passive cooling, while providing visual depth. A uniform north façade is achieved through a portal frame and vertical extrusion system, linking to articulated east and west façades. Vertical modulation, varied textures, and integrated screening conceal rooftop plant and mechanical systems, maintaining a cohesive profile. The layered material palette provides contrast between the office and the larger data hall volumes, giving the campus a contemporary and recognisable identity within the Erskine Business Park.
- **Landscape integration and legibility:** The design retains and enhances the landscaped berm along Lenore Drive, providing immediate visual screening of operational areas. Deep soil zones, structured planting buffers, and continuous green edges are incorporated throughout the site, with tree planting exceeding DCP canopy targets to provide shade, habitat, and microclimate benefits. The landscape palette extends native species from the Ropes Creek biodiversity corridor into the site, reinforcing ecological connections and embedding Caring for Country principles. Vegetated swales and bioretention areas integrate WSUD while contributing to the site's green character.
- **Durability and materiality:** Materials have been selected for long-term durability, ease of maintenance, and resilience in an exposed industrial environment. The architectural expression showcases materials in their natural form -concrete, steel, and glass reflecting the precinct's industrial identity while achieving a refined finish.
- **Sustainability and adaptability:** The project incorporates high-performance façades, light-coloured roof and hardstand materials to reduce heat absorption, rooftop photovoltaic arrays, and rainwater harvesting for reuse in landscaping and cooling systems. Cooling plant is designed for efficiency to support low Power Usage Effectiveness (**PUE**) targets. Large-span structural grids and generous floor-to-floor heights enable future technological upgrades without major structural modifications.
- **Connectivity and precinct integration**: Although security and operational needs necessitate an inward-facing campus, the design ensures a positive interface with the public domain through façade articulation, generous setbacks, and high-quality landscaping. Clearly defined entry points, under-croft parking, and legible circulation routes enhance wayfinding. The proposal contributes to the coordinated industrial urban form of the Erskine Business Park and reinforces its role as a key employment precinct.

A diagram demonstrating the evolution of the proposed massing and built form strategy is provided in **Figure 11**.

Figure 11 Evolution of Massing and Form Strategy



Source: Genton, 2025

3.2.3 Site Layout / Urban Design

The site layout will accommodate two hyperscale data centre buildings and associated infrastructure, arranged to make use of the cleared, level development pad and to respond to the triangular site shape and existing frontage conditions. The overall layout is illustrated in the site plan provided at **Figure 12**.

The key elements of the site layout are as follows:

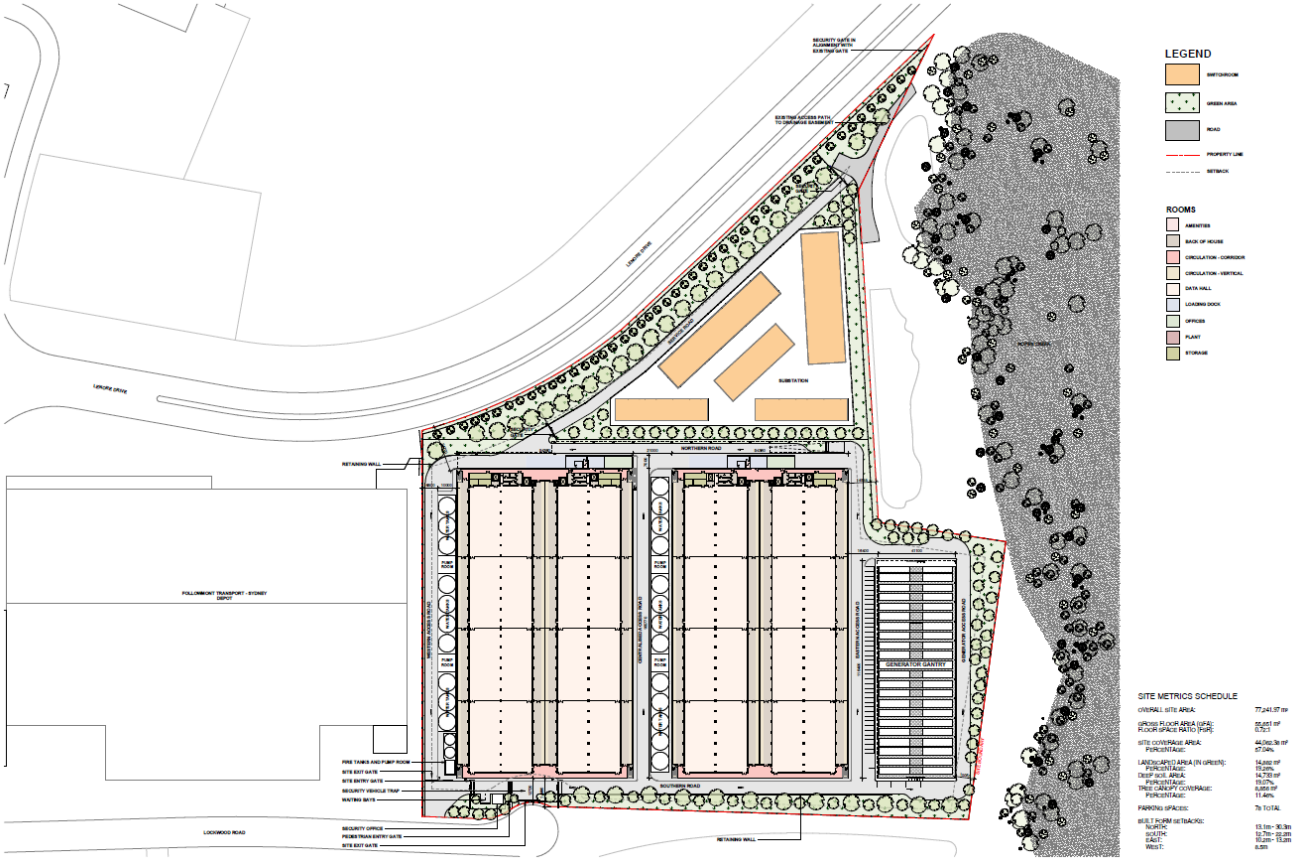
- **Data Centre Buildings** – Two rectilinear buildings are centrally located, each comprising two data hall levels, an intermediate plant level, and a screened rooftop plant zone. Both reach 26.5 metres to parapet height, with exhaust chimneys extending above this level. Massing is concentrated to the south, while office components address Lenore Drive to provide a public frontage and screen operational areas from view. Each building will include:
  - **Data Halls** – Each building will include a total of 16 data halls each (32 in total) located on the lower and upper technical floors of each building, with an intermediate plant level between them. These secure, climate-controlled environments are designed for high-density ICT infrastructure, supported by adjoining fan wall rooms, plant areas, and equipment corridors to ensure operational efficiency, redundancy, and ease of maintenance.
  - **Office and Administrative Spaces** – Concentrated along the Lenore Drive frontage of each building over three levels, accommodating operational offices, meeting rooms, security facilities, staff amenities, and end-of-trip facilities. Extensive glazing along this frontage enhances transparency,

promotes activation, and enables passive surveillance of the public domain. Roof terrace areas at the upper level are set back to reduce visual bulk and provide outdoor amenity.

  - **Switch rooms and Electrical Rooms** – Located within the ground floor and plant levels of each building to house electrical distribution equipment, ensuring efficient connection to the on-site substation and data halls. Secure access and clear circulation paths facilitate equipment movement and maintenance.

- **Substation** – Located in the triangular northern portion of the site, behind the existing landscaped berm, with equipment up to 4 metres high screened by both built form and landscaping.
- **Generator Gantry Stack** – Situated in the south-eastern portion of the site, accommodating multiple backup diesel generators in an elevated configuration. This location allows compliance with exhaust dispersion requirements, utilises natural screening from adjacent bushland, and reduces potential noise and visual impacts on Lenore Drive and neighbouring sites.
- **Water Storage** – Industrial cooling and fire water tanks are distributed adjacent to each building.
- **Access and Circulation** – A single secure vehicular entry from Lockwood Road provides controlled access via gates, a vehicle trap, and security office. An internal loop road serves staff/visitor parking, loading docks, and service yards. Under-croft parking is provided beneath the office components, with additional surface parking near the gantry. Heavy-vehicle routes are separated from staff/visitor parking areas.
- **Landscaping and WSUD** – The Lenore Drive berm will be retained and enhanced. Landscaped setbacks include native canopy trees, WSUD swales, and layered understorey planting. Deep soil zones and permeable paving are integrated with stormwater swales and raingardens to enhance amenity, biodiversity, and water management.

Figure 12 Proposed Site Plan



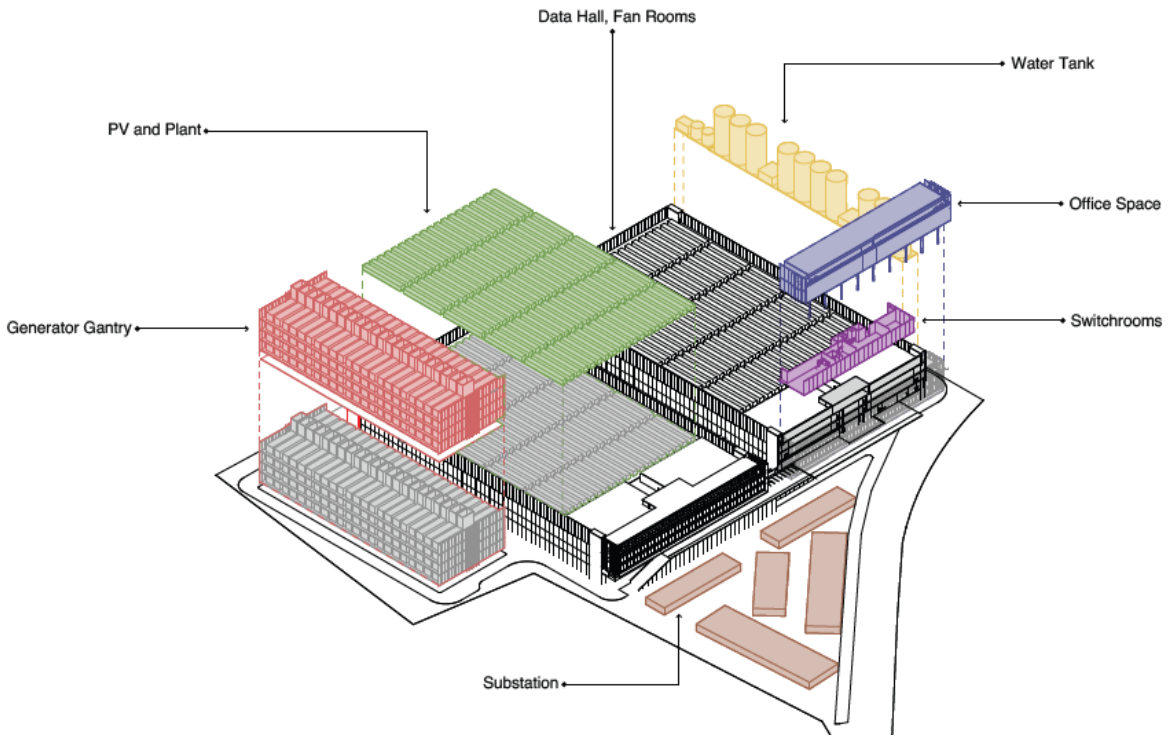
Source: Genton, 2025

3.2.4 Building Design

Form and Architecture

The architectural design reflects the operational requirements of a mission-critical hyperscale data centre while presenting a cohesive, robust, and well-articulated built form within the Erskine Business Park. The design integrates technical, office, and support functions in a manner that reduces bulk, promotes legibility, and enhances the public domain interface. The internal configuration and functional relationships are illustrated in the functional stack diagram provided at **Figure 19**.

Figure 13 Functional Stack Diagram



Source: Genton, 2025

The two buildings adopt a rectilinear form that balances efficiency with urban design outcomes. Office components are positioned along Lenore Drive with glazed façades that activate the frontage and provide a distinct public address. Recessed upper office levels and wrap-around landscaped terraces reduce the perceived mass and create visual interest. In contrast, data hall façades are expressed as solid, durable panels, emphasising the functional hierarchy of uses. Plant areas are interposed between technical levels and screened within rooftop zones to reduce visual clutter.

The external expression employs layering, modulation, and material differentiation to break down the scale of the buildings. Vertical and horizontal panels align with the structural grid, while tonal contrast and textural variation articulate the façade. The integration of perforated metal screens, louvres, and curtain wall glazing ensures plant and service areas are visually unified with the overall architectural language.

The substation and generator gantry are treated as integrated site elements rather than ancillary additions. The substation is visually contained behind the Lenore Drive berm, while the gantry is positioned at the rear and adopts complementary finishes. Together with the robust base treatment of precast panels and the lighter upper-level cladding, these elements form a consistent, coordinated built environment outcome.

Internal Configuration

The internal layout of the data centre buildings is deliberately structured to separate public-facing office functions from secure technical spaces and to ensure efficient servicing.

The functional hierarchy is expressed as follows:

- **Lower Ground Level** – Houses the principal operational back-of-house functions, including secure data halls, loading docks, waste management facilities, storerooms, and facility management offices. Heavy-vehicle access is directed to this level, ensuring segregation from visitor and staff movements.
- **Upper Ground Level** – Functions as the main transition level, combining plant and equipment areas (mechanical and electrical rooms) with office and amenity spaces. This level accommodates the main lobby, security office, meeting rooms, end-of-trip facilities, and a parking deck, providing the interface between technical operations and staff/visitor entry.
- **Level 1** – Contains additional data halls, supplemented by office space at the Lenore Drive frontage. Circulation paths and adjacent plant areas are designed to allow efficient movement of ICT equipment and personnel while maintaining strict access control.
- **Level 2 and Office Roof Level** – Dedicated to the office program, including administrative areas, breakout spaces, and meeting rooms. The upper office level is recessed from the building envelope and incorporates an external landscaped terrace wrapping the floor plate, providing outdoor amenity and softening the visual bulk.
- **Rooftop** – Accommodates screened mechanical plant platforms and photovoltaic arrays.

This arrangement is further illustrated in the section plans (**Figure 14** and **Figure 15**) and in greater detail within the floor plans (**Figure 16** to **Figure 19**).

Supporting Infrastructure

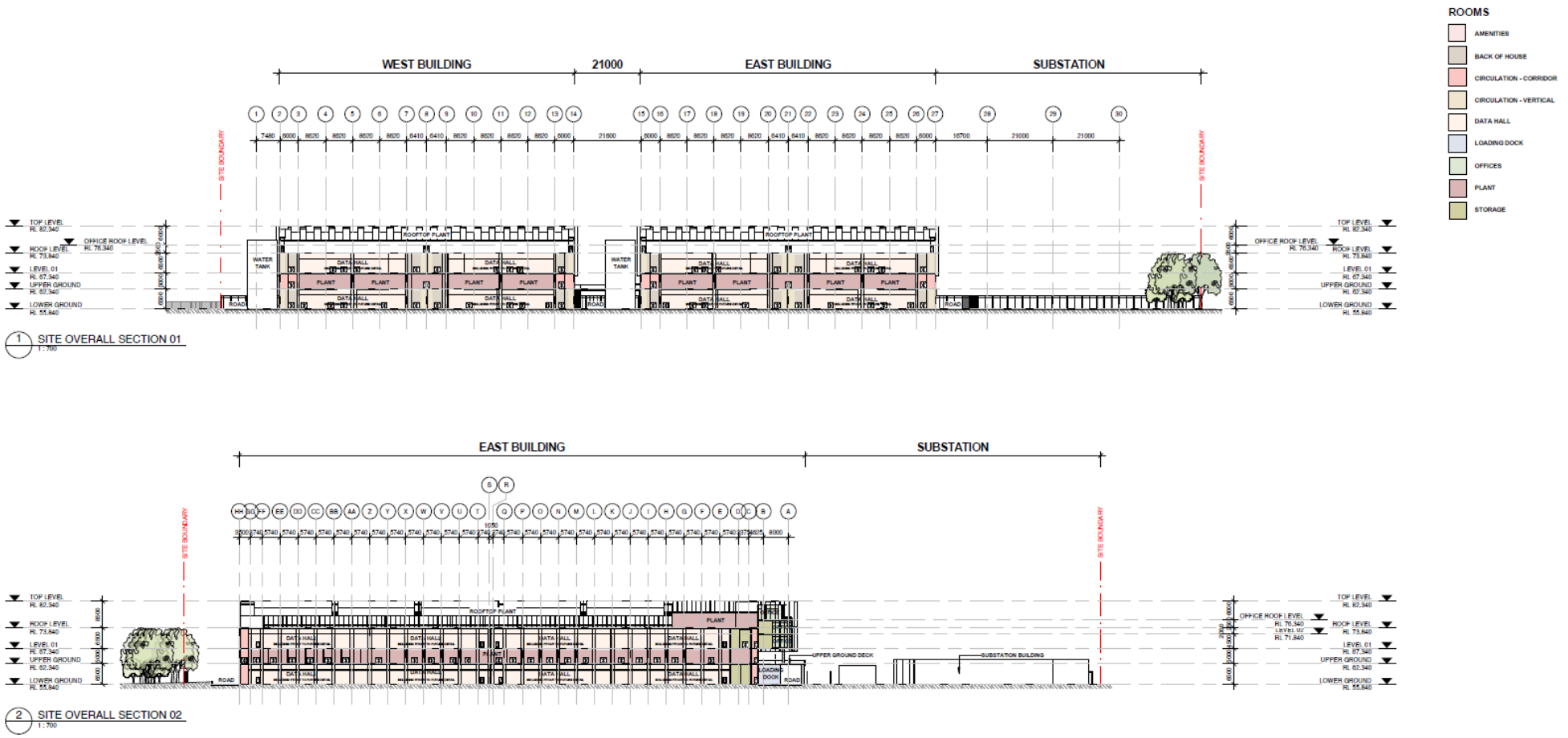
The proposed substation will be located in the northern triangular portion of the site, enabling efficient integration with the electricity network. It will be screened from Lenore Drive by the existing landscaped berm in combination with the adjoining data centre buildings.

The generator gantry located in the south-eastern corner of the site will accommodate multiple backup generators in an elevated configuration. The structure has been positioned to optimise acoustic performance and exhaust dispersion, while being visually screened by the massing of the proposed data centre buildings. Industrial water storage tanks will be located adjacent to each building, sized to provide both cooling capacity and fire suppression, and directly connected to plant areas for operational efficiency.

Figure 14 Section Plan of Office Component

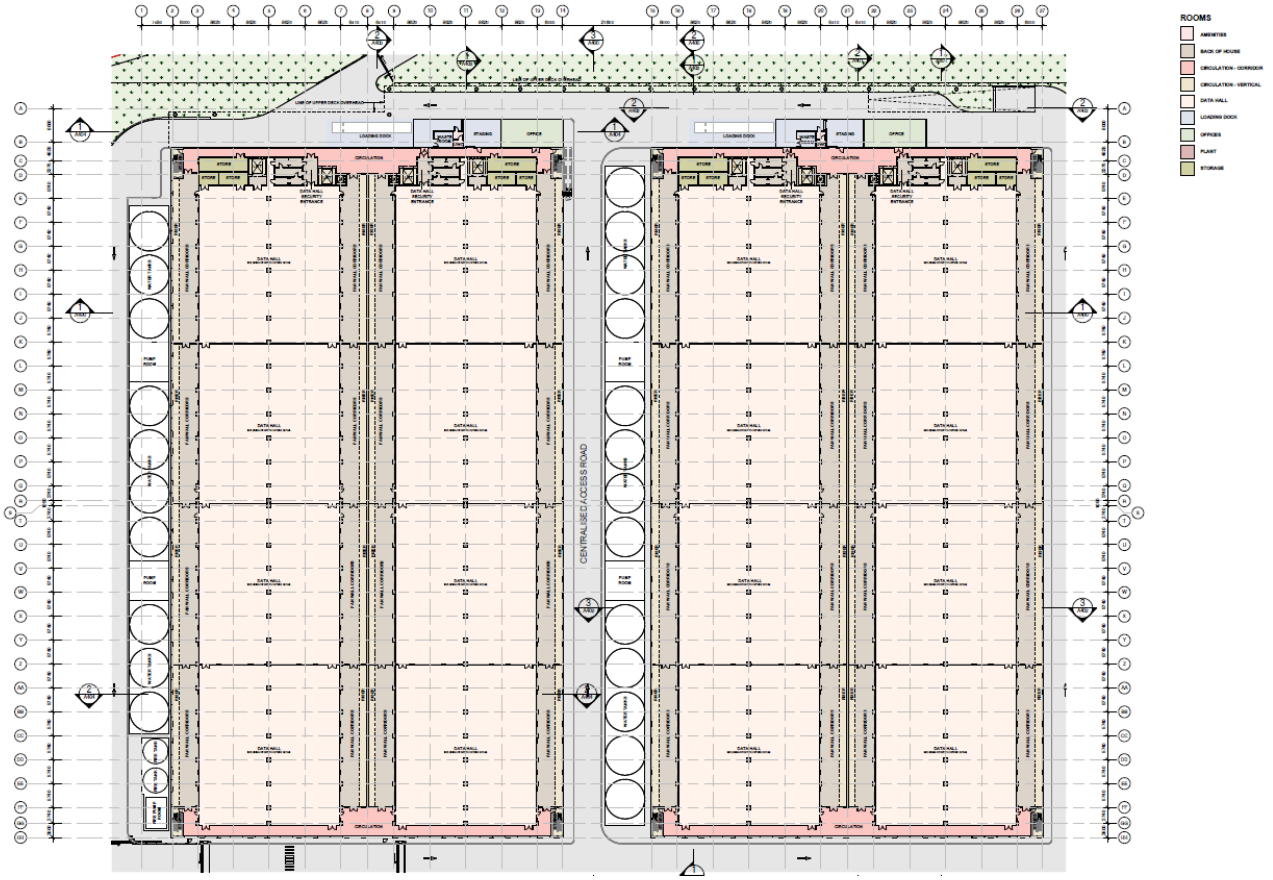
Source: Genton, 2025

Figure 15 Site Section Plan



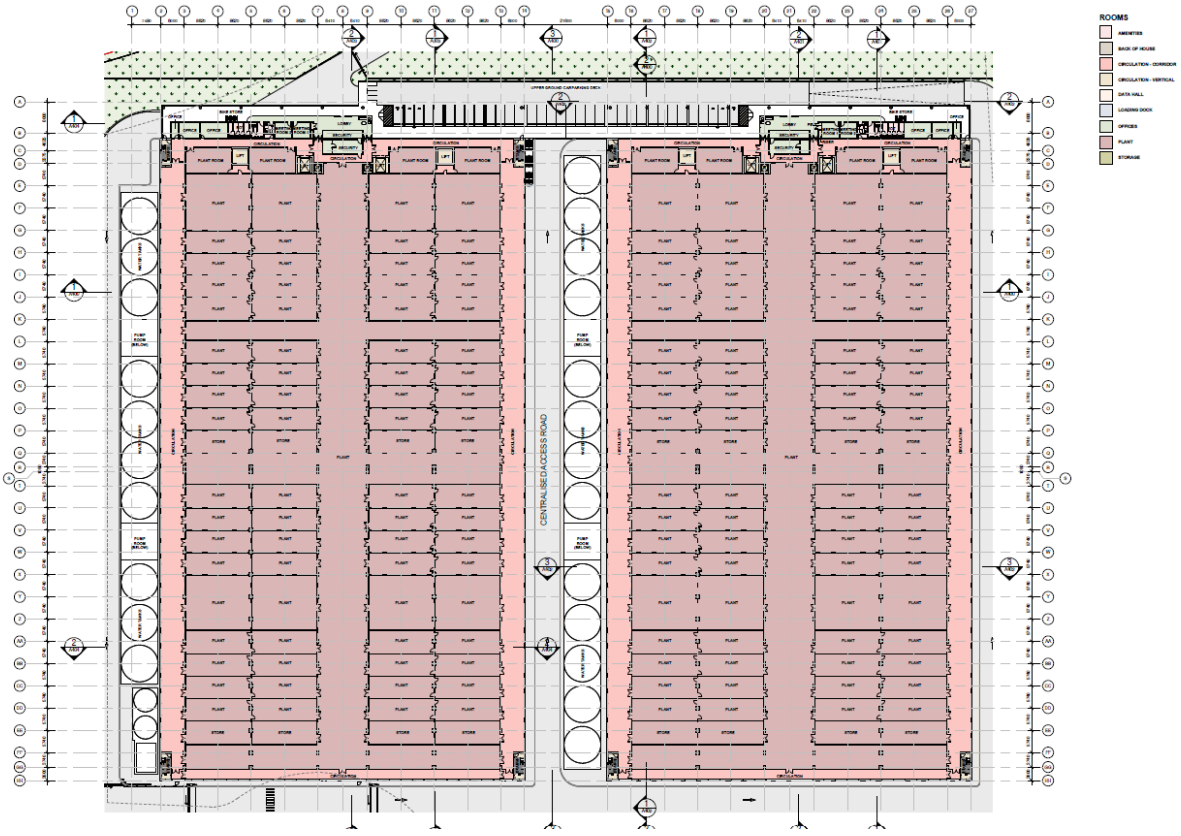
Source: Genton, 2025

Figure 16 Lower Ground Floor Plan



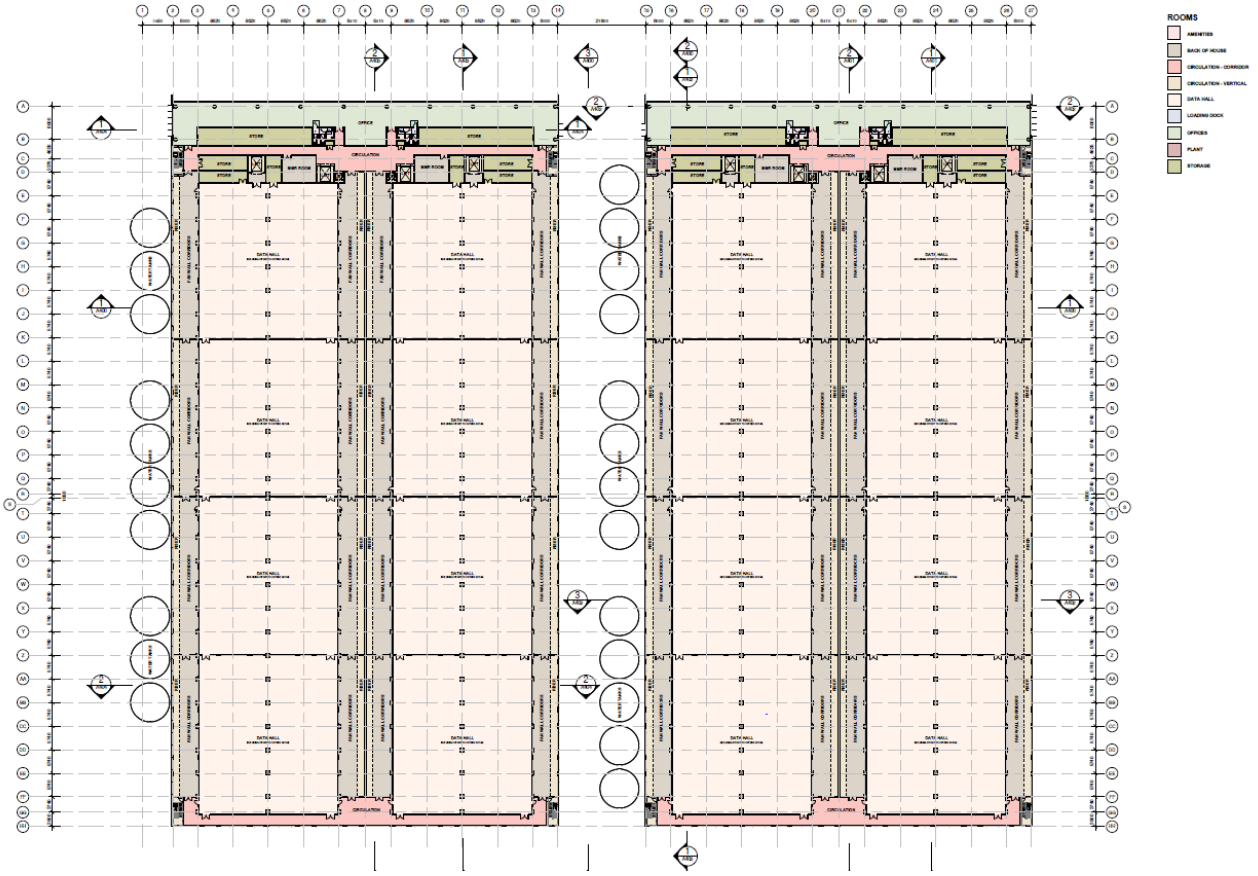
Source: Genton, 2025

Figure 17 Upper Ground Floor Plan



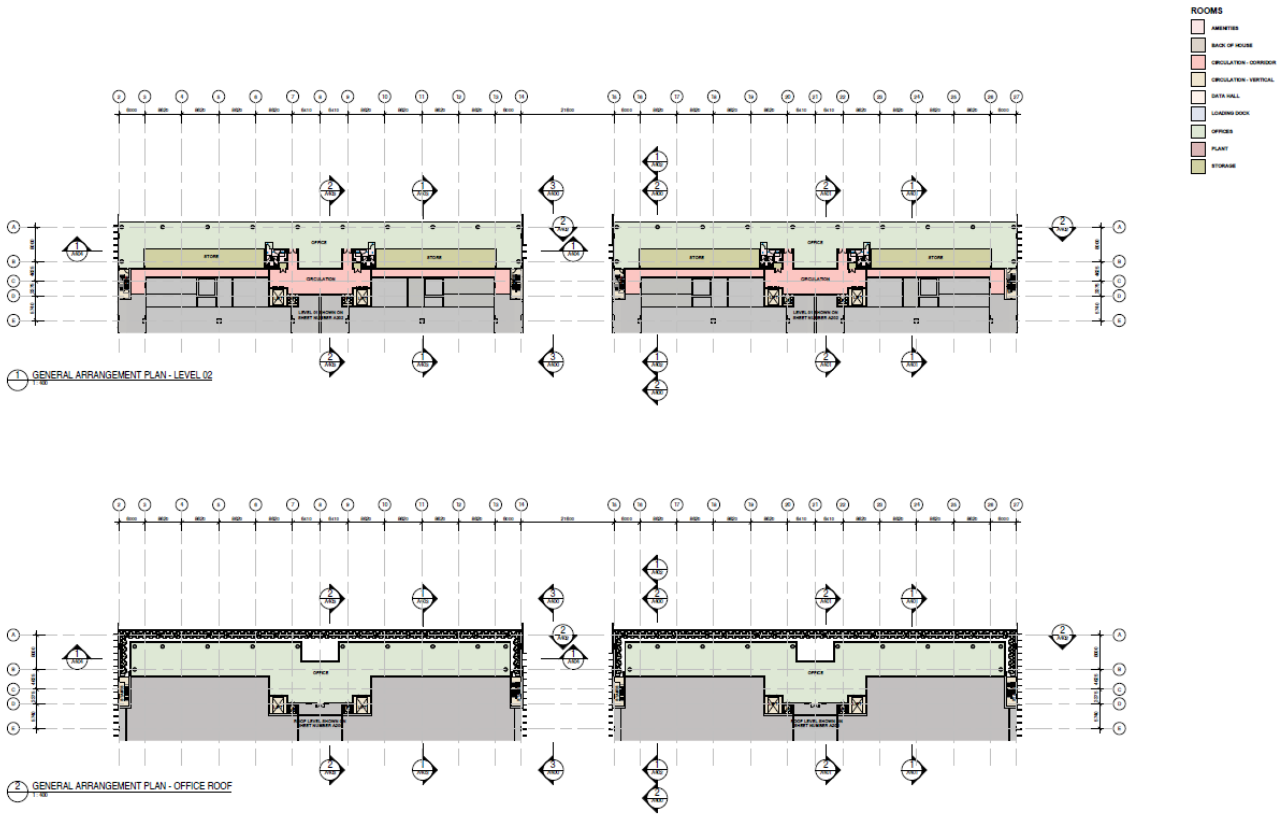
Source: Genton, 2025

Figure 18 Level 1 Floor Plan



Source: Genton, 2025

Figure 19 Level 2 and Office Roof Plan



Source: Genton, 2025

Materials and Finishes

The proposed development applies a refined yet robust materials palette that balances the operational demands of a mission-critical data centre with a cohesive, high-quality built form for the Erskine Business Park. Materials have been selected for durability, low maintenance, and strong performance in an exposed industrial setting, while tonal variation, articulation, and textural contrast are employed to break down bulk and create visual interest. As illustrated in **Figure 20** and **Figure 21**, the primary façade treatment for the two data centre buildings combines:

- **Prefinished steel cladding** in neutral and dark tones, aligned with precast concrete panel joints and articulated through vertical and horizontal panelisation to break down the massing and reinforce façade rhythm.
- **Precast concrete panels** at lower levels to provide robustness, resistance to wear, and visual grounding in high-traffic or service areas.
- **Perforated metal screening** to mechanical plant areas, providing ventilation, visual concealment, and contributing to the layered architectural expression.
- **Glazing to office areas**, particularly along the Lenore Drive frontage, designed as a unitised curtain wall system with a combination of clear glass and anti-reflective secure glazing to maximise daylight penetration, maintain privacy and security where required, and enhance activation of the public domain.
- **Integrated louvre systems** to plant and service areas, detailed to balance ventilation and acoustic needs with a unified façade appearance.

A coordinated colour scheme of muted and recessive tones ensures the built form integrates with its industrial context, complemented by metallic or anodised highlight elements that define entry points and provide subtle contrast. Roof areas will accommodate screened mechanical plant, PV arrays, and ancillary equipment, all finished in low-reflectivity, non-glare coatings to minimise visual impact from surrounding public domain. The elevated generator gantry and on-site substation adopt complementary finishes and colour treatments to ensure a consistent presentation across all built elements.

Extract of elevations are provided at **Figure 22** and **Figure 23.**

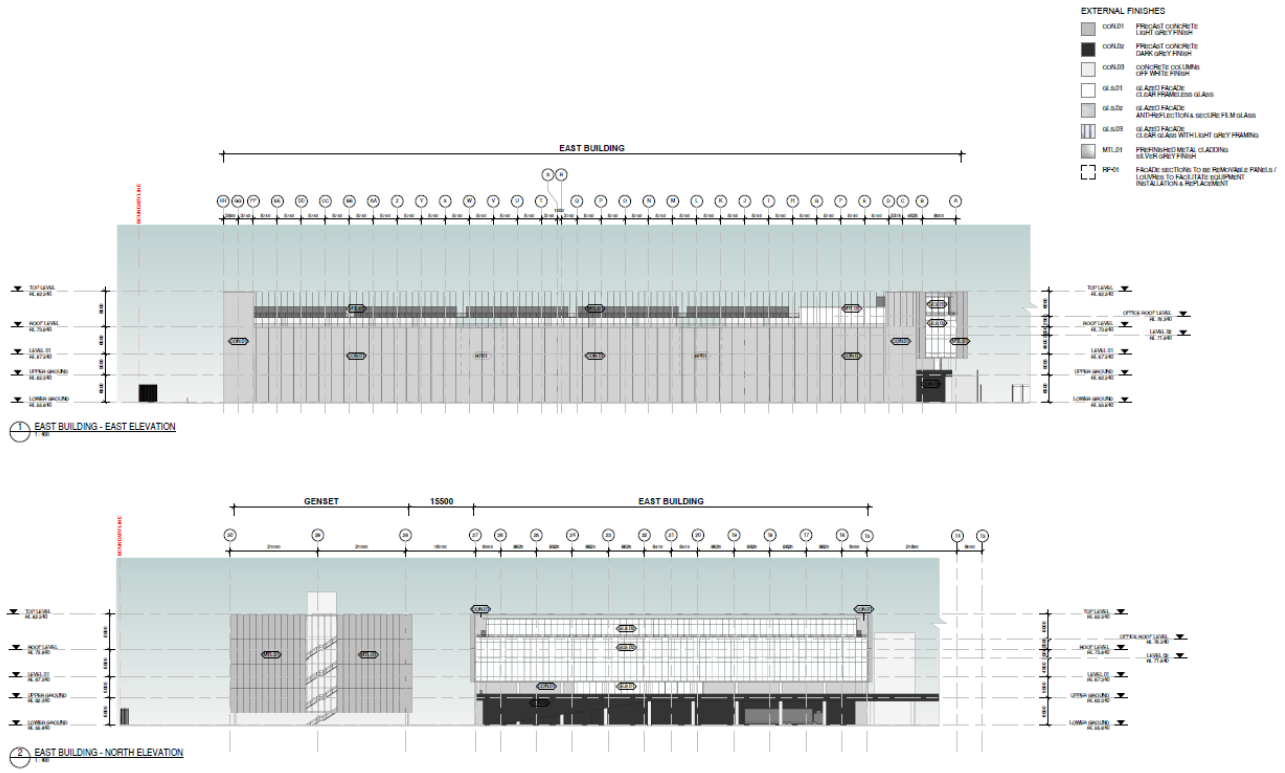
Figure 20 Materials- Office component

Source: Genton, 2025

Figure 21 Materials – Data Hall component

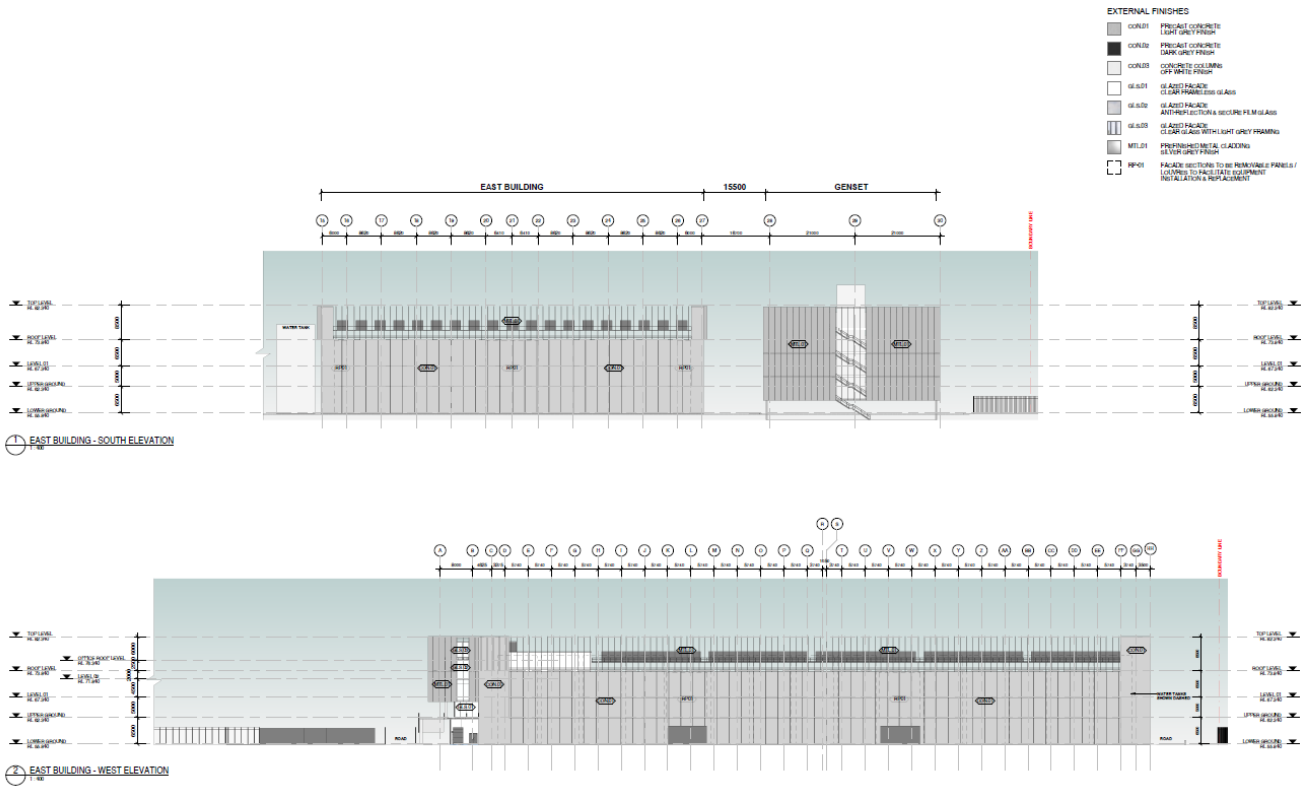
Source: Genton, 2025

Figure 22 Eastern Building (East and North Elevation)



Source: Genton, 2025

Figure 23 Eastern Building (West and South Elevation)



Source: Genton, 2025

Sustainability

The proposal incorporates a comprehensive range of ESD initiatives to optimise environmental performance, reduce operational demand, and support long-term climate resilience. The facility is designed for a PUE of 1.35, achieved through direct-to-chip liquid cooling, high-efficiency air-cooled chillers with integrated free cooling, and optimised control systems. Redundant (N+1) systems ensure operational continuity without compromising efficiency. Roof-mounted PV arrays will generate on-site renewable electricity, with provision for exporting surplus power to the grid.

