SSD-55266460 45-57 MOXON ROAD, PUNCHBOWL

Environmental Impact Statement

Prepared for
Hale Capital Development Management
17 July 2023

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

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Project Code	P0042549
Report Number	02

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

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Project details		
Project name	45-57 Moxon Road, Punchbowl	
Application number	SSD-55266460	
Address of the land in respect of which the development application is made	45-57 Moxon Road, Punchbowl	
Applicant details		
Applicant name	Hale Capital Development Management PTY LTD	
Applicant address	Suite 903, 25 Martin Place Sydney NSW 2000	
Details of people by whom this EIS was prepared		
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Declaration

The undersigned declares that this EIS:

- has been prepared in accordance with Schedule 2 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;
- contains the information required under the *Registered Environmental Assessment Practitioner Guidelines*;
- 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.		
Signatures		
 Alaine Roff, Director (RPIA)	 Holly Rhoades, Senior Consultant	
17 July 2023	17 July 2023	

Glossary and Abbreviations

Reference	Description
ACHA	Aboriginal Cultural Heritage Assessment
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACM	Asbestos Containing Material
AEP	Annual Exceedance Probability
AHIMS	Aboriginal Heritage Information Management System
AIA	Arboricultural Impact Assessment
AQIA	Air Quality Impact Assessment
AQMS	Air Quality Monitoring Station
ARI	Average Recurrence Interval
ARR	Accessibility Report
ASS	Acid Sulfate Soil
ASSMP	Acid Sulfate Soil Management Plan
AV	Articulated Vehicles
AVD	Average Vehicle Delay
BAM	Biodiversity Assessment Method
BC Act	*Biodiversity Conservation Act 2016*
B&C SEPP	*State Environmental Planning Policy (Biodiversity and Conservation) 2021*
BCA	Building Code of Australia
BC Reg	*Biodiversity Conservation Regulation 2017*
BDAR	Biodiversity Development Assessment Report
CBCity	Canterbury Bankstown City Council
CDCP 2012	*Canterbury Development Control Plan 2012*
CBDCP	*Canterbury Bankstown Draft Development Control Plan 2021*
CBD	Central Business District
CEEC	Critically Endangered Ecological Community
CER	Civil Engineering Report

Reference	Description
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
CLEP 2012	*Canterbury Local Environmental Plan 2012*
Council	Canterbury Bankstown City Council
CTMP	Construction Traffic Environmental Plan
DCP	Development Control Plan
DOS	Degree of Saturation
DPE	New South Wales Department of Planning and Environment
DSI	Detailed Site Investigation
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA Regulation	*Environmental Planning and Assessment Regulation 2021*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EIS	Environmental Impact Statement
EPA	New South Wales Environment Protection Authority
EOT	End of Trip
FPL	Flood Planning Level
GANSW	Government Architect NSW
GI	Geotechnical Investigation
GTP	Green Travel Plan
HBMS	Hazardous Building Materials Survey
LGA	Local Government Area
LOS	Level of Service
LSA	Light Spill Assessment
LSPS	Canterbury Bankstown *Local Strategic Planning Statement Connective City 2036*
LTEMP	Long Term Environmental Management Plan
NHVR	National Heavy Vehicle Regulator
NML	Noise Management Level
NO_2	Nitrogen Dioxide

Reference	Description
NPfI	Noise Policy for Industry
NVIA	Noise and Vibration Impact Assessment
R&H SEPP	*State Environmental Planning Policy (Resilience and Hazards) 2021*
PAD	Potential Archaeological Deposit
PASS	Potential Acid Sulfate Soil
PBP	Planning for Bushfire Protection
PCB	Polychlorinated Biphenyls
Planning Systems SEPP	*State Environmental Planning Policy (Planning Systems) 2021*
PMF	Probable Maximum Flood
PSI	Preliminary Site Investigation
PPE	Personal Protective Equipment
RAP	Remediation Action Plan
RCR	Regulatory Compliance Report
RHR	Resilience and Hazards Report
RSA	Road Safety Audit
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SHI	Statement of Heritage Impact
SMP	Salinity Management Plan
IA	Services Infrastructure Assessment
SIA	Social Impact Assessment
SIDRA	Signalised & Unsignalised Intersection Design and Research Aid
Site	45-57 Moxon Road, Punchbowl Lot B in Deposited Plan 390488, Lot 1 in Deposited Plan 618465, Lots 221 and 222 in Deposited Plan 840328, Lot 23 in Deposited Plan 552521
SSD	State Significant Development
SSDA	State Significant Development Application
SRZ	Structural Root Zone