Passive design measures reduce building energy loads by orientating structures to minimise summer heat gain and allow winter solar penetration. High-performance façades, particularly to north-facing office areas, incorporate vertical and horizontal shading to reduce HVAC demand and improve comfort.

Water efficiency is addressed through rainwater harvesting and storage for cooling tower make-up and landscape irrigation, WSUD (including vegetated swales and bioretention systems) to improve stormwater quality and manage peak flows, and the use of water-efficient fixtures and fittings throughout.

Material selection focuses on reducing embodied carbon and construction waste. Durable, low-maintenance materials with recycled content, such as recycled steel and concrete with locally sourced aggregates, are prioritised. Prefabricated building elements are proposed to minimise waste, shorten construction programs, and further lower embodied impacts.

Landscaping is designed to reduce the urban heat island effect and enhance biodiversity. Deep-soil zones, layered planting, and canopy cover exceeding 10% of the site will improve microclimatic conditions. Planting draws heavily on native species from the adjoining Ropes Creek biodiversity corridor, reinforcing ecological connections and incorporating Caring for Country principles.

The project is designed for resilience, with flood-tolerant materials in at-risk areas, robust power and cooling systems, and layouts that accommodate future technology upgrades while maintaining operational capacity during extreme weather events.

Key initiatives include:

- **Energy efficiency** – PUE 1.35, high-efficiency chillers, integrated free cooling, on-site solar PV, and advanced building control systems.
- **Passive design** – optimised orientation, high-performance façades, and office shading strategies.
- **Water management** – hybrid cooling systems, rainwater harvesting, WSUD features, and efficient fixtures.
- **Materials** – recycled steel, low-cement concrete, prefabrication, and a C&D waste management plan.
- **Landscape** – deep-soil planting, native species, and canopy cover exceeding DCP requirements.
- **Climate resilience** – flood-tolerant materials, adaptable infrastructure, and robust backup systems.

3.2.5 Site Infrastructure

The proposed development will be serviced by upgraded utilities and infrastructure designed to meet the operational requirements of a high-performance, mission-critical data centre.

Substation Yard

The substation yard is proposed within the triangular northern portion of the site, positioned between the two data centre buildings and fronting Lenore Drive. It will accommodate key electrical infrastructure required to service the development, including:

- Three x 330/132 kV transformers to step down incoming high-voltage supply to 132 kV.
- A 132 kV switch room to distribute power within the site.
- Eight x 132/11 kV transformers located within the substation yard, which supply both data centre buildings.

The maximum height of equipment within the yard will be approximately 4 metres. The substation will be screened from public view through a combination of the retained and enhanced landscaped berm along Lenore Drive and the adjacent built form, ensuring minimal visual impact. An acoustic enclosure (blast wall) surrounds the substation which ranges in height from 6 to 8 metres

Generator Gantry

The generator gantry will be located in the south-east corner of the site, occupying an irregular-shaped parcel of land and benefitting from natural screening provided by existing vegetation to the east. The structure will house the primary backup power generation infrastructure for the data centre facility.

A total of 170 high-voltage 3.1 MW diesel generators is proposed (85 per data centre building), supporting a total load capacity of approximately 450 MW. Generators will operate only during mains utility outages affecting the respective electrical block or for periodic testing. Final generator capacity will be reached progressively in line with staged construction, with completion anticipated by 2035 once all colocation spaces are operational.

The generators will be installed in a stacked arrangement across Levels 1–4 of the gantry (refer **Figure 24**), with the ground level accommodating diesel storage tanks. Each generator will be containerised in prefabricated, acoustic-rated enclosures with integrated 990L day tanks and fitted with:

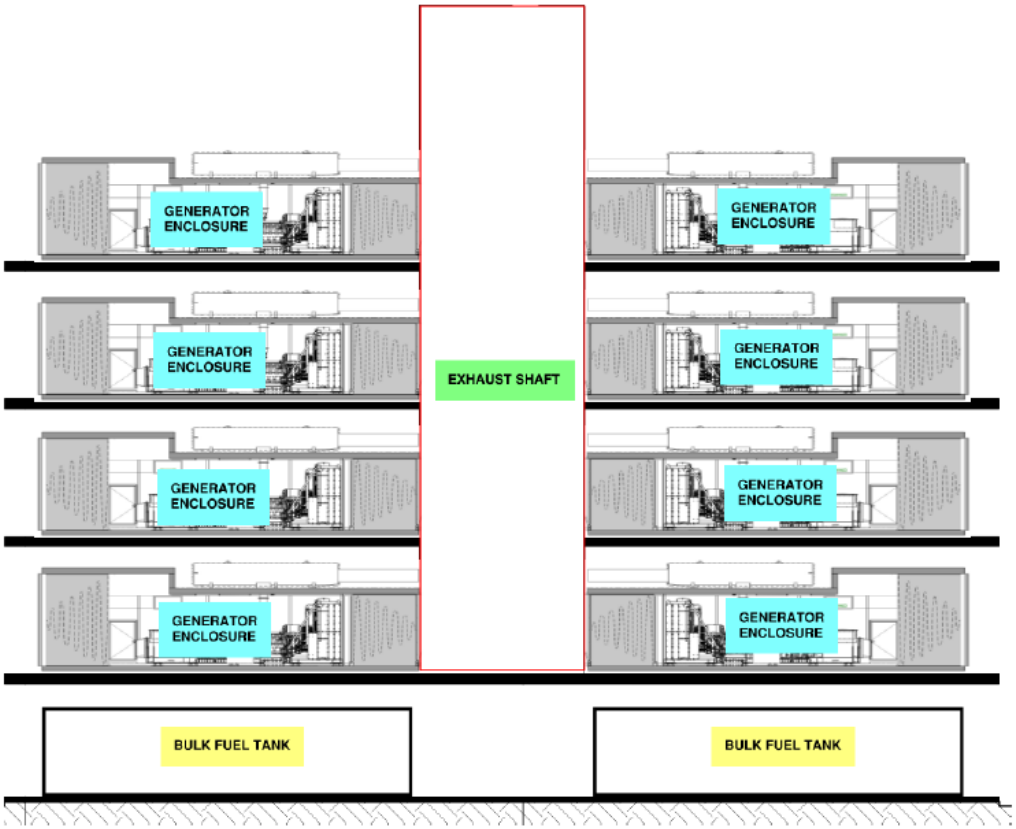
- Generator engine set.
- Local fuel system, including pumps.
- Control and power panels.
- Acoustic attenuation for cold air intake and hot air discharge (ventilation).
- Exhaust gas silencers and flues.

Fuel will be supplied from dedicated, double-skinned above-ground diesel storage tanks located at ground level, each with a capacity of approximately 22.7kL and equipped with leak detection systems. The storage tanks will be designed to provide at least 24 hours of operation for each generator and will be

constructed to comply with AS 1940. Diesel will be transferred from the bulk storage tanks to the day tanks via a duty/standby pumping system with filtration units, located within enclosures on each fuel tank.

The gantry structure will be 26.5 m high, with exhaust chimneys extending above this height to achieve the required dispersion performance. Generators and fuel infrastructure will be staged and commissioned progressively to align with operational demand.

Figure 24 Section - Quadruple Stacked Generator Gantry



Source: LCI, 2025

Water Storage Tanks

Water storage infrastructure will be provided adjacent to each data centre building to support both operational and fire suppression requirements.

The proposal includes:

- **Industrial Water Supply**: A total of 23 above-ground water tanks dedicated to supporting operational requirements of the data centre, including cooling and other building systems.
- **Fire Water Supply**: Two above-ground fire water tanks, designed and sized in accordance with relevant fire safety and building code requirements to ensure adequate supply for the facility's fire suppression systems.

Tanks will be located within secure service areas adjacent to each building, with appropriate bunding, access for maintenance, and connection to the site's internal pipe network. The placement and design of the tanks ensure ready availability of water in the event of an emergency while maintaining separation between industrial and fire water systems.

Stormwater Management

The development will incorporate an integrated stormwater management system to manage the collection, conveyance, treatment, reuse and discharge of runoff from the site. The system will be designed in

accordance with Council's DCP requirements and relevant Australian Standards. An extract of the proposed stormwater management plan is provided at **Figure 25**.

Stormwater from roof and hardstand areas will be collected via an internal pit and pipe network and conveyed to a gross pollutant trap (**GPT**) located downstream of the system. The existing GPT installed at the subdivision stage will be replaced with an OceanProtect OceanSave-3300-870 unit, positioned outside trafficable areas to facilitate maintenance.

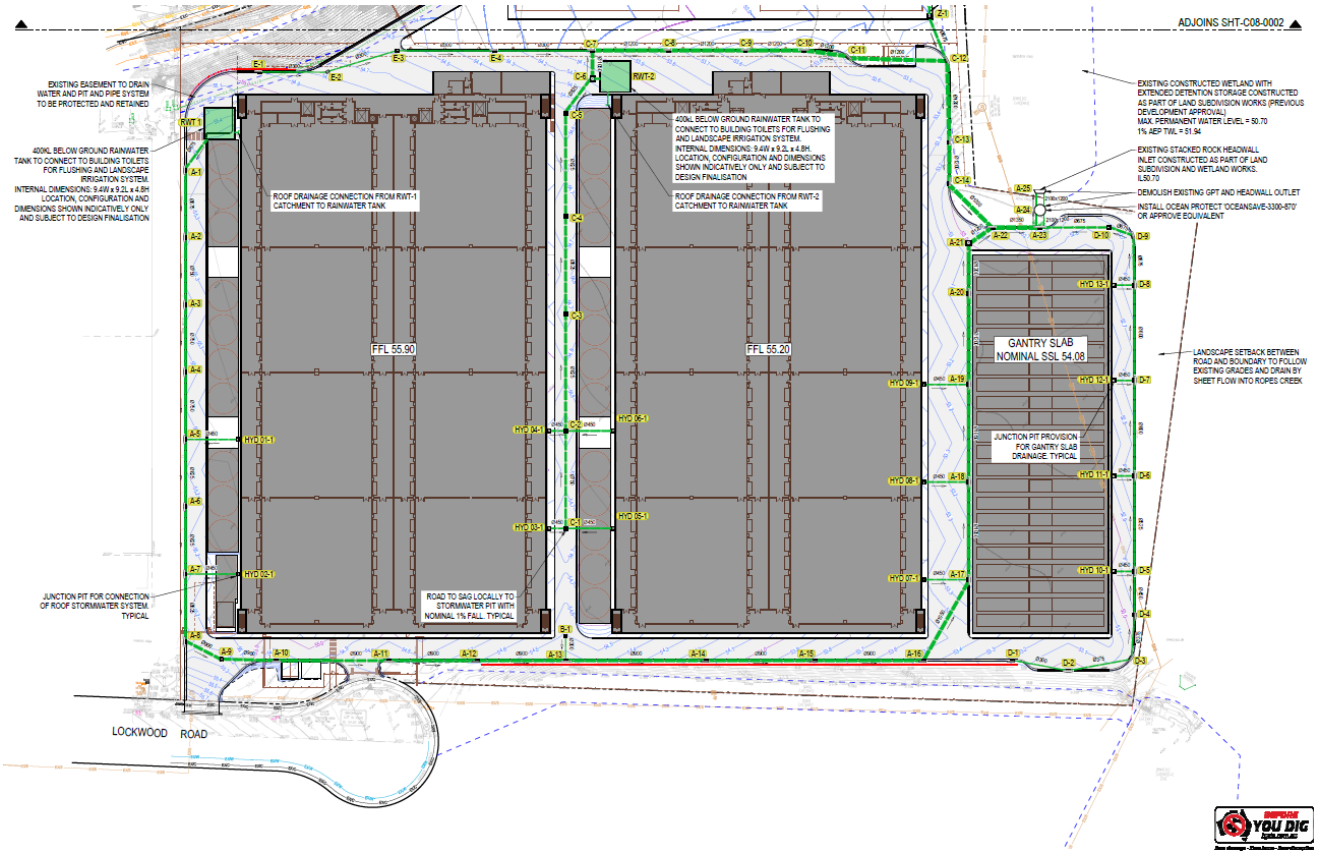
On-site detention and additional water quality treatment will not be required, as these were provided through regional infrastructure at the subdivision stage. The proposed impervious area will remain within the allowance established for the site under the original subdivision approvals. Stormwater will discharge to the existing subdivision drainage network, feeding into the existing detention basin located adjacent to the site within the Ropes Creek biodiversity corridor.

Overland flow paths will be incorporated within circulation roadways and landscaped areas to safely convey flows from major storm events to the existing subdivision drainage system for discharge to the Ropes Creek biodiversity corridor.

Two above-ground 400kL rainwater tanks will be installed to capture approximately 50% of runoff from the data centre roofs. Captured water will be reused on site for non-potable purposes, including toilet flushing and irrigation of nominated landscaped areas.

WSUD elements, including vegetated swales, tree pits, bioretention areas and permeable paving, will be integrated within landscaped setbacks and other key locations to improve stormwater quality and contribute to the landscaped setting.

Figure 25 Stormwater Management Plan

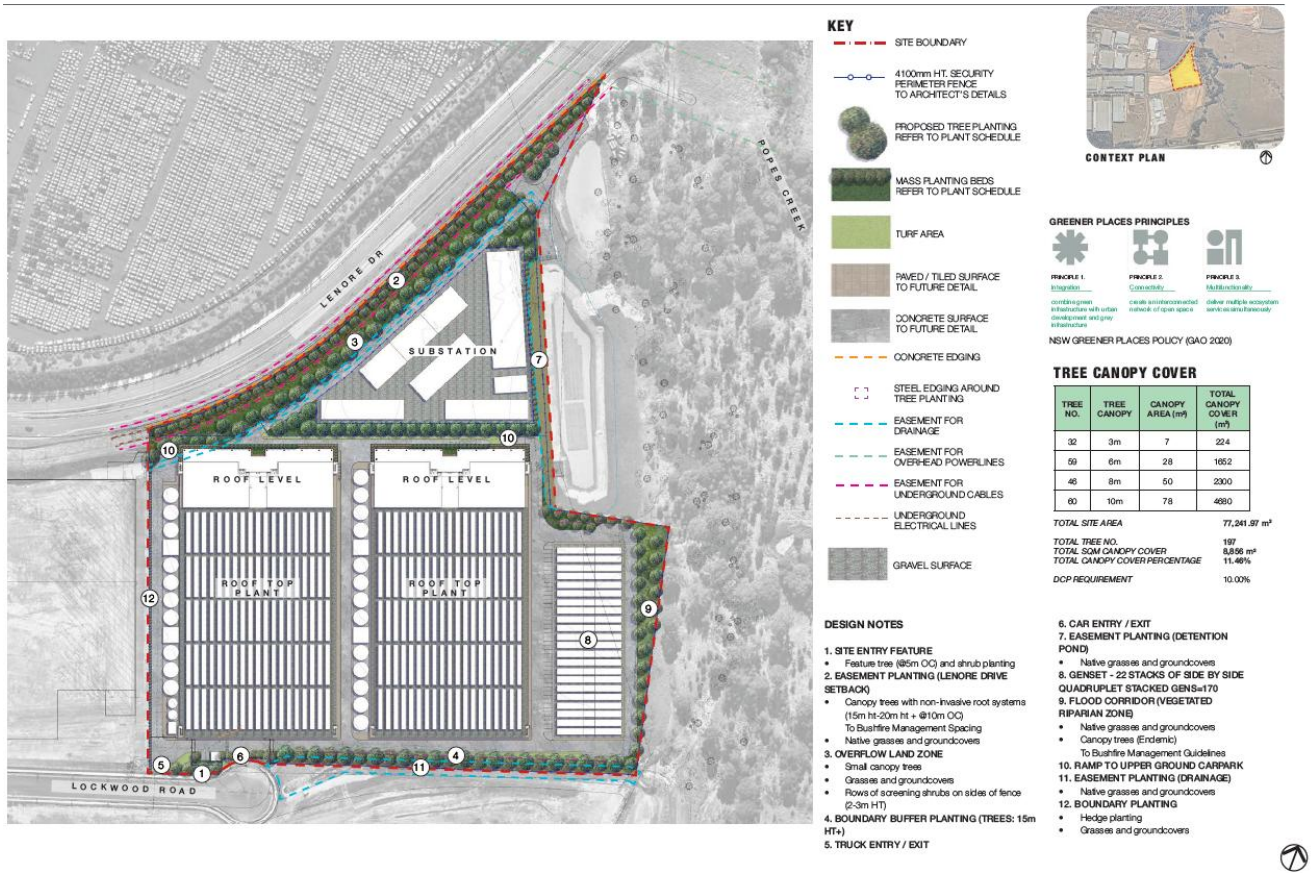


Source: Acor Consultants, 2025

3.2.6 Landscaping

The landscape strategy has been prepared to integrate the development with its surrounding context, respond to identified site opportunities and constraints, and contribute to broader precinct greening and environmental objectives. An extract of the proposed landscape masterplan is provided at **Figure 26**.

Figure 26 Proposed Landscape Master Plan



Source: Habit8, 2025

Key components of the landscape design are as follows:

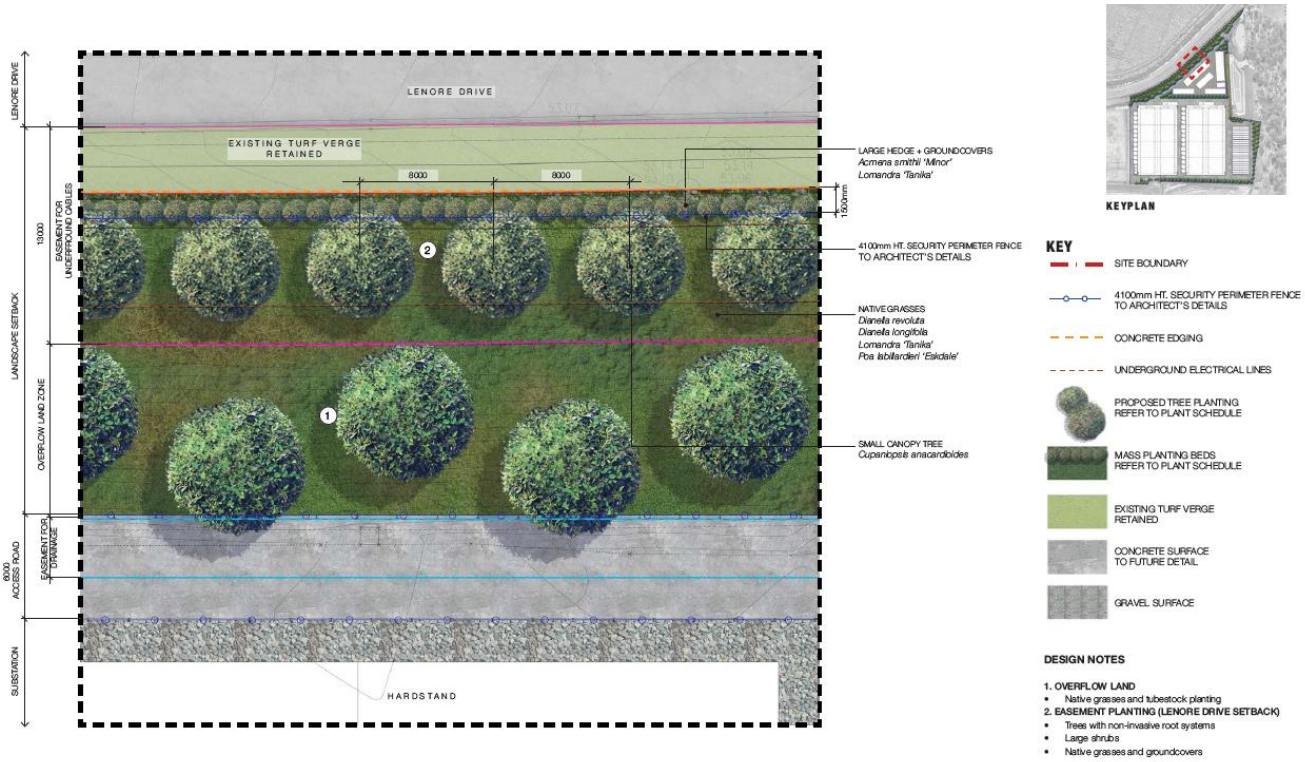
- **Landscaping and setbacks**
  - The existing landscaped berm along the Lenore Drive frontage will be retained and enhanced, increasing screening to the substation and data centre buildings and improving visual amenity from the public domain.
  - As shown in **Figure 27** generous landscaped setbacks along Lenore Drive and other site boundaries to provide green edges with significant tree canopy, WSUD swales, and low-level planting to enhance visual amenity, provide shade and improve local microclimate.
  - Deep soil zones and layered planting will be distributed throughout the site to achieve and exceed canopy targets and deliver improved biodiversity outcomes.
- **Canopy, deep soil and biodiversity outcomes**
  - Approximately 14,733.8m² of deep soil (19.07% of site area) and approximately 11.46% canopy coverage enable large-tree planting, promote stormwater infiltration, improve ecological function, mitigate urban heat island effects and enhance pedestrian amenity.
  - The planting palette will comprise low-maintenance native and endemic species, reflecting local character, supporting ecology and reducing irrigation demand:
    - Boundary buffer planting will include Eucalyptus crebra, Eucalyptus moluccana, Elaeocarpus reticulatus and Melaleuca decora. Planting along the Lenore Drive setback will include Corymbia

citriodora 'Baby Citro', Corymbia eximia 'Nana', Cupaniopsis anacardioides and Corymbia ficifolia.

- Along the southern and eastern interfaces, planting will utilise native riparian and habitat-forming species (including *Eucalyptus amplifolia* and *Melaleuca linariifolia*) capable of tolerating periodic inundation, enhancing ecological connectivity and reinforcing Caring for Country principles.

- **WSUD and stormwater**
  - WSUD measures including swales, raingardens, tree pits, bioretention areas and permeable paving are integrated to capture and treat stormwater on site, improve water quality and regulate flow rates while contributing to the overall landscaped setting.
  - A landscaped entry zone at the Lockwood Road frontage incorporates shade planting, WSUD swales and clear pedestrian connections to the broader precinct pathway network.
- **Interfaces, easements and maintenance**
  - Planting within or adjacent to easements will use suitable low- to moderate-height, shallow-rooted native species and turf/groundcovers, maintain required access clearances and sightlines, and avoid deep excavation or trees within protected zones unless approved by the relevant authority. Species selection and spacing will be coordinated with service owners to prevent root conflict and facilitate maintenance.
- **Amenity and building interface**
  - Landscaped terraces adjoining the Level 1 office frontages on both data centre buildings provide secure staff breakout areas with planter boxes, shade structures and integrated seating, contributing to a green outlook and improved on-site amenity.
  - Screen planting around the generator gantry, substation yard and loading docks reduces visual bulk, filters views from the public domain and assists with acoustic mitigation.
- **Materials and security**
  - Pavements, retaining elements and ancillary structures will use durable, low-maintenance and climate-resilient materials that complement the architectural palette and ensure long-term performance.
  - The site perimeter will be enclosed by a 4.1-metre-high security fence, excluding controlled entry/exit points (sliding or boom gates). Where retaining walls are proposed, fencing will be located on top of the wall to form a continuous secure edge and will be coordinated with planting to soften views.

Figure 27 Typical Landscape Setback – Lenore Drive



Source: Habit8, 2025

3.2.7 Access, Parking and Circulation

Vehicle Access and Circulation

Vehicular access to the site will be provided via a single-entry point from Lockwood Road. The entry is designed to accommodate all vehicle types, including heavy vehicles, service vehicles, emergency vehicles, and passenger cars. Movements will be restricted to left-in/left-out only, consistent with the design of the surrounding road network.

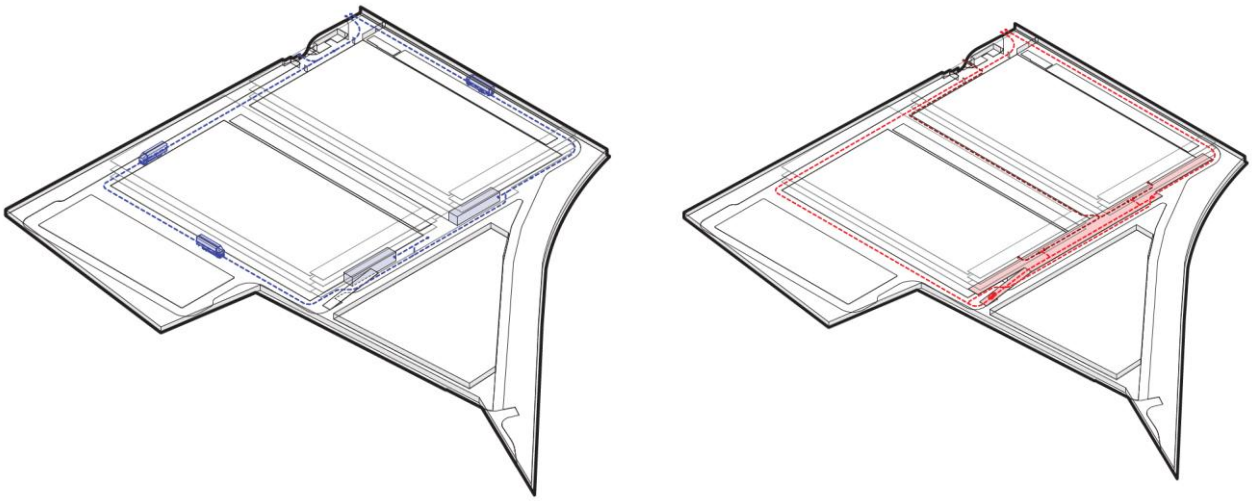
At the entry point, all vehicles will pass through a secure screening checkpoint incorporating security gates, a vehicle trap, and a manned security office. This ensures that only authorised staff, contractors, and visitors can enter. Pedestrian and cyclist access will also be channelled through this checkpoint, with controlled gates and segregated pathways providing safe movement to building lobbies.

Once inside, circulation is organised by a continuous anticlockwise internal loop road that provides perimeter access around both data centre buildings. This road layout enables efficient distribution of vehicle movements, ensures clear separation of heavy and light vehicle routes, and provides full emergency vehicle access to all building façades, plant areas, and the substation.

- Heavy vehicles will travel via the southern internal road and then eastwards towards each building. Dedicated loading docks are located beneath the upper ground deck on the northern side of both buildings, allowing discrete access and minimising conflict with staff and visitor parking.
- Passenger vehicles will be directed along the eastern road, ascending a ramp to under-croft parking areas adjacent to main building entries. From here, staff and visitors will have secure, weather-protected access into building lobbies. Vehicles will exit via the western loop road back to Lockwood Road.

A detailed circulation diagram is provided in **Figure 28** to illustrate the movement of heavy vehicles, passenger vehicles, pedestrians, and emergency vehicles through the site.

Figure 28 Heavy and light vehicle circulation



Picture 8 Heavy vehicle movements

Picture 9 Light vehicle movements

Source: Genton, 2025

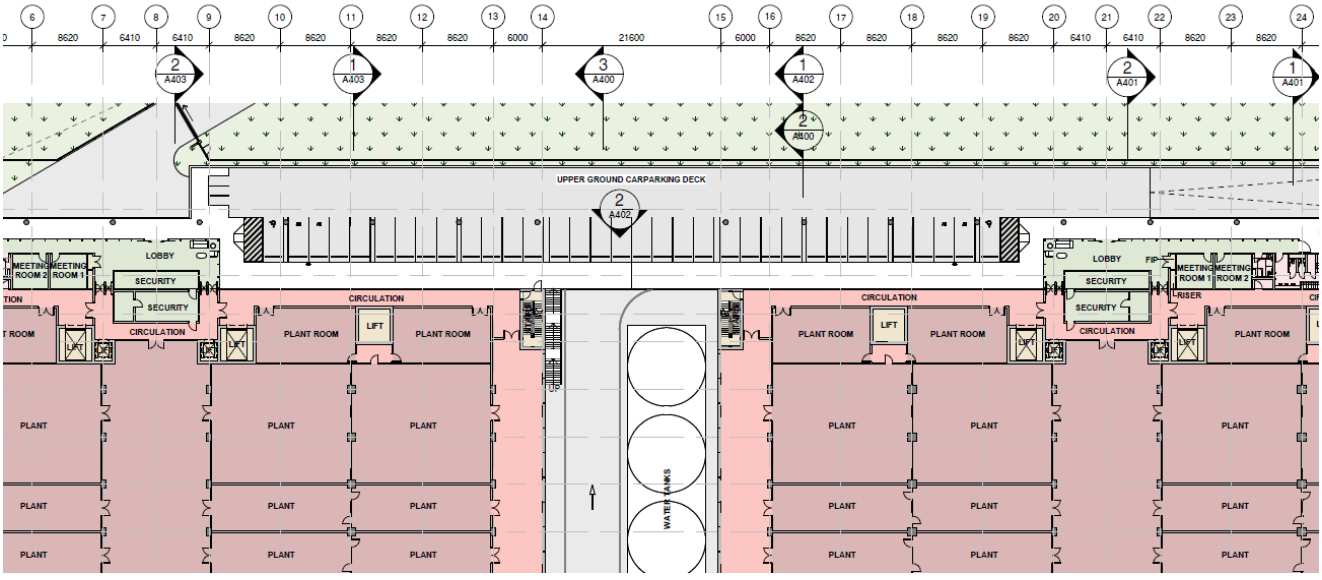
Parking

The proposal provides a total of 78 car parking spaces, distributed as follows:

- 34 spaces per building within the under-croft parking areas at upper ground level (refer to **Figure 29**) directly adjacent to the building entries for convenience and weather protection.
- 40 spaces located along the internal circulation road near the generator gantry, serving operational and overflow requirements.
- Two accessible spaces and four EV charging spaces are included (one accessible and two EV per building).

In addition, three motorcycle spaces will be provided near staff entries. To support active transport, the development will include 30 secure, covered bicycle parking spaces, complemented by two end-of-trip facilities incorporating showers, lockers, and change rooms, located for direct access from the primary cyclist and pedestrian entry points.

Figure 29 Under-croft parking area – Upper ground level



Source: Genton, 2025

Pedestrian Access

Pedestrian access is provided via a dedicated pedestrian gate adjacent to the vehicle checkpoint on Lockwood Road. From here, a central access road and stair connect to the upper ground parking deck and building lobbies. On entry, all pedestrians pass through security before accessing lifts, office areas, or end-of-trip facilities.

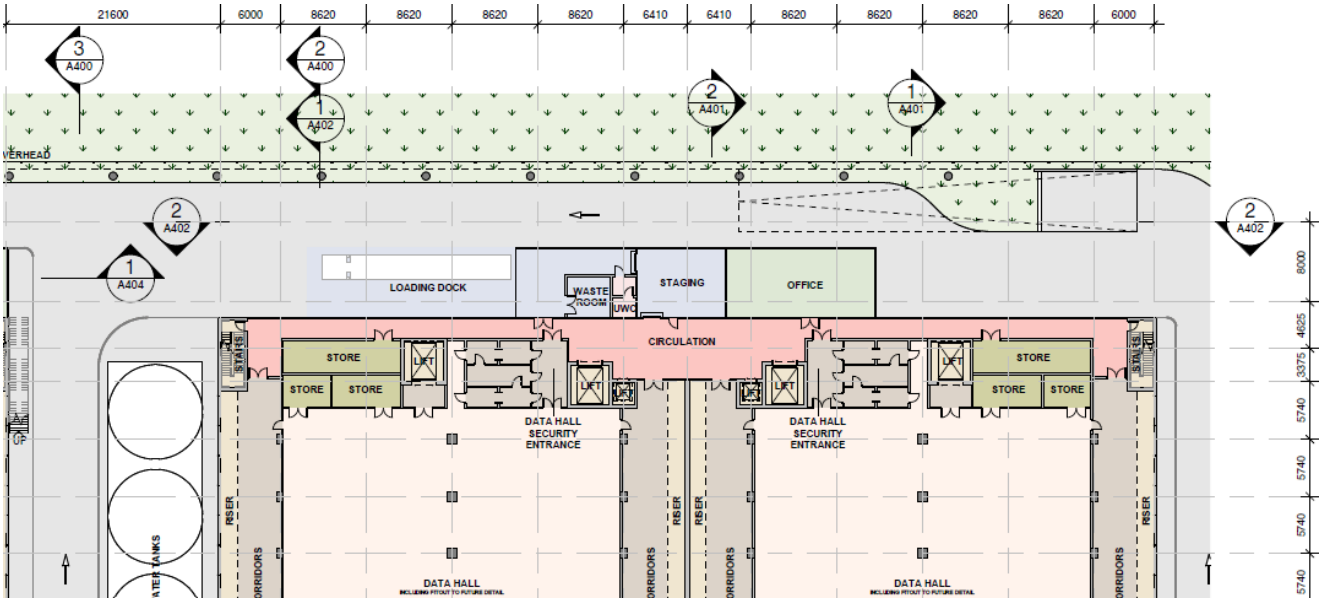
Loading and Servicing

As illustrated in **Figure 30**, each building incorporates a dedicated loading dock located beneath the upper ground deck. The docks are designed to accommodate up to two 24-metre articulated vehicles simultaneously and provide sufficient manoeuvring space for safe reversing, loading, and unloading. Locating these docks on a separate level from car parking areas ensures that heavy vehicle operations remain segregated from passenger vehicle and pedestrian movements.

All loading, unloading, and servicing activity will occur wholly within the site, away from public roads. Servicing will generally involve intermittent equipment deliveries, replacement of plant, and periodic servicing, with relatively low traffic generation. Goods lifts and staging areas are integrated to enable the efficient transfer of equipment from the docks to technical and plant areas within each building.

Emergency access is maintained across the entire site, with the loop road enabling fire trucks and other emergency vehicles to circulate around all buildings, plant zones, and the substation.

Figure 30 Loading dock arrangement – Lower ground level



Source: Genton, 2025

3.2.8 Utilities and Services

The proposed development will be serviced by upgraded utilities and infrastructure designed to meet the operational requirements of a high-performance, mission-critical data centre.

Electrical Supply and Backup Power

Electrical supply will be provided via a new on-site substation located along the northern boundary fronting Lenore Drive. The system is designed to provide N+1 redundancy to ensure uninterrupted operations.

Emergency backup power will be supplied by up to 170 diesel generators, each with a 3,100kW capacity, installed in a dedicated four-level generator gantry at the eastern end of the site. The ground level of this structure will accommodate dedicated double-skinned above-ground diesel storage tanks (22.7kL each) with leak detection systems. Each generator will be fitted with a 990L day tank. The generator installation will be staged in line with operational demand, with full capacity anticipated by 2035.

Fuel will be transferred from the storage tanks to the day tanks via a duty/standby pumping system with filtration, located within an enclosure adjacent to the tanks. A dedicated tanker offloading area will be located next to the fuel storage yard, with an access roadway allowing tanker manoeuvring and simultaneous passage of other vehicles. Decanting will occur via bunded fill cabinets, with double-walled stainless-steel fuel reticulation (UV-resistant) and hydrocarbon leak detection to each generator enclosure. Generator exhaust will be discharged vertically to mitigate acoustic and air quality impacts.

Uninterruptible Power Supply (**UPS**) will be provided via 16 lithium-ion battery systems (one per mechanical line-up and catcher), each comprising ten battery cabinets with a total capacity of 63.9kWh per unit. These will be located in dedicated battery rooms across Level 2 and rooftop plant areas. Additional rack-mounted battery backup units (up to 5.8kWh per rack) will be installed within colocation spaces. All battery systems will be staged in line with generator capacity.

In the event of mains power loss, the UPS systems provide short-term supply while generators start. Batteries remain continuously charged and connected, ensuring immediate availability.