Reference	Description
SMF	Synthetic Mineral Fibres
TEC	Threatened Ecological Community
TfNSW	Transport for NSW
TMAP	Transport Management & Accessibility Plan
TPZ	Tree Protection Zone
TRH	Total Recoverable Hydrocarbons
VIA	Visual Impact Assessment
WCM	Water Cycle Management
WMP	Waste Management Plan
WSUD	Water Sensitive Urban Design

Executive Summary

This Environmental Impact Statement (**EIS**) has been prepared on behalf of Hale Capital Development Management Pty Ltd (**Hale Capital** / **the applicant**) in support of a State Significant Development Application (**SSDA**) for a 'Warehouse and Distribution Centre' at 45-57 Moxon Road, Punchbowl.

Hale Capital has identified an opportunity to redevelop and consolidate multiple industrial sites to provide an innovative warehouse and distribution centre. Specifically, the intended outcomes of the project are to:

- Provide a modern two-storey warehouse and distribution centre, strategically located in proximity to key transport nodes and central to Sydney Airport, Port Botany and Western Sydney.
- Deliver 269 jobs through the construction phase and up to 585 jobs once operational.
- Develop a high quality design that takes into consideration the surrounding site context and neighbouring uses to deliver an improved urban outcome for the site.
- Integrate landscaping and tree planting to ensure a high standard of architectural, urban and landscape design is provided on the site and at the interface with Salt Pan Creek.

The proposal is for the purposes of warehouse or distribution centre with a capital investment value of $82,110,000. Accordingly, it is classified as a State Significant Development (**SSD**) under Clause 12, Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021*.

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

Figure 1 Aerial Photograph

Source: Urbis

Feasible Alternatives

Various project alternatives were considered for the proposed warehouse and distribution centre.

A ‘do nothing’ approach would fail to deliver the sustainable development of the site to provide up to 854 jobs through the construction and operation phases.

Alterative locations were considered by Hale Capital for the warehouse and distribution centre. These options were not considered to be the preferred option for the proposed development as they were not as strategically located central to Sydney Airport, Port Botany and Western Sydney as well as key road networks, as the preferred location.

An alternate design was also considered however this did not provide for the best environmental impacts and urban design outcome for the site.

The Proposal

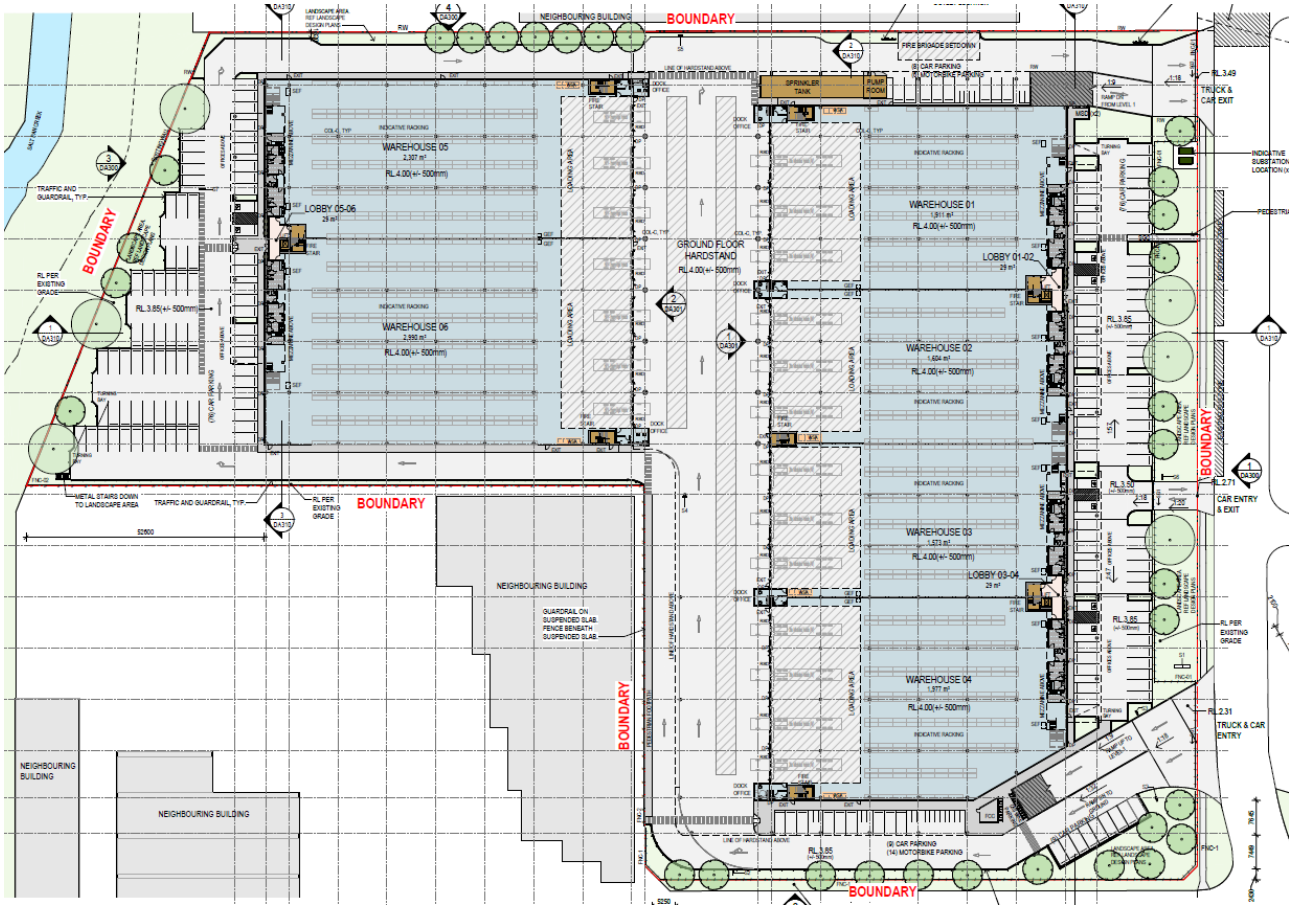
The proposal will deliver an innovative two-storey warehouse and distribution facility of a high-quality design that is sympathetic to the local context. The proposal seeks to consolidate the multiple lots of industrial land into one site which is located within an established industrial precinct. This will deliver a variety of employment opportunities on site, whilst minimising any potential impacts on local amenity. The proposed development involves:

- Demolition of all existing buildings and structures, construction, fit out and operation of a two-storey warehouse and distribution centre comprising 29,309m^2 GFA including:
  - 12 warehouse and distribution tenancies with a total 25,565m^2 GFA; and
  - 3,744m^2 GFA ancillary office space.
- Provision of 20 bicycle parking spaces, 20 motorcycle parking spaces and 178 car parking spaces at ground floor level.
- Approximately 3,450m^2 of soft landscaping at ground level.
- Replacement of the five existing vehicular access from Moxon Road with three new access driveways.
- Earthworks and upgrades to existing on-site infrastructure.
- Provision of internal vehicle access road and loading docks.
- Building identification signage.
- Hours of operation 7:00am to 10:00pm Monday to Saturday.

The site was identified as being the most suitable location to deliver the project objectives.

The proposal will be undertaken in accordance with the Architectural Plans prepared by SBA Architects at **Appendix B**. The proposed site plan is provided at **Figure 2.**

Figure 2 Proposed Site Plan



Source: SBA Architects

Consultation

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.
- Government, agency and utility stakeholders.

The outcomes of the community and stakeholder engagement have been incorporated into the proposed design for the warehouse and distribution centre and are discussed in detail at **Section 5** of this EIS.

Justification of the Project

This EIS assesses the development as proposed with regard to relevant planning instruments and policies, and outlines the mitigation measures to ensure the project does not result in unreasonable or adverse environmental effects. Additionally, the proposed development satisfies the Secretary's Environmental Assessment Requirements (**SEARs**) issued for the project.