Routine maintenance testing will include:

- Up to 20 generators tested in parallel at no load (0% load).
- Up to 3 generators tested at full load (100% load) simultaneously.

Total annual run-time for testing and outages is expected to remain under the 200-hour exemption threshold in Schedule 1, Clause 17 of the *Protection of the Environment Operations Act 1997*. A detailed overview of the backup power system is outlined in the Backup Power Report provided at **Appendix O**.

Alternative Technologies Considered

The following alternative backup power technologies were considered for the project:

- Lithium-ion batteries
- Diesel generators using renewable diesel (hydrotreated vegetable oil – HVO) as a fuel
- Open Cycle Gas Turbines or Reciprocating Engines with natural gas as a fuel
- Hydrogen fuel generators

These technologies were discounted due to limitations in reliability, scalability, fuel supply availability, safety implications, and their inability to meet the site's substantial electrical demand (approximately 450 MW with 24-hour redundancy).

A summary of the alternative technologies considered for this project is outlined below.

Table 12 Backup Power Options Analysis

Technology	Description	Technology maturity	Suitability for Data Centres	Limitations for viability	Viability for the site
Lithium-ion Batteries	Lithium-ion batteries utilize an anode (negative electrode, usually made of graphite), a cathode (positive electrode, from a lithium metal oxide) and an electrolyte as a conductor	**High** – due to their high energy density, lightweight design and relatively long cycle life, lithium-ion batteries are widely used in portable electronics,	**Possibly suitable:** Advantages: ▪ High power density ▪ Declining costs Disadvantages: ▪ Large physical footprint and Capex given the site	Space Constraints: ▪ Reduction in spatial requirements unlikely for this technology. ▪ Capex costs: High due to the required capacity.	Due to the spatial requirements of lithium-ion batteries for the quantity of power generation required, coupled with fire-separation and safety requirements, it is not feasible to

Technology	Description	Technology maturity	Suitability for Data Centres	Limitations for viability	Viability for the site
		electric vehicles and other energy storage systems.	backup requirements ▪ Fire risk		provide sufficient batteries in the event of an extended power failure to the site. Current lithium-ion battery provision to the site is to facilitate the switch between utility and backup power. Hence, this technology is **not viable** to be used as standalone backup power for the site.
HVO renewable diesel fuel	HVO fuel (Hydrotreated Vegetable Oil) is a renewable alternative to diesel made from vegetable oil, waste fats and other biological matter. Waste cooking oil, animal fats etc. are collected, with impurities removed during pre-treatment. The stock is then hydrotreated to remove oxygen and saturate the molecules. The final product is then refined to meet diesel standards.	**Moderate** – the HVO supply chain is still fairly localised, and dependent on availability of feedstock. There are no large scale HVO supply chain or support policies in Australia.	**Possibly suitable:** Advantages: ▪ Biodiesel blends are compatible with existing diesel engines ▪ Lower emissions than regular diesel. 100% renewable. Disadvantages: ▪ Availability and supply chain	Availability of HVO is large quantities (available supply chain). There is a requirement of high volume of HVO diesel to be delivered to site for refills.	The site is proposed to use diesel generators, which shall utilize HVO fuel compatible engines, subject to availability and local supply chain, which is currently limited. Hence, this makes HVO fuel **moderately viable**.
Natural Gas Fuel	Natural Gas can be used as	**Moderate** - Natural Gas	**Possibly suitable:** Advantages:	▪ Environmental approvals,	**Not viable** – this technology

Technology	Description	Technology maturity	Suitability for Data Centres	Limitations for viability	Viability for the site
	a backup generation fuel via gas turbine generators.	has a mature supply chain, with gas turbine generators used frequently in electric grids globally.	▪ Proven technology, with fuel delivery via existing gas supply pipes Disadvantages: ▪ Higher emission and noise criteria ▪ Complex and specialized maintenance ▪ High Capex ▪ High cooling requirements	depending on exact technology, expected usage and noise. ▪ Capacity from the existing gas pipeline, which may impact supply within the area	requires additional space that what is currently available on site, due to additional cooling and ventilation requirements. Furthermore, the impact of a 450MW gas turbine on the local gas supply pipeline is significant and may trigger upgrade requirements.
Hydrogen Fuel	Hydrogen can be used as a backup generation fuel source, via hydrogen fuel cells.	**Moderate** – the current hydrogen supply chains are still immature, with progress improving with passing years. There are currently no data centres utilizing hydrogen fuel for backup generation at this scale.	**Possibly suitable:** Advantages: ▪ Zero emissions ▪ Long storage duration ▪ Quire operation Disadvantages: ▪ Supply chain issues ▪ Large storage requirements, likely triggering major Hazard requirements	▪ Large spatial requirements due to hazardous hydrogen gas storage ▪ Hydrogen supply chain limitations ▪ Capex costs in line with alternate options	**Not viable** – this technology requires additional space that what is currently available on site, due to storage tank requirements. Furthermore, hydrogen supply pipeline would not be possible in the development timeframe. Safety considerations would have to also be considered, particular to neighbouring site regarding the storage of large quantities of hydrogen.

Mechanical Plant and Cooling System

Cooling will be delivered through high-efficiency chillers, cooling towers, and associated rooftop plant, designed to achieve a PUE of 1.35. Plant selection will be finalised post-approval, with options assessed

including direct and indirect evaporative coolers, air-cooled chillers, and water-cooled chillers. Selection criteria include energy consumption, water use, capital cost, and refrigerant impact.

Water Supply and Storage

Potable water will be provided by a new Sydney Water connection. On-site water storage will support both operational and firefighting requirements. A total of 23 water tanks is proposed for industrial water. Rainwater harvesting tanks will capture roof runoff for irrigation and non-potable uses, reducing reliance on mains supply.

Sewer and Wastewater

Sewerage will be discharged to the Sydney Water network via a gravity connection. Trade waste from cooling tower blow-down or plant maintenance will be pre-treated in compliance with Sydney Water requirements.

Fire Protection

The fire safety strategy includes hydrants, sprinklers, and gaseous suppression systems for ICT areas. Firefighting water storage will be located at lower ground level in the form of two above ground water tanks.

Communications Infrastructure

The facility will be connected to multiple high-capacity fibre networks for diversity and redundancy. Communications rooms and cable pathways are designed for scalability and technology upgrades.

3.2.9 Hazardous Goods

The proposed development will include a range of hazardous materials necessary to support the operation of the facility. These include:

- Diesel fuel generator system
  - 170x 22.7kL above-ground diesel fuel bulk storage tanks (one per genset)
  - 170x 990L diesel generator day tanks (one per genset)
  - 1x offloading area (with fill cabinets and associated pipework to each genset)
- Lithium-Ion battery data halls
  - 32x 29.6kL Lithium-Ion electrolyte data halls

All hazardous materials will be stored and managed in accordance with relevant Australian Standards, including AS 1940, and will be subject to risk assessments and appropriate mitigation controls during both construction and operation as outlined in the Dangerous Goods Report at **Appendix ZG**.

3.3 Construction and Staging

3.3.1 Construction Activities

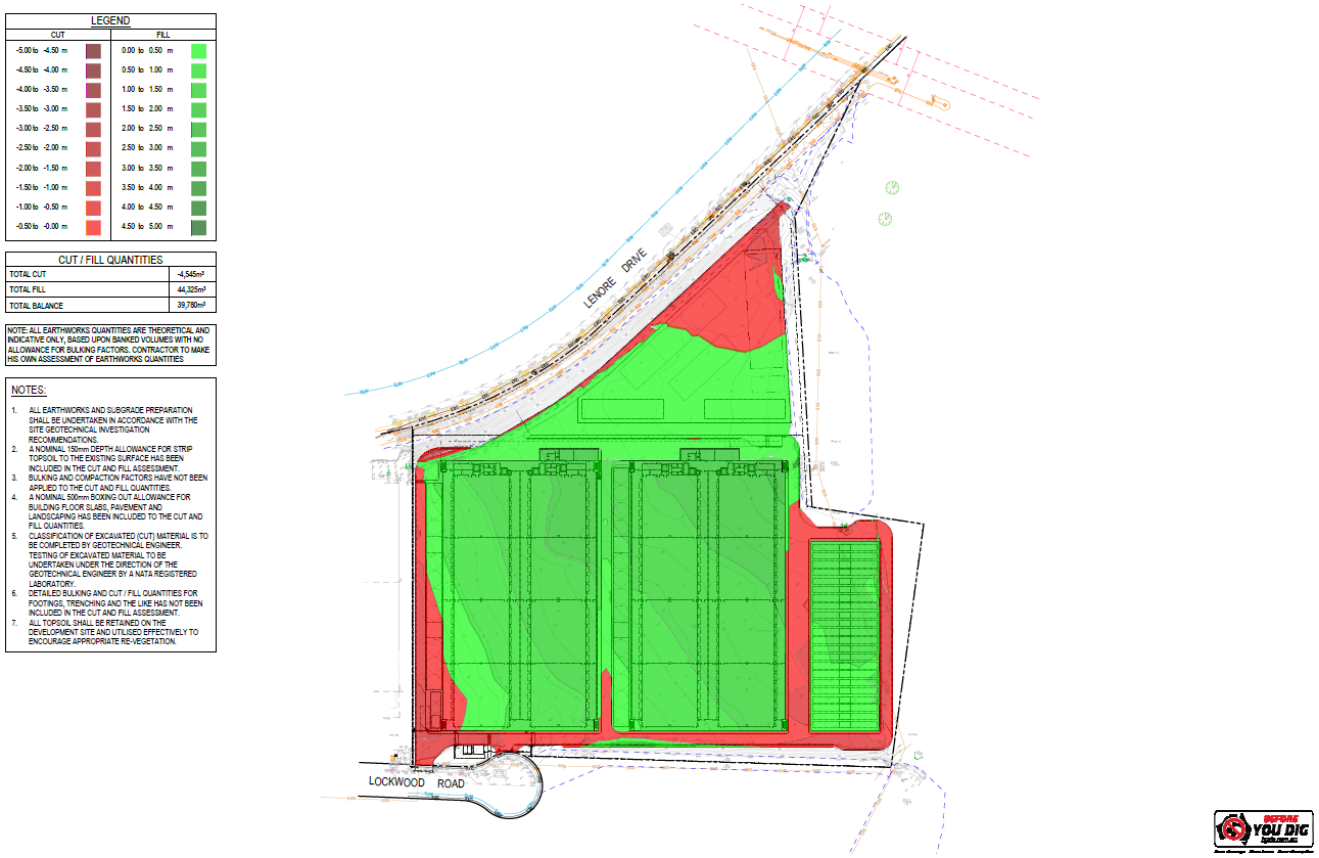
Excavation/Cut and Fill

The site is level with no basement proposed however bulk earthworks are required to establish development platforms suitable for the proposed data centre and associated infrastructure. The site is predominantly cleared and level, with only slight variations in grade. Regrading is required to achieve consistent finished levels and facilitate integration with adjoining road and service infrastructure.

The works will involve an estimated cut volume of approximately 4,545m³ and a fill volume of approximately 44,325m³, resulting in a net fill of approximately 39,780m³. Retaining walls of up to 2 metres in height are proposed along the southern boundary to accommodate level transitions and ensure a stable interface with adjoining land.

The earthworks strategy has been informed by the need to minimise unnecessary ground disturbance, while ensuring efficient coordination with the broader precinct's road network, servicing strategy, and urban design objectives. An extract of the cut and fill plan is provided at **Figure 31**.

Figure 31 Proposed Cut and Fill Plan



Source: Acor, 2025

Site Access and Traffic Routing

Construction vehicle access to the site will be primarily via Lockwood Road, with supplementary temporary access via the existing driveway access from Lenore Drive. The site benefits from being located within a designated industrial precinct with direct links to approved B-Double routes and key arterial roads including Lenore Drive and Compass Drive, providing efficient connections to the M7 Motorway and Mamre Road. These routes are purpose-built for heavy vehicle access, thereby minimising impacts on local roads and residential areas.

Construction Workforce and Parking

Workforce numbers will vary throughout the construction period, with typical daily levels ranging between 50 and 185 workers, and peak periods involving up to 600 personnel during major construction events. On-site parking will be provided throughout all phases, utilising unoccupied areas of the site to accommodate worker vehicles. This arrangement ensures that construction-related parking demand is met entirely within the site boundary, avoiding disruption to the surrounding road network.

Loading and Unloading

All loading and unloading during construction will occur within the site during construction, with no activities taking place from Lockwood Road or other frontages. Deliveries, including concrete pumping, will be managed to avoid overlap unless both vehicles can be accommodated on-site or within approved Works Zones. Traffic controllers will manage truck movements to ensure pedestrian safety and minimise traffic disruption. All materials will be stored on-site, with no storage on roads or Council land without prior Council approval.

Construction Waste Management

The construction of the proposed data centre will generate approximately 414 tonnes of waste, primarily sand/soil, concrete, bricks, timber, metal, and gyprock. Waste will be managed in line with the waste hierarchy prioritising avoidance, reuse, and recycling before disposal.

Materials will be separated on-site, with recyclables sent to licensed facilities and non-recyclable waste disposed of at approved landfills. Designated waste storage areas will be secure, signposted, and managed to prevent environmental impacts.

All workers will receive waste management training during induction, and any hazardous materials encountered will be handled in accordance with EPA and WorkSafe NSW regulations.

Construction Hours

Works will generally occur Monday to Friday, 7:00 am to 6:00 pm, and Saturdays, 8:00 am to 1:00 pm, in accordance with EPA standard construction hours. No works are proposed on Sundays or public holidays.

3.3.2 Staging and Timing

The development will be delivered in two main stages as outlined in detailed in **Figure 32**. Each stage will include site preparation, base building works, internal fit-out, and commissioning. Construction activities are expected to commence in mid-2026 and extend through to early 2029. The staged approach allows for logical progression and the continued use of completed site areas to support construction logistics. A summary of the indicative construction program is provided below.

It is anticipated that the staged construction can be managed through a staged issuance of Construction Certificates. A formal staging of the project is not proposed. Conditions will need to reflect the intention to operate Stage 1 whilst Stage 2 is still under construction.

Table 13 Indicative Construction Program

Stage	Phase	Duration	Start	Finish
Stage 1	Site Preparation & Civil Works	6 months	May 2026	Nov 2026
	Base Building Works	12 months	Sep 2026	Nov 2027
	Internal Fit-Out	15 months	Jun 2027	Aug 2028
	Commissioning & Practical Completion	–	Aug 2028	Aug 2028
Stage 2	Site Preparation & Civil Works	6 months	Aug 2026	Feb 2027
	Base Building Works	14 months	Dec 2026	Feb 2028
	Internal Fit-Out	17 months	Aug 2027	Jan 2029
	Commissioning & Practical Completion	–	Jan 2029	Jan 2029

Stage 1

Stage 1 will deliver the eastern data centre building (Building 1) together with the on-site substation and initial generator gantry. Works will include:

- Site preparation across the development footprint.
- Bulk earthworks across both Stage 1 and Stage 2 areas, including a temporary surface treatment for the future western building pad.
- Construction of the eastern data centre building and all associated infrastructure services.
- Delivery of the generator gantry, including associated infrastructure and above-ground fuel tanks servicing Building 1.
- Construction of the on-site substation.
- Establishment of a new vehicular access from Lockwood Road, together with the internal loop roads servicing both buildings.

- Provision of car parking to support Building 1 operations.
- Installation of external plant and equipment, including water storage tanks and pump rooms associated with Building 1.
- Implementation of landscaping works.

Stage 2

Stage 2 will complete the western data centre building (Building 2) and the balance of site infrastructure. Works will include:

- Construction of the western data centre building and all associated infrastructure services, including bulk fuel storage.
- Expansion of the generator gantry to accommodate the Stage 2 diesel generators.
- Provision of car parking to support Building 2 operations.
- Completion of landscaping across the remainder of the site.

Figure 32 Construction Staging Plans

Source: Genton, 2025

3.4 Operations

Hours of Operation

The proposed date centre will operate for 24-hours a day, seven days a week. This allows for the critical nature of operations and includes loading and unloading, data centre and office operations.

Employment

The development will operate with relatively modest staffing levels despite its overall scale. The site will operate 24 hours a day under a two-shift system, supported by a small number of visitors and contractors.

- Day shift (7:00 am – 7:00 pm): 26 staff in Building 1 and 17 staff in Building 2, totalling 43 personnel.
- Night shift (7:00 pm – 7:00 am): 10 staff in Building 1 and 5 staff in Building 2, totalling 15 personnel.

During standard business hours, the site will typically accommodate 43 staff and 3–5 visitors. After hours, staffing reduces to 15. Contractor and visitor numbers will generally range between 5 and 15 at any one time, with short-term peaks of up to 30 additional personnel during biannual infrastructure maintenance. Even under these conditions, peak parking demand (approximately 76 spaces) will be comfortably accommodated within the 78 on-site spaces.

In addition to site-based staff, broader business operations including Engineering, Finance, Operations Management, Delivery, Client Management, Networks & IT, Security, and Procurement will undertake site visits as required. These functions, based at the NSW headquarters, involve approximately 50–100 personnel who provide strategic and operational support to the facility.

Overall, the project is expected to generate around 200 ongoing jobs, comprising site-based roles, operational staff, and wider business support functions.

Operational Activities

The facility will operate as a hyperscale data centre providing secure data storage, processing, and management services. Day-to-day operations will include a mix of technical, administrative, and support functions, comprising:

- **Data centre operations**: Continuous monitoring, maintenance, and servicing of servers, network infrastructure, and building management systems to ensure operational resilience and uptime.
- **General office activities**: Routine administrative, security, and client management functions within the office components of each building.
- **Goods delivery and servicing**: Periodic deliveries of IT equipment, consumables, and maintenance supplies, accommodated within the dedicated loading docks and screened service areas.
- **Waste management**: Collection and removal of office waste, packaging, and recyclable materials, with all activities contained within the site.

Although not part of normal operation, occasional major equipment replacements may be required. In particular, diesel generators may need to be replaced if units fail or reach the end of their service life. These activities would be infrequent and carefully managed, using cranes positioned within the secure internal circulation areas to avoid disruption to site access or neighbouring properties.

The facility will operate on a 24/7 basis, with staff split across day and night shifts, supported by advanced building management and security systems to ensure reliable, safe, and continuous operation

Waste Management

Operational waste from the proposed development will primarily arise from the office and administration areas. Waste generation estimates are based on the EPA NSW *Better Practice Guidelines* and are appropriate for the site's industrial zoning under Penrith City Council guidelines.

Each of the two buildings is expected to generate approximately 1,529L of general waste and 1,147L of mixed recycling per week, based on a 7-day operational schedule. Total weekly waste generation across the site is

estimated at 3,058L of general waste and 2,293L of mixed recycling. Additional minor waste streams will include secure paper (managed by tenants), e-waste, toner cartridges, batteries, and lighting, with collection arranged on an as-needed basis.

Waste will be managed via dedicated storage rooms located on the lower ground floor of each building, adjacent to the loading docks. Each room will house 3 x 660L bins for general waste and 2 x 660L bins for mixed recycling, with weekly collection by a medium-rigid rear-lift waste truck. Waste rooms are designed for efficient operation, with level access, mechanical ventilation, vermin-proofing, epoxy floors with drainage, and appropriate signage. Access and clearances are designed in accordance with AS 2890.2 to accommodate service vehicles.

Ongoing waste room maintenance will be undertaken by building management staff, who will ensure cleanliness, proper bin storage, and compliance with noise and hygiene requirements.

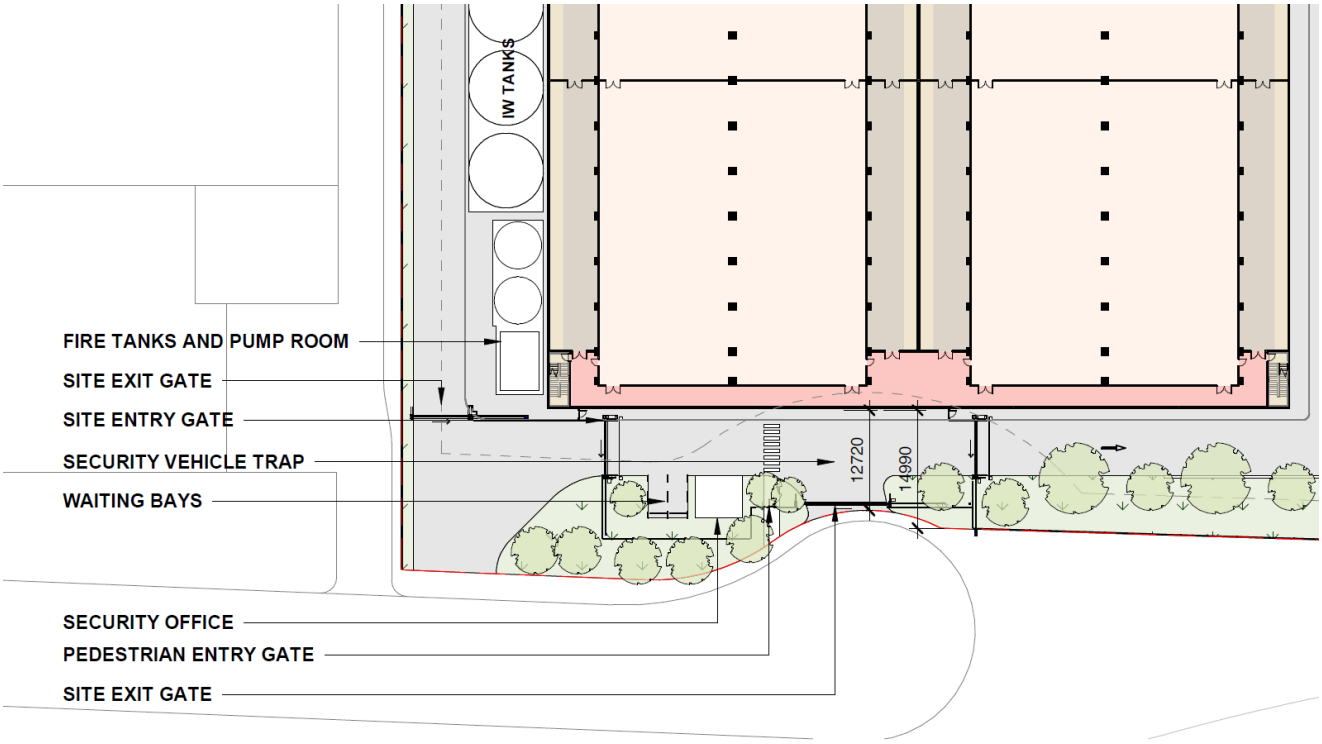
Security

The data centre will operate under a comprehensive, multi-layered security framework designed to safeguard critical digital infrastructure, protect personnel, and ensure the integrity of client equipment.

- **Site access:** As outlined in **Figure 33** the vehicle entrance will be restricted to a single secure point on Lockwood Road, incorporating a 24/7 staffed security checkpoint with automated sliding or boom gates. All vehicles will be screened on arrival, with identification verification, sign-in procedures, and escorting of visitors, contractors, and delivery personnel as required.
- **Perimeter controls:** A 4.1-metre-high security fence with controlled access gates will enclose the site, integrated with a continuous network of CCTV cameras covering the perimeter, entry point, and internal circulation roads.
- **Building security:** The data centre buildings will be fitted with electronic access control systems, including biometric authentication for data halls and other sensitive areas. Comprehensive CCTV coverage of internal and external zones will be monitored in real time from the on-site Security Operations Room.
- **Operational measures:** Security will be further supported by continuous patrols, intrusion detection systems, and established incident response protocols, enabling rapid and coordinated action in the event of a security breach or emergency.

Together, these measures ensure the facility achieves mission-critical levels of security, in line with best practice for hyperscale data centres.

Figure 33 Security arrangements at entrance



Source: Genton, 2025

4 Statutory Context

4 Statutory Context

This section of the report provides an overview of the key statutory requirements relevant to the site and the project, including:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**)
- *NSW Biodiversity Act 2016* (**BC Act**)
- *NSW Water Management Act 2000* (**WM Act**)
- *NSW Protection of the Environment Operations Act 1997* (**POEO Act**)
- *NSW Environmental Planning and Assessment Act 1979* (**EP&A Act**)
- *NSW Environmental Planning Assessment Regulation 2021* (**EPA Regulation**)
- *State Environmental Planning Policy (Planning Systems) 2021* (**Planning Systems SEPP**)
- *State Environmental Planning Policy (Transport and Infrastructure) 2021* (**T&I SEPP**)
- *State Environmental Planning Policy (Resilience and Hazards) 2021* (**R&H SEPP**)
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (**B&C SEPP**)
- *State Environmental Planning Policy (Industry and Employment) 2021* (**I&E SEPP**)
- *State Environmental Planning Policy (Sustainable Buildings) 2022* **(SB SEPP**)

Consideration is also required to be given to the following matters:

- *Penrith Development Control Plan 2014*

It identifies the key statutory matters which are addressed in detail within the EIS, including the power to grant consent, permissibility, other approvals, pre-conditions and mandatory considerations.

4.1 Statutory Requirements

The following sections provide a summary of the relevant statutory requirements having regard to the *State Significant Development Guidelines*. A detailed statutory compliance table for the project is provided at **Appendix B**.

4.1.1 Power to Grant Approval

The legal pathway under which the consent is sought, why this pathway applies, and the relevant consent authority is outlined in **Table 14**.

Table 14 Power to Grant Approval

Matter	Consideration
Declaration of SSD	Under Schedule 1, Clause 25 of the Planning Systems SEPP, development for the purpose of data centres that has a total power consumption of more than 15 megawatts is classified as SSD. The proposed data centre on the site will have a total power consumption of 450 megawatts and, accordingly, is to be assessed as an SSDA.
Consent Authority	Under Section 4.5 of the EP&A Act and Section 2.4 of the I&E SEPP, the consent authority for this SSDA is the NSW Minister for Planning and Public Spaces. Under Section 2.7 of the Planning Systems SEPP, the Independent Planning Commission will be the consent authority for this SSDA in the instance that:

Matter	Consideration
	▪ Penrith City Council makes a submission by way of objection to this SSDA, or ▪ At least 50 submissions (other than from a Council) have duly been made by way of objection, pursuant to the mandatory requirements for community participation in Schedule 1 of the EP&A Act.

4.1.2 Permissibility

The permissibility of proposed development is outlined in **Table 15**.

Table 15 Permissibility

Matter	Consideration
Land use	This SSDA seeks consent for development on the site for the purpose of a data centre. 'Data centre' is defined in the *Standard Instrument—Principal Local Environmental Plan* (**Standard Instrument**) as follows: ***data centre*** *means 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' which, in turn, is a type of 'light industry' as defined in the Standard Instrument.
Land use zone	Under the I&E SEPP, the land is zoned IN1 General Industrial.
Permissibility	The land use table contained in Section 2.10 of the I&E SEPP identifies that "Industries (other than offensive or hazardous industries)" are permitted with consent on land zoned IN1. The proposed use of the land for the purpose of a data centre, which is a type of light industry, is therefore permitted with consent on the site. The proposed development also includes 6,240m^2 of ancillary office floor space within the building footprint. Planning Circular PS 21-008 ('How to characterise development') outlines that an ancillary use is a use that is subordinate or subservient to the dominant purpose on the land. The office component is therefore also permitted, as an ancillary component of the primary use being a data centre.

4.1.3 Other Approvals

The other approvals required to carry out the project are outlined in **Table 16** below.

Table 16 Other Approvals

Matter	Consideration	Approval required?
Fisheries Management Act 1994	Aquaculture works do not form part of this SSDA.	No
Coal Mine Subsidence Compensation Act 2017	The site is not located within a mine subsidence district.	No
Mining Act 1992	Mining works do not form part of this SSDA.	No
Petroleum (Onshore) Act 1991	No works are proposed as part of this SSDA which would require a petroleum title.	No

Matter	Consideration	Approval required?
Protection of the Environment Operations Act 1997	The POEO Act sets out the scheduled activities for which a licence is required. Relevant to this Project is Clause 9 under Schedule 1 of the POEO Act, which relates to 'chemical storage'. For the purpose a scheduled activity, 'chemical storage' includes petroleum products storage, which is defined as 'the storage or packaging of petroleum products in containers, bulk storage facilities or stockpiles'. The project includes approximately 4,023,000 litres of diesel to be stored on-site. This is above the 2,000-tonne limit and so the diesel storage will be classified as a scheduled activity for which a license is required. As such, an Environmental Protection License (**EPL**) will be required as per the requirements of Schedule 1, Clause 9 of the POEO Act. 86,170 litres of lithium-ion batteries will be stored onsite. This is below the 2,000-tonne limit as specified in the POEO Act. Accordingly, the development's lithium-ion battery storage is not classified as a scheduled activity and a licence is not required.	Yes EPL required for diesel storage
Water Management Act 2000	Section 91 of the WM Act regulates two kinds of activities - controlled activity approvals and aquifer interference approvals. The site is within 40 metres of a mapped hydro line, corresponding to the dam located to the north-east of the site. This proximity triggers the controlled activity provisions relating to works on or within 40 metres of waterfront land. For SSDAs, a separate water use approval, water management work approval, or controlled activity approval (other than an aquifer interference approval) is not required. Instead, DPHI will consult Water NSW during assessment. Guidelines for Controlled Activities on Waterfront Land have been considered in the EIS and supporting documentation. The proposed works are wholly contained within the established industrial footprint, with no disturbance to the dam or its embankment, and have been designed to avoid impacts on the waterbody and associated flow paths.	No
Roads Act 1993	The project involves connecting a new driveway to the existing public road (Lockwood Road), which will require approval under Section 138 of the Roads Act 1993.	Yes
Pipelines Act 1967	The development does not require a licence under the *Pipelines Act 1967*.	No
Environmental Protection and Biodiversity Conservation Act 1999	Under the 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	No

Matter	Consideration	Approval required?
	"Controlled Action" for which formal Commonwealth approval is required. Based on investigations undertaken for this SSDA, the project does not warrant referral to the Commonwealth Minister for Environment. The site has been cleared of all vegetation and no significant impacts on any MNES as a result of the project are expected to occur.	
Heritage Act 1977	The site is not listed on the NSW State Heritage Register. Accordingly, approval under Part 4 of the *Heritage Act 1977* is not required.	No
National Parks and Wildlife Act 1974	The ACHAR (**Appendix ZA**) confirms that while the site is located within 200 metres of Ropes Creek which is considered indicative of past Aboriginal land use, a high level of ground disturbance has occurred on the site as a result of previous site preparation activities and no intact natural soils are expected to remain on the land. Accordingly, the ACHAR does not recommend that an Aboriginal Heritage Impact Permit is required.	No
Biodiversity Conservation Act 2016	The site has already been cleared of native vegetation. A request to waive the requirement for a Biodiversity Development Assessment Report (**BDAR**) was prepared by Ecologique and submitted to DPHI on 15 August 2025 to accompany the SSD application. DPHI granted a BDAR waiver on 12 September 2025 for the project (**Appendix ZM**).	No
Rural Fires Act 1997	The site is not identified as bushfire prone land. A bush fire safety authority is therefore not required for this SSDA.	No

4.2 Pre-Conditions to Granting Consent

Table 17 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 17 Pre-Conditions

Statutory Reference	Pre-Condition	Relevance to Proposal	Section in EIS
EPA Regulation			
Part 8 Infrastructure and environmental impact assessment	An Environmental Impact Statement must be prepared in accordance with the SEARs issued for the Project, and contain the relevant information identified in Sections 190 and 192 of the EPA Regulation.	This EIS has been prepared in accordance with Part 8 of the EPA Regulation. This EIS addresses the SEARs issued by the Secretary pursuant to Section 175 of the EPA Regulation and contains the detailed information identified in Sections 190 and 192 of the EPA Regulation. Specifically, this includes a statement prepared by a	**Signed Declaration** SEARs reference table at **Appendix A**

Statutory Reference	Pre-Condition	Relevance to Proposal	Section in EIS
		Registered Environmental Assessment Practitioner. The proposal is consistent with the principles of ESD as per Section 193 of the EPA Regulation, as discussed in Section 7. This application will be placed on public exhibition on the NSW Major Projects Portal.	
Section 66 Contributions plans for certain areas in Sydney—the Act, s 4.16(1)	Section 66 of the EPA Regulation provides that a development application for land in zone IN1 General Industrial under the I&E SEPP must not be determined by the consent authority unless a contributions plan has been approved for the land to which the development relates. The consent authority may dispense with this requirement if the developer has entered into a planning agreement for the matters that may be the subject of a contributions plan.	The *Penrith City Section 7.12 Citywide Development Contributions Plan for Non-Residential Development* (November 2020) applies to the land.	
R&H SEPP			
Section 4.6 Contamination and remediation to be considered in determining development application	Under the R&H SEPP, the consent authority must be 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.	The DSI provided at **Appendix Q** confirms that the site is suitable for the proposed development from a contaminated land perspective, subject to implementations of the recommendations made in the DSI.	**Section 6.13**
I&E SEPP			
Section 2.17 Requirement for development control plans	Under Section 2.17 of the I&E SEPP, the consent authority must not grant consent to development on any land to which Chapter 2 of the I&E SEPP applies unless a development control plan has been prepared for that land.	Chapter 2 of the I&E SEPP is the principal environmental planning instrument that sets out statutory provisions and controls for development on the land. Chapter E6 of the Penrith DCP 2014 relates to the Erskine Business Park (the Erskine Business Park DCP), a land area which includes the subject site. Additional sections of the Penrith DCP 2014 also apply to the land.	Statutory compliance table at **Appendix B**.
T&I SEPP			

Statutory Reference	Pre-Condition	Relevance to Proposal	Section in EIS
Section 2.119 Development with frontage to classified road	Under Section 2.119 of the T&I SEPP, the consent authority must not grant consent to development unless it is satisfied that where practicable and safe, vehicular access is provided by a road other than a classified road and that the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development.	Vehicle access to the site will be from Lockwood Road, a local road. The northern boundary adjoins Lenore Drive, a classified State road. During construction, the project will also utilise the existing driveway from Lenore Drive for site access. The Transport Impact Assessment (**TIA**) (**Appendix U**) confirms that the proposed development will not adversely affect the operation of intersections connected to Lenore Drive. It further notes that Lenore Drive is currently under capacity and can accommodate the modest increase in traffic generated by the data centre's operations.	**Section 6.3**
Section 2.122 Traffic generating development	Section 2.122 relates to traffic generating development and requires that before granting consent the consent authority must refer certain development for with access to any road to TfNSW.	The site has an area of 77,241.97m² and provides access to a local road. It exceeds the 20,000m² threshold for traffic-generating development, necessitating referral of the SSDA to TfNSW for concurrence.	**Section 6.3**

4.3 Mandatory Considerations

Table 18 outlines the relevant mandatory considerations to exercising the power to grant approval and the section where these matters are addressed within the EIS

Table 18 Mandatory Consideration

Statutory Reference	Mandatory Consideration	Section in EIS
Consideration under the EP&A Regulation		
Section 193 Principles of ecologically sustainable development	Consideration of the principles of ecologically sustainable development	**Appendix ZE**
Consideration under the EP&A Act		
Section 1.3 Objects of Act	The relevant objects of the Act	**Appendix B**
Section 4.15 (1)(a)(i) Relevant environmental planning instruments	All relevant EPIs have been addressed in the EIS, including: ▪ Planning Systems SEPP ▪ Industry and Employment SEPP ▪ Resilience and Hazards SEPP ▪ Transport and Infrastructure SEPP	**Appendix B**

Statutory Reference	Mandatory Consideration	Section in EIS
	▪ Biodiversity and Conservation SEPP ▪ Sustainable Buildings SEPP	
Section 4.15 (1)(a)(ii) Relevant draft environmental planning instrument	No draft EPIs apply to this site or to the proposed development.	N/A
Section 4.15 (1)(a)(iii) Relevant development control plan	Section 2.10(1) of the Planning Systems SEPP provides that the provisions of development control plans do not apply to SSDAs. There is therefore no requirement for assessment of the project against the Penrith DCP 2014. Notwithstanding, the project has considered the following provisions of the Penrith DCP 2014: ▪ Chapter E6 Erskine Business Park ▪ Chapter C2 Vegetation Management ▪ Chapter C10 Transport, Access and Parking ▪ Chapter C13 Infrastructure and Services ▪ Chapter C14 Urban Heat Management	**Appendix B**
Section 4.15 (1)(a)(iiia) Any planning agreement or draft planning agreement	The site forms part of the former Fitzpatrick Industrial Estate, which was subject to a VPA (SVPA-2017-8407, dated 30 August 2019) with the former DPE for the provision of State Infrastructure. The developer's obligations under the VPA have been met. The Estate is also covered by a Biodiversity Management Plan, which established the Erskine Park Biodiversity Corridor to offset biodiversity losses from the Estate's development as part of the Ropes Creek biodiversity corridor.	
Section 4.15 (1)(a)(iv) Relevant matters prescribed by the Regulations	This SSDA and EIS have been prepared in accordance with relevant matters prescribed in the EP&A Regulation.	Throughout this EIS
Section 4.15(1)(b) The likely impacts of that development	The likely impacts of the development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.	**Section 6**
Section 4.15(1)(c) The suitability of the site for the development	The suitability of the site for the development	**Section 7**
Section 4.15(1)(d) Any submissions	Any submissions made in accordance with the Act or the regulations	To be addressed post-SSDA lodgement
Section 4.15(1)(e) The public interest	The public interest	**Section 7**
Mandatory relevant considerations under EPIs		
State Environmental Planning Policy (Industry and Employment) 2021	The I&E SEPP is the principal environmental planning instrument that that sets out land use zones and development controls for the	**Appendix B**

Statutory Reference	Mandatory Consideration	Section in EIS
Chapter 2 Western Sydney employment area	site. The I&E SEPP includes the following relevant considerations that will be fully addressed in the EIS: ▪ Part 2.2 Permitted or prohibited development ▪ Part 2.3 Development control plans ▪ Part 2.4 Principal development standards ▪ Part 2.5 Miscellaneous provisions	
State Environmental Planning Policy (Resilience and Hazards) 2021	**Chapter 3** Hazardous and offensive development ▪ Section 3.7 Departmental guidelines	**Appendix ZF**
	Chapter 4 Remediation of land ▪ Section 4.6 Contamination and remediation to be considered in determining development application	**Appendix Q**
State Environmental Planning Policy (Transport and Infrastructure) 2021	Section 2.122 Traffic-generating development Section 2.119 Development with frontage to a classified road	**Appendix U**
State Environmental Planning Policy (Biodiversity and Conservation) 2021	**Chapter 2** Vegetation in non-rural areas	**Appendix ZB**
State Environmental Planning Policy (Sustainable Buildings) 2022	**Chapter 3** Standards for non-residential development ▪ Section 3.3 - Other considerations for large commercial development	**Appendix ZE**
Considerations under other legislation		
Biodiversity Conservation Act 2016 Part 7 and Part 8 (2)	The BC Act protects native vegetation, species of threatened flora and fauna, endangered populations and endangered ecological communities and their habitats in NSW. Section 7.9 requires a development application for SSD to be accompanied by a BDAR, unless the Planning Agency Head and the Environment Agency Head determines that the proposed development is not likely to have any significant impact on biodiversity values. A request to waive the requirement for a BDAR was prepared by ecologique and submitted to DPHI on 15 August 2025 to accompany the SSD (**Appendix ZB**). The waiver request was prepared on the basis that: ▪ The site is located within the 'Fitzpatrick Industrial Estate', which has been the subject of a Biodiversity Management Plan (prepared by Kevin Mills and Associates) and a VPA resulting in the establishment of the Erskine Park Biodiversity Corridor. ▪ This is in place to offset the losses in biodiversity from the overall development of the Estate lands and forms part of the Ropes Creek biodiversity corridor. ▪ Previous approvals for site preparation works, including the creation of development pads, granted consent for the removal of most vegetation from the site.	**Appendix ZB**

Statutory Reference	Mandatory Consideration	Section in EIS
	▪ The site is now largely cleared of vegetation and does not contain habitat for threatened species. Limited vegetative regrowth (predominantly weeds) is present along the northern boundary on a landscaped berm created under DA19/0818. ▪ The site is fully serviced, with potential hydrological impacts previously assessed under DA19/0817 (which approved an artificial waterbody/detention basin providing storage and tertiary water quality treatment for three developments, including this site) and DA19/0818 (which approved bulk earthworks and stormwater infrastructure). Based on these factors, DPHI granted a BDAR waiver on 12 September 2025 for the project (**Appendix ZM**).	

5 Community Engagement

5 Community Engagement

The following sections of the report describe the engagement activities that have been undertaken during the preparation of the EIS and the community engagement which will be carried out if the project is approved.

5.1 Engagement Carried Out

Community and stakeholder engagement has been undertaken by the Project Team in the preparation of the SSDA. Consultation was also undertaken with the certain stakeholders to inform the detailed assessment of key matters. The engagement carried out for the project is summarised in **Table 19**.

Table 19 Engagement Carried Out

Stakeholder	Action	Date(s)
Community Stakeholders		
Surrounding industrial businesses and occupiers	Project newsletter distributed with proposal info, enquiry channels and SIA survey link.	5 June 2025
Community enquiry lines	1800 phone line and engagement email established and monitored (no enquiries received to report date).	June- August 2025 (ongoing)
Social Impact Assessment – online survey	Online SIA survey promoted via newsletter.	From 5 June 2025
Fitzpatrick Investments (Adjacent landowner)	Email with newsletter and offer of briefing.	13 June 2025
	Online stakeholder briefing (project overview, plans, pathway; Q&A).	1 July 2025
Penrith Valley Chamber of Commerce	Email with newsletter and offer of briefing / interview.	13 June 2025
	Online stakeholder briefing (presentation + Q&A; interview for SIA)	18 July 2025
Elected officials – Tanya Davies MP (State Member, Badgerys Creek)	Email with newsletter and offer of briefing.	6 June 2025
Elected officials -The Hon Chris Bowen MP, Federal Member for McMahon and Federal Minister for Climate Change and Energy of Australia	Email with newsletter; offer of briefing.	6 June 2025
	In-person stakeholder briefing at electorate office (project overview and discussion).	1 August 2025

Stakeholder	Action	Date(s)
Luddenham Progress Association	Email with newsletter; invitation to briefing (no response).	13 June 2025
First Nations stakeholders (RAPs, Deerubbin LALC; public notice)	ACHAR process: agency notifications and public notice inviting registrations.	From 29 April 2025
Key Agencies		
DPHI	Formal scoping meeting to discuss EIS scope and SEARs	31 March 2025
	Lodgement of BDAR waiver request	15 August 2025
	BDAR waiver issued	12 September 2025
Penrith City Council – Officers	Pre-lodgement meeting with planning, engineering and traffic officers	24 July 2025
Penrith City Council – Councillors	Email to Mayor/Deputy Mayor/Ward Councillors with newsletter and offer of briefing	6 June 2025
Transport for NSW	Written consultation on access arrangements and traffic generation.	24 July 2025
Sydney Water	Consultation to confirm servicing strategy and capacity for potable water, sewer, and recycled water.	7 August 2025
TransGrid	Preliminary consultation on high-voltage infrastructure interfaces and potential coordination requirements.	11 December 2024 (ongoing)
NSW Environment Protection Authority (**EPA**)	Meeting with EPA to discuss the proposal and reporting requirements.	24 July 2025

This engagement outlined above was consistent with the community participation objectives in the *Undertaking Engagement Guidelines for State Significant Projects* and complied with the community engagement requirements in the SEARs.

In accordance with the Regulations, the EIS will be placed on formal public exhibition once DPHI has reviewed the EIS and deemed it 'adequate' for this purpose. Following this exhibition period, the applicant will respond to any matters raised by notified parties.

5.2 Community Views

The key issues raised by the community and key stakeholders, including Penrith City Council's formal pre-lodgement feedback, are summarised in **Table 20**. A detailed community engagement table is provided as **Appendix D** which details the way in which these issues have been addressed in the EIS.

Table 20 Community Feedback

Key Issue	Community Stakeholder	Project Response
Planning		
The proposal should be reconciled with the existing approvals for the Fitzpatrick Industrial Estate and related planning agreements/covenants.	Penrith City Council	The proposal is consistent with previous approvals for the Fitzpatrick Industrial Estate, associated planning covenants, and VPA (SVPA-2017-8407), with all VPA obligations already satisfied. The VPA and Biodiversity Management Plan established the Erskine Park Biodiversity Corridor to offset vegetation loss across the Estate. Previous approvals for site preparation works, including the creation of development pads, permitted the removal of most vegetation from the site and the establishment of regional stormwater infrastructure. The proposal does not involve any works to the small portion of land in the south-east of the site formerly zoned C2 Environmental Conservation, ensuring consistency with the VPA. This area will be retained and enhanced through planting with appropriate flood-resilient vegetation.
The proposal will need to provide a Water Management Strategy for the site that aligns with the precinct strategy. Among other things, the strategy will need to provide details of on-lot water reuse and the provision of Gross Pollutant Traps. Council controls seek an 80% target for water reuse. Given the nature of the development, you should strive to get as close to that target as possible.	Penrith City Council, Sydney Water	As detailed in the Integrated Water Management Plan (**Appendix ZK**), the proposal aligns with the precinct's original stormwater and servicing strategy, by connecting to existing shared infrastructure, including the stormwater detention basin and wetlands within the Ropes Creek biodiversity corridor. The pit and pipe stormwater system has been designed to convey the 5% AEP storm event including climate change factors. The overland flow paths during 1% AEP storm event have been designed to convey flow safely to the roadway or open space areas within the subject site. On-site detention of stormwater is not required within the lot boundaries of the development as regional detention infrastructure was constructed at the subdivision stage. A replacement of the existing GPT is proposed to suit the development layout and improve treatment efficiency. A MUSIC model of the existing and proposed stormwater treatment train has been prepared to confirm that Council's pollution reduction targets will be achieved. The design includes two 400kL rainwater tanks, sized to capture 50% of runoff generated from data centre roof areas. Collected water will be reused for non-potable purposes, including toilet flushing and landscape irrigation, thereby meeting Penrith Council DCP requirements for 80% of non-potable demand to be supplied from non-potable sources.
Adequate setbacks should be provided from boundaries,	Penrith City Council,	The proposal complies with the DCP setback requirements along the majority of all site boundaries, providing substantial landscaped buffers, deep soil planting, and separation from

Key Issue	Community Stakeholder	Project Response
particularly road frontages and the Erskine Park Biodiversity Corridor, to allow deep soil landscaping and visual buffers, with utilities positioned to retain vegetation and support new landscaping/tree canopy for urban heat and screening benefits.	Community Stakeholders	adjoining land uses. A minor non-compliance occurs at a single pinch point on the Lenore Drive frontage in the north-west corner, where built form encroaches into the required setback. This is due to the site's irregular geometry and the operational requirements of a modular building layout. Notwithstanding the minor encroachment, the building frontage to Lenore drive provides an 'average' setback that exceeds the DCP requirement. The impact is appropriately mitigated through retention and enhancement of the existing landscaped berm, the recessing of the upper office level, and additional endemic planting to reinforce visual screening, reduce urban heat, and complement the streetscape. The development provides 14,733.8m² of deep soil planting (19.07% of the site area) and achieves approximately 11.46% canopy cover, both of which exceed the minimum requirements of the DCP. These landscaped areas are concentrated along public frontages and site boundaries to provide effective visual screening, meet canopy coverage objectives, mitigate urban heat, and integrate with the character and ecological values of the adjoining Ropes Creek biodiversity corridor.
The proposal results in tight setbacks and landscaping due to the site's operational requirements, with site coverage exceeding the DCP by 7% and reduced setbacks to Lenore Drive and Lockwood Road. Council suggested increasing planting on the Lenore Drive berm to strengthen visual buffering, subject to existing easements and underground services.	Penrith City Council	The site layout balances the operational requirements of a large-scale data centre with the planning objectives of the Penrith DCP. While the proposal results in a site coverage of 57% which represents a 7% exceedance, all building elements and associated infrastructure are contained within the site and do not result in adverse visual or amenity impacts on surrounding land uses. Setbacks comply with DCP provisions along all boundaries except for the single localised pinch point on Lenore Drive. This variation is offset by the retention and enhancement of the existing berm, supplemented with additional endemic planting, and supported by the deep soil and canopy provision, which exceed DCP controls. The built form is further refined by façade articulation, varied materiality, recessed upper office levels, and extensive landscape buffers. Planting on the Lenore Drive berm has been designed having regard to existing easements and underground services, ensuring serviceability while delivering a high-quality landscaped edge.
The proposed building height of 25.5 metres exceeds the 15-metre limit in the Penrith DCP and is higher than surrounding warehouse buildings. The non-compliance must be justified through a comprehensive VIA and	Penrith City Council	The proposed maximum building height of 26.5 metres is driven by the specific operational requirements of a hyperscale data centre, including the vertical stacking of technical floors, plant levels, and associated infrastructure. This height is essential to accommodate efficient layouts for data halls, mechanical systems, and servicing infrastructure that cannot be achieved within the 15-metre limit typically applied to traditional forms of warehouse-style development. There is no applicable height standard under the Penrith LEP or any relevant SEPP. While Penrith DCP 2014 identifies a 15-metre

Key Issue	Community Stakeholder	Project Response
landscape plan, including viewpoints from nearby residences, with additional landscaping and tall canopy trees to assist in screening. Earthworks and filling should be limited to avoid exacerbating visual bulk		guideline for the Erskine Park Industrial Precinct, DCP provisions do not strictly apply to SSDAs. Notwithstanding, the proposal addresses the underlying intent of the DCP control by ensuring a high-quality built form outcome that manages visual bulk and integrates the development into its setting. A VIA has been prepared and is included in the EIS (**Appendix ZH**). The VIA confirms that visual impacts are acceptable, with photomontages showing nil to low–medium levels of impact from all assessed viewpoints. For further discussion regarding visual impacts, refer to **Section 6.2** of the EIS The design incorporates a recessed upper office level, façade articulation, and a carefully considered material palette to reduce perceived bulk and scale. The generator gantry is located towards the rear of the site and screened by building form and landscaping, ensuring it remains visually recessive. Generous landscaped setbacks are provided to all frontages, exceeding DCP requirements in most locations, with canopy trees and layered native planting further mitigating visual prominence. On this basis, the proposed building height is justified. The absence of a statutory height control under an EPI, the inapplicability of DCP controls to SSDAs, the comprehensive VIA demonstrating acceptable impacts, and the robust landscape and design response collectively confirm the proposal achieves an appropriate planning and urban design outcome.
The proposal must address urban heat and sustainability by considering the use of measures such as 'green concrete' and sustainable design, and by demonstrating consistency with the relevant LEP and DCP provisions as well as the SEPP (Sustainable Buildings).	Penrith City Council	The EIS is accompanied by an ESD Report (**Appendix ZE**) which addresses the relevant SEARs requirements including the provisions of the Sustainable Buildings SEPP. The proposed development includes a range of sustainability and heat-mitigation measures, including significant deep soil landscaping, canopy tree planting, passive design strategies, and the use of low-carbon materials such as green concrete where feasible. Solar panels, efficient cooling systems, and WSUD further reduce the project's environmental footprint. For further discussion regarding ESD, refer to **Section 6.5** of the EIS.
Parking provision should be justified through a demand analysis referencing operational needs and comparable data centres.	Penrith City Council, TfNSW	Parking provision has been determined through a demand-based assessment in the TIA (refer **Appendix U**). The proposal includes 78 on-site car spaces. Given the operational profile of the proposed data centre, where only a small proportion of the 200 jobs are site-based, the use is not comparable to the higher-intensity industrial uses referenced in the Penrith DCP. The TIA demonstrates peak demand of approximately 43 spaces on a typical weekday, 15 spaces overnight, and a worst-case of 76 spaces during infrequent biannual maintenance events. All

Key Issue	Community Stakeholder	Project Response
		scenarios are fully accommodated within the 78 spaces provided, avoiding reliance on street parking. Benchmarking against other Western Sydney data centres confirms this provision is consistent with industry standards and sufficient to meet operational and visitor requirements. For further discussion regarding parking, refer to **Section 6.3** of the EIS.
Heavy and light vehicles will share the same access which does not comply with Council's DCP. Justification should be provided noting that site access is to be controlled and managed.	Penrith City Council	The proposed development includes a single, secured access point from Lockwood Road, with all vehicles processed through 24/7 security screening prior to entry. This arrangement ensures that both heavy rigid vehicles (up to 19m) and light vehicles enter the site in a controlled and coordinated manner, eliminating the potential for unmanaged conflicts at the access. Internal circulation has been designed as a one-way loop road, providing safe and efficient vehicle movement across the site. The design incorporates a functional separation of uses through loading docks located on the lower ground level and staff and visitor parking accommodated in an under-croft on the upper ground level via a dedicated ramp. This arrangement provides a clear physical and operational distinction between service vehicle activity and light vehicle parking. The TIA (refer **Appendix U**) confirms the data centre will generate low traffic volumes relative to comparable industrial uses with approximately 37 vehicle trips in both the AM and PM peak period once fully operational. A queuing analysis has been undertaken in the TIA which demonstrates that vehicles entering the site will not result in queues extending onto the public road network or adversely impact surrounding traffic conditions. The combination of controlled site entry, a one-way internal road system, low traffic generation, and vertical separation of loading docks and parking areas will ensure a safe, efficient and appropriate outcome that is consistent with the operational requirements of the proposed data centre. For further discussion regarding access and traffic, refer to **Section 6.3** of the EIS.
Rooftop plant should be integrated and designed within the roofscape, with any required screening shown, as screening will also contribute to height of building.	Penrith City Council	Rooftop plant is shown on the Architectural Drawings (refer **Appendix E**). The proposal has been designed to integrate rooftop plant within the overall roofscape to minimise bulk and visual prominence. Plant equipment is consolidated within screened rooftop zones, and the screening structures are architecturally integrated into the building design to provide a uniform appearance. The screening has been included in the overall height envelope assessed in the EIS. Accordingly, its contribution to building height and bulk has been accounted for in the VIA, which confirms the development, inclusive of rooftop screening, can be appropriately

Key Issue	Community Stakeholder	Project Response
		accommodated within the site and is compatible with the surrounding context. Materials and finishes for the screening will be consistent with the main façade treatments, ensuring a cohesive built form and further reducing potential visual impact.
All plans must show lighting, signage, and fencing. Fencing should generally be behind landscaped setbacks, with security needs balanced against the site's visual presentation.	Penrith City Council, Community Stakeholders	External lighting is designed to AS 4282 with directional fittings to avoid spill. No signage is proposed. The proposal incorporates a 4.1-metre-high security fence around the site perimeter to ensure appropriate protection of critical infrastructure, consistent with the operational requirements of a Tier III/IV standard data centre. Along Lenore Drive, the fence is set back 1.5m from the boundary line and integrated with new landscape planting, while also benefitting from the existing landscaped berm behind. Although the berm prevents the fence from being setback further into the site due to security risks (such as creating climbing opportunities), this arrangement strikes a reasonable balance between security and streetscape presentation. Similarly, at the Lockwood Road entrance, the fence is recessed to reduce visual prominence and improve integration with the landscaped frontage. Wherever feasible, the fence has been setback further behind landscaping, ensuring the built form is softened from public vantage points. The approach has been carefully considered to balance operational security imperatives with the objectives of the DCP relating to streetscape character.
Council required updated investigations due to the age of the 2008 validation.	Penrith City Council	A DSI has been prepared for this SSDA (**Appendix Q**) which confirms the site is suitable for the intended use from a contamination perspective with standard environmental controls during construction including unexpected finds protocol.
Environmental Management		
The noise and air quality assessments will need to include a 'worst-case scenario' reflecting maximum operation of plant and equipment under worst-case meteorological conditions. For generator impacts, the assessments should address worst-case (all generators operating simultaneously) and normal operations,	Penrith City Council, EPA	The Air Quality Impact Assessment (**AQIA**) has addressed these requirements through the following modelling scenarios: ▪ Scenario 1 – Justified Worst-Case: All 170 generators operating simultaneously, representing maximum potential emissions during peak operation under adverse meteorological conditions. ▪ Scenario 2 – Realistic (Maintenance Testing): Routine generator testing, with two generators operating for one hour at a time within the designated testing hours. This ensures the assessment covers both worst-case operational conditions and realistic generator use, consistent with the industry-specific SEARs for data storage centres. In relation to meteorological conditions, the dispersion modelling incorporated a full year of hourly sequential meteorological data.

Key Issue	Community Stakeholder	Project Response
detailing the various scenarios of generator testing.		This approach inherently captures adverse dispersion periods and therefore reflects worst-case conditions within the assessment. The Noise and Vibration Impact Assessment (**NVIA**) submitted with the EIS has been prepared in accordance with ISO 9613, adopting a conservative "worst-case scenario" where all receivers are assumed to be downwind of the noise source. The assessment has modelled cumulative noise emissions from chillers, vehicles, and generators to ensure a robust understanding of potential impacts. While various routine generator testing scenarios have not been individually modelled, the worst-case scenario of all generators operating simultaneously has been assessed. This complies with the NPfI project noise trigger level + 5 dB criteria adopted for emergency operation.
Mitigation measures for construction and operation must be clearly detailed in the technical reports, demonstrating compliance with relevant guidelines and standards.	Penrith City Council	Mitigation measures are detailed in the EIS and supporting technical reports.
A WSUD Strategy is required that aligns with the precinct strategy. It must comply with B&C SEPP and Council's DCP. MUSIC modelling is to demonstrate neutral or beneficial water quality and runoff outcomes. The Strategy must also address water conservation, with 80% of non-potable demand met by rainwater. A concept stormwater plan with calculations and WSUD measure details must be provided.	Penrith City Council	The development forms part of a subdivision that incorporated a constructed wetland and GPT to the east of the site. These elements were designed to achieve WSUD requirements and pollutant reduction targets for this precinct, servicing both the subject site and adjoining lots. A site-specific MUSIC model has been prepared which demonstrates that Council's pollution reduction targets will be satisfied.
Engineering		
All works must comply with Council's	Penrith City Council	Engineering works have been designed in accordance with Council's design and construction requirements (refer **Appendix**

Key Issue	Community Stakeholder	Project Response
engineering design and construction standards, supported by a detailed survey. Plans should address the adjoining wetlands to the east, with access provided at the northern and southern ends and formalised through rights of access.		**ZJ**). A detailed survey has been provided at **Appendix H** to inform the design. The proposal responds to the adjoining wetlands to the east. If required, a right of access can be formalised to ensure access is provided at the northern and southern end of the wetlands.
Stormwater drainage must comply with Council's DCP, Drainage Specification, and WSUD Policy, supported by a stormwater concept plan, report, and checklist. Easements to drain water over downstream properties may also be required.	Penrith City Council	Stormwater drainage has been designed in accordance with Council's DCP, Drainage Specification and WSUD Policy. The Integrated Water Management Plan (**Appendix ZK**) demonstrates integration with the existing regional stormwater infrastructure ensuring compliance with Council and B&C SEPP requirements. No additional drainage easements are required.
No development is permitted over easements. Relocation requires approval from beneficiaries. Where new easements are proposed, cross-sections must be provided showing all services, structures, footings, and ground levels.	Penrith City Council	No built form is proposed over any easements, and all existing easements will be retained and maintained.
The site is affected by local overland flow flooding, with the 1% AEP event impacting the south-east corner. Filling of flood-affected areas will not be supported. The application must obtain Council's adopted flood level and demonstrate consistency with the	Penrith City Council	A Flood Impact Risk Assessment has been prepared by Acor Consulting and is included at **Appendix ZD**. The assessment confirms the development is compatible with the State Floodplain Development Manual, Clause 5.21 of the Penrith LEP 2010, and Part C3.5 of the DCP. No filling is proposed within the south-east flood-affected area, and the design ensures habitable floor levels, basement access, fencing, and site drainage comply with Council's flood planning controls, without adverse impacts on adjoining properties.

Key Issue	Community Stakeholder	Project Response
State Floodplain Development Manual, LEP Clause 5.21, and DCP Part C3.5. An Overland Flow Flood Impact Assessment is required, addressing future climate change scenarios. Habitable floor levels must be 0.5m above the 1% AEP level, basement access and openings must be designed to prevent inundation, fencing in flood-affected areas must allow water passage, and the development must not adversely impact flood behaviour or adjoining properties.		
Council does not support the shared driveway from Lockwood Road and requires separate access for cars and trucks. The application must include a traffic report addressing traffic generation, access, parking, and manoeuvring, with compliance to AS 2890 and Council's DCP. Turning paths and parking layouts must demonstrate safe on-site manoeuvring, forward entry/exit, and dimensions that meet required standards.	Penrith City Council	The TIA (**Appendix U**) confirms the data centre will generate low traffic volumes compared with typical industrial uses, with approximately 37 vehicle trips in both the AM and PM peak periods at full operation. On this basis, no queuing is expected at the site access or on Lockwood Road, even under peak conditions. A single consolidated access point from Lockwood Road is proposed, incorporating a security-controlled entry arrangement for both cars and heavy vehicles. This ensures all arrivals are managed in a controlled manner, eliminating potential conflicts between vehicles entering the site. Swept path analysis demonstrates that cars and heavy vehicles can safely enter, circulate, and exit the site in accordance with AS 2890, with no conflict between vehicle movements. All manoeuvring occurs within the site, with forward entry and exit provided for all vehicles, including the largest anticipated service vehicles. Car parking and aisle dimensions comply with AS 2890 and Council's DCP requirements, ensuring safe and efficient on-site circulation and capacity to meet operational demand. Accordingly, the proposed access arrangement is considered safe, efficient, and appropriate for the site context, with no requirement for separate car and truck access.
Council requires that earthworks and retaining walls do not	Penrith City Council	The proposal involves only minor earthworks as the site benefits from an existing development pad, and no basement car parking is proposed. Details of retaining walls and fencing are provided in

Key Issue	Community Stakeholder	Project Response
impede or divert stormwater and must comply with the DCP. Full details of filling, retaining walls, and boundary fencing must be provided. A geotechnical report is required to address excavation, basement car parking, groundwater impacts, salinity, and construction effects on adjoining land. Any basement must be designed watertight (or supported by detailed hydrogeological assessment if drained). Design and Building Practitioners Act requirements for shoring and ground anchors must also be addressed.		the Civil and Landscape Plans. A Geotechnical Investigation and a Salinity Management Plan have been prepared and are submitted with the EIS at **Appendix T** and **Appendix S** respectively.
Traffic		
The EIS must address traffic and parking impacts through a Traffic and Parking Assessment Report prepared by a qualified practitioner in accordance with TfNSW guidelines. The report is to assess impacts on local roads, intersections, and road safety (including cumulative impacts), supported by SIDRA modelling. Swept path diagrams must demonstrate safe on-site manoeuvring for the largest design vehicle. Any	Penrith City Council	A TIA (**Appendix U**) has been prepared in accordance with the TfNSW Guide to Traffic Generating Developments and Council's DCP. The assessment confirms the data centre will generate low traffic volumes (approx. 37 trips in AM/PM peaks), with no queuing anticipated at the site access or on Lockwood Road. SIDRA modelling demonstrates the surrounding road network can accommodate the development without adverse impacts, including cumulative traffic from approved developments. Swept path diagrams confirm safe manoeuvring for the largest design vehicles, with no conflicts between cars and heavy vehicles. Access will be security-controlled, ensuring managed entry/exit and minimising potential conflicts. Any temporary construction access from Lenore Drive will be coordinated with TfNSW.

Key Issue	Community Stakeholder	Project Response
construction or operational access to Lenore Drive will require referral to TfNSW.		
Council requires details of loading and servicing arrangements, including demonstration that the largest heavy vehicle can be safely accommodated on-site with separated routes for heavy vehicles, cars, and pedestrians.	Penrith City Council	The proposed development provides clear separation between loading/service vehicle areas and general car parking. Car parking is located within the under-croft on the upper ground level, while loading docks are located on the lower ground level with dedicated heavy vehicle access. The loading dock design accommodates the largest anticipated service vehicle in accordance with AS2890, with swept path analysis confirming safe entry, manoeuvring, and forward exit to Lockwood Road. An internal one-way loop road is provided to facilitate controlled and efficient vehicle circulation across the site.
Council requires the application to demonstrate adequate on-site parking for staff, visitors, and servicing (including shift overlaps), safe pedestrian movement, and full compliance with AS2890 standards. All vehicles must enter and exit in a forward direction, with swept path analysis confirming passing manoeuvres and access to restricted spaces.	Penrith City Council	The proposal includes 78 on-site parking spaces, with provision based on a detailed demand assessment that accounts for staff, visitors, contractors, and shift overlaps. Even during peak maintenance periods, parking demand will be fully accommodated on site. All spaces have been designed in full compliance with AS2890 standards, with swept path analysis confirming safe access, passing manoeuvres, and forward entry and exit for all vehicle types. Secure, direct pedestrian connections are provided between parking areas and building entries, ensuring safe and efficient circulation across the site.
Other matters		
Community engagement process	Community Stakeholders	Engagement was consistent with the *Undertaking Engagement Guidelines for State Significant Projects*. Stakeholders were informed of key design elements, environmental controls, and construction management measures. Further engagement will occur post-approval to provide updates on construction progress.
Electrical infrastructure integration	TransGrid	TransGrid sought coordination of substation and electrical works. The design integrates with existing TransGrid network requirements, ensuring compliance with connection agreements, and locates the substation to retain screening and maximise operational efficiency.

Key Issue	Community Stakeholder	Project Response
Biodiversity	DPHI, community	The site has been previously cleared and a BDAR waiver has been granted from DPHI (**Appendix ZM**). Landscaping will include endemic species to enhance habitat, particularly along the Ropes Creek biodiversity corridor, consistent with the Estate's biodiversity obligations.
Heritage	RAPs, Deerubbin LALC	The ACHAR has been prepared in consultation with RAPs and Deerubbin LALC **(Appendix ZA).** No Aboriginal heritage has been identified on the site. It is recommended that an Unexpected Finds Protocol will apply during construction phase.

5.3 Engagement to be Carried Out

STACK welcomes feedback on the proposal. STACK will continue to keep stakeholders, and the community informed of the project approval process through the exhibition and determination phases by:

- Continuing to engage with the community about the project, its potential impacts, and the approval process.
- Enabling the community to seek clarification about the project through the two-way communication channels.

6 Assessment of Impacts

6 Assessment of Impacts

This section describes the way in which the key issues identified in the SEARs have been assessed. It provides a comprehensive description of the specialist technical studies undertaken regarding the potential impacts of the proposed development and recommended mitigation, minimisation and management measures to avoid unacceptable impacts.

Detailed tables have been provided within the appendices as outlined in **Table 21.** This information includes a reference to where these matters have been addressed in the EIS.

Table 21 Key Appendices

Key Appendix	Reference
SEARs compliance table	**Appendix A**
Statutory compliance table	**Appendix B**
Proposed mitigation measures table	**Appendix C**
Community engagement table	**Appendix D**

The detailed technical reports and plans prepared by specialists and appended to the EIS are individually referenced within the following sections.

6.1 Built Form and Urban Design

An Architectural Design Report has been prepared by Genton and is provided at **Appendix F**. The Architectural Design Report provides details of the built form and urban design approach to the proposed data centre.

6.1.1 Existing Environment

The site is located within the established Erskine Park industrial precinct, characterised by large-format industrial and logistics buildings, wide internal roads, and landscaped setbacks. Surrounding development typically comprises substantial warehouse structures with minimal fenestration, articulated façades, and integrated landscaping.

The site itself is currently cleared and largely level, with minor grade variations. It is bounded by Lenore Drive to the north, Lockwood Road to the south, and industrial land to the west. The adjacent Ropes Creek biodiversity corridor lies to the east, providing an environmental buffer to industrial land further to the east. The site accommodates existing in-ground services and easements, and a green berm is located along the Lenore Drive frontage.

Surrounding development is functional and robust in character, typically incorporating minimal fenestration, articulated façades to mitigate bulk, and a predominance of neutral-coloured materials. Building heights in the locality typically range from 12 to 20m, with larger footprints being common given the operational requirements of industrial and logistics uses. Street frontages incorporate generous landscape buffers, particularly along primary road corridors, to soften views of development from the public domain.

6.1.2 Potential Impacts

Bulk and Scale

The proposal comprises two three-storey hyperscale data centre buildings positioned centrally within the site to create an internal circulation spine and landscaped frontage zones. This arrangement reduces the perception of bulk and provides visual breaks in the built form. While the footprint of each building is

substantial, it is consistent with the operational requirements of a hyperscale data centre and aligns with the prevailing development pattern in the industrial zone.

Each building incorporates integrated office components along the Lenore Drive frontage and large-scale technical areas to the rear. As demonstrated in **Figure 34**, locating the office components along this frontage introduces a finer grain of built form to the public domain interface, helping to reduce the perceived bulk of the overall development when viewed from Lenore Drive. A separation of approximately 21 metres is provided between the two buildings, further contributing to visual openness and reducing perceived bulk.

Figure 34 Proposed Render from Lenore Drive

Source: Genton, 2025

The overall bulk and massing are consistent with the established character of the Erskine Business Park, which is defined by large-format industrial and warehouse buildings with substantial footprints and functional layouts.

The proposed site coverage of 57.04% marginally exceeds the DCP's 50% control. This reflects the functional requirements of a hyperscale data centre, which relies on large, contiguous floorplates to accommodate secure technical infrastructure. Importantly, this is consistent with other large-format industrial developments in Erskine Park, where site coverage commonly exceeds the nominal control without adverse impacts. The variation is offset by generous landscaped setbacks, deep soil planting, and an internalised service layout, ensuring the built form integrates appropriately with the precinct.

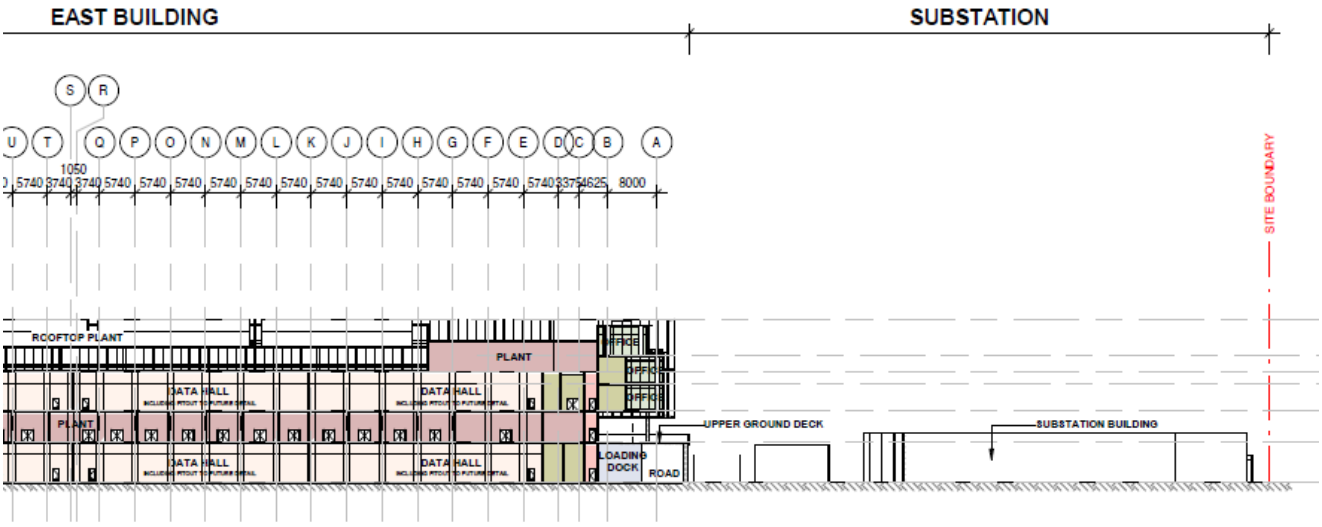
The built form is centrally positioned within the site, ensuring that service areas, plant equipment, and loading docks are screened from public view by intervening buildings and landscaping. This arrangement minimises the perceived visual mass from surrounding vantage points and maintains a high-quality presentation to the public domain.

The buildings adopt a linear form with a modular configuration optimised for operational efficiency. Bulk is moderated through façade modulation, vertical and horizontal panels, and material variation. Office

elements along Lenore Drive introduce a human scale and visual interest to the public domain interface. The configuration maintains a functional separation between public-facing office components and secure operational areas. Landscaped edges, including deep soil zones and significant tree plantings, soften the appearance of the development from the public domain and enhance visual integration with the broader precinct.

As illustrated in **Figure 35**, the on-site substation yard, located between the buildings and Lenore Drive, is low in height (approximately 4m) and will be screened from public view by the combination of landscaping, the retention of the substantial green berm, and the placement of built form. An enclosure (blast wall) surrounding the substation will be approximately 6 to 8 metres in height. The elevated generator gantry stack is positioned in the south-eastern portion of the site to meet functional, acoustic, and exhaust dispersion requirements. Its location, combined with surrounding built form and vegetation, minimises visual prominence from Lenore Drive and adjoining development. Both the substation and generator stack are designed to read as secondary, low-scale service elements that remain visually subservient to the primary three-storey data centre buildings.

Figure 35 Extract of Section Plan



Source: Genton, 2025

Height

The proposed data centre buildings reach a maximum height of 26.5 metres across three storeys. Along Lenore Drive, the landscaped berm and recessed upper office level ensure the development reads as a conventional three-storey form, substantially reducing perceived mass when viewed from the street.

The generator gantry is also 26.5 metres in height, with exhaust flues extending marginally higher. These elements are positioned deep within the site, screened by intervening built form and landscape buffers, and will not be prominent from the public domain.

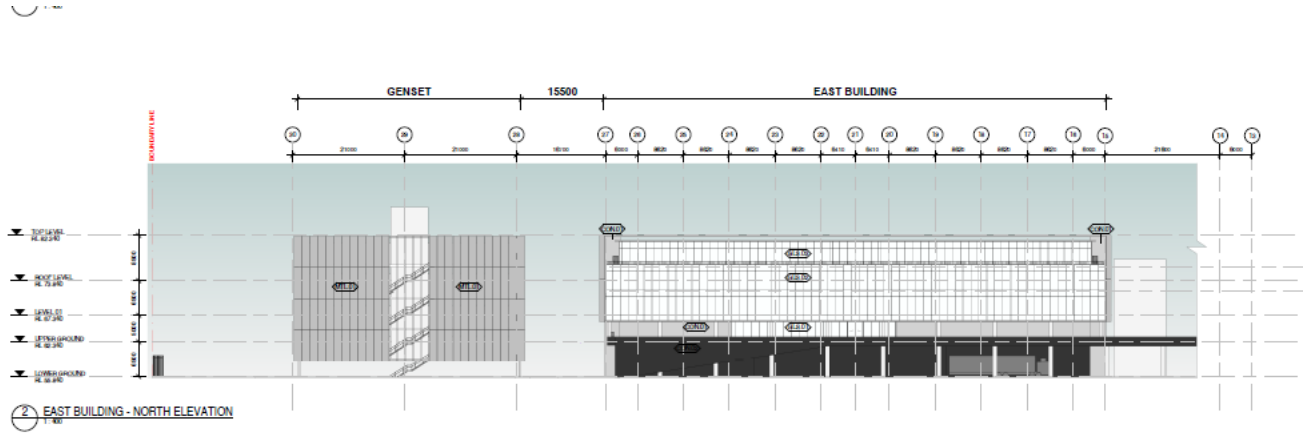
While the proposal exceeds the 15m guideline in the Penrith DCP 2014, it is important to note that no statutory building height standard applies under the LEP. In practice, contextual fit is the relevant test. Within Erskine Park, many large-format industrial, logistics, and infrastructure developments exceed the nominal 15m DCP limit where operational plant and equipment require additional vertical capacity. Approvals for comparable hyperscale facilities demonstrate this is an established and accepted planning outcome.

The increased height is a direct and unavoidable response to the operational requirements of a hyperscale data centre, which must accommodate stacked technical floors, plant levels, and vertical cable and air distribution systems in a secure, consolidated footprint. Without this vertical arrangement, efficiency, resilience, and client security could not be achieved.

Mitigation is embedded into the design. Vertical articulation, façade modulation, rooftop screening, and recessed upper levels all work to break down massing. Combined with generous landscaped setbacks, a continuous landscaped berm, and deep soil planting along Lenore Drive, these measures ensure that the height is visually contained and integrated with the broader industrial character of the precinct.

Accordingly, the proposed height represents a functional necessity, is consistent with established precinct character, and is appropriately mitigated to avoid adverse visual or amenity impacts.