The key issues for all components of the project identified in the SEARs have been assessed in detail, with specialist reports underpinning the key findings and recommendations identified in the Assessment of Impacts in **Section 6**. It has been demonstrated that for each of the likely impacts identified in the assessment of the key issues, the impact will either be positive or can be appropriately mitigated.

The proposal represents a positive development outcome for the site and surrounding area for the following reasons:

- **The proposal is consistent with state and local strategic planning policies:**

  The proposal is consistent with the relevant goals and strategies contained in:

- *Greater Sydney Region Plan: A Metropolis of Three Cities*
- *Our Greater Sydney 2056: South District Plan*
- *City of Canterbury Bankstown Local Strategic Planning Statement.*

- **The proposal satisfies the applicable local and State development controls:**

  The proposal is permissible with consent and meets the relevant statutory requirements of the relevant environmental planning instruments, including:

  - *State Environmental Planning Policy (Industry and Employment) 2021*
  - *State Environmental Planning Policy (Planning Systems) 2021*
  - *State Environmental Planning Policy (Resilience and Hazards) 2021*
  - *State Environmental Planning Policy (Transport and Infrastructure) 2021*
  - *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
  - *Canterbury Local Environmental Plan 2012* (**CLEP 2012**).

- **The design responds appropriately to the opportunities and constraints presented by the site:**

  - The design of the proposal responds to the site context whilst seeking to deliver an attractive, modern warehouse and distribution facility. The design has taken into consideration the site qualities as well as neighbouring land uses and built form.
  - The proposed built form reflects the industrial character of the precinct whilst being sympathetic to the adjacent Creek and residential area.
  - The built form, facade treatment and materiality enhance the quality of the site as well as the provision of increased landscaping and an improved streetscape.
  - The design includes vehicular access from Moxon Road with a one-way circular vehicular route through the site.

- **The proposal is highly suitable for the site:**

  - The warehouse and distribution centre use is permissible within the IN2 zone. It also satisfactorily responds to the zone objectives, providing for warehouse land uses, encouraging employment opportunities, and minimising potential adverse effects on other land uses.
  - The site is located within an existing industrial area and the character and scale of the development is compatible with the site context.
  - The site is well connected to key transport nodes, making it highly accessible to the freight network.
  - The proposal optimises the use of multiple outdated individual industrial buildings to consolidate into one modern development design to meet current and future tenant demand.

- **The proposal 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.
  - The proposal will stimulate local investment and contribute significant economic output and value add to the economy each year, delivering up to 854 jobs through the construction and operation phases.
  - Subject to implementation of the recommended mitigation measures, no adverse, social or economic impacts will result from the proposal in terms of traffic, noise and vibration, air quality and odour or views during construction and ongoing operation of the facility. Based on the assessment of noise, air quality and traffic, the proposal will not result in any adverse cumulative impacts.
  - The issues identified during the community and stakeholder engagement have been addressed through the assessment of the impacts of the modified project.

In view of the above, it is considered that this SSD Application has significant merit and should be approved subject to the implementation of the mitigation measures described in this report and supporting documents.

1 Introduction

This section of the report identifies the applicant for the project and describes the site and proposed development. It outlines the site history and feasible alternatives explored in the development of the proposed concept, including key strategies to avoid or minimise potential impacts.

1.1 Applicant Details

The applicant details for the proposed development are listed in the following table.

Table 1 Applicant Details

Descriptor	Proponent Details
Full Name(s)	Hale Capital Development Management Pty Ltd
Postal Address	Suite 903, 25 Martin Pace Sydney NSW 2000
ABN	89 655 366 322
Nominated Contact	Dominic Sester

1.2 Project Description

This EIS is submitted to the Department of Planning and Environment (**DPE**) on behalf of the Hale Capital and in support of an application for SSD-55266460 at 45-57 Moxon Road, Punchbowl.

The SSDA seeks consent for:

- Demolition of all existing buildings and structures, construction, fit out and operation of a two-storey warehouse and distribution centre comprising 29,309m^2 GFA including:
  - 12 warehouse and distribution tenancies with a total 25,565m^2 GFA; and
  - 3,744m^2 GFA ancillary office space.
- Provision of 20 bicycle parking spaces, 20 motorcycle parking spaces and 178 car parking spaces at ground floor level.
- Approximately 3,450m^2 of soft landscaping at ground level.
- Replacement of the five existing vehicular access from Moxon Road with three new access driveways.
- Earthworks and upgrades to existing on-site infrastructure.
- Provision of internal vehicle access road and loading docks.
- Building identification signage.
- Hours of operation 7:00am to 10:00pm Monday to Saturday.

The key objectives for the proposed development and the way in which these have been achieved are summarised in **Table 2**.

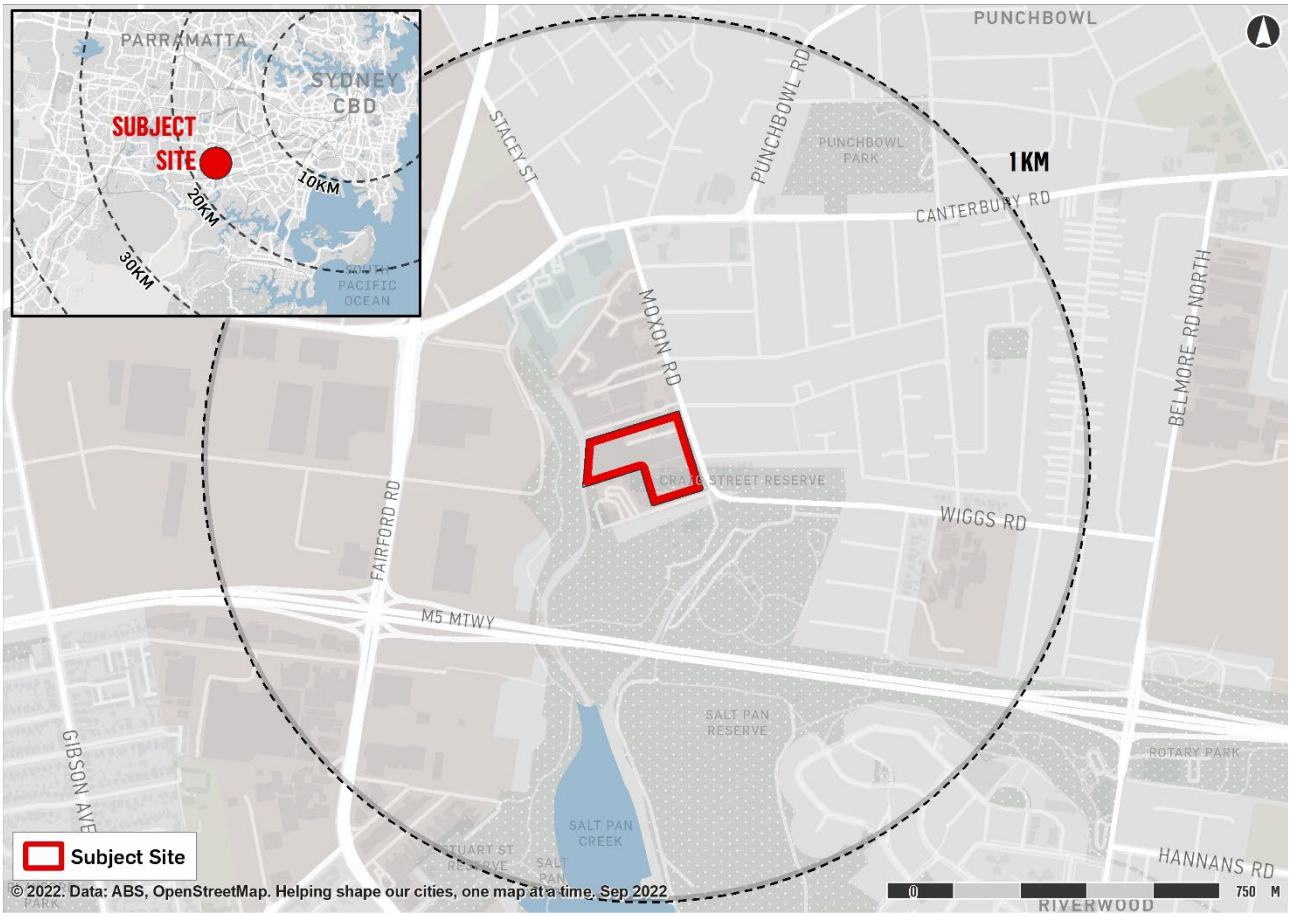
Table 2 Project Objectives

Project Objective	Proposed Development
Deliver a modern multi-level warehouse and distribution centre in a strategic location.	The proposal seeks to deliver a modern warehouse and distribution facility to meet current and future tenant demand, strategically located and well-connected to the regional road network.