Figure 36 North Elevation Plan



Source: Genton, 2025

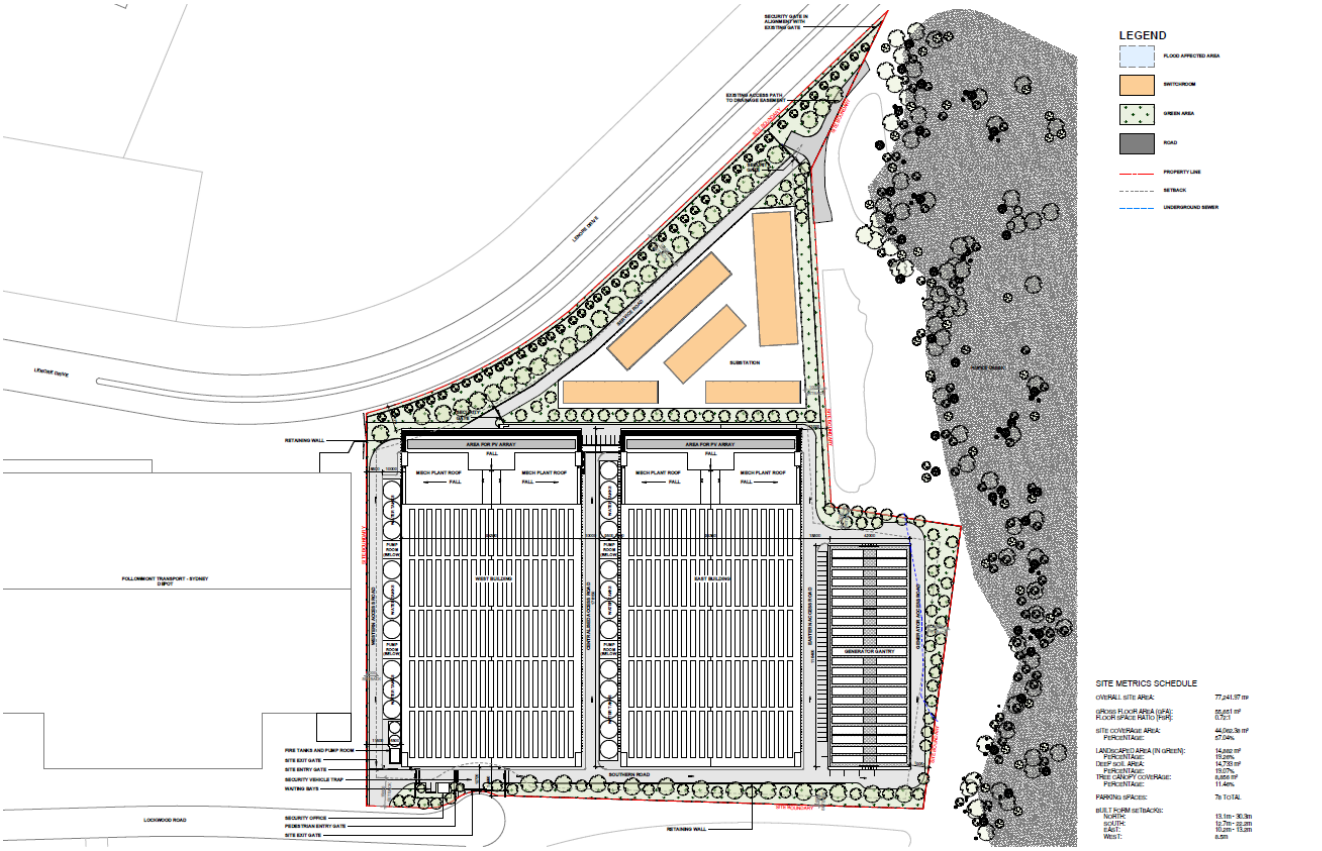
Setbacks

Generous setbacks are provided to all site boundaries, exceeding DCP requirements in most locations and ensuring building mass does not dominate the Lenore Drive frontage. These setbacks accommodate substantial landscaped buffers, vehicle circulation zones, and separation from adjoining properties. The orientation and massing also ensure that service areas, plant yards, and loading docks are located away from Lenore Drive and screened by intervening buildings and landscaping.

As shown in **Figure 37**, due to the irregular shape of the site, a range of setbacks are proposed to different boundaries:

- **Northern setback / Lenore Drive**: The DCP requires a 20m setback. At its narrowest point (north-west corner), the building is set back 13.1m; however, this section is heavily screened by a landscaped berm, deep soil planting, and recessed upper levels that significantly reduce visual bulk. Moving east, the setback increases to more than 30.3m. Across the majority of the frontage, a 20m landscaped setback is maintained. While there is a technical non-compliance at the pinch point, the average setback comfortably meets the control, and the visual outcome is consistent with the DCP's intent.
- **Western boundary setback**: The DCP requires a 5m setback. The proposal provides 8.5m, inclusive of the western access road, exceeding the control.
- **Eastern boundary setback to C2 land**: The DCP requires 10m. A setback of 10.2m is provided from the generator stack, increasing to over 20m in parts. The substation is also set back 10m, and the western building is set back by 13.2m. This exceeds the control.
- **Southern boundary / Lockwood Road**: The DCP requires 15m. Setbacks range from 12.7m to more than 22 m, meeting the intent of the control while allowing for landscaping and circulation.

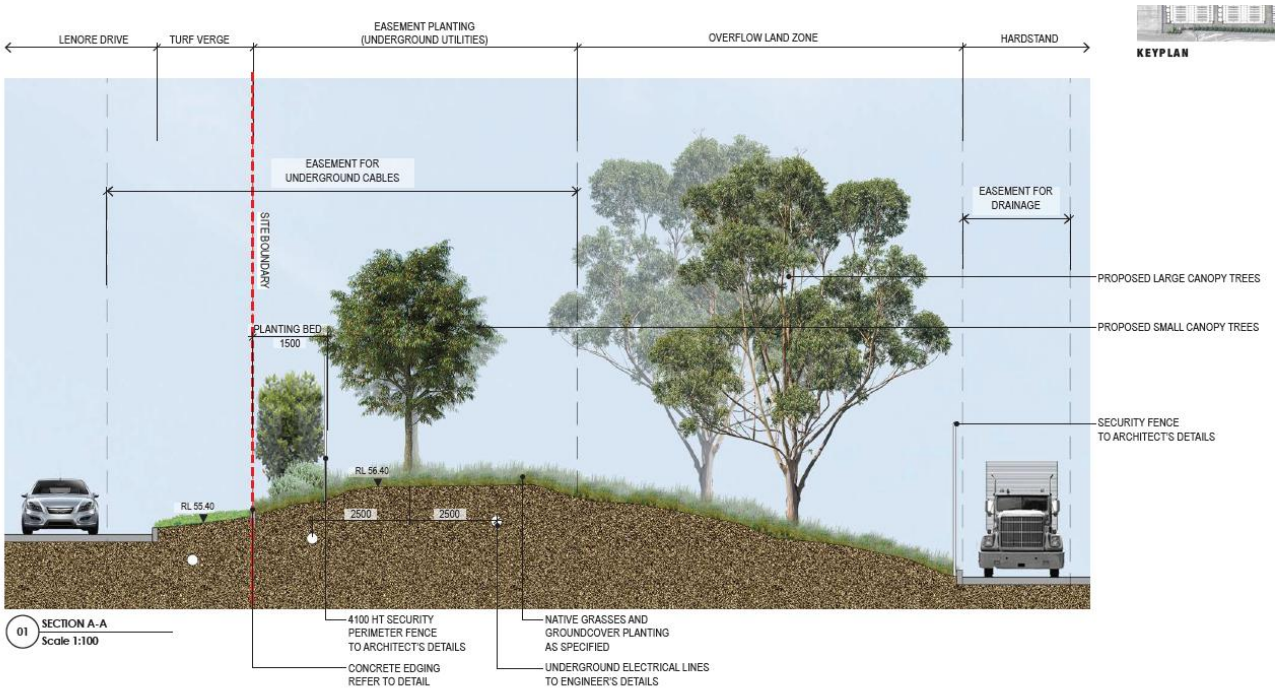
Figure 37 Site Ground Floor Plan



Source: Genton, 2025

As demonstrated in **Figure 38**, the Lenore Drive interface is reinforced by a continuous landscaped berm and deep soil planting, which reduce the apparent bulk and soften views of the development. These measures ensure that, notwithstanding minor technical variations, the proposal delivers a built form outcome consistent with the established character and expectations of the wider employment area.

Figure 38 Landscape Section – Lenore Drive



Source: Habit8, 2025

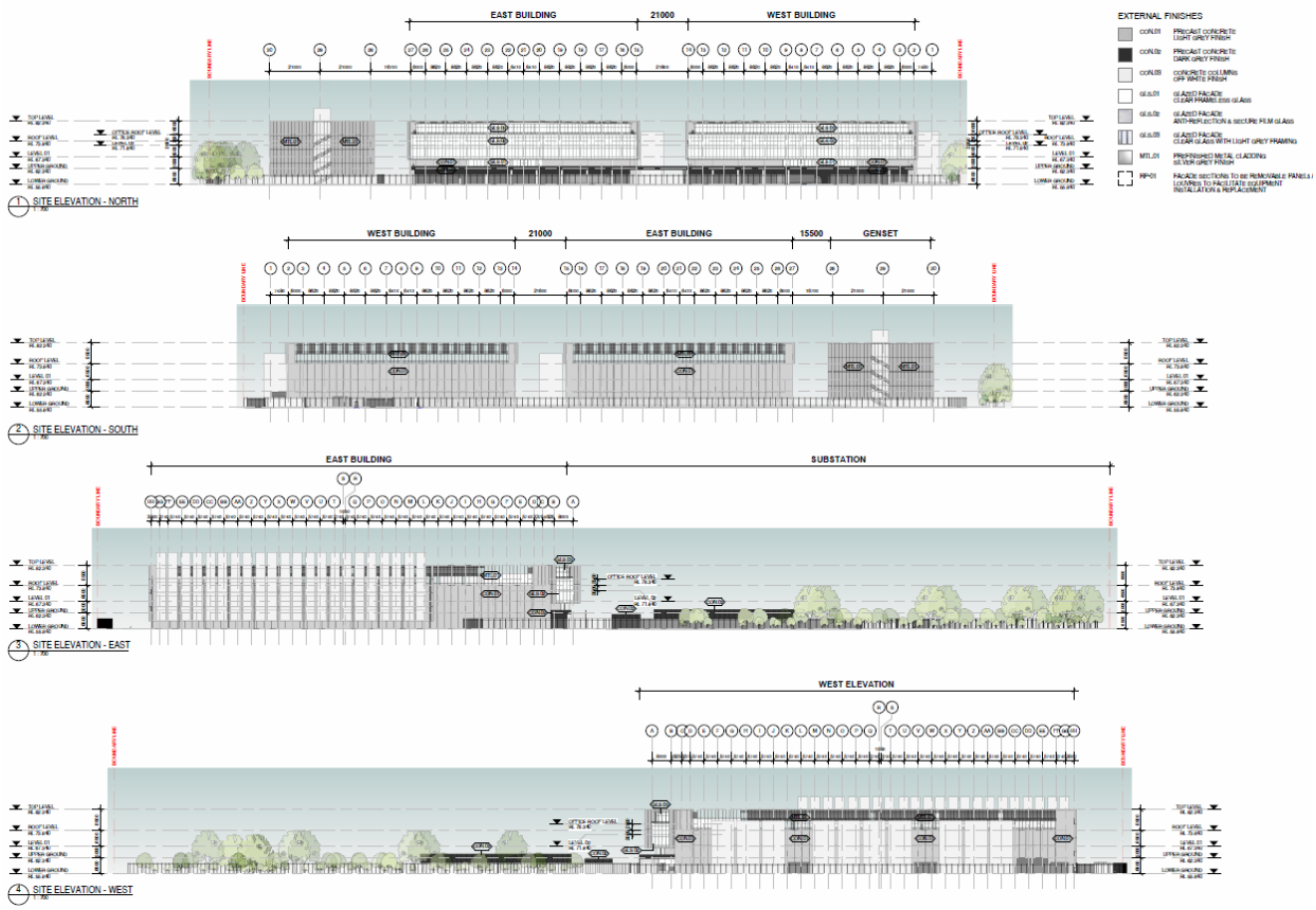
Design and Materiality

The architectural design adopts a refined, functional industrial aesthetic that is both consistent with the established character of the Erskine Park Industrial Precinct and responsive to the operational requirements of a hyperscale data centre. The design is informed by the principles of visual quality, durability, and contextual integration.

The two data centre buildings are articulated through a combination of vertical and horizontal modulation, varied material treatments, and careful façade detailing to break down the massing and provide visual interest. The Lenore Drive frontage is activated through the integration of glazed office elements, providing transparency, passive surveillance, and a clear address for the development.

As shown in **Figure 39** the primary materials include prefinished steel cladding in neutral and dark tones, precast concrete panels for robustness and grounding, perforated metal screening to mechanical plant areas, and a high-quality glazing system for the office facades. These materials have been selected for their long-term durability, low maintenance requirements, and suitability for the industrial context. The tonal variation and textured finishes reduce perceived bulk, while integrated screening elements ensure a cohesive and refined presentation across all building elevations.

Figure 39 Site Elevation Plans



Source: Genon, 2025

Roof-mounted plant, photovoltaic arrays, and water storage infrastructure are fully screened from view, maintaining the clean architectural profile of the buildings. The on-site substation yard adopts a coordinated material palette and is integrated with the surrounding built form and landscaping, ensuring a visually recessive appearance.

The generator gantry stack is positioned deep within the site, using distance, built form, and landscaping to minimise visual prominence. This siting, combined with the coordinated finishes and screening, ensures functional infrastructure elements do not detract from the architectural composition of the development.

The materiality of all structures is complemented by the hardscape and landscape treatments, which have been designed to integrate seamlessly with the architectural palette. Paving, retaining walls, and external furniture adopt neutral tones and robust finishes, ensuring durability while contributing to a unified and visually coherent public domain interface.

Views

The predominant visual character is defined by large-format warehouse and logistics facilities of substantial bulk and height. Views towards the site from the public domain are largely limited to Lenore Drive and Lockwood Road, with intervening development, vegetation, and topography restricting longer-distance vistas.

The siting and design of the two data centre buildings, combined with generous landscaped setbacks, ensures that views from Lenore Drive are of a high-quality, well-articulated façade treatment, with office components, vertical modulation reducing perceived bulk. The integration of a landscaped berm along Lenore Drive further screens ground-level servicing areas and the on-site substation yard, which at approximately 4m in height will not be visible from the street.

The elevated generator gantry stack, while a functional and taller element, is located deep within the site to the south-east, orientated away from Lenore Drive, and screened from key public vantage points by building mass, existing vegetation, and new landscape buffers. Rooftop plant is fully screened by parapets and architectural cladding, avoiding visual clutter and maintaining a cohesive built form profile.

Overall, the proposal has been designed to ensure that views from the public domain are of a well-composed, visually contained development that integrates into the established industrial context while contributing positively to the streetscape character of Lenore Drive and Lockwood Road.

Overshadowing

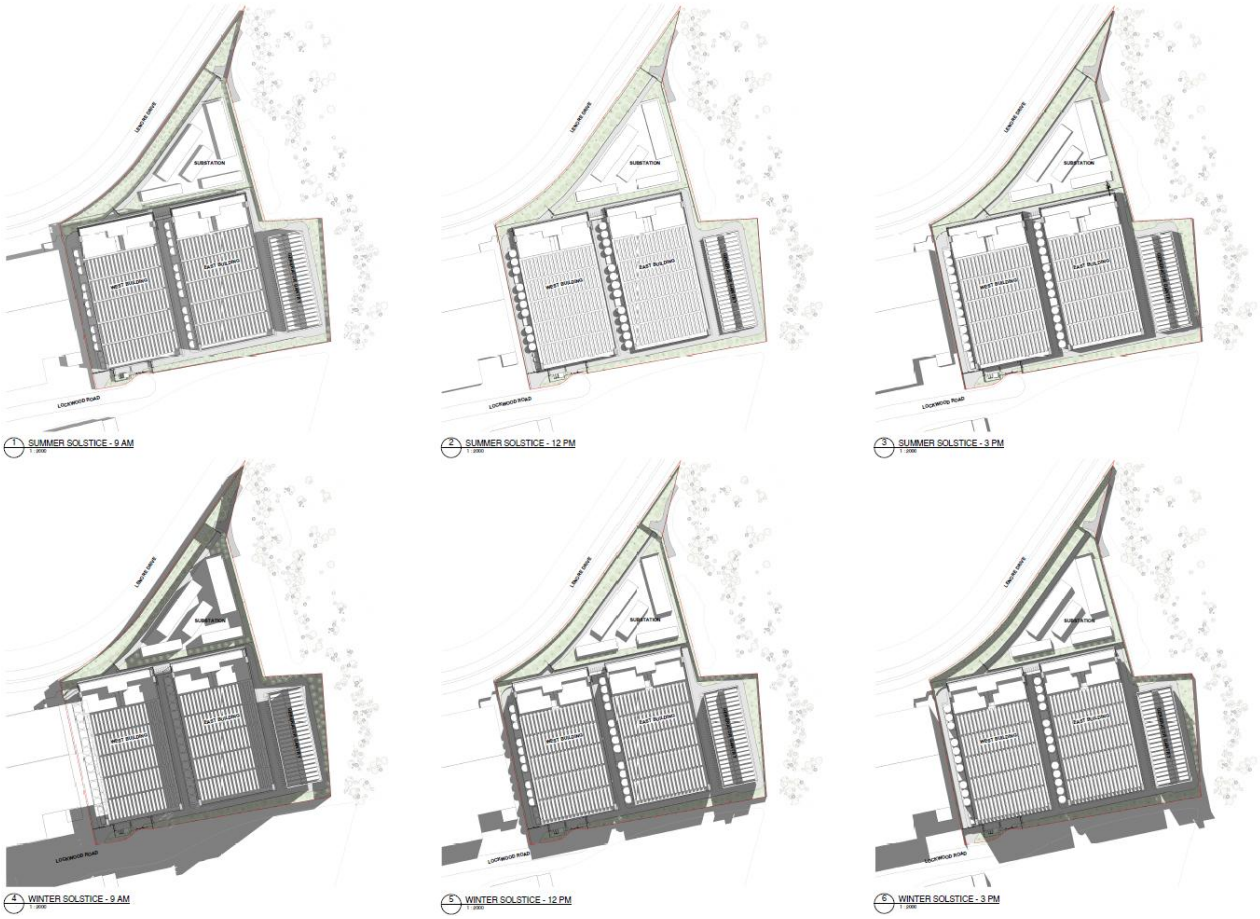
Given the industrial context, overshadowing is not a key constraint for the proposal. The proposed development has been designed to minimise adverse overshadowing impacts on the public domain and adjoining properties. The surrounding context is predominantly comprised of other large-format industrial buildings, roads, and landscaped setbacks, with no sensitive residential or recreational land uses in proximity that could be affected by loss of solar access.

Shadow diagrams (**Figure 40**) prepared by Genton demonstrate that the majority of shadowing generated by the three-storey data centre buildings will fall within the site boundaries or over adjoining industrial land and road reserves. Any overshadowing of Lockwood Road will be limited in duration, occurring primarily in the early morning or late afternoon during winter, and will not materially affect the function or amenity of the public domain. Given the site's orientation, the development will not cast any shadows over Lenore Drive at any time of year

Generous landscaped setbacks along the site's frontages ensure that overshadowing does not impact the usability of footpaths or landscaped buffers. The low-scale substation yard (approximately 4 metres in height) and the recessed upper levels of the main buildings further reduce overshadowing potential.

Given the industrial setting, absence of shadow-sensitive uses, and the limited duration and extent of any shadows cast beyond the site, the proposal is considered to have an acceptable level of impact with respect to overshadowing.

Figure 40 Shadow Diagrams



Source: Genton, 2025

CPTED

The proposed development has been designed in accordance with CPTED principles to promote safety, security, and passive surveillance, both within the site and along its public interfaces. The primary building frontages to Lenore Drive incorporate extensive glazing to the integrated office components, enabling clear sightlines and providing continuous passive surveillance over the public domain.

Pedestrian access to the site is provided via a secure gate on Lockwood Road, adjacent to the main vehicle entry point. This location allows direct visibility from security facilities within the site, while landscape design ensures sightlines are maintained without creating concealment opportunities.

Site planning provides a clear delineation between public, staff, and service areas, with secure access control points restricting entry to operational and plant zones. Level changes within the site further segregate heavy vehicle movements from pedestrian routes, enhancing safety and reducing potential conflicts.

Lighting will be provided to all building entries, car parking areas, and pedestrian routes, designed to maintain adequate illumination without creating glare or light spill. CCTV surveillance will be deployed across key access points, operational areas, and the site perimeter to deter unauthorised entry and assist in security monitoring.

Perimeter fencing is integrated with landscape buffers to maintain a high standard of visual amenity while reinforcing security. The landscaped berm along Lenore Drive not only provides screening for plant areas but also creates a clear physical barrier without compromising sightlines.

The combination of passive and active surveillance, secure access arrangements, well-defined pedestrian networks, and consistent lighting ensures the development achieves a safe and secure environment in line with CPTED best practice.

Amenity

The development has been designed to ensure no unreasonable amenity impacts on surrounding land uses, which are predominantly large-format industrial buildings with similar operational characteristics. Generous landscaped setbacks, a planted berm along Lenore Drive, and continuous tree planting soften the built form and improve the streetscape presentation. Façade articulation, recessive colours, and integrated landscape buffers further reduce visual bulk from key public vantage points.

Noise-generating plant and equipment, including the generator gantry and rooftop systems, are sited away from public interfaces and screened by buildings and vegetation. Acoustic treatments will ensure compliance with relevant criteria. Operational lighting will be designed and directed to avoid glare and light spill. Staff and visitor amenity is supported through well-lit pedestrian routes, office spaces with natural light, end-of-trip facilities, and outdoor terrace areas.

Overall, the proposal provides a high standard of on-site amenity while maintaining compatibility with its industrial setting.

6.2 Visual Impact

A Visual Impact Assessment (**VIA**) has been prepared by Urbis and is provided at **Appendix ZH.** The VIA has been prepared to analyse the visual effects of the proposed built form on nearby sensitive visual receivers and public domain views from key locations surrounding the site.

6.2.1 Existing Environment

The site is located within the established Erskine Park Industrial Precinct, characterised by large-format warehouse and logistics buildings, wide internal roads, and extensive hardstand areas. Built form in the precinct is generally of a substantial scale, with rectilinear footprints, simple architectural treatments, and landscaped setbacks incorporating street trees and low planting. The surrounding area has a functional, industrial character with limited public realm activation.

To the north, the site fronts Lenore Drive, a wide collector road with landscaped verges. To the south and east, it adjoins the Ropes Creek biodiversity corridor, which contains native vegetation, riparian habitat, and open grassed areas. Views to the south-east extend over floodplain land. The western interface connects to other large industrial allotments. The topography is generally flat, with minor falls towards the south-east.

The visual environment is dominated by built form, service yards, and light poles within the industrial estate, softened in parts by street tree planting and vegetated corridors. Public viewpoints are primarily from surrounding road corridors and the adjacent conservation lands.

The VIA involved the analysis of a range of viewpoints from which the proposed development may have a potential visual impact. An extract of the viewpoint location map is provided at **Figure 41**.

In accordance with the viewpoint location map, the specific locations are noted as follows:

- Viewpoint 1: View south east from Pictor Street.
- Viewpoint 2: View south east from intersection of Swallow Drive and Pegasus Street.
- Viewpoint 3: View east from the intersection of Grady Crescent and Lenore Drive.
- Viewpoint 4: View south-west from Lenore Drive south of Archibold Road.
- Viewpoint 5: View north west from Old Wallgrove Road.

Existing and proposed viewpoints are provided from **Figure 42** through **Figure 45**. The two viewpoints extrapolated below have been highlighted within the EIS as these views are considered to produce the highest potential visual impacts.

Figure 41 Viewpoint Location Map

Source: Urbis, 2025

Figure 42 Viewpoint 4 – View south east from intersection of Swallow Drive and Pegasus Street - Existing Environment

Source: Urbis ,2025

Figure 43 Viewpoint 2 – View south east from intersection of Swallow Drive and Pegasus Street -Proposed Environment

Source: Urbis, 2025

Figure 44 Viewpoint 5 – View north west from Old Wallgrove Road - Existing Environment

Source: Urbis, 2025

Figure 45 Viewpoint 5 - View north west from Old Wallgrove Road – Proposed Environment

Source: Urbis, 2025

6.2.2 Potential Impacts

The VIA methodology identifies objective 'visual baseline' information about the site and surrounds, analyses the extent of visual effects or quantum of change using visual aids from key locations, and considers the importance of that change.

The VIA method takes into consideration other relevant factors such as the underlying strategic planning intent of the site and its immediate or wider setting. The methodology adopted also distinguishes and places 'weight' on key factors such as view place and viewer sensitivity, and physical absorption capacity, and considers impacts on unique settings near the site that could be potentially affected, including for example heritage items, conservation areas, views to icons and areas of high scenic quality.

A visual effects analysis was undertaken to determine the extent of the visual change based on the seven representative modelled views (photomontages). In determining the base visual analysis, the following factors were considered:

- Visual character of the site
- Scenic quality
- View place sensitivity
- Viewer sensitivity

Urbis then applied relevant weighting factors to determine the overall level of visual impacts or importance of the visual effects. The factors have been considered in relation to the visual effects to provide up-weight or down-weights and to determine a final impact rating. The weighting factors include sensitivity, visual absorption capacity and compatibility with urban features. A summary of the overall visual impacts for each of the selected viewpoints is provided in **Table 22**.

Table 22 Summary of Overall Visual Impacts

Viewpoint	Visual effects of proposal	Overall visual impact
Viewpoint 1: View south east from Pictor Street.	The foreground is unaffected. The proposal introduces new, contemporary development to the mid-ground composition where a section of the northern elevation of the eastern data hall is visible, with an upper section of the stacked generators above and low height switch room and transformer development visible north of the data hall. The majority of the proposed data halls are blocked by intervening warehouse development. The proposal blocks a small section of tree canopy and open sky south of the site. The proposal does not block views to any scenic or highly valued features or any heritage items.	Low
Viewpoint 2: View south east from intersection of Swallow Drive and Pegasus Street.	Sections of the northern elevations of both data halls and the stacked generators are visible in the distant mid-ground composition above intervening roof forms. The built form blocks a small section of distant built form south of the site and open sky beyond. The majority of the proposal is blocked by intervening development. The proposal does not block views to any scenic or highly valued features or any heritage items.	Low-medium
Viewpoint 3: View east from the intersection of Grady Crescent and Lenore Drive.	The proposal introduces a small section of new, contemporary development with oblique sections of the northern and western elevations of the data halls visible along the road corridor.	Low

Viewpoint	Visual effects of proposal	Overall visual impact
	The built form blocks a small section of distant vegetation east of the site and open sky beyond. The majority of the proposal is blocked by intervening vegetation along Lenore Drive. The proposal does not block views to any scenic or highly valued features or any heritage items.	
Viewpoint 4: View south-west from Lenore Drive south of Archibold Road.	The foreground is unaffected by the proposal. Sections of the eastern and northern elevation of the data halls and stacked generators are visible above the tree canopy surrounding Ropes Creek. The built form blocks sections of existing development west of the site, open sky and a section of the distant Blue Mountains in the centre of the composition. Views to the Blue Mountains are still possible to the right of the view. The additional built form increases the perception of height and scale of development in the composition compared to the existing view. The proposal does not block views to any heritage items.	Medium-low
Viewpoint 5: View north west from Old Wallgrove Road.	The foreground and mid-ground is unaffected by the proposal. Sections of the eastern and southern elevation of the data halls and stacked generators are visible above the tree canopy surrounding Ropes Creek. The built form blocks a section of roof forms of existing development west of the site, open sky and a section of the distant Blue Mountains but does not extend beyond the ridge of the mountains. Views to the mountains remain possible to either side of the proposal. The additional built form increases the perception of height and scale of development in the composition compared to the existing view but is viewed in an expansive composition which decreases the visual effects of the additional built form. The proposal does not block views to any heritage items.	Low

Overall, the VIA makes the following conclusions regarding potential visual impacts:

- The site is located on IN1 zoned land with the same land use zoning to the north, south and west.
- The visual context surrounding the site includes warehouse and distribution development characterised by built form with large, rectangular floorplates.
- The site is not listed on any statutory heritage lists, nor is it located within a heritage conservation area.
- Analysis of 5 public domain photomontages found that the proposal creates nil to medium-low visual effects (extent of visual change) on the baseline factors.
- Overall visual impacts for the assessed views were rated as three 'Low', one 'Low-medium' and one 'Medium-low'.
- The proposal does not block views to any heritage items.
- Physical Absorption Capacity within the surrounding context is medium-high and lessens the visual effects and impacts of the proposal.
- The proposal can be supported on visual impact grounds.

Taking into consideration the existing visual context and baseline factors against which to measure change and the level of visual effects of the proposed development, in the context of additional weighting factors, the visual impacts of the proposal were found to be acceptable.

6.2.3 Cumulative Impact Assessment

When considered in the context of existing, approved, and future developments within the Erskine Park Industrial Precinct, the proposal will form part of a broader pattern of large-format industrial and data centre facilities envisaged under the applicable planning controls. The cumulative visual impact is considered acceptable for the following reasons:

- The built form is consistent with the scale, height, and bulk anticipated for the precinct, as reflected in zoning and development standards.
- Architectural treatments, neutral colour palettes, and façade articulation are consistent with other high-quality developments in the area, ensuring visual coherence across the precinct.
- The provision of deep soil zones, canopy tree planting, and landscaped setbacks will soften the built form, enhance the streetscape, and contribute to the precinct's visual amenity objectives.
- Functional elements such as the generator gantry, substation, and plant areas are screened through built form and landscaping, minimising their visibility in cumulative views.
- The precinct is primarily industrial in character, with sensitive residential receptors located at a substantial distance. The primary views are from adjoining industrial properties, internal roads, and key transport corridors, where large-scale built form is an established feature.

Overall, the proposal will contribute to the incremental build-out of the precinct in a manner consistent with its strategic planning framework, without introducing visual elements that are inconsistent with the desired future character.

6.2.4 Mitigation Measures

The VIA concluded that the proposal would have a low visual impact within its industrial context, with built form, materials, and landscaping designed to integrate the development into the surrounding environment. As such, no additional mitigation measures are proposed or required beyond the design treatments and landscaping already incorporated into the proposal.

6.3 Traffic, Transport and Accessibility

A Transport Impact Assessment (**TIA**) prepared by Positive Traffic (**Appendix U**) assesses the potential traffic-related impacts of the proposal, including access, parking, servicing, and compliance with relevant guidelines. The Construction Traffic Management Plan (**CTMP**) (**Appendix V**) outlines measures to manage temporary impacts during construction, and the Green Travel Plan (**Appendix W**) identifies strategies to promote sustainable travel and reduce reliance on private vehicles during operations.

6.3.1 Existing Environment

The site is located within the Erskine Park Industrial Precinct, with vehicle access provided via Lockwood Road. Lockwood Road is a two-lane, two-way carriageway with a central median, restricting movements to left-in and left-out only. It connects to Lenore Drive, a key distributor road within the precinct that links to the M4 and M7 Motorways, providing access to the broader regional road network. The surrounding area is characterised by large-format warehouse, logistics, and industrial operations, resulting in a traffic profile dominated by heavy vehicles. Pedestrian and cyclist infrastructure in the immediate vicinity is limited, consistent with the industrial context. The nearest public transport is bus services operating along Lenore Drive, approximately 600 metres from the site, providing connections to nearby centres and rail stations.

6.3.2 Potential Impacts

Construction Phase

Construction will occur in two stages, with typical workforce numbers ranging from 50–185 and short-term peaks of up to 600 during major events such as large concrete pours. The site's location in an industrial precinct with direct access to Lenore Drive, Compass Drive, and the M7 Motorway, and within an approved B-double access zone, enables efficient heavy-vehicle movements.

Primary construction access will be via Lockwood Road, with occasional use of the existing Lenore Drive access under approved Traffic Control Plans. Internal site areas will accommodate all worker parking, eliminating reliance on surrounding streets. Light-vehicle trips will mostly occur outside road network peaks, while heavy-vehicle activity will average 15 trips/day, peaking at 35 during high-demand periods. All deliveries, loading/unloading, and waste collection will occur wholly within the site.

SIDRA modelling confirms that, even under conservative assumptions (75% of peak workforce travelling during AM/PM network peaks), key intersections including Lenore Drive/Erskine Park Road, Lenore Drive/Compass Drive, and Lenore Drive/Old Wallgrove Road will operate at acceptable Levels of Service (LOS B–D) with available capacity. Any overlap between Stage 1 operations and Stage 2 construction will have negligible traffic effects.

The CTMP incorporates measures to manage potential impacts, including:

- Implementation of approved Traffic Control Plans at all site accesses.
- Scheduling of heavy-vehicle movements outside AM/PM peak periods where practicable.
- Provision of all worker parking on-site.
- Separation of construction plant, delivery vehicles, and pedestrian routes within the site.
- Requiring all deliveries and waste collection to occur within the site boundary, with no queuing on public roads.

Operational Phase

Parking

The proposal includes 78 on-site car parking spaces, comprising two accessible spaces, three motorcycle bays and 30 secure bicycle spaces. End-of-trip facilities with showers, lockers and change rooms will support staff who travel by active modes, consistent with the Green Travel Plan.

Parking demand modelling in the TIA considered the expected operational staffing profile, visitor numbers and contractor attendance. During standard operation, peak weekday demand is estimated at approximately 43 spaces during the day and 15 spaces overnight. This comfortably accommodates the forecast 3 to 5 daily visitors and the 5 to 15 contractors typically on site at any one time.

During biannual maintenance events, which represent the highest demand scenario, parking requirements are forecast to increase to around 76 spaces. Even under this condition, all demand can be met within the site, ensuring there is no overflow into surrounding streets and no impact on public parking supply.

The parking layout has been designed to provide safe, efficient and convenient access. Spaces are located in weather-protected under-croft areas near building entries and along internal circulation roads to distribute traffic flow and avoid congestion. The design complies with AS 2890 for bay dimensions, aisle widths, circulation geometry and sight distances.

Bicycle parking provision exceeds minimum requirements and is supported by secure, weather-protected facilities located close to the end-of-trip amenities. Together with Green Travel Plan initiatives such as public transport information and active transport incentives, these facilities are expected to encourage staff to reduce private vehicle use over time, improving long-term parking efficiency.

Access and Circulation

All vehicle access to the site will be via Lockwood Road. Two access driveways are proposed near the western boundary:

- a combined 11.0-metre-wide entry/exit driveway serving all authorised vehicles, and
- a 10.5-metre-wide exit-only driveway that functions as a relief route for vehicles denied access at security.

Access will be controlled through a secure gatehouse with an 'air lock' arrangement. On entry, vehicles pass through the first gate and are held within a secure space for approval. This area provides approximately 25–30 metres of queuing space between the gate and the site boundary, ensuring that vehicles do not queue back onto Lockwood Road. A queuing analysis has been undertaken in the TIA which demonstrates that vehicles entering the site will not result in queues extending onto the public road network or adversely impact surrounding traffic conditions.

If access is approved at the security gates, vehicles will proceed east along the southern circulation road. If access is denied, the vehicle immediately exits via the dedicated exit-only driveway, allowing efficient clearance without disrupting site operations.

The site has been designed with a one-way, anticlockwise internal road network to ensure consistent and predictable movement of all vehicles, reducing crossover conflicts and improving safety. The outer circulation road accommodates both heavy and light vehicles and provides access to car parking areas as well as the loading docks for Buildings 1 and 2 via the northern circulation road. A central spine road is also provided; however, this road is limited to light vehicles only and is expected to have low usage, as it does not provide direct access to parking areas.

Swept path analysis confirms that the longest expected design vehicle (24-metre articulated truck) can safely undertake left-in/left-out movements, having regard to the turning head of the Lockwood Road cul-de-sac. The analysis also demonstrates that proposed traffic movements will not conflict with or detract from the operation of existing crossovers within the cul-de-sac, including servicing arrangements for 120 Lockwood Drive to the south of the site.

The access design achieves the required sight distances under Austroads and TfNSW guidelines, and all vehicle entries and exits will occur in a forward direction. Internal circulation separates heavy vehicle routes from light vehicle and pedestrian areas wherever possible, ensuring safe and efficient operation for staff, visitors, and service vehicles.

Given the low level of traffic generation associated with the development and the robust security arrangements in place to control access, the proposed access and circulation arrangements are considered safe, efficient, and appropriate for the site context.

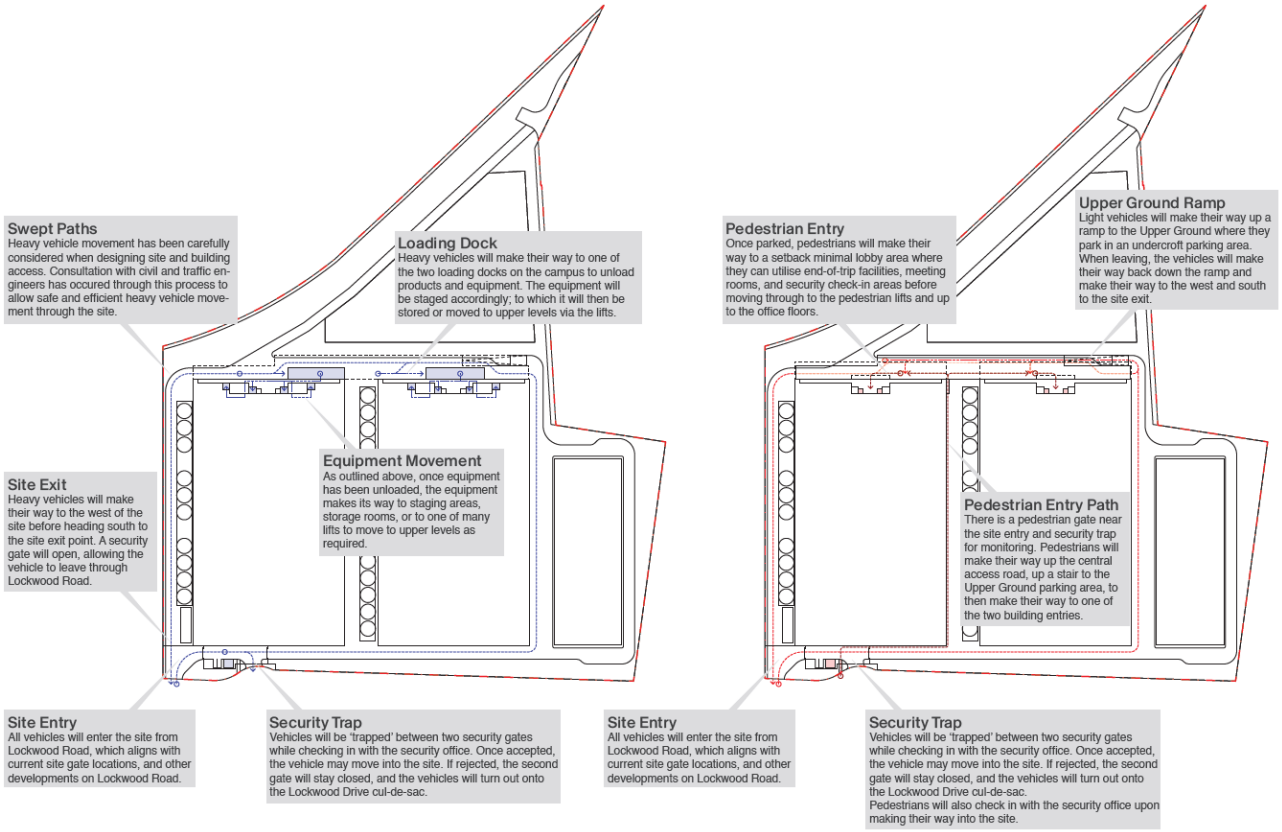
The light and heavy vehicle circulation routes are shown in **Figure 48**.

Servicing and Loading

Servicing, deliveries, and waste collection will occur entirely within the site via two dedicated loading docks, each capable of accommodating two 24-metre articulated vehicles simultaneously. This capacity ensures that multiple large deliveries can be handled without queuing or disruption to internal operations.

The servicing design isolates heavy vehicle manoeuvring areas from staff and visitor parking, reducing the risk of vehicle–pedestrian conflicts. Loading docks provide sufficient turning areas for heavy rigid vehicles (HRVs) and semi-trailers, with swept-path analysis confirming that manoeuvres can be completed without impacting public roads. Servicing demand during operations will be low, with most trips limited to scheduled equipment deliveries, periodic waste removal, and maintenance activities.

Figure 46 Access and Circulation Diagram



Source: Genton, 2025

Operational Traffic Generation

The operational traffic generation of the proposed data centre has been modelled using industry-recognised trip generation rates for comparable facilities. Due to the inherently low staffing levels associated with data centre operations, the overall traffic volumes are substantially lower than those generated by most other industrial land uses.

When both stages are operational, the facility is expected to employ up to 43 staff on site during peak periods. Based on the adopted trip generation rates, this equates to approximately 37 two-way vehicle trips in each of the AM and PM peak hours. Under Stage 1 operation, peak staffing is expected to generate approximately 23 two-way trips in each peak period. These figures include staff movements, visitors and occasional service or contractor vehicles.

Heavy vehicle activity during operations will be limited. Deliveries, equipment upgrades and waste collection will occur on an infrequent basis and will be scheduled to avoid the road network's peak periods wherever practicable. All heavy vehicle movements will occur within the approved B-double access network and will enter and exit the site in a forward direction via the Lockwood Road access.

SIDRA intersection analysis was undertaken for the Lockwood Road and Lenore Drive intersection under 2025 background traffic conditions and 2029 future year scenarios incorporating development traffic. The results indicate that the intersection will continue to operate within an acceptable Level of Service, with minimal changes to delays or queue lengths compared to the background case. No road or intersection upgrades are required to accommodate the forecast operational traffic.

The Green Travel Plan includes initiatives to further minimise operational traffic impacts. These include secure bicycle parking, high quality end-of-trip facilities, provision of public transport information to staff and visitors, and encouragement of ridesharing and car-pooling. Implementation of these measures is expected to reduce the proportion of trips made by private car over time, further limiting the impact of the development on the surrounding road network.

Summary

Overall, the TIA concluded that:

- Key intersections will continue to operate at satisfactory LOS during peak periods.
- Traffic impacts from both construction and operation are acceptable and require no road or intersection upgrades.
- Staff demand is low relative to other industrial uses in the precinct.
- Parking provision is sufficient and supports alternative travel modes.
- End-of-trip facilities and bicycle parking exceed requirements.
- Access and servicing arrangements safely accommodate all vehicle types.
- The CTMP and Green Travel Plan provide effective frameworks for managing construction traffic and encouraging sustainable travel during operations.

6.3.3 Cumulative Impact Assessment

The cumulative traffic effects have been assessed considering background growth to 2029 and other committed developments within the Erskine Park Industrial Precinct.

SIDRA modelling shows that key intersections, including Lockwood Road / Lenore Drive, will continue to operate within acceptable performance thresholds, with minimal change in delays or Level of Service compared to the background scenario.

Given the low traffic generation of the proposal and the capacity of the surrounding industrial road network, the development will not materially exacerbate cumulative traffic impacts when combined with other known and approved developments in the area.

6.3.4 Mitigation Measures

The TIA concludes that the proposal will not result in unacceptable traffic, transport or parking impacts and that no road or intersection upgrades are required. Notwithstanding this, a range of best-practice measures, as detailed in the CTMP and Green Travel Plan, will be implemented to ensure impacts remain minimal and the surrounding road network continues to operate efficiently.

Construction phase

- Preparation and implementation of a detailed CTMP prior to commencement of works, incorporating approved Traffic Control Plans for all site accesses.
- Manage all vehicle movements in accordance with approved Traffic Control Plans at site accesses.
- Schedule heavy vehicle deliveries outside the AM and PM peak periods where practicable.
- Provide all construction worker parking within the site.
- Clearly delineate and separate pedestrian routes from construction plant and delivery vehicle movements.
- Undertake all deliveries, waste collection and laydown activities within the site boundary, with no queuing or obstruction on public roads.
- Maintain and periodically review the CTMP throughout all construction phases.

Operational phase

- Implement the Green Travel Plan to encourage sustainable transport choices and reduce reliance on private vehicles.
- Provide secure bicycle parking and high-quality end-of-trip facilities.
- Distribute public transport information to staff and visitors.

- Promote ridesharing and car-pooling initiatives.
- Monitor parking and access arrangements to ensure they continue to meet demand without affecting the surrounding road network.

6.4 Trees and Landscaping

6.4.1 Existing Environment

The site is largely cleared and contains minimal existing vegetation of ecological or visual significance. Sparse plantings are limited to the site boundaries along Lenore Drive, Lockwood Road, and the eastern edge adjoining the Ropes Creek biodiversity corridor. The internal area is predominantly hardstand or undeveloped land within the Erskine Park Industrial Precinct. The immediate surrounds are characterised by large-format industrial buildings, sealed access roads, and landscaped setbacks incorporating a mix of native and exotic plantings typical of the precinct.

6.4.2 Potential Impacts

The proposal will not require the removal of any existing trees. The landscaping scheme has been designed to significantly enhance the site's presentation to Lenore Drive, Lockwood Road, and the adjoining Ropes Creek biodiversity corridor, while also delivering measurable environmental and amenity benefits.

The landscape design incorporates substantial canopy tree cover equating to approximately 11.46% of the total site area and deep soil zones covering approximately 19.07% of the site (refer **Figure 47**). These elements will provide opportunities for mature tree growth, contribute to shade provision, improve stormwater infiltration, and support biodiversity.

Key landscape features include:

- Retention of and landscaping planting to the existing berm with deep soil planting along Lenore Drive to screen infrastructure, soften views of buildings from the street, and contribute to the established green character of the precinct.
- More than 200 new trees, including large native canopy species, will be planted to enhance amenity, increase biodiversity, provide significant shade, and contribute to long-term urban heat island mitigation.
- As illustrated in **Figure 48**, significant landscaped setbacks along site boundaries including a 20m landscaped setback along Lenore Drive.
- Dense planting along all site boundaries to screen service areas, plant yards, and the substation from public view, and to visually integrate the site into its industrial context.
- Feature planting at site entries, between the two data centre buildings, and within setbacks to improve staff amenity, create attractive outdoor spaces, and assist with wayfinding.
- Landscaped rooftop terrace areas for the office components will provide accessible outdoor spaces for staff, improving workplace amenity, offering shaded seating areas, and contributing to staff wellbeing.
- Predominantly hardy native species have been selected for drought tolerance, low maintenance requirements, and compatibility with local ecological conditions, ensuring long-term canopy and groundcover resilience.
- The south-eastern portion of the site within the mapped flood corridor, will be planted with appropriate flood-tolerant species to enhance resilience, maintain hydraulic function, and improve biodiversity outcomes without impeding overland flow.
- Landscaping will be designed and implemented so as not to interfere with existing easements, ensuring ongoing access for maintenance and operation of underground or above-ground services.

The landscape design will also play an important role in mitigating urban heat impacts. Large canopy trees, the landscaped berm, rooftop terraces, and extensive groundcover and turf areas will help shade hardstand surfaces, reduce heat absorption, and improve on-site comfort.

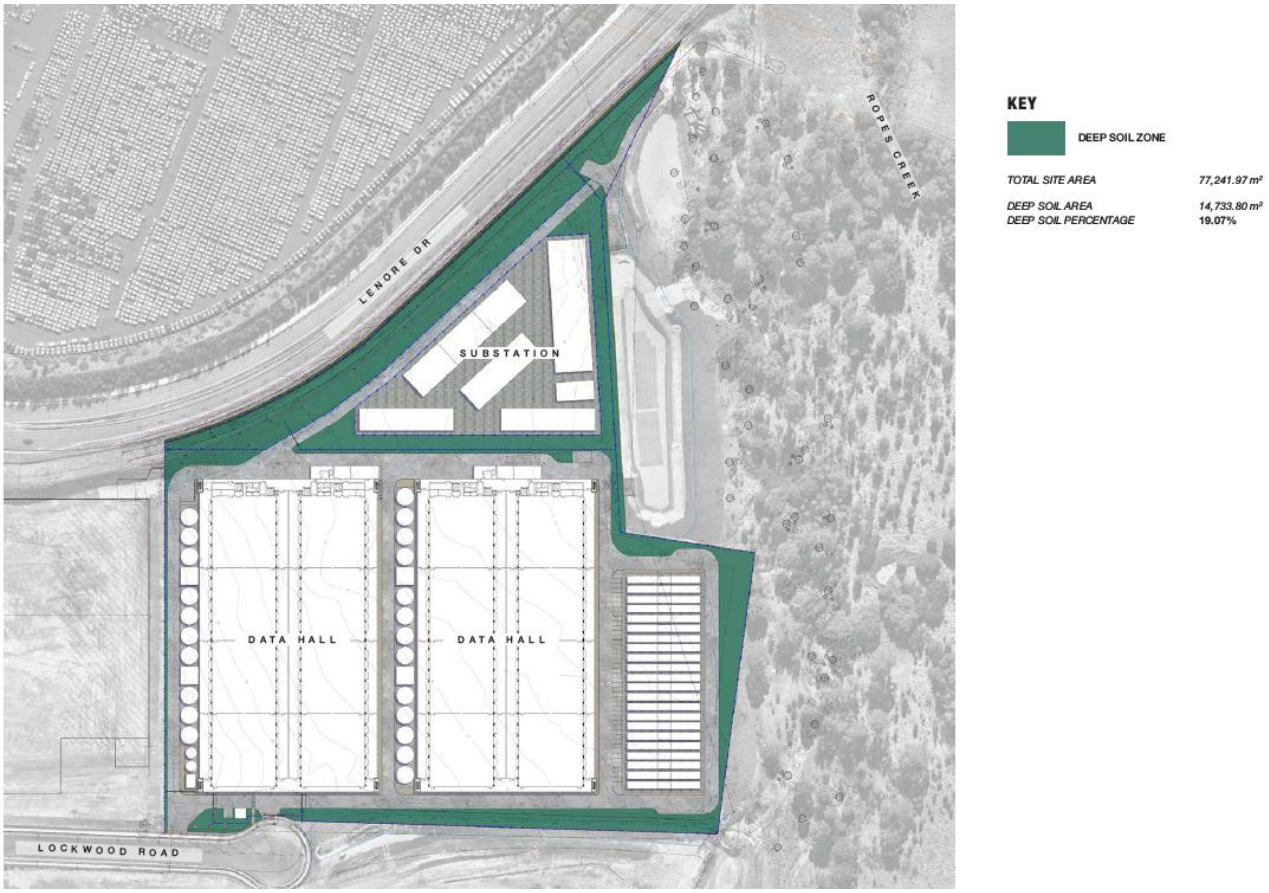
Planting along the Ropes Creek biodiversity corridor will use predominantly native species to complement the ecological values of the conservation area and provide potential habitat for local fauna.

Overall, the proposed landscaping will integrate the development into its surroundings, improve the amenity of the public domain, and contribute positively to the landscaped character of the Erskine Park Industrial Precinct.

6.4.3 Cumulative Impact Assessment

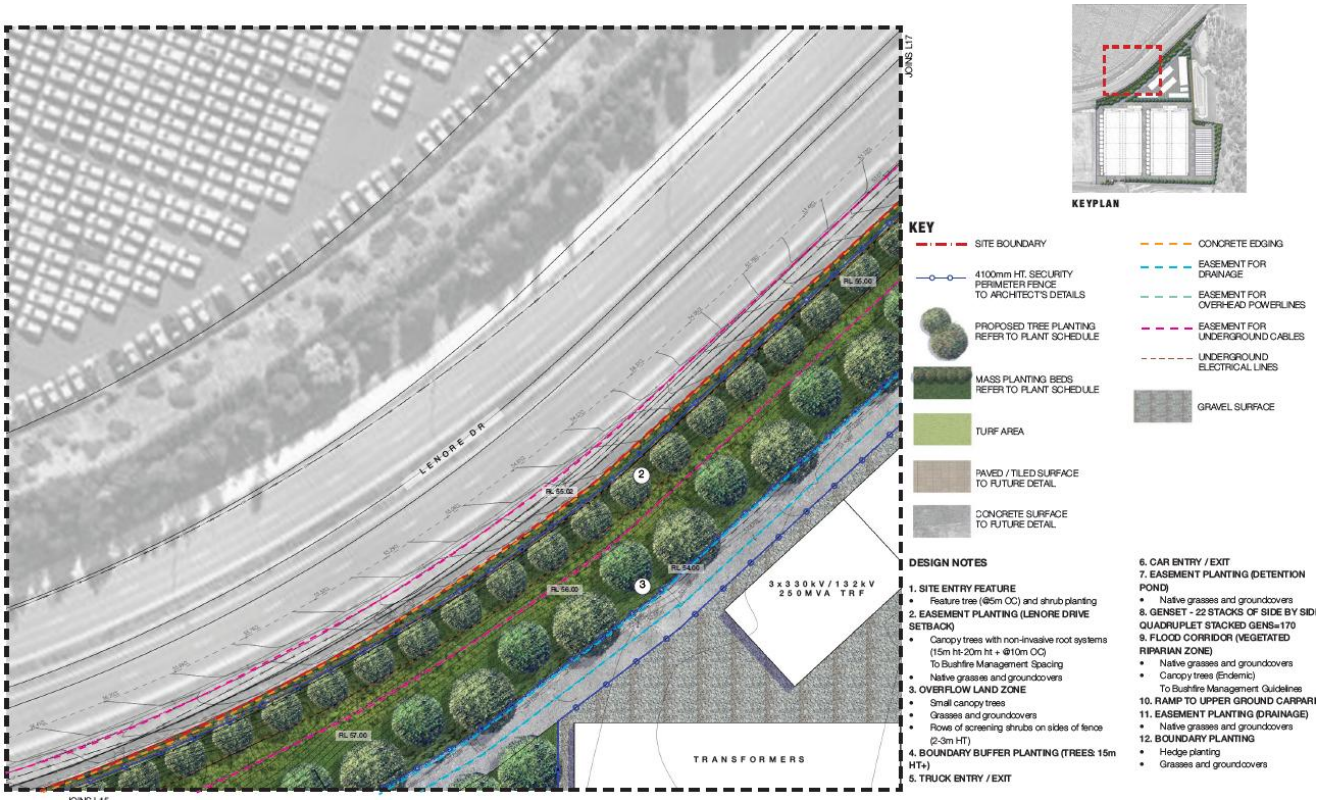
The site is currently cleared with minimal vegetation. The proposal will enhance the landscape character of the Erskine Park Industrial Precinct by increasing canopy cover, deep soil planting, and visual amenity. It will introduce 200 new trees, extensive boundary planting, and landscaped setbacks, significantly improving visual quality, ecological value, and connectivity, particularly along the Ropes Creek biodiversity corridor. The proposed deep soil and canopy cover complies with the requirements of the DCP. Overall, it will strengthen green infrastructure, reduce urban heat, and result in no adverse cumulative impacts on vegetation, ecology, or visual character.

Figure 47 Deep Soil Plan



Source: Habit8, 2025

Figure 48 Lenore Drive Landscaped Setback



Source: Habit8, 2025

6.5 Ecologically Sustainable Development

An Ecologically Sustainable Development (**ESD**) Report prepared by LCI Consultants (refer **Appendix ZE**) outlines the energy efficiency and sustainability measures proposed to minimise greenhouse gas emissions and reduce resource consumption. The report demonstrates consistency with the SEARs, the Sustainable Buildings SEPP, and relevant ESD principles under Section 193 of the EP&A Regulation.

In summary, the ESD targets and initiatives pursued for the development include:

Energy Efficiency and Performance

- Target annual average Power Usage Effectiveness (**PUE**) of approximately 1.35, representing a marked improvement compared with the national average of around 1.6.
- Operational energy performance designed to support a NABERS Energy for Data Centres rating of 4.5 stars (exceeding the current national average of 4 stars).
- Commitment to achieving a 5.5 Star NABERS Energy (Base Building) rating and a 3 Star NABERS Water rating for the office component, secured through a NABERS Agreement to Rate.
- Consistent with the Sustainable Buildings SEPP, an Embodied Emissions Materials Form has been prepared and is provided at **Appendix ZL**.
- Integration of high efficiency building services and technologies, including:
  - Elevated data hall cooling set-point temperatures and relaxed humidity set-points, supported by direct-to-chip liquid cooling, to optimise mechanical plant efficiency.
  - Waterside economy cycle and free-cooling capability from hybrid coolers, reducing reliance on mechanical chillers.
  - High-efficiency chiller plant with modern compressor technology and elevated operational chilled water temperatures enabled by liquid cooling.

- Maximised on-site photovoltaic (**PV**) generation, with a minimum targeted output of 115 kWe per data centre building, subject to available roof space (noting constraints from cooling plant requirements).
- High-efficiency LED lighting with occupant-responsive controls to minimise demand and operational hours.
- Low-absorptivity, high Solar Reflective Index (**SRI**) external finishes to reduce radiant heat gain.
- High-performance building fabric and glazing to office areas, with shading devices to reduce thermal loads.

Water Efficiency and Conservation

- Hybrid coolers with capability to operate in air-cooling mode (in lieu of evaporative mode) when ambient conditions allow.
- Reduced cooling loads through elevated data hall set-points and direct-to-chip liquid cooling, lowering heat rejection and associated water use.
- Landscaping designed with drought-tolerant, predominantly native species, minimising or eliminating irrigation demand.

Pathway to Net Zero Emissions

- Commitment to procuring 100% renewable electricity for all non-IT operational energy use within the facility, noting alignment with leading hyperscale AI and cloud providers' net-zero carbon commitments.
- Use of very low Global Warming Potential (**GWP**) refrigerants in chiller plant to minimise Scope 1 emissions.
- Consideration of future adoption of renewable diesel alternatives to replace fossil-fuel products.

Materials and Waste

The following initiatives are proposed to minimise material use and waste generation:

- Construction and demolition waste management plan to maximise diversion from landfill.
- Use of concrete mixes with supplementary cementitious materials to reduce embodied carbon.
- Structural steel and reinforcement with high recycled content.
- Durable, low-maintenance materials to extend service life and reduce replacement needs.

Urban Heat Mitigation

The following initiatives are proposed to minimise urban heat generation:

- High-reflectivity external finishes to minimise heat absorption and contribute to cooler surrounding temperatures.
- Over 19% of the site landscaped with deep soil planting to provide shading and evapotranspiration cooling.
- Evaporative heat rejection with vertical discharge to minimise localised temperature increases.
- Significant separation from sensitive receivers, with nearest residences located more than 300 metres away.

These measures will be further developed during detailed design and tracked throughout the project lifecycle. Together, they demonstrate a strong commitment to minimising environmental impacts and delivering a high-performance, future-ready data centre consistent with government sustainability objectives.

In addition to project-specific measures outlined above, STACK has made broader corporate commitments that reinforce its role as a responsible developer and operator. STACK is a founding signatory of the

Infrastructure Masons Climate Accord, pledging to lead industry-wide reductions in carbon emissions. The company has achieved 100% renewable energy across its portfolio and procured Renewable Energy Certificates to offset employee home energy use.

STACK also promotes sustainable sourcing, offering lower-carbon building materials and energy-efficient solutions, including green concrete, recycled steel, Hydrotreated Vegetable Oil for backup generation, and advanced battery technologies. These corporate initiatives strengthen the project's alignment with best-practice sustainability outcomes and demonstrate STACK's commitment to leadership in decarbonisation and resource efficiency.

6.5.1 Mitigation Measures

The proposed ESD initiatives will not only minimise site-specific impacts but also mitigate broader cumulative environmental effects associated with large-scale data centre development. Key mitigation measures include:

Energy and Carbon

- Reduce operational energy demand by targeting a PUE of 1.35, thereby mitigating greenhouse gas emissions relative to the national average of 1.6.
- Mitigate energy inefficiency by designing systems to achieve a NABERS Energy for Data Centres rating of 4.5 stars.
- Mitigate office building energy and water consumption impacts by committing to a 5.5 Star NABERS Energy Base Building rating and 3 Star NABERS Water rating under an Agreement to Rate.
- Minimise energy consumption from cooling plant through elevated data hall conditions, direct-to-chip liquid cooling, waterside economy cycle/free cooling, and installation of high-efficiency chillers.
- Offset grid reliance through installation of on-site photovoltaic systems with a minimum output of 115kWe per data hall (~230kWe total).
- Reduce lighting demand by installing LED luminaires with occupant-responsive controls.
- Mitigate refrigerant-related emissions by specifying very low GWP refrigerants.
- Contribute to Net Zero 2050 targets by committing to procure 100% renewable electricity for all non-IT operational energy use.

Water

- Reduce water consumption for cooling by using hybrid coolers capable of operating in dry air-cooling mode when ambient conditions allow.
- Minimise cooling water demand through elevated set-points and direct-to-chip liquid cooling, which reduce heat rejection requirements.
- Limit potable water demand by installing water-efficient fixtures and fittings and providing strategic sub-metering.
- Avoid ongoing irrigation requirements through use of drought-tolerant and endemic native planting.

Waste and Materials

- Reduce construction and demolition waste impacts through implementation of a waste management plan with landfill diversion targets.
- Minimise embodied emissions by using concrete mixes with supplementary cementitious materials and structural steel/reinforcement with high recycled content.
- Mitigate long-term material demand by selecting durable, low-maintenance finishes to extend service life.

Urban Heat and Ecology

- Mitigate heat island impacts by applying low-absorptivity, high-SRI finishes to roofs and façades.

- Reduce localised heat build-up and improve amenity by landscaping more than 19% of the site, predominantly with deep soil planting to provide shading, evapotranspiration cooling, and biodiversity benefits.
- Minimise contribution to ambient dry-bulb temperatures by adopting evaporative cooling for heat rejection with rapid dissipation of residual humidity.

Together, these measures demonstrate that the project has been designed to minimise operational demand, reduce greenhouse gas emissions, conserve resources, and mitigate cumulative environmental impacts, consistent with the Sustainable Buildings SEPP, the SEARs, and Section 193 of the EP&A Regulation.

6.6 Air Quality

An Air Quality Impact Assessment (**AQIA**) has been prepared by Northstar (**Appendix L**) to assess potential impacts associated with the construction and operation of the proposed data centre. The assessment considered the existing air quality environment, identified relevant pollutants of concern, and evaluated potential impacts against applicable NSW and Commonwealth criteria. It also assessed cumulative impacts and recommended mitigation measures where appropriate.

6.6.1 Existing Environment

The site is located within the Erskine Park Industrial Precinct in western Sydney, an area characterised by large-format warehouse, logistics, and manufacturing land uses. The surrounding environment is influenced by emissions from industrial activities, regional road traffic (particularly heavy vehicles on Lenore Drive and the M7 Motorway), and broader background sources such as domestic wood heating and seasonal hazard reduction burns.

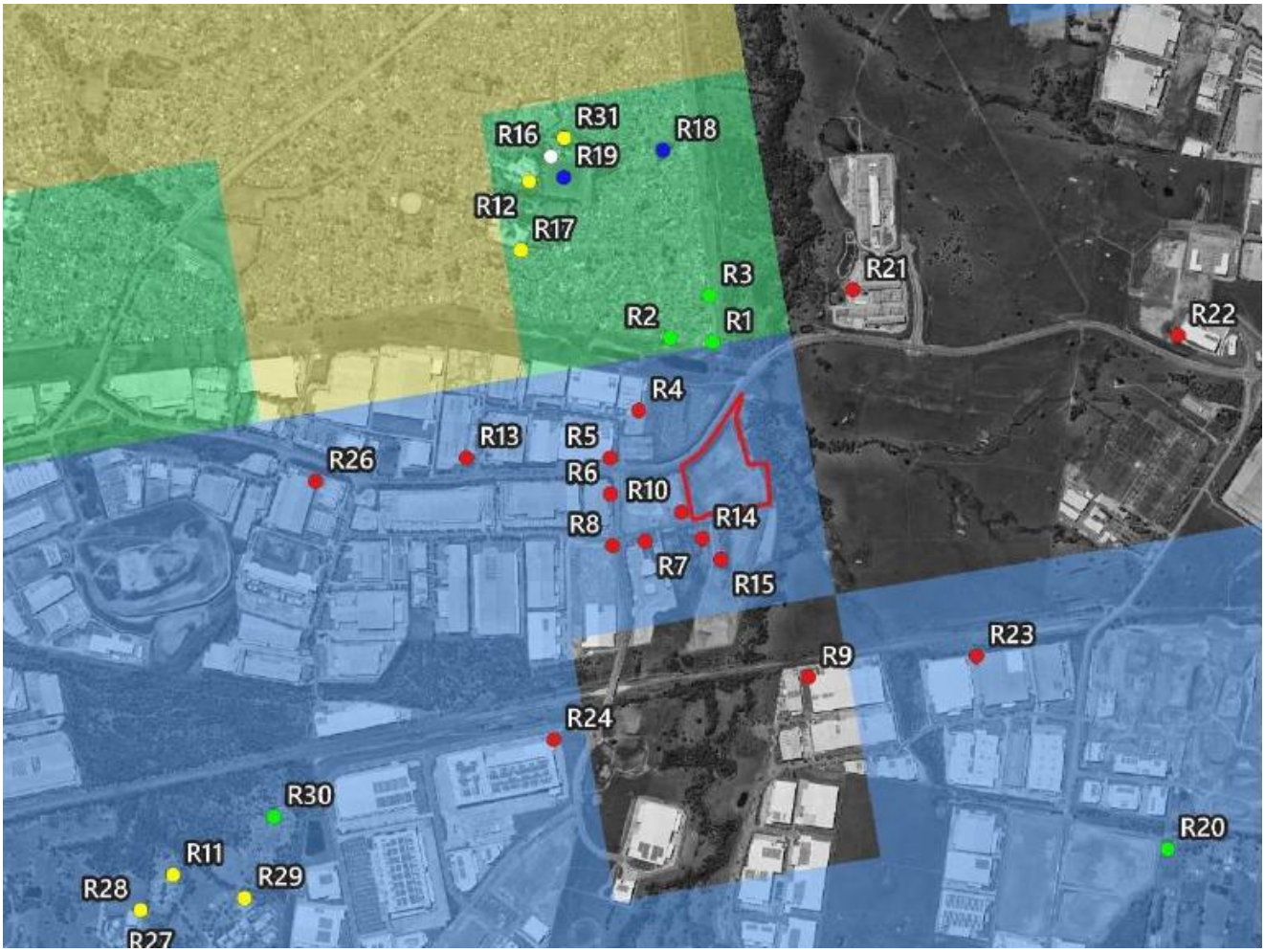
The nearest sensitive receivers to the site are low-density residential dwellings located to the north within the Erskine Park residential area (approximately 300 metres from the site boundary). These locations were selected as representative receptors for the air quality assessment, along with other relevant commercial and industrial premises in proximity to the site.

Background air quality conditions were characterised using data from the NSW EPA's Greater Metropolitan Region West monitoring network, which records occasional exceedances of PM_{10} and $PM_{2.5}$ criteria during bushfire events, dust storms, and summer photochemical smog episodes. These values formed the baseline for the impact assessment.

Local meteorology is dominated by westerly and north-westerly winds, with calmer morning conditions that may reduce dispersion and summer months that experience higher photochemical activity. Winter months can have reduced atmospheric mixing, increasing the potential for particulate accumulation.

A map showing the location of all modelled receptors is provided in **Figure 49**.

Figure 49 Map showing nearby sensitive receivers (air quality)



Source: Northstar, 2025

6.6.2 Potential Impacts

Construction Phase

The construction phase of the proposal has the potential to generate temporary air quality impacts through the emission of dust (particulate matter) and vehicle exhaust associated with site preparation, bulk earthworks, building construction, and associated haulage movements. The extent of potential impacts is influenced by the intensity and duration of activities, the distance to sensitive receptors, and prevailing meteorological conditions.

A qualitative risk-based assessment of construction dust emissions was undertaken in accordance with the Institute of Air Quality Management (**IAQM**) Guidelines. This method is appropriate where potential emissions are temporary, variable in nature, and not suited to quantitative dispersion modelling.

The nearest sensitive residential receptors are located approximately 300 metres from the site boundary in the Erskine Park residential area, with additional receptors along haulage routes on Lenore Drive. For assessment purposes, four key dust-generating activity types were considered:

- Site preparation and bulk earthworks, including excavation and material handling.
- Building construction and fit out works.
- Movement of construction vehicles and plant on unsealed or partially sealed surfaces.
- Vehicle track-out of dirt and mud onto public roads.

The risk assessment determined that, given the scale of the works and the presence of receptors within 250 metres of the site, there is potential for low to moderate dust risk during periods of intense activity, such as

bulk earthworks. Exhaust emissions from diesel-powered plant, generators, and delivery vehicles are expected to be minimal relative to local background concentrations, and unlikely to result in exceedance of relevant criteria at off-site receptors.

The air quality assessment concluded that, with standard best-practice mitigation measures implemented including dust suppression through water sprays, covering of stockpiles, wheel-wash facilities, and regular street sweeping, the risk of adverse impacts will be reduced to a low residual level. Impacts will be temporary, localised, and compliant with relevant NSW EPA and NSW Planning requirements.

With these measures in place, the proposal is not expected to result in any significant degradation of local air quality during construction.

Operational Phase

The only significant source of emissions during site operations will be the diesel-fuelled standby generators, which operate during mains power outages or for scheduled maintenance testing. Under normal conditions, the data centre facility will draw electricity from the grid, and no adverse air quality impacts are expected.

Two operational scenarios were assessed:

- Scenario 1 – Justified Worst-Case: All 170 generators operating simultaneously at full load during a complete power failure.
- Scenario 2 – Routine Maintenance Testing: Two generators operating for approximately one hour during daylight, at off-load (service tests) or 70% load (monthly load tests).

Air dispersion modelling was undertaken using CALPUFF, accounting for building wake effects, local topography, and 2021 meteorological data processed via CALMET. Background pollutant concentrations were sourced from the St Marys and Prospect Air Quality Monitoring Stations.

Under Scenario 1, modelling predicted short-term exceedances of some criteria (including NO_2, PM_{10}, $PM_{2.5}$ and SO_2) at certain sensitive receptors. However, this scenario represents a highly unlikely event given the low probability of a full-site outage, the redundancy of the on-site power system, and the high reliability of the external electricity grid. Probability analysis in the AQIA confirmed that the combined likelihood of both a full outage and concurrent exceedances is very low.

Under Scenario 2, predicted incremental concentrations for all pollutants were well below NSW EPA and NEPM criteria at all sensitive receptors. No exceedances were predicted, either for incremental results or when combined with background levels.

Cumulative modelling confirmed that for realistic operational conditions the facility will comply with all relevant ambient air quality standards. While the worst-case outage scenario may cause short-term impacts, the infrequency of such events and built-in operational redundancy significantly reduce potential risks.

With implementation of standard construction dust controls, adherence to the proposed maintenance testing schedule, and proper generator maintenance, the proposal is expected to comply with relevant NSW EPA and NEPM criteria under realistic operating conditions. Residual risks to surrounding sensitive receptors are low, and no significant adverse air quality, human health, or amenity impacts are anticipated during either construction or operation.

6.6.3 Cumulative Impact Assessment

The cumulative assessment considered the proposal alongside other pollutant sources in the local airshed, including nearby industrial facilities, approved data centres, major roads, and regional background contributions. Background data were drawn from St Marys and Prospect stations, with conservative assumptions for pollutants not monitored.

Under Scenario 2, cumulative concentrations for all pollutants were well below relevant criteria at all assessed receptors, confirming no material degradation of local air quality under normal operation. For Scenario 1, cumulative results showed short-term exceedances for some pollutants at certain receptors; however, the AQIA notes these conditions are highly improbable, requiring concurrent full-site outage, operation of all

generators, and meteorology unfavourable to dispersion. The likelihood of such an event is very low. Potential overlaps with nearby generator operations would be short-lived and infrequent, resulting in minimal combined effects.

6.6.4 Mitigation Measures

As outlined in the AQIA, to minimise operational air quality impacts, during the construction and operational phases of the project, the following mitigation measures will be implemented:

Construction Phase

- Implement a Construction Environmental Management Plan (**CEMP**) with a specific Air Quality Management Sub-Plan.
- Apply standard best-practice dust suppression techniques, including water sprays on exposed surfaces and during earthworks.
- Cover stockpiles when not in use and minimise material drop heights during handling.
- Use wheel-wash facilities at site exits to reduce track-out of material onto public roads.
- Undertake regular street sweeping along haulage routes to remove deposited material.
- Limit vehicle speeds on unsealed surfaces and maintain these surfaces to reduce dust generation.
- Ensure plant and equipment are well maintained to minimise exhaust emissions.

Operational Phase

- Adhere to the proposed generator maintenance and testing schedule to minimise cumulative operational hours and emissions.
- Optimise generator load management during testing to reduce emissions intensity.
- Maintain all generators in accordance with manufacturer specifications to ensure efficient combustion and minimise pollutant output.
- Implement an operational air quality management plan if nearby sensitive land uses are realised in future, with the flexibility to introduce additional controls if required.

6.7 Noise and Vibration

A Noise and Vibration Impact Assessment **(NVIA)** has been prepared by Acoustic Logic (**Appendix M**) to assess the potential impacts of the proposal during both construction and operation. The assessment was undertaken in accordance with relevant NSW guidance, including the *Noise Policy for Industry (EPA, 2017)* (**NPfI**) and *Interim Construction Noise Guideline (DECC, 2009)* (**ICNG**).

The assessment identifies existing acoustic conditions, establishes appropriate noise and vibration criteria, models construction and operational scenarios, and recommends mitigation measures to ensure compliance with regulatory thresholds.

6.7.1 Existing Environment

The site is located within the Erskine Business Park, a precinct dominated by large-format warehousing, logistics and data centre uses. Ambient noise levels are characterised by:

- Industrial and commercial activity within the business park;
- Road traffic noise associated with Lenore Drive and the M4/M7 corridors; and
- Distant background noise including aircraft and general urban activity.

The nearest sensitive receivers include:

- Low-density residential dwellings in Erskine Park to the north, separated from the business park by an environmental corridor;

- Recreational uses including nearby playing fields; and
- Other commercial/industrial premises within the business park.

A map showing the location of these sensitive receivers and the location of unattended noise monitoring locations relative to the site is provided in **Figure 50**.

Three unattended environmental noise monitors were installed at the following locations:

- Public land immediately to the east of 76 Weaver Street, Erskine Park
- Public land located between 24 Weaver Street and 26 Weaver Street, Erskine Park; and
- Public Land immediately to the north of 315 Burley Road.

Figure 50 Unattended Noise Monitoring Locations

Source: Acoustic Logic, 2025

Access was not available to residential properties at the time unattended monitoring was conducted. As such, additional attended measurements were undertaken during both daytime and night-time periods to validate and support the unattended monitoring data at representative

receiver locations. The locations of the attended measurements (as shown **Figure 51**) were selected based on a façade noise map generated using SoundPLAN to identify the likely most-affected residential receivers.

Figure 51 Attended Noise Monitoring Locations

Source: Acoustic Logic, 2025

6.7.2 Potential Impacts

Methodology

The assessment methodology involved:

- Establishing noise and vibration criteria consistent with the NPfI for operational impacts, and the ICNG for construction impacts.
- Identifying representative noise catchment areas and sensitive receivers.
- Developing noise models using SoundPLAN, incorporating terrain, shielding from buildings, and façade reflections.
- Predicting noise and vibration levels for both construction and operational scenarios.

As per the NPfI there are three categories of residential receivers - rural, suburban, urban. In determining the residential receiver category applicable to properties in the vicinity of the development, the following features of the receiver have been considered:

- Land use zone
- Measured existing background noise level
- Dominant noise sources in the existing acoustic environment
- Location of receivers in relation to:
  - Transport infrastructure
  - Industrial precincts
  - Commercial precincts

The adopted receiver category used in the NVIA and the features of the receiver location considered are detailed in **Table 23** below.