Project Objective	Proposed Development
Provide for the highest and best use of the site through the sustainable development of a vacant brownfield site.	The proposal is for a warehouse and distribution centre use which is permissible within the IN2 zoning for the site. The existing site comprises of multiple lots with several obsolete and outdated buildings. The proposal will make best use of the site through sustainable redevelopment and amalgamation of an existing industrial site to deliver increased, long-term employment opportunities.
Provide a high-quality design that responds to the local site context and enhances the streetscape.	The design of the proposal has been carefully considered to respond to the local context and enhance the qualities of the site and local character. The design of the proposal has taken into consideration neighbouring uses as well as providing improvements to the streetscape. Careful consideration is made to the interface with Salt Pan Creek and neighbouring residential uses.
Integrate landscaping and tree planting to ensure a high standard of architectural, urban and landscape design.	Landscaping and tree planting has been integrated into the proposal across the site. Planting has been proposed to enhance the site in relation to the public domain, the appearance of the building and provide screening for the amenity of employees and nearby residents.
Minimise disruption to existing residents and businesses within the surrounding area during the construction phase	Where required, mitigation and management measures will be implemented during the construction phase to minimise any impacts on neighbouring businesses and residents.
Deliver up to 269 jobs through the construction stage and up to 585 jobs once operational.	The proposal will generate 269 construction jobs and up to 585 jobs once operational on site to provide a range of local employment opportunities.

A map of the site in its regional setting is provided as **Figure 3**.

Figure 3 Regional Context



Source: Urbis

1.3 Project Background

The site has been used for industrial and factory purposes for over 40 years. In 1969, a factory was constructed at the site involving extensive land clearing and structural development. By 1991, the site was completely developed with car parks, large industrial buildings and footpaths.

Since then, the site and existing structures have experienced many alterations and additions. Most recently, internal alterations and additions to create offices and other changes to the warehouse facilities occurring in 2006. Currently, the existing buildings across the multiple lots are found to be outdated and obsolete.

Hale Capital purchased the site as an opportunity to deliver an innovative two-storey industrial development, strategically located within an industrial precinct of south west Sydney. The site was chosen due to its central location between Sydney CBD, Sydney Airport, Port Botany and Western Sydney and its proximity to the M5 and A6.

1.4 Related Development

The site contains two existing electrical padmount substations. As part of the development, one of the substations is proposed to be decommissioned and the asset recovered. New padmount stations will be installed in appropriate locations to service the new warehouse.

The existing 225mm sewer within the site is to be substantially decommissioned due to the footprint of the proposed building. A small section of the sewer will remain to facilitate connection of the internal waste water hydraulic services planned for the development to connect to Sydney Water reticulation system.

1.5 Restrictions and covenants

The site has a number of covenants across the several lots, primarily in relation to services and infrastructure, as follows:

- Lot 1 in DP 618465:
  - Easement for transmission line
- Lot 23 in DP 552521
  - Easement to drain water
  - Easement to drain sewage
  - Easement for services
- Lot 22 in DP 840328
  - Easement to drain water
  - Easement to drain sewage
  - Easement for services.

2 Strategic Context

This section of the EIS describes the way in which the proposal addresses the strategic planning policies relevant to the site. It identifies the key strategic issues relevant to the assessment and evaluation of the project, each of which are addressed in further detail in **Section 7** of this EIS.

2.1 Project Justification

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

2.1.1 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 Region Plan includes objectives and strategies for infrastructure and collaboration, liveability, productivity and sustainability. The following matters are relevant to the proposed development:

- *Objective 16 - Freight and Logistic network is competitive and efficient*

  The proposal will provide additional floorspace and industrial typologies to assist with the growth of the freight and logistics network. The site is central to Port Botany, Sydney Airport and Western Sydney which are key parts of Sydney's freight and logistics networks.

- *Objective 23 – Industrial and urban services land is planned, retained, and managed*

  The proposal will deliver 29,309m^2 of warehouse and distribution floor space, which will support the retention and management of industrial areas within Greater Sydney. It will provide critical employment spaces for industrial activity and new job opportunities as it replaces the obsolete existing buildings on site.

- *Objective 33 – A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change*

  The proposed development will minimise energy use through heating and cooling systems, lighting and a high-quality building envelope. Similarly, the proposal seeks to reduce the negative impacts on the site's ecological value by incorporating strategies to make the building adapt to the changing climate and mitigate urban heat island effects.

2.1.2 Our Greater Sydney 2056: South District Plan

The *South 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 intent of the District Plan is to inform local strategic planning statements and local environmental plans, guiding the planning and support for growth and change across the district.

The District Plan contains strategic directions, planning priorities and actions that seek to implement the objectives and strategies within the Region Plan at the district-level. The Region Plan identifies the key centres, economic and employment locations, land release and urban renewal areas and existing and future transport infrastructure to deliver growth aspirations.

The planning priorities and actions likely to have implications for the proposed development are listed and discussed below:

- *Planning Priority S10 - Retaining and managing industrial and urban services land*

  The development will deliver 29,309m^2 of warehouse and distribution floor space, which will support the retention and management of industrial areas within Greater Sydney. It will also generate additional employment opportunities to strengthen the industrial and urban services land in Canterbury Bankstown and broader Sydney.

- *Planning priority S11 - Supporting growth of targeted industry sectors*

The proposal will support the growth of technological innovation in the freight and logistics industry by providing an innovative solution to maximising the efficient use of space available for warehousing and distribution.

- *Planning Priority S13 - Protecting and improving the health and enjoyment of the District's waterways*

  The objective of this priority seeks to ensure the protection of the coast and waterways health. The site is adjacent to Salt Pan Creek on its western boundary, which will be protected and effectively managed in the design of the development. The development will be sympathetic to the waterway to ensure its health and biodiversity values are not impacted.

2.1.3 City of Canterbury Bankstown Local Strategic Planning Statement

The City of Canterbury Bankstown *Local Strategic Planning Statement Connective City 2036* (**LSPS**) provides the framework and vision for land use planning over a 20-year period in Canterbury Bankstown LGA. The population of Canterbury Bankstown is expected to reach approximately 500,000 people, which will require significant increase in infrastructure and employment opportunities to facilitate this growth.

The LSPS priorities under *Evolution 3: Places for Commerce and Jobs* highlights demonstrate the importance to protect and enhance industrial services and employments lands. It reiterates that the transport, postal and warehousing sector is a large generator of value.

Planning Priority 3.6: '*Protect and Enhance Employment Lands'* aligns with the Region Plan and District Plan. The proposal supports the importance of retaining and protecting industrial zoned land for industrial manufacturing and warehousing uses and urban services by providing 29,309m^2 high quality industrial floorspace. Further, the proposal delivers on priority 3.7 *'Increase the number of people living and working in the city'* through the generation of up to 585 jobs in operation which will attract people to work and support the continued growth of the LGA.

The proposal is consistent with the provisions of the LSPS as the redevelopment of the site will facilitate the delivery of a new two-storey warehouse and distribution facility. The proposal is well located to capitalise on key transport infrastructure adjacent the site, making it highly accessible to workers and users.

2.1.4 Better Placed

In August 2017, the Government Architect for NSW (**GANSW**) released *Better Placed* which seeks to establish priorities and objectives that shape design to create well-designed built environments. It presents a collection of priorities and objectives that aspire to shape design that addresses key challenges and directions and creates good design outcomes for NSW.