Table 23 Project Residential Receiver Categories

Noise Catchment Area	Land Use Zone	Measured Existing Background Noise Levels	Description	Receiver Category Adopted
NCA1	R2 Low Density Residential	▪ Day RBL 43 dB(A) ▪ Evening RBL 45 dB(A) ▪ Night RBL 44 dB(A)	▪ Noise environment is dominated by traffic noise from Lenore Drive and industrial noise from industrial precincts to the east and south. ▪ Lenore Drive carries through traffic with volumes >1,000 vehicles per hour during peak periods. ▪ Is near the Erskine Park industrial precinct.	Urban
NCA2	R2 Low Density Residential	▪ Day RBL 40 dB(A) ▪ Evening RBL 39 dB(A) ▪ Night RBL 38 dB(A)	▪ Noise environment is dominated by intermittent traffic flows, human activity and environment noise. ▪ Roads in proximity carry local traffic.	Suburban
NCA3	RU4 Primary Production Small Lots	▪ Day RBL 38 dB(A) ▪ Evening RBL 38 dB(A) ▪ Night RBL 37 dB(A)	Noise environment is dominated by environment noise and some industrial noise from industrial precincts to the north and west.	Rural

Additional justification for the amenity category adopted in the NVIA is provided in Appendix E.

Construction Phase

Construction Noise

Construction will be undertaken in defined stages, including:

- Site establishment and demolition – involving light earthmoving plant, small trucks, and general equipment.
- Bulk earthworks – with excavators, bulldozers, scrapers, and haulage trucks generating the highest potential noise levels.
- Piling – predicted to generate short-term high noise events, with potential to exceed daytime Noise Management Levels (**NMLs**) at the nearest residential receivers.
- Concrete works and structural erection – including mobile cranes, concrete pumps, and trucks.
- Building fit-out and services installation – generally limited to internal works with reduced external noise impact.

Modelling results indicate that exceedances of the NML may occur during the most intensive phases, particularly bulk earthworks and piling.

Residential NMLs are based on the "rating background noise level" (**RBL**) applicable to the receivers. RBLs are typically determined by measuring the ambient noise environment using the methodology in the NPfI, with the measurements, analysis and RBLs for this project summarised in Section 8 of the NVIA.

At residential receivers north of the site, exceedances of up to 5–10 dB above the NML are predicted during certain high-intensity periods. These impacts are temporary, daytime only, and diminish once above-ground works commence. Within the industrial locality, no sensitive receivers are identified and predicted levels are compatible with the existing acoustic environment.

While exceedances are predicted during discrete phases, they are short-term and can be effectively managed through mitigation measures including scheduling of high-noise activities, community notification, and implementation of a Construction Noise and Vibration Management Plan (**CNVMP**).

Construction Traffic Noise

Construction traffic will comprise spoil haulage, material deliveries, and workforce commuter trips. The NVIA assessed construction traffic along Lenore Drive and the broader Business Park network. Predicted increases in road traffic noise at residential receivers are less than 2 dB below the threshold of perceptibility and within the criteria of the Road Noise Policy. Along industrial frontages, additional heavy vehicle activity will be acoustically negligible given the dominance of existing logistics and freight movements.

Construction Vibration

Vibration modelling considered typical piling activities, vibratory rollers, and heavy truck movements. Predicted levels at the nearest residential dwellings are well below human comfort thresholds and less than half of the structural damage screening criteria. No heritage structures or vibration-sensitive infrastructure (such as laboratories or hospitals) are located nearby. As such, the risk of cosmetic or structural damage is negligible, and vibration impacts will be imperceptible at residential properties.

Operational Phase

The NVIA assessed a range of operational scenarios for both Stage 1 and Stage 2 to capture typical and emergency testing conditions. The scenarios assessed included:

- Normal operation – continuous operation of chillers, cooling towers, air handling units, pumps, and other mechanical services associated with the ongoing operation of the data centre.
- Emergency equipment and maintenance testing – periodic testing of diesel generators under controlled conditions.
- Full emergency operation – simultaneous operation of all diesel backup generators during a complete power outage, representing the maximum potential site noise emissions.

Noise modelling was undertaken in accordance with the NPfI. The modelling accounted for site-specific factors including the layout of buildings, plant and generator locations, shielding provided by built form, local terrain conditions, and façade reflections. Predictions were made at the nearest sensitive receivers, including residential dwellings to the north and east of the site and other land uses within the surrounding business park.

Normal operation

During standard data centre operations, the acoustic environment is primarily influenced by continuous mechanical services such as cooling towers, chillers, pumps, and air handling units. These sources are generally constant in output, with equipment operating in cycles to respond to data hall loads.

The NVIA confirmed that:

- As outlined in **Table 24**, predicted noise levels generally remain below the intrusiveness and amenity criteria set out in the NPfI under all scenarios, with the exception of minor residual exceedances of up to 2 dB at some receivers within NCA2 during Stage 2 night-time full-load operation.

- A residual level of up to 1 dB is also predicted at some receivers within NCA2 during Stage 1 night-time full-load operation and Stage 1 Part Occupancy A. These occur at the second storey of two-storey dwellings and at ground level of residences within the first row of the residential precinct (south or east of Weaver Street).
- These residual noise levels are limited to modelling scenarios where chillers operate at full load. While the proposed development is capable of operating at this load, such conditions are unlikely to occur in practice. Predicted noise levels for typical operational loads, based on equivalent data centre performance, comply with the relevant project noise trigger levels.
- Predicted noise levels comply with the established criteria for all other time periods and modelled scenarios within NCA2 and for all scenarios across other NCAs.
- The modelling represents a conservative assessment, noting that chiller noise data are based on manufacturer specifications under more extreme ambient conditions than typically recorded at the site, and that the acoustic barrier effect of adjacent chillers has not been incorporated into the model.

Accordingly, operational noise impacts under normal operating conditions are expected to be low and not discernible above the existing industrial and traffic noise that characterises the local environment.

Table 24 Predicted Noise Levels (Normal Operations)

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
Scenario 1 – Stage 1 – Daytime Full Load			
NCA 1	43	48	Yes
NCA 2	42	45	Yes
NCA 3	42	68	Yes
NCA 4	42	68	Yes
NCA 5	43	68	Yes
NCA 6	47	68	Yes
NCA 7	58	68	Yes
NCA 8	56	68	Yes
NCA 9	48	68	Yes
NCA 10	31	43	Yes
Scenario 2 – Stage 1 – Evening Full Load			
NCA 1	42	48	Yes
NCA 2	41	43	Yes
NCA 3	41	68	Yes

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
NCA 4	40	68	Yes
NCA 5	42	68	Yes
NCA 6	44	68	Yes
NCA 7	53	68	Yes
NCA 8	55	68	Yes
NCA 9	44	68	Yes
NCA 10	29	43	Yes
Scenario 3 – Stage 1 – Night Full Load			
NCA 1	41	43	Yes
NCA 2	39	38	Marginal*
NCA 3	40	68	Yes
NCA 4	39	68	Yes
NCA 5	40	68	Yes
NCA 6	44	68	Yes
NCA 7	51	68	Yes
NCA 8	53	68	Yes
NCA 9	45	68	Yes
NCA 10	28	38	Yes
Scenario 10 – Stage 2 – Day Full Load			
NCA 1	45	48	Yes
NCA 2	45	45	Yes
NCA 3	44	68	Yes
NCA 4	45	68	Yes
NCA 5	46	68	Yes

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
NCA 6	50	68	Yes
NCA 7	60	68	Yes
NCA 8	68	68	Yes
NCA 9	50	68	Yes
NCA 10	33	43	Yes
Scenario 13 – Stage 2 – Evening Full Load			
NCA 1	44	48	Yes
NCA 2	43	43	Yes
NCA 3	43	68	Yes
NCA 4	43	68	Yes
NCA 5	44	68	Yes
NCA 6	48	68	Yes
NCA 7	58	68	Yes
NCA 8	67	68	Yes
NCA 9	48	68	Yes
NCA 10	31	43	Yes
Scenario 15 – Stage 2 – Night Full Load			
NCA 1	42	43	Yes
NCA 2	40	38	Marginal*
NCA 3	42	68	Yes
NCA 4	42	68	Yes
NCA 5	43	68	Yes
NCA 6	47	68	Yes
NCA 7	57	68	Yes

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
NCA 8	66	68	Yes
NCA 9	46	68	Yes
NCA 10	30	38	Yes

**Marginal compliance indicates a residual level ≤ 2dB after reasonable and feasible mitigation measures have been adopted. In accordance with the NPfI this residual level is considered negligible.*

Emergency equipment and maintenance testing

As outlined in **Table 25,** noise emission from the maintenance and testing of emergency equipment is predicted to comply within all NCAs. Generator noise would be short-term and infrequent, only occurring in the event of a genuine outage. For this reason, the impacts were assessed as acceptable and manageable, given the critical infrastructure role of the facility. Due to the separation distance and intervening vegetation between the site and residential areas, perceptibility will be low, with noise unlikely to be intrusive within internal residential spaces.

Table 25 Predicted Noise Levels (Emergency Operations)

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
Full Occupancy Emergency Equipment Testing			
NCA 1	45	48	Yes
NCA 2	45	45	Yes
NCA 3	44	68	Yes
NCA 4	45	68	Yes
NCA 5	46	68	Yes
NCA 6	50	68	Yes
NCA 7	59	68	Yes
NCA 8	68	68	Yes
NCA 9	50	68	Yes
NCA 10	33	43	Yes
Part Occupancy A Emergency Equipment Testing			
NCA 1	42	48	Yes

Receiver	Maximum Predicted External Noise Levels (dB(A) Leq(15mins))	Project Noise Criteria (dB(A) Leq 15min)	Compliance?
NCA 2	41	45	Yes
NCA 3	42	68	Yes
NCA 4	41	68	Yes
NCA 5	42	68	Yes
NCA 6	46	68	Yes
NCA 7	52	68	Yes
NCA 8	62	68	Yes
NCA 9	47	68	Yes
NCA 10	30	43	Yes
Part Occupancy B Emergency Equipment Testing			
NCA 1	42	48	Yes
NCA 2	41	45	Yes
NCA 3	42	68	Yes
NCA 4	41	68	Yes
NCA 5	42	68	Yes
NCA 6	46	68	Yes
NCA 7	52	68	Yes
NCA 8	62	68	Yes
NCA 9	46	68	Yes
NCA 10	30	43	Yes

Emergency worst case

In the unlikely event of a complete power outage, all backup diesel generators would operate simultaneously. This represents a deliberately conservative, worst-case scenario adopted for assessment purposes.

Under this condition, the NVIA identified that maximum predicted noise levels at some receivers in NCA1, NCA2 and NCA7 may marginally exceed the relevant criteria. Notwithstanding this, the scenario is highly improbable and short-term in duration, occurring only during emergency situations when the primary power supply is interrupted.

The NVIA concludes that even under these worst-case conditions, operational noise impacts would not result in unacceptable or prolonged adverse effects on surrounding land uses or residential amenity.

Vibration impacts

Operational vibration impacts are expected to be negligible. All fixed plant and generators will be installed with appropriate vibration isolation measures (such as anti-vibration mounts, inertia bases, and acoustic enclosures) that prevent the transmission of vibration off-site. As such, no perceptible vibration impacts are anticipated at the nearest sensitive receivers.

Conclusion

Overall, the operational noise and vibration assessment demonstrates that:

- Normal operations will comply with all relevant EPA noise criteria and will be acoustically consistent with the surrounding industrial environment.
- Emergency generator operation, although louder, will occur rarely and only during grid outages, and remains compliant with NPfI criteria.
- Vibration impacts are not anticipated given the design of plant and separation from sensitive uses.

Accordingly, the operational phase of the project is expected to have a negligible to minor noise and vibration impact, with no significant adverse effects on nearby residents or businesses.

6.7.3 Cumulative Impact Assessment

The NVIA also considered cumulative impacts associated with concurrent construction and operation of other projects within the Erskine Business Park.

- **Construction phase** – if nearby developments undertake piling or earthworks concurrently, there is potential for cumulative noise levels to increase at sensitive receivers. However, the spatial separation between sites, staging of works, and coordination of construction traffic are expected to limit the likelihood of significant cumulative exceedances.
- **Operational phase** – given the industrial nature of the precinct, cumulative operational noise is expected to remain consistent with the existing acoustic character and below applicable NPfI criteria when considered in aggregate.

On this basis, cumulative impacts are not expected to be significant.

6.7.4 Mitigation Measures

The NVIA recommends the following measures to minimise potential noise and vibration impacts:

Construction Phase

- Implement a CNVMP in accordance with the ICNG.
- Schedule high-noise activities (such as piling) within standard construction hours wherever possible and avoid extended periods of continuous high-noise works.
- Use quieter equipment and methods where practicable, and ensure all equipment is fitted with appropriate noise suppression devices.
- Provide advance notification to nearby sensitive receivers prior to particularly noisy works.
- Establish a complaints management system and designate a community liaison officer to respond promptly to concerns.
- Manage construction traffic to minimise impacts, including restricting access to designated haulage routes and avoiding night-time heavy vehicle movements.

Operational Phase

- All chiller fans are to be fitted with acoustic attenuation in the form of minimum 1.5 metre rigid ductwork internally lined with 100 mm acoustic insulation.

- All generators are to be provided with an acoustic enclosure such that the cumulative noise (enclosure intake, enclosure discharge and exhaust) complies with the levels presented in Table 20 of the NVIA.
- An 8-metre acoustic barrier is to be provided around the full perimeter of the 330/66 kV transformers. The barrier is to be of solid construction and free of air gaps. Due to requirements for blast walls, the barrier is intended to be of minimum 300 mm precast concrete construction.
- 6 metre acoustic barriers are to be provided to the east, north and west sides of each 66/11 kV transformer cluster. The barriers are to be of solid construction and free of air gaps. Due to requirements for blast walls, the barrier is intended to be of minimum 300 mm precast concrete construction.
- Acoustic design to be undertaken during CC for all mechanical plant to be installed and appropriate acoustic treatments incorporated, where required, to meet the noise emission objectives presented in Table 12.
- To minimise the acoustic impact on surrounding receivers, it is recommended that servicing and testing of the emergency generators be conducted during the daytime period of 7:00 am to 6:00pm.
- The substation switch rooms are to be located within acoustic enclosures. The enclosure is to be acoustically designed such that noise emission from the substation, and any associated mechanical ventilation plant, when considered cumulatively with other development plant, such as the chillers, does not result in an exceedance of the established project noise objectives.
- An acoustic lid is to be implemented over the extent of the chiller plant decks. The lid is to be located at a height between the top of the chillers (RL 80.06), and the top of the chiller discharge ducts (RL 81.56). The lid is to be of solid construction and free of air gaps with penetrations to accommodate the discharge ducts to pass through. The acoustic lid is to have a minimum performance of Rw 30. Indicative constructions include 9 mm fibre cement sheet.

6.8 Water Management

An Integrated Water Management Plan (**IWMP**) has been prepared by ACOR Consultants (refer **Appendix ZK**) to assess potable water, non-potable water, stormwater, and wastewater management for the proposed development. The plan addresses operational water efficiency, WSUD outcomes, and environmental protection measures in line with relevant legislative and policy requirements.

6.8.1 Existing Environment

The site is serviced by an existing on-site detention (**OSD**) basin and water quality treatment train installed under subdivision consent DA19/0818. Under the regional stormwater management framework, no additional OSD or water quality treatment is required provided the development does not exceed the approved 85% impervious area or pollutant load allowances set in the subdivision approval. Potable water is supplied by Sydney Water, and wastewater is discharged to the Sydney Water sewer network.

6.8.2 Potential Impacts

The proposal will increase the built footprint and impervious surfaces but will remain within the 85% impervious limit, with an estimated impervious area of less than 80%. On-site detention is not required as the subdivision's regional basin provides detention for the estate and has been sized and modelled to accommodate this level of development.

The existing precinct-wide stormwater management system, designed and validated at the subdivision stage using DRAINS and MUSIC, has capacity to manage flows and achieve pollutant load reduction targets for this site. Stormwater from the development will be conveyed via a new pit and pipe network designed for the minor drainage event with climate change allowance, with safe overland flow paths for the major event.

The modelling undertaken shows that no additional on-lot treatment train is required; however, the existing GPT will be replaced and relocated to suit the proposed drainage layout, maintaining estate-level water

quality performance. Two 400kL rainwater tanks will capture roof runoff for non-potable uses such as toilet flushing and irrigation, meeting approximately 80% of annual non-potable demand.

During construction, earthworks, materials handling and vehicle movements could mobilise sediment and pollutants. If uncontrolled, these could enter the stormwater network and impact the adjacent Ropes Creek biodiversity corridor to the east. Subject to comprehensive erosion and sediment controls in accordance with the *Blue Book*, these risks will be effectively managed to avoid degradation of water quality, habitat condition, or ecological function.

In operation, the facility will increase potable water demand and wastewater generation. Potable demand will be reduced through rainwater harvesting and water-efficient fixtures. Wastewater will be discharged to the Sydney Water network in accordance with trade waste requirements, ensuring compliance with infrastructure and environmental standards.

6.8.3 Mitigation Measures

The IWMP outlines the following measures to avoid or minimise potential water management impacts during construction and operation:

- Limit total site impervious area to ≤85% (target ≤80%) to comply with subdivision stormwater management parameters and avoid the need for additional detention or treatment infrastructure.
- Remove the existing GPT and replace it with an OceanProtect OceanSave-3300-870 unit in the downstream pit, installed in accordance with manufacturer specifications and positioned for safe maintenance access.
- Construct the internal pit-and-pipe drainage network to accommodate the 5-year ARI (minor) event with climate change allowance and provide overland flow paths to safely convey the 100-year ARI (major) event without causing property damage or safety risks.
- Install and commission two 400kL rainwater tanks to harvest roof runoff for toilet flushing and irrigation, with backflow prevention, inlet/overflow screening, and connections to building plumbing to meet at least 80% of projected annual non-potable demand.
- Prepare and implement a Construction Erosion and Sediment Control Plan (**CESCP**) in accordance with the *Blue Book*, including sediment fences, stabilised site access points, inlet protection, and progressive stabilisation of disturbed areas.
- Prevent construction runoff or pollutants from entering the adjacent Ropes Creek biodiversity corridor by maintaining containment measures and undertaking daily inspections during all ground-disturbing works.
- Establish a maintenance program for all stormwater quality devices, drainage infrastructure, and rainwater tanks, with inspections in accordance with manufacturer guidelines and after significant rainfall events.
- Connect wastewater to the Sydney Water sewer network under an approved trade waste agreement, ensuring no untreated discharge enters the stormwater system.

6.9 Hazards and Risks

The hazards and risks assessment for the proposed data centre was addressed through two technical reports: a SEPP (Resilience and Hazards) Risk Screening and a Dangerous Goods Compliance Report prepared by ACOR Consultants (refer **Appendix ZF** and **Appendix ZG**).

6.9.1 Potential Impacts

The project is proposed to contain the following hazardous materials stored on site:

- Diesel fuel generator system
  - 170x 22.7kL above-ground diesel fuel bulk storage tanks (1 per genset)

  - 170x 990L diesel generator day tanks (1 per genset)
  - 1x offloading area (with fill cabinets and associated pipework to each genset)
- Lithium-Ion battery data halls
  - 32x 29.6kL Lithium-Ion electrolyte data halls (16 data halls per building, 8 per floor)

To support site operations and uninterrupted and consistent power supply, both lithium-ion batteries and diesel generators will be on site. While diesel is not classified as a dangerous good by the Australian Dangerous Goods Codes, it is a Class C1 combustible liquid. Li-ion batteries have the potential for thermal runaway and are identified as Class 9 dangerous goods.

Resilience and Hazards SEPP Screening Results

A SEPP (Resilience and Hazards) risk screening was undertaken to identify and assess potential hazards associated with the proposed development. The assessment considered the applicability of the *State Environmental Planning Policy (Resilience and Hazards) 2021* and the *Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines*. The only relevant dangerous goods proposed to be stored and handled on site are:

- Diesel fuel (C1 combustible liquid) for standby generators.
- Electrolytes within lithium-ion batteries (Class 9 miscellaneous dangerous goods) for uninterruptable power supply systems.

The proposed storage volumes are approximately 4,029,000 litres of diesel and 86,170 litres of electrolyte. Storage locations are set back a minimum of 13 metres (diesel tanks) and 9.4 metres (battery electrolyte) from site boundaries.

Dangerous goods movements are limited. Diesel deliveries are expected monthly, while lithium-ion battery deliveries will occur only at installation and at end-of-life (estimated at 10-year intervals). Standby generators are expected to operate for less than two hours annually.

The assessment determined that both storage and handling volumes are well below SEPP 33 screening thresholds. The proposal is not classified as a potentially hazardous industry, and a Preliminary Hazard Analysis is not required.

Storage of Hazardous Materials

The Dangerous Goods Compliance Report confirms that the facility's design accommodates the safe storage and handling of diesel and lithium-ion batteries in accordance with:

- FM Global Property Loss Prevention Data Sheet 5-32.
- AS/NZS 4681, AS IEC 62619 (batteries).
- AS 1940 (diesel fuel storage and handling).

Design provisions include bunding of diesel tanks, compliant separation distances, spill containment, ventilation, passive and active fire protection systems, and secure storage configurations. All materials will be stored in designated areas with access control, in line with manufacturer recommendations and statutory requirements.

Protection of the Environment Operations (POEO) Act Considerations

Under Clause 9 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (**POEO Act**), an Environment Protection Licence (**EPL**) is required for premises with the capacity to store more than 2,000 tonnes of petroleum products, which includes diesel fuel. The proposed development includes approximately 4,029,000 litres of diesel, equating to well over 2,000 tonnes. Accordingly, an EPL will be required for the site prior to operation.

In addition to licensing, the handling and use of diesel and battery electrolyte will be managed to prevent environmental harm, with spill prevention and emergency response procedures in place. Fuel delivery and

battery replacement activities will be undertaken in accordance with contractor compliance requirements, ensuring consistency with the EPL conditions and broader environmental protection obligations.

6.9.2 Mitigation Measures

To ensure ongoing compliance and minimise risks, the following measures will be implemented:

- Maintain separation distances between hazardous material storage and property boundaries in accordance with Australian Standards.
- Provide bunding and spill containment systems for all diesel storage tanks.
- Install ventilation systems and fire detection/suppression systems in battery and generator areas.
- Implement spill prevention and emergency response procedures, including staff training and equipment maintenance.
- Conduct regular inspections and maintenance of hazardous goods storage areas.
- Restrict generator testing and operation to minimal durations, consistent with operational requirements.
- Limit dangerous goods deliveries to off-peak times where practicable to reduce on-site traffic and handling risks.
- Maintain compliance with all applicable standards (AS/NZS 4681, AS IEC 62619, AS 1940) and FM Global recommendations.

6.10 Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment Report (**ACHAR**) has been prepared by Urbis and is provided at **Appendix ZA.** The ACHAR documents the process of investigation, Aboriginal community consultation with locally listed Aboriginal communities and the Registered Aboriginal Parties (**RAPs**) and assessment with regard to potential Aboriginal cultural heritage and Aboriginal archaeology across the site.

The ACHAR was prepared in accordance with the NSW *National Parks and Wildlife Regulation 2019* and relevant NSW heritage guidelines, including the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW and the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Consultation with RAPs was undertaken in four stages: notification and registration of interest; presentation of project information and methodology; gathering of cultural information including a site visit; and review of the draft ACHA. A desktop review assessed archaeological, environmental and historical contexts, including Aboriginal Heritage Information Management System (**AHIMS**) searches, previous archaeological investigations and predictive modelling. A visual inspection of the site was undertaken with RAP representatives to confirm disturbance levels and assess archaeological potential.

6.10.1 Existing Environment

The site is located within the traditional lands of the Darug people, approximately 200 metres from Ropes Creek. Previous archaeological work in the broader Ropes Creek Employment Area, including within the subject site, recorded low-density stone artefacts of local significance, primarily within the upper 30cm of soil. These artefacts were concentrated in natural topsoils that have since been subject to extensive ground disturbance.

The subject area has undergone significant modification from bulk earthworks approved under DA19/0818, including excavation, levelling and filling. No intact natural soils are expected to remain. The archaeological potential is assessed as very low, and the site has low Aboriginal cultural heritage significance, reduced from its original context by the scale of prior disturbance.

6.10.2 Potential Impacts

The following conclusions were drawn from the ACHAR assessment for the potential impacts of the development:

- The subject area is within a broader Aboriginal landscape with nearby sites registered on the AHIMS register which overlap the current subject area. The subject area was the subject of previous test excavations which identified the presence of Aboriginal objects. These were assessed to be of low archaeological significance within a local context only. No further archaeological assessment was recommended for the study area and an application for a Section 90 Consent to Destroy was recommended. Subsequent bulk earthworks have been conducted under the approval of DA19/0818. No intact natural soils are expected to remain within the subject area.
- Portions of the subject area are located within 200 metres of Ropes Creek. This landscape feature is considered indicative of past Aboriginal land use under the Due Diligence Code.
- Historical ground disturbance will have been limited to pastoral and agricultural activities. However, in recent times the subject area has been heavily modified in preparation for industrial development. The Ropes Creek Employment Area, which encompasses the present subject area, was the subject of previous test excavations following which an application for a Section 90 Consent to Destroy was recommended.
- Subsequent bulk earthworks have been conducted under the approval of DA19/0818. Ground disturbance is therefore assessed as high. No intact natural soils are expected to remain within the subject area.
- Any intact, artefact bearing natural topsoils that were present within the study area have been displaced and/or removed. Intact topsoils are therefore unlikely to be present throughout the subject area. Due to high levels of disturbance conducted under the approval of DA19/0818 the archaeological potential of the subject area is assessed as being very low.
- Based on the present evidence, the subject area is assessed as having low Aboriginal cultural heritage significance. The assessment of significance should be updated in the unlikely event that any Aboriginal objects are found within the subject area (e.g. during future works).
- Due to high levels of disturbance conducted under the approval of DA19/0818, it assessed that potential archaeological deposits within the subject area will have already been significantly impacted, if not removed entirely. Future works are unlikely to cause further cumulative impacts to Aboriginal cultural heritage values.

6.10.3 Mitigation Measures

To mitigate potential impacts related to Aboriginal cultural heritage, the ACHAR recommended the following be implemented during the construction phase of the project:

- A copy of this report should be submitted with the SSDA application to support SSD-82211208.
- As the proposed works are unlikely to cause harm to Aboriginal objects, it is recommended that no further investigation is required for the present development and that the proposed development can proceed in line with the Archaeological Unexpected Finds Procedure and Human Remains Procedure outlined in the ACHAR.
- In the event of an unexpected archaeological find or human remains, works will cease immediately in the vicinity, the area will be secured, and relevant authorities and specialists will be notified. Works will only recommence once the find has been assessed and appropriately managed in consultation with Heritage NSW and, where applicable, NSW Police.

6.11 Social Impact

A Social Impact Assessment (**SIA**) has been prepared by Urbis and is provided at **Appendix P**. The SIA identifies and analyses the potential positive and negative social impacts associated with the proposal. Mitigation and enhancement measures are recommended to minimise negative impacts and strengthen positive social outcomes.

6.11.1 Existing Environment

The site lies within Erskine Business Park, a growing industrial hub for logistics, warehousing and data centres. New developments are under construction, with an environmental corridor buffering the precinct from nearby housing in Erskine Park.

The social locality includes workers and businesses in the park, surrounding industrial areas and adjacent residential communities. While supporting Sydney's digital infrastructure needs, the area lacks worker amenities, active transport options and is subject to urban heat.

6.11.2 Potential Impacts

The proposed development has the potential to generate a range of positive and negative social impacts across the immediate, surrounding and strategic social locality. The key issues are outlined below:

Way of life

- The proposal will strengthen Erskine Business Park's role in Sydney's digital economy, consolidating its identity as a national hub for technology and data infrastructure. This is considered a high positive impact that endures over the long term.
- Minimal disruption to residential amenity is expected due to separation from dwellings. Temporary effects may arise during construction through traffic and noise affecting local workers and transport users, assessed as low negative with mitigation.

Community

- Potential risks to data security and privacy were identified. These risks are considered low negative but are addressed by existing regulatory and operational frameworks.
- The project will contribute to community skills development and training opportunities, particularly during construction, and through operational partnerships with education and training providers. This is assessed as a medium positive outcome aligned with Penrith's economic aspirations.

Accessibility

- During construction, additional heavy vehicle movements on Lenore Drive and Lockwood Road may temporarily reduce accessibility and increase safety concerns. This impact is assessed as low negative with mitigation.
- Once operational, traffic impacts are minor. Accessibility outcomes are considered low positive, particularly if improvements to public and active transport connections are realised over time.

Culture

- A low risk of impact on Aboriginal cultural values has been identified. Consultation and due diligence confirmed no significant sites directly affected. Nevertheless, the site's proximity to Ropes Creek and environmental corridors requires protocols for unexpected finds and ongoing cultural awareness. This is assessed as low negative.

Health and Wellbeing

- Construction noise and vibration are predicted to be significant. Without mitigation this would represent a high negative impact, reduced to medium negative with controls in place.
- Construction dust and emissions are short-term and localised. With mitigation these reduce to negligible.
- Operation of the facility is unlikely to generate significant air quality impacts, assessed as negligible.
- The creation of a modern, secure and well-serviced workplace supports health, safety and wellbeing for operational staff. This impact is rated medium positive unmitigated and high positive when design features for worker wellbeing are implemented.

Surroundings

- Stakeholders raised concerns about servicing infrastructure and utility capacity due to the scale of energy and water demand. These are considered low negative impacts, manageable through network planning and ongoing engagement with utilities providers.
- Visual and lighting impacts from the built form are largely contained within the industrial setting and are not expected to significantly affect surrounding communities.

Livelihoods

- The proposal will generate approximately 1,100 construction jobs, representing a medium positive short-term contribution to the local economy.
- Operational employment is estimated at around 200 specialised jobs, contributing to diversification of the labour market and assessed as medium positive.
- Opportunities for local procurement during both phases will provide additional economic benefits to small and medium enterprises in the locality.

Decision-Making Systems

- The proposal has facilitated opportunities for Council, landowners, and the community to contribute to the decision-making process (high positive).
- Ongoing transparency and stakeholder engagement can strengthen trust and maintain a social licence to operate.

Overall, construction impacts are expected to be localised and temporary, with mitigation measures in place to manage amenity effects. In operation, the proposal will deliver enduring positive outcomes through employment generation, skills development and strengthened digital infrastructure, supporting both the local economy and regional resilience.

6.11.3 Cumulative Impact Assessment

Cumulative impacts are anticipated in relation to other major developments in the locality, including nearby logistics facilities and data centres. The main cumulative considerations are:

- **Amenity and traffic**: Concurrent construction activities may intensify cumulative impacts relating to noise, dust and congestion along Lenore Drive and Mamre Road.
- **Contribution to the digital economy**: Collectively, data centre developments in the precinct will reinforce Western Sydney's role as a national hub for digital infrastructure, enhancing resilience and competitiveness.
- **Urban heat island effect**: The concentration of large-scale built form and sealed surfaces in the Business Park contributes to urban heat stress. While mitigation measures such as landscaping and high-reflectivity finishes are proposed, cumulative contributions remain a concern for workers and nearby communities.

6.11.4 Mitigation Measures

To address the identified impacts and enhance positive outcomes, the SIA recommends that the following mitigation measures be implemented:

- Develop and implement a Community Engagement Strategy targeting the immediate social locality, highlighting potential impacts and benefits.
- Maintain ongoing engagement with Penrith City Council, stakeholders, and surrounding landowners (particularly those with concurrent developments) to coordinate construction timelines and minimise cumulative impacts.
- Provide clear two-way communication channels, supported by a grievance mechanism and a dedicated Community Liaison Officer during construction.

- Deliver regular updates on design, construction milestones, and local employment and training opportunities.
- Consider preparing an Employment Strategy that prioritises local hiring and procurement.
- Collaborate with key industry and educational stakeholders to establish partnerships for skills development and future employment pathways.
- Implement the measures outlined in the Preliminary CTMP to mitigate traffic and parking impacts during construction.
- Apply the Preliminary Green Travel Plan to encourage operational workers to use alternative modes of transport, leveraging the existing bus corridor along Lenore Drive.
- Incorporate worker wellbeing initiatives into the design, including breakout spaces, communal kitchen facilities, and shaded outdoor areas to support health and amenity.
- Apply landscaping, shading and high-SRI external finishes to mitigate the site's contribution to the urban heat island effect.

6.12 Ground and Water Conditions

A Geotechnical Investigation (**Appendix T**), Salinity Management Plan (**Appendix S**), and Groundwater Impact Assessment (**Appendix R**) have been prepared by Douglas Partners to assess subsurface conditions, salinity risks, and groundwater conditions for the proposed development. The investigations provide a basis for design and construction recommendations addressing excavation, retention, hydrogeology, footings, subgrade preparation, and environmental management.

6.12.1 Existing Environment

The site is an irregularly shaped lot that has undergone bulk earthworks to create a near-level clay building platform. Levels fall gently (less than one degree) to the north-east towards Ropes Creek, with some localised areas of water ponding and minor erosion evident on batters.

The subsurface profile comprises controlled fill up to 3m thick in places, placed and compacted to Level 1 specifications (AS 3798) during the 2021 earthworks program. The fill predominantly consists of clay with minor sand, silt and gravel, and locally contains layers of silty sand and occasional oversized sandstone, timber and plastic fragments. Natural soils underlying the fill comprise alluvial and residual clays derived from Bringelly Shale, typically of medium to high plasticity, stiff to very stiff in consistency, and containing occasional ironstone gravels. Weathered siltstone and claystone occur at depth, with low to medium strength rock identified in deeper boreholes. These soils are dispersive and prone to erosion if exposed.

The site is mapped within a "moderate salinity potential" zone on Department of Infrastructure, Planning and Natural Resources (2002) mapping. Field and laboratory testing identified soils ranging from non-saline to very saline, with slightly to moderately saline conditions most common near surface and isolated deeper clays exhibiting very saline conditions. Several samples were sodic or highly sodic, and all tested clays were assessed as highly dispersive (Emerson Class 2).

Groundwater occurs within the soil profile and upper weathered rock, with seepage observed in boreholes at depths of approximately 5–7m below ground level (RL 48.4–49.5 m AHD). Monitoring between 2021 and 2025 recorded groundwater level fluctuations of up to 0.9 m. The underlying Bringelly Shale has low permeability and is considered a "less productive" groundwater source under the NSW Aquifer Interference Policy. The nearest mapped groundwater dependent ecosystem is approximately 100m east along Ropes Creek, outside the site boundary.

6.12.2 Potential Impacts

Geotechnical Conditions

The site comprises an engineered clay building platform established during 2021 bulk earthworks which was approved under DA19/0818. These earthworks involved minor cut along the western boundary and placement

of up to 3m of controlled fill compacted to Level 1 specifications (AS 3798). The fill predominantly consists of clay with minor sand, silt and gravel, and locally contains layers of silty sand. Natural soils underlying the fill comprise alluvial and residual clays derived from Bringelly Shale, typically of medium to high plasticity, stiff to very stiff in consistency, and containing occasional ironstone gravels.

Weathered siltstone and claystone occur at depth, with low to medium strength rock identified in deeper boreholes. Some localised inclusions of unsuitable material (e.g. oversized sandstone, timber and plastic fragments) were observed within the fill profile. The site has a gentle fall of less than one degree towards the north-east, draining towards Ropes Creek. The soil profile is highly susceptible to erosion and dispersion if left unprotected, requiring careful management during and after construction.

Salinity Conditions

The site lies within a "moderate salinity potential" zone on regional mapping. Laboratory testing of soils from recent and previous investigations classified salinity levels ranging from non-saline to very saline, with slightly to moderately saline conditions most common near the surface and isolated deeper clays exhibiting very saline conditions. Several samples were sodic or highly sodic, and all tested clays were assessed as highly dispersive (Emerson Class 2). These conditions pose a moderate to high risk of structural degradation, corrosion of buried infrastructure, and limitations for landscaping without appropriate management.

The Salinity Management Plan recommends a range of measures to manage these risks, including:

- Cap exposed or placed sodic soils with a more permeable material to prevent ponding, reduce capillary rise, provide drainage, and minimise erosion. Match excavated material to in-situ soils of similar or higher salinity/aggressivity where possible. Restrict imported fill to non-aggressive and non- to slightly saline soils, confirmed by testing. Maintain vegetation where possible, plant salt-tolerant species, and consider adding organic matter, gypsum or lime in landscaped areas to improve structure and promote leaching of sodium.
- Avoid water collection in low-lying areas. Design pavements and site grading to drain effectively and avoid ponding. Provide surface drains along the top of batter slopes and ensure retaining walls are designed with full drainage provisions to prevent salt build-up in backfill.
- Use salt-tolerant grasses and trees to stabilise soils, reduce erosion, and maintain evapotranspiration and groundwater levels.
- For mildly aggressive soils to concrete, provide piles with minimum 32 MPa strength and 60mm cover to reinforcement (AS 2159). For moderately saline soils mildly aggressive to concrete, provide slabs and foundations with minimum 25 MPa strength, 45mm cover to reinforcement, and a three-day minimum curing period (AS 3600). Install AS 4058-compliant reinforced concrete pipes of general-purpose Portland cement with minimum 10 mm cover to reinforcement, or fibre-reinforced pipes, to achieve a design life exceeding 100 years. For mildly aggressive soils to steel (<1000 Ohm-cm), allow for a corrosion rate of 0.01–0.02mm/year, or provide equivalent protection.

Groundwater Conditions

Groundwater was encountered at depths of approximately 5–7m below ground level (RL 48.4–49.5m AHD) in installed monitoring wells, with recorded fluctuations of up to 0.9m between 2021 and 2025. For design purposes, Douglas Partners recommends adopting a conservative maximum groundwater level of RL 50.8m AHD to account for potential seasonal and climatic variations. The proposed bulk excavation, to a maximum of 0.5m below existing surface levels, will remain at least 2m above the adopted groundwater design level.

Accordingly, bulk excavation dewatering is not anticipated, with only negligible water volumes potentially removed during pile installation. The site is underlain by low-permeability clays and Bringelly Shale bedrock, which constitute a "less productive" groundwater source under the NSW Aquifer Interference Policy. No groundwater dependent ecosystems occur within the works footprint, and the nearest identified terrestrial GDE is approximately 100m east along Ropes Creek, beyond the zone of influence of the proposed works.

6.12.3 Mitigation Measures

The following measures will be implemented to manage geotechnical, salinity and groundwater risks:

- Undertake groundwater monitoring from at least three on-site wells for a minimum of three months prior to bulk earthworks, and continue during construction, to confirm separation from the water table and identify fluctuations. Maintain a minimum 1 m clearance between the finished excavation levels and the maximum recorded groundwater table. Check groundwater levels daily during bulk excavation to ensure proposed cuts will not intersect the water table.
- Implement the Salinity Management Plan in full, including all site-specific strategies for sodic soil management, fill placement, drainage, landscaping, and structural design requirements.
- Cap exposed or placed sodic soils with a more permeable material to prevent ponding, reduce capillary rise, provide drainage, and minimise erosion. Match excavated material to in-situ soils of similar or higher salinity/aggressivity where possible. Restrict imported fill to non-aggressive and non- to slightly saline soils confirmed by testing. Avoid water collecting in low-lying areas, depressions, or behind fill.
- Incorporate effective drainage to direct runoff away from structures, prevent infiltration into permeable zones, and minimise salt mobilisation. Provide drains at the top of batter slopes to reduce concentrated flows and risk of scour. Ensure retaining walls are designed with adequate drainage to prevent salt accumulation in backfill.
- Implement erosion and sediment controls during construction and promptly stabilise exposed soils to prevent dispersion and sediment loss. Use salt-tolerant grasses and trees in landscaping to stabilise soils, reduce erosion, and maintain evapotranspiration and groundwater levels.
- Design concrete mixes, masonry and buried steelwork for salinity exposure in accordance with AS 3600, AS 2159, AS 4058 and Penrith DCP, including:
  - For mildly aggressive soils to concrete: minimum 32 MPa strength piles, 60 mm cover to reinforcement (AS 2159).
  - For moderately saline soils mildly aggressive to concrete minimum 25 MPa strength slabs and foundations, 45 mm cover to reinforcement, and minimum three-day curing period (AS 3600).
  - Use AS 4058-compliant reinforced concrete pipes (general purpose Portland cement) with minimum 10 mm cover to reinforcement, or fibre-reinforced pipes, to achieve a design life >100 years.
  - For mildly aggressive soils to steel (<1000 Ohm-cm), allow for a corrosion rate of 0.01–0.02 mm/year or equivalent protection if coating life is shorter than structure life.
- Identify and manage any unsuitable fill encountered during excavation, including oversized or organic material, to maintain foundation performance and limit potential for settlement or instability. Compact all engineered fill in accordance with AS 3798 Level 1 requirements.
- Manage soil stockpiles to prevent the spread of saline material and revegetate disturbed areas promptly. Limit irrigation volumes to reduce salt accumulation and use salt-tolerant landscaping species.

6.13 Contamination and Remediation

A Detailed Site Investigation (**DSI**) (**Appendix Q**) has been prepared by Douglas Partners to assess the contamination status of the site. The objectives of the assessment were to:

- Determine the suitability of the site for the proposed data centre development and whether further investigation or remediation is required.
- Assess the potential for off-site migration of contamination by considering potential source–pathway–receptor linkages.
- Provide a preliminary waste classification assessment to inform project planning and management.

This DSI is a revision of Douglas Partner's 2024 investigation, updated to reflect the current development proposal.

6.13.1 Existing Environment

The site comprises a compacted clay fill platform with variable silt, sand and gravel components overlying natural clays. In some locations, a silty clay layer was observed above the natural clays, likely representing a buried topsoil horizon or reworked soils from past earthworks.

The fill is thought to originate primarily from reworked natural materials, possibly imported from adjacent properties that underwent similar earthworks during the same period. Field observations and screening during the DSI did not identify gross contamination.

Chemical laboratory analysis results for fill and natural soils recorded low concentrations for all contaminants of concern, well below adopted human health and ecological investigation levels for commercial/industrial land use. Asbestos screening and laboratory analysis did not detect any asbestos-containing material.

Groundwater levels at the site have previously been recorded below 4m depth. The low concentrations detected in soils, combined with the depth to groundwater, indicate no significant risk to groundwater or surface water receptors from a contamination perspective.

Evidence of fly tipping was observed along the northern boundary adjacent to Lenore Drive. This area contains in-ground high voltage cables, limiting intrusive investigation in that zone.

6.13.2 Potential Impacts

The proposed works will primarily involve excavation of engineered fill and natural clays classified as general solid waste (non-putrescible) and virgin excavated natural material (**VENM**) respectively. No significant contamination was identified that would present a risk to human health or the environment under the proposed land use.

Potential contamination impacts are limited to:

- Disturbance of isolated fly-tipped materials near the northern boundary.
- Encountering unexpected contamination during excavation.
- Management and lawful disposal of surplus excavated material.

Subject to the below mitigation measures, Douglas Partners considers the site suitable for the proposed data centre from a contaminated land perspective. No remediation is required prior to development. Risks to human health, groundwater, and surface water are considered low, and any isolated materials of concern can be effectively managed through targeted removal and established site protocols.

6.13.3 Mitigation Measures

The DSI recommends the implementation of the following mitigation measures:

- Prior to civil works along the northern boundary, inspect for and remove any dumped material. If contamination indicators (e.g. asbestos, odours, staining) are present, engage a suitably qualified environmental consultant to manage removal and disposal.
- Implement both an unexpected finds protocol and an asbestos finds protocol during all earthworks. Cease works in affected areas until assessment and clearance is provided.
- Undertake additional assessment (inspection, sampling, analysis) to confirm final waste classifications for any surplus materials. Consider assessment of fill material under the NSW EPA Excavated Natural Material Order 2014 prior to, or in conjunction with, assessment under the Waste Classification Guidelines (2022).
- Implement erosion and sediment controls to prevent off-site migration of sediments or contaminants during construction.

6.14 Other impacts not requiring detailed assessment

This section of the report addresses the matters which require a standard impact assessment. It outlines the findings of the assessment and the key mitigation measures used to ensure compliance with the relevant standards or performance measures.

Table 26 Standard Assessment Matters

Issue (per SEARs)	Assessment	Mitigation
Biodiversity	A BDAR waiver request was prepared by Ecologique and submitted to DPHI on 15 August 2025 (**Appendix ZB**). The waiver request was prepared on the basis that: ▪ The site is located within the 'Fitzpatrick Industrial Estate', which has been the subject of a Biodiversity Management Plan (prepared by Kevin Mills and Associates) and a VPA resulting in the establishment of the Erskine Park Biodiversity Corridor. ▪ This is in place to offset the losses in biodiversity from the overall development of the Estate lands and forms part of the Ropes Creek biodiversity corridor. ▪ Previous approvals for site preparation works, including the creation of development pads, granted consent for the removal of most vegetation from the site. ▪ The site is now largely cleared of vegetation and does not contain habitat for threatened species. Limited vegetative regrowth (predominantly weeds) is present along the northern boundary on a landscaped berm created under DA19/0818. ▪ The site is fully serviced, with potential hydrological impacts previously assessed under DA19/0817 (which approved an artificial waterbody/detention basin providing storage and tertiary water quality treatment for three developments, including this site) and DA19/0818 (which approved bulk earthworks and stormwater infrastructure). Based on the above factors, DPHI granted a BDAR waiver on 12 September 2025 for the project (**Appendix ZM**).	None required
Flood Risk	A Flood Impact Risk Assessment (**Appendix ZD**) prepared by Acor Consultants has assessed potential flood risks for the proposed development in accordance with Penrith City Council's controls and the NSW Floodplain Development Manual (2005). The assessment included hydraulic modelling of the 5% AEP, 1% AEP and Probable Maximum Flood (**PMF**) events.	None required.

Issue (per SEARs)	Assessment	Mitigation
	Existing Environment The site is located within the Ropes Creek catchment and is predominantly flood-free during events up to and including the 1% AEP. Minor shallow inundation, generally less than 0.3m deep, may occur in isolated low points along the Lockwood Road frontage during the PMF event. Flood behaviour in the area is influenced by overland flow paths that traverse the surrounding industrial estate towards Ropes Creek, with the existing trunk drainage system capturing most surface flows. No habitable or operational areas within the site are currently affected by 1% AEP flood extents. **Potential Impacts** Flood modelling confirms that the proposed finished platform level is well above both the 1% AEP and PMF hazard thresholds. The development footprint will remain free from inundation in all modelled events, ensuring continued protection for the data centre's operational and critical infrastructure areas. The proposed works will maintain existing overland flow paths along Lockwood Road and preserve the performance of the local drainage network. The modelling found no measurable increase in flood levels, velocities or hazard categories on neighbouring properties or elsewhere in the catchment. The proposed development is appropriately sited and designed to avoid adverse flood impacts. The finished platform level and drainage design will ensure the facility remains free from inundation during all modelled flood events, while maintaining existing flow paths and avoiding any detrimental effects on neighbouring properties or the broader floodplain. Based on the assessment, a Flood Emergency Response Plan is not required.	
Waste Management	Nuloop have prepared An Operational Waste Management Plan (**OWMP**) and Construction Waste Management Plan (**CWMP**) which are provided at **Appendix X** and **Appendix Y** respectively. These plans identify all potential waste likely to be generated by the proposed development during the construction and operational phases and includes a description of how the waste is to be handled, processed and disposed of, or reused and recycled. **Construction Phase** During construction, waste will primarily be generated from building materials, packaging, off-cuts, and soil	The following measures, consistent with the OWMP and CWMP, will be implemented to manage waste impacts: • Apply the waste hierarchy (avoid, reduce, reuse, recycle, dispose) across all stages of the project. • Establish designated, clearly signed waste storage areas with

Issue (per SEARs)	Assessment	Mitigation
	from bulk earthworks. Based on project specifications, the estimated total construction waste is approximately 414 tonnes. No demolition waste is expected as the development does not involve demolition activities. Waste impacts during construction relate to the potential for inappropriate disposal, contamination of soils or waterways, inefficient use of materials, and unnecessary landfill contribution. The CWMP outlines systems to minimise waste, maximise reuse and recycling, and ensure compliant disposal, reducing the risk of environmental harm. **Operational Phase** Operational waste streams will be typical of a large-scale data centre and will include office-type waste (paper, cardboard, plastics, food waste), occasional packaging waste from deliveries, maintenance-related waste, and end-of-life equipment. Waste volumes are expected to be low relative to construction and will be managed in accordance with the OWMP to ensure segregation at source, recycling where possible, and lawful disposal of residual waste. Each building has suitably sized waste rooms located on the lower ground level to accommodate the anticipated volume of waste to be generated and the expected waste collection schedule. Hazardous waste generation during operations is expected to be minimal, but any such waste (e.g. from batteries or electronic equipment) will be managed in compliance with relevant regulations.	separation of materials to maximise recovery. • Implement systems for on-site reuse where feasible (e.g. reusing fill for backfilling or landscaping). • Arrange regular collection by licensed waste contractors and ensure all waste is transported to appropriately licensed facilities. • Maintain accurate records of waste quantities, destinations, and recovery rates. • Provide training and site inductions for all staff and contractors on waste minimisation and correct segregation practices. • Implement hazardous waste protocols, including early identification, secure containment, and compliant disposal. • Incorporate operational waste minimisation strategies, including recycling stations, reduced packaging procurement, and regular waste audits to improve recovery rates.
Environmental Heritage	The subject site is not listed as a heritage item under any environmental planning instrument nor comprises any statutory heritage listings. The site is not within the vicinity of any heritage items or heritage conservation areas. Accordingly, it has been found that there is no potential for works to have any detrimental heritage impacts.	None required.

Issue (per SEARs)	Assessment	Mitigation
Infrastructure Requirements and Utilities	An Infrastructure Requirements and Utility Report prepared by LCI Consultants (refer **Appendix N**) assessed the existing and required infrastructure needed to service the site and future data centre. The proposed data centre will require connection to and augmentation of key utility services to meet the operational needs of a high-performance, mission-critical facility. **Existing Environment** The subject site is located within an established industrial precinct in Erskine Park, serviced by a comprehensive network of public utilities. Sydney Water's potable water and sewer mains are available in Lockwood Road, with capacity confirmed to meet the proposed demand. Electrical supply is available from the TransGrid high-voltage transmission network in Lenore Drive, with a new on-site substation proposed to service the development. Multiple telecommunications carriers operate in the locality, enabling provision of dual diverse fibre connections. Stormwater drainage is managed via the Sydney Water trunk drainage network, with discharge to the Ropes Creek catchment. Importantly, on-site detention is not required, with the proposal to connect into the existing constructed detention basin adjacent to Ropes Creek, which provides the necessary flood storage and flow attenuation for the precinct. No natural gas services are currently connected to the site, and none are required for the proposed development. **Potential Impacts** Construction and operation of the data centre will generate increased demand on local utility networks, particularly for high-voltage electricity supply and, to a lesser extent, potable water. Key potential impacts include: ▪ **Electrical Demand** – Significant operational loads will require the installation of a new on-site substation and internal distribution network. Backup diesel generators will be installed to maintain operational continuity during outages, resulting in minor, intermittent air and noise emissions during testing. ▪ **Water Supply and Sewer Discharge** – Potable water will be required for cooling systems, fire	The following measures will be implemented to manage infrastructure-related impacts: ▪ Continue liaison with utility providers (TransGrid, Sydney Water, telecommunications carriers) to confirm connection capacity, finalise designs, and coordinate works to minimise service disruptions. ▪ Incorporate high-efficiency cooling plant, water-saving fixtures, and renewable energy generation to reduce ongoing demand on public utilities. ▪ Implement traffic and access controls during utility installation works and schedule service tie-ins to avoid peak usage periods for surrounding businesses. These measures will ensure the proposed development can be serviced without adverse impacts on existing infrastructure capacity or the surrounding environment, while supporting the facility's operational resilience and sustainability objectives.

Issue (per SEARs)	Assessment	Mitigation
	suppression, and staff amenities. Sewer flows will be limited to domestic wastewater, with no trade waste generated. ▪ **Stormwater Runoff** – Additional impervious areas will be managed through connection to the existing basin adjacent to Ropes Creek, ensuring no adverse impacts on local hydrology or downstream water quality. ▪ **Telecommunications** – Dual diverse fibre connections will be installed to ensure redundancy, involving minor civil works within existing road reserves. ▪ **Construction Impacts** – Temporary service interruptions may occur during utility connection works, with potential for short-term traffic and access disruption along Lockwood Road and Lenore Drive. Given the availability of existing infrastructure and the scale of proposed augmentation, these impacts are expected to be localised, short-term, and manageable with appropriate design and construction practices.	
Bushfire Risk	A Bushfire Hazard Assessment (**Appendix Z**) prepared by Blackash Bushfire Consulting assesses potential bushfire risks for the proposed development. **Existing Environment** The site not identified as bushfire prone land under the Penrith City Council Bushfire Prone Land Map and is surrounded predominantly by industrial land. The only nearby bushfire hazard is a small area of Coastal Valley Grassy Woodland, Grassland and Coastal Floodplain Wetland vegetation within the C2 Environmental Conservation corridor to the east. This land was recently removed from bushfire prone mapping due to its low risk. The northern, southern and western boundaries are free of bushfire hazard. **Potential Impacts** While the site is not on mapped bushfire prone land, the presence of vegetation within the adjoining C2 corridor presents a residual bushfire risk. Without appropriate controls, potential impacts include: • If vegetation is unmanaged and no separation is provided, fire in the C2 corridor could increase radiant heat exposure and, under extreme conditions, allow limited flame contact to the eastern façade.	The following measures, consistent with the Bushfire Hazard Assessment, will be implemented to manage bushfire risk: ▪ At the commencement of building works and in perpetuity, the entire site shall be maintained as an Asset Protection Zone. The APZ shall be established and maintained as an inner protection area as outlined within *Planning for Bushfire Protection 2019* and the NSW RFS document '*Standards for Asset Protection Zones*'. ▪ Proposed new buildings are to be constructed to comply with the National Construction Code (2019), Australian Standard AS 3959:2018, *Construction of buildings in bush fire-prone areas* and/or NASH

Issue (per SEARs)	Assessment	Mitigation
	• Winds could carry burning debris into the site, potentially igniting combustible materials, debris or landscaping. • A bushfire in the corridor could affect air quality, visibility and operational safety. • Fire activity adjacent to the site could impede emergency service operations or complicate evacuation. As such, a minimum 12-metre Asset Protection Zone (**APZ**) is proposed along the eastern boundary to provide a defendable space, reduce fuel loads, and ensure separation between hazard vegetation and the building envelope. This buffer also ensures that most of the building footprint is more than 100 metres from hazard vegetation, resulting in a Bushfire Attack Level (**BAL**) classification of BAL-Low for the majority of the development, with no specific bushfire construction provisions required in those areas.	Standard (1.7.14 updated), *National Standard Steel Framed Construction in Bushfire Areas – 2014*, and Section 7.5 of *Planning for Bush Fire Protection 2019* on a prescriptive (deemed to satisfy and/or acceptable solution) basis and/or performance basis to the extent identified in the Bushfire Hazard Assessment. Implementation of these measures will ensure the development meets the aims and objectives of PBP 2019 by providing adequate separation from hazard vegetation, reducing potential bushfire attack, supporting safe access and egress, and enabling effective firefighting operations.
BCA	A BCA Compliance Report (**Appendix I**) prepared by bm+g confirms that the proposed development can be designed and constructed to achieve compliance with the National Construction Code (**NCC**) 2022 requirements for a Class 7b building (data centre). Key considerations include: ▪ Provision of appropriate fire resistance levels for structural elements, fire separation between fire compartments, and protection of openings to limit fire spread. ▪ Adequate number, width, and separation of exits, with travel distances within allowable limits. Exit paths to discharge directly to a road or open space. ▪ Compliance of mechanical ventilation, emergency lighting, exit signage, and essential services with NCC performance requirements. ▪ Incorporation of accessible facilities, paths of travel, and door hardware in accordance with NCC Part D4, referencing the Disability (Access to Premises – Buildings) Standards 2010. The BCA assessment confirms that no fundamental non-compliances have been identified. Any detailed	It is anticipated that a suitable condition of consent can be imposed on the proposed data centre to ensure the recommendations of the BCA Report are addressed prior to the issue of the relevant Construction Certificate.

Issue (per SEARs)	Assessment	Mitigation
	compliance matters can be addressed during the detailed design and construction certificate stages.	
Accessibility	An Access Capability Report (**Appendix J**) prepared by STACC confirms the proposal can be designed to meet the Disability Discrimination Act 1992 and the Access to Premises Standards 2010, as well as NCC accessibility provisions. Key outcomes include: ▪ At least one continuous accessible path of travel from the site boundary and car parking spaces to building entries. ▪ Provision of compliant accessible parking bays located near main building entries, with appropriate circulation space and signage. ▪ Accessible sanitary facilities located on each floor and sized in accordance with AS 1428.1:2021. ▪ Lifts provided where required to connect all accessible floors, with compliant controls, dimensions, and fit out. No significant barriers to compliance were identified. Recommendations relate to ensuring door widths, gradients, tactile indicators, and signage are addressed at the detailed design stage.	It is anticipated that a suitable condition of consent can be imposed on the proposed data centre to ensure the recommendations of the Access Capability Report are addressed prior to the issue of the relevant Construction Certificate.
Greenhouse Gas Emissions	A Greenhouse Gas (GHG) Emissions Assessment (refer **Appendix ZI**) has been prepared for the proposed data centre development at 78 Lockwood Road, Erskine Park, in accordance with the NSW Guide for Large Emitters. The assessment confirms that the project meets the classification threshold for a large emitter, as combined Scope 1 and 2 emissions are expected to exceed 25,000 tonnes of CO_2-e per year under a benchmark operating scenario. To ensure alignment with the *NSW Guide for Large Emitters*, the assessment has been verified by an independent expert review. **Assessment Methodology and Scenarios** The GHG assessment considered emissions across the construction and operational stages within the defined project boundary, including Scope 1 (direct emissions from fuel combustion and refrigerants) and Scope 2 (indirect emissions from purchased electricity). Three comparative operational scenarios were assessed: ▪ Scenario 1 – Benchmark: Representative national average data centre performance with an approximate Power Usage Effectiveness (PUE) of	To minimise greenhouse gas emissions, the following measures will be implemented as part of the project: ▪ Operating data halls at elevated temperature and humidity setpoints, incorporating direct-to-chip liquid cooling, and using waterside economy/free cooling to reduce reliance on chillers. ▪ Installing high-efficiency chillers with modern compressor technology, elevated chilled water temperatures, and refrigerants with a GWP of 1. ▪ Maximising rooftop solar PV, with a combined minimum capacity of approximately 230 kWe across both data centre buildings.

Issue (per SEARs)	Assessment	Mitigation
	1.6, aligning with minimum NABERS 3-Star Energy performance requirements. ▪ Scenario 2 – Design Measures: Incorporating targeted design features to minimise energy demand and maximise efficiency, supporting an annual PUE of 1.35. ▪ Scenario 3 – All Measures: Includes all Scenario 2 measures plus procurement of 100% renewable electricity for all non-IT equipment from the commencement of operation, and achievement of net-zero Scope 1 and 2 emissions for non-IT equipment by 2050, consistent with the proponent's emissions goals. **Operational Emissions** Average annual operational Scope 1 and 2 emissions were estimated for both the proponent's direct operations and the total site emissions including tenants. Under the Benchmark scenario, which reflects typical national average data centre performance (PUE of 1.6), emissions under the proponent's control are estimated at approximately 42,044 tonnes of CO_2-equivalent per year. When tenant IT equipment loads are included, total site emissions are projected to be around 85,626 tonnes of CO_2-equivalent per year. Under the Design Measures scenario, which incorporates the project's high-efficiency design features (target PUE of 1.35), emissions under the proponent's control are expected to decrease by 63.3%, to approximately 15,410 tonnes of CO_2-equivalent per year. When tenant emissions are included, total site emissions reduce by about 31%, to approximately 58,991 tonnes of CO_2-equivalent per year. Under the All Measures scenario, which combines the design efficiencies with the commitment to procure 100% renewable electricity for all non-IT operations from the start of operations and to achieve net-zero Scope 1 and 2 emissions by 2050, emissions under the proponent's control fall by 99.8%, to around 70 tonnes of CO_2-equivalent per year. This is well below the NSW Guide for Large Emitters threshold of 25,000 tonnes of CO_2-equivalent per year. Including tenant IT emissions, total site emissions reduce by approximately 49% compared with the benchmark, to about 43,651 tonnes of CO_2-equivalent per year.	▪ Using high-efficiency LED lighting with occupant-responsive controls. ▪ Applying low-absorptivity/high-SRI external finishes, high-performance fabric/glazing, and shading to reduce thermal loads. ▪ Procuring 100% renewable electricity for all non-IT operational energy use from commencement of operations. ▪ Investigating renewable diesel alternatives at other sites, with potential future application to this facility.

Issue (per SEARs)	Assessment	Mitigation
	The assessment demonstrates that the proposed design and operational strategy will achieve substantial reductions in greenhouse gas emissions, with almost all proponent-controlled emissions eliminated under the All Measures scenario. **Construction and Scope 3 Emissions** Construction-related emissions will result from embodied carbon in building materials, manufacturing and transport of materials, and fuel use in construction equipment. These are one-off emissions that occur over a short period compared with the operational life of the facility. Scope 3 emissions were also estimated for information as required by the *NSW Guide for Large Emitters*. These include indirect emissions outside the proponent's control, such as supply-chain and tenant-related activities. The assessment confirms that operational Scope 1 and 2 emissions dominate the overall GHG profile, with construction and Scope 3 emissions representing a comparatively minor contribution to total lifecycle emissions **Summary** The assessment concludes that the project has been designed to substantially reduce GHG emissions through: ▪ High-efficiency building systems and low-PUE design; ▪ Integration of renewable energy procurement for non-IT loads; and ▪ A long-term commitment to achieving net-zero Scope 1 and 2 emissions for all non-IT operations by 2050. Accordingly, the project will achieve significant reductions in GHG emissions relative to standard data-centre benchmarks and aligns with NSW Government policy objectives to transition towards low-carbon, energy-efficient infrastructure.	

7 Justification of the Project

7 Justification of the Project

This section of the report provides a comprehensive evaluation of the project having regard to its economic, environmental and social impacts, including the principles of ecologically sustainable development. It assesses the potential benefits and impacts of the proposed development, considering the interaction between the findings in the detailed assessments and the compliance of the proposal within the relevant controls and policies.

7.1 Project Design

The design of the project has been carefully considered to ensure any potential impacts of the development are minimised. The development will deliver a state-of-the-art data centre within a strategic site that can help bolster the increasing demand for cloud-based data storage in Australia.

The design of the building and layout has been carefully considered to be optimised for the site. The buildings and associated landscaping will complement the existing and future character of the area.

7.2 Strategic Planning Consistency

This EIS has demonstrated that the Proposal is consistent with the strategic framework and has been considered against the key statutory and non-statutory instruments applying to the site including the following:

- *Greater Sydney Region Plan – A Metropolis of Three Cities*
- *Our Greater Sydney 2056: Western City District Plan*
- *Greater Sydney Region Plan: A Metropolis of Three Cities*
- *Our Greater Sydney 2056: Western City District Plan*
- *Penrith Local Strategic Planning Statement 2020*
- *Penrith Employment Lands Strategy 2021*
- *Penrith Economic Development Strategy*
- *GANSW Better Placed*
- *Future Transport Strategy 2056*

The proposal is consistent with the State and local strategic planning policies. Consistency is achieved through the provision of employment, and implementation of ESD measures that contribute to create a new and leading-edge form of development, for the purposes of a data centre. The proposed development complements significant government investment in infrastructure, including the recently upgraded Lenore Drive.

7.3 Statutory Planning Consistency

The relevant State and local environmental planning instruments are listed in **Section 4** and assessed in **Appendix B**. The assessment concludes that the proposal complies with the relevant provisions within the relevant instruments as summarised below:

- The proposed development has been assessed and designed in respect to the relevant Objects of the EP&A Act as defined in section 1.3 the Act and has been evaluated in accordance the relevant matters for consideration under s4.15(1) of the EP&A Act as outlined in **Appendix B**.
- This EIS has been prepared in accordance with the SEARs as required by sections 190-192 of the EPA Regulation.
- Consideration is given to the relevant matters for consideration as required under the BC Act and the Proposal is supported by a BDAR Waiver and a relevant environmental assessment.

- This SSDA pathway has been undertaken in accordance with the Planning Systems SEPP as the proposed development is classified as SSD.
- An EPL will be required as per the requirements of Schedule 1 clause 9 of the POEO Act.
- Concurrence from TfNSW will be required as per the T&I SEPP for 'traffic generating development'.
- The proposal addresses the principles of ESD in accordance with the requirements at section 194 of the EPA Regulation and as outlined below:

Table 27 Consistency wit EP&A Regulation s.193

Matter	Consistency
The precautionary principle	The precautionary principle relates to uncertainty around potential environmental impacts and where a threat of serious or irreversible environmental damage exists, lack of scientific certainty should not be a reason for preventing measures to prevent environmental degradation. This EIS has not identified any serious threats of environmental damage that cannot be adequately mitigated or addressed based on current scientific standards and best practices. In this regard, the proposed development can be considered generally consistent with the precautionary principle.
Inter-generational equity	Intergenerational equity: the needs of future generations are considered in decision making and that environmental values are maintained or improved for the benefit of future generations. The needs of future generations are considered in decision making and environmental values are maintained or improved for the benefit of future generations by: ▪ Providing new local employment opportunities during the construction and operational phases. ▪ Delivering a development that will assist in providing key technology infrastructure that will ensure the economic vitality of a key employment generating corridor and area of Sydney.
Conservation of biological diversity and ecological integrity	As demonstrated in **Section 6** and throughout the EIS, the proposed development will not result in any significant impacts on biological and ecological integrity of surrounding land, subject to the implementation of mitigation measures. The planting of native vegetation will facilitate a development that will conserve and support local ecological diversity and integrity.
Improved valuation, pricing and incentive mechanisms	Improved valuation, pricing and incentive mechanisms: this requires the holistic consideration of environmental resources that may be affected as a result of the development including air, water and the biological realm. It places a high importance on the economic cost to environmental impacts and places a value on waste generation and environmental degradation. The development will not have any unacceptable impacts on the natural environment in relation to air quality, water quality or waste management. The effects of the development will be acceptable and managed accordingly by the proposed mitigation measures as required. Overall, the proposal will not have any unacceptable impacts on the natural environment. The ESD Report (**Appendix ZE**) identifies sustainability measures including energy savings, energy efficiency and waste minimisation.

7.4 Community Views

Community and stakeholder engagement has been undertaken by the Applicant and Urbis in preparation of the SSDA. This included direct engagement and consultation with:

- Surrounding landowners, tenants and businesses.
- RAPs as part of the ACHAR process.
- Government, agency, utility services and other key stakeholders.

This engagement was consistent with the community participation objectives in the Undertaking Engagement Guidelines for State Significant Projects and complied with the community engagement requirements.

Feedback obtained from Government agencies and utility stakeholders has been incorporated into the design and assessment in the EIS. At the time of lodgement of the SSDA, very few submissions were made, and no objections were raised. Comments primarily sought clarification on traffic management, access arrangements, and environmental considerations such as noise and air quality.

In accordance with the EPA Regulation, the EIS will be placed on formal public exhibition once DPHI has reviewed the EIS and deemed it 'adequate' for this purpose. Following this exhibition period, the Applicant will respond to any matters raised by notified parties.

7.5 Environmental Impacts

The proposed development has been assessed considering the potential environmental, economic and social impacts as outlined in the summary table below.

Table 28 Environmental Impact Summary

Matter	Summary
Impacts on the natural environment	The proposal has been assessed in relation to the following key natural environment impacts: ▪ **Contamination:** A DSI confirmed the site is suitable for the proposed use. No significant contamination was identified, and the risk to human health and the environment is low, subject to standard construction and site management measures. ▪ **Flooding:** The south-eastern portion of the site is mapped as being within the 1% AEP flood extent; however, no built form is proposed in this area. Stormwater will be managed by connecting to the adjacent detention basin within the Ropes Creek catchment. The proposal will not alter flood behaviour or increase risk to surrounding land. ▪ **Bushfire:** While the site is not mapped as bushfire prone land, existing vegetation to the east associated with the Ropes Creek corridor presents a potential bushfire hazard. To address this, the proposal incorporates an APZ consistent with the recommendations of the Bushfire Hazard Assessment. The APZ ensures adequate separation between the development and the hazard, thereby mitigating bushfire risk and ensuring compliance with relevant NSW RFS guidelines. ▪ **Biodiversity:** The site has been previously cleared and is highly disturbed, with no native vegetation communities or threatened species habitat present. The proposal will not result in the removal of native vegetation or impact on any threatened species, populations, or ecological communities. Landscaping with locally appropriate species will provide incidental ecological benefits and contribute to precinct greening objectives.

Matter	Summary
	▪ **Salinity:** A Salinity Management Plan identifies moderate to high salinity across parts of the site. The proposal incorporates recommended mitigation measures, including suitable construction materials, subsoil drainage, and salt-tolerant landscaping. With these measures, salinity risks to buildings, services, and landscaping will be effectively managed. ▪ **Aboriginal cultural heritage:** An Aboriginal Cultural Heritage Assessment confirmed no Aboriginal objects or places will be impacted. The risk of unexpected finds is low and can be managed through an Unexpected Finds Protocol.
Impacts on the built environment	The proposal has been assessed in relation to the following key built environment impacts: ▪ **Bulk and Scale**: The proposed built form is compatible with the existing and planned future industrial context of the Erskine Park Employment Area. The design incorporates façade articulation, varied materials, and recessed office elements to break down visual massing, complemented by substantial landscape buffers. This ensures the overall scale and presentation are appropriate for the precinct and consistent with the emerging built character. ▪ **Trees and Landscaping**: No tree removal is required. The proposal delivers over 14,700m² of deep soil landscaping (approximately 19% of the site area) and new canopy plantings along Lockwood Road, Lenore Drive, and site boundaries. These measures will provide visual screening, enhance the streetscape, improve local amenity, support biodiversity, and mitigate urban heat island effects. ▪ **Visual Impacts**: The proposal is visually compatible with the desired future character and land uses within the locality. The visual impacts range from nil to medium-low. The proposal does not impact on views to any heritage items or areas of unique scenic quality. The proposal can therefore be supported on visual impact grounds. ▪ **Traffic**: The development will generate up to 37 peak-hour vehicle trips. The TIA confirms that the surrounding road network and intersections are forecast to continue operating satisfactorily, with safe and efficient site access provided from Lockwood Road. Internal circulation arrangements accommodate both light and heavy vehicle movements without conflict, supported by security-controlled entry. ▪ **Noise and Vibration**: The construction and operational noise impacts are generally below the relevant noise criteria. Any exceedances will be temporary during construction and appropriate mitigation measures have been recommended to manage construction noise. Overall, the proposal has been assessed as appropriate from an acoustic perspective. ▪ **Air Quality**: Construction-related air quality impacts, primarily from dust and emissions generated by plant and equipment, will be temporary and can be effectively managed through standard site controls and mitigation measures. During operation, emissions are limited to periodic testing of standby generators. Dispersion modelling confirms that these emissions will remain well within the relevant criteria at all sensitive receivers, with no adverse cumulative effects anticipated. On this basis, the proposal is considered appropriate from an air quality perspective.
Social impacts	▪ The proposal will create employment opportunities during both the construction and operational phases. During construction, jobs will be generated in various

Matter	Summary
	trades and services, benefiting local contractors and suppliers. In operation, the data centre will provide ongoing roles in areas such as facility management, IT infrastructure, research and development, and administration. These roles contribute to regional economic growth and local workforce development. ▪ The development of a contemporary data centre addresses the increasing demand for digital infrastructure and data storage in the Sydney region. By enabling businesses to securely store and process data, the proposal aligns with the strategic goals of WSEA to position itself as a hub for employment, technology and innovation. ▪ The inclusion of generous landscaped setbacks and green spaces will enhance the visual and functional quality of the streetscape and mitigate against the urban heat island effect. These enhancements will create a more pleasant and accessible environment for local workers and visitors, contributing to community well-being and urban amenity. ▪ The proposal incorporates a range of sustainability measures to reduce energy consumption while minimising environmental and amenity impacts
Economic impacts	▪ The proposal will facilitate the orderly and economic development of a highly strategic site. ▪ The proposal will provide employment opportunities during both the construction and operational phases of the development. ▪ The proposal will meet the growing demand for data storage space in a highly suitable location.
Cumulative impacts	The proposed development will contribute to the ongoing transition of the Erskine Park Employment Area into a high-tech industrial precinct. Given the site's location within an established industrial context and the scale of the project, cumulative impacts are expected to be limited and manageable. Utility augmentation, stormwater discharge to the adjacent detention basin, and localised traffic generation have been assessed as having negligible to low cumulative effects on surrounding infrastructure networks. Landscaping, deep soil provision, and canopy planting will assist in mitigating urban heat contributions at a precinct scale. Operational air quality and noise impacts are confined to periodic generator testing and comply with relevant criteria, ensuring no unacceptable cumulative effects on nearby sensitive receivers. Through adoption of sustainable design measures, including high-efficiency cooling systems, renewable energy commitments, and low-carbon construction materials, the project will further reduce its contribution to cumulative environmental loads.

The potential impacts can be mitigated, minimised or managed through the measures discussed in detail within **Section 6** and as summarised in **Appendix C** to this EIS.

7.6 Suitability of the Site

The site is considered highly suitable for the proposed development for the following reasons:

- The site comprises a large, consolidated landholding that is vacant and has been previously cleared of structures and vegetation, making it readily available for development.
- No significant environmental constraints have been identified that would limit or preclude the proposed use.

- The character, bulk, and scale of the development are compatible with the existing and likely future context of the Erskine Park Industrial Precinct, which is evolving as a high-quality employment area.
- The project will optimise use of a vacant site, deliver strategic employment objectives and support business activity within both the precinct and the broader WSEA.
- The site is well serviced, with utilities and infrastructure available to support operations without the need for additional government investment.
- The location provides direct access to the regional road network, ensuring efficient connectivity for staff, visitors, and freight movements.
- Environmental assessments confirm the development will not result in adverse impacts on surrounding land uses, including the nearest residential area located approximately 300 metres to the north.

7.7 Public Interest

The proposed development is considered in the public interest for the following reasons:

- The proposal is consistent with relevant State and local strategic plans and complies with the relevant State and local planning controls including the relevant provisions in the I&E SEPP and Penrith DCP 2014.
- Subject to the implementation of the recommended mitigation measures, no adverse social or environmental impacts result from the proposal in terms of traffic, noise and vibration, air quality or views during construction and operation of the development.
- The potential impacts of this development are significantly reduced compared to traditional industrial land uses, e.g. warehousing and distribution, which have greater potential noise and traffic impacts.
- The proposal directly contributes to the important role that the WSEA plays as an employment generating precinct within the broader Western Parkland City, as identified in the Region Plan.
- The proposal provides critical infrastructure which will support the growth for the digital economy within NSW and more broadly.
- The proposal will protect and enhance employment lands and increase job numbers.
- No major issues relating to the construction and operation of the development were raised during the pre-lodgement consultation with the local community, Council, Government and agency stakeholders.

Having considered all relevant matters, we conclude that the proposed development is appropriate for the site and approval is recommended, subject to appropriate conditions of consent.

8 Conclusion

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8 Conclusion

In conclusion, the proposed development project has been thoroughly evaluated, taking into account its economic, environmental, and social impacts. The project design minimises potential negative impacts, and strategic planning consistency has been ensured, aligning with government strategic policies and regional plans.

The project complies with all relevant state and local environmental planning instruments, demonstrating statutory planning consistency. It also adheres to the principles of ecologically sustainable development, considering inter-generational equity, conservation of biological diversity, and improved valuation, pricing, and incentive mechanisms.

Community views have been considered and addressed in the project design and impact assessment. The potential environmental impacts have been assessed, and measures have been proposed to mitigate, minimise or manage these impacts.

The site has been deemed highly suitable for the proposed development, considering various factors such as the locality, site attributes, and potential hazards. The project is also in the public interest, aligning with relevant federal, state, and local strategic plans and studies, and providing benefits to the health and safety of the public.

This project represents a thoughtful and responsible approach to urban development, balancing economic growth, environmental sustainability, and social considerations. Given the comprehensive evaluation and the measures taken to address potential impacts, the proposed development is deemed appropriate for the site. Approval is recommended, subject to appropriate conditions of consent and implantation of the recommended mitigation measures.

Disclaimer

This report is dated 11 November 2025 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of STACK Infrastructure **(Instructing Party)** for the purpose of SSDA **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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