The proposed development is consistent with the *Better Placed* objectives as it will:

- Consider the relationship of the development to the surrounding neighbourhood and similar industrial facilities (Objective 1). The proposed development has given careful consideration to the site surroundings including the adjacent residential zone and riparian corridor. The building has been setback from the eastern and western site boundaries to improve the relationship of the proposal to its surroundings.
- Incorporate sustainability measures to improve the environmental performance of the building (Objective 2). A number of sustainability measures have been incorporated into the proposal to improve environmental performance including rainwater collection and reuse, water efficient irrigation systems and LED lighting.
- Capable of complying with relevant accessibility provisions to ensure equitable access (Objective 3). The proposal has been designed to comply with the 'deemed to satisfy' requirements of the Building Code of Australia 2019 Amendment 1, the Disability (Access to Premises – Buildings) Standards 2010 and the pertinent Australian Standards.
- Enhance the efficient use of the site and adding more employment opportunity to the overall facility and area (Objective 6). The development proposes to consolidate a number of small and outdated industrial lots and buildings to enable a modern and innovative two-storey warehouse and distribution centre to be delivered to meet current and future tenant demand. The proposal will provide an uplift of employment opportunities with up to 585 jobs during operation.

- The articulated office and warehouse façade design with a warm material palette applied, to blend with the residential neighbours (Objective 7). The design of the building façade has been carefully considered to integrate the ancillary office space into the eastern façade and provide a high level of articulation to respond to the adjacent residential properties. High quality materials are proposed with materials specified to respond to the local context.

By adopting the objectives of the *Better Placed* policy, the development responds to the key challenges and directions for NSW.

2.2 Key Features of Site and Surrounds

The site is located at 45-57 Moxon Road, Punchbowl within the City of Canterbury Bankstown local government area (**LGA**). The site currently comprises multiple lots legally described below:

- Lot B in Deposited Plan 390488
- Lot 1 in Deposited Plan 618465
- Lots 221 and 222 in Deposited Plan 840328
- Lot 23 in Deposited Plan 552521.

The site is approximately 34,499m^2 in area and has old industrial buildings situated on each lot. It has several mature trees located across the site and lot boundaries. The site shares its western boundary with Salt Pan Creek. Immediately to the west of the site is an existing industrial lot with battle-axe access to Moxon Road.

The location of the site showing the consolidated lot boundary is illustrated in **Figure 4.** Photographs of the current site condition are provided in **Figure 5**.

Figure 4 Local Context

Source: Urbis

Figure 5 Site Photographs

Picture 1 View looking across Moxon Road to the eastern boundary of the site.

Picture 2 View of the site from the north east boundary.

Picture 3 View of the site from the south-east boundary.

Picture 4 View looking across Moxon Road to the north-eastern portion of the site.

Source: Google Maps

The key features of the site which have the potential to impact or be impacted by the proposed development are summarised in **Table 3**.

Table 3 Key Features of Site and Locality

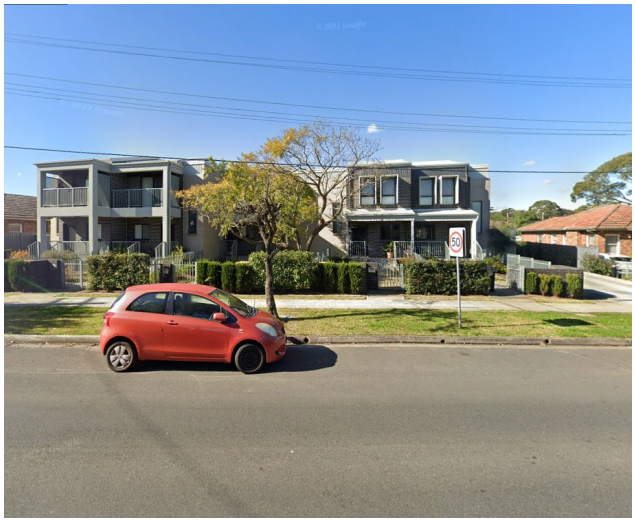
Descriptor	**Site Details**
Land Configuration	The site has a total area of 34,499m^2. It is irregular in shape with the following (approximate) boundary dimensions: 185 metres to Moxon Road. 219 metres along the northern side boundary. 116 metres along the south-eastern side boundary (adjoining the battle-axe driveway) and 137 metres along the south-western side boundary (adjoining the battle-axe lot).

Descriptor	Site Details
	107 metres to Salt Pan Creek and 83 metres to the western boundary (adjoining the battle-axe block). The site slopes in an east to west direction from Moxon Road to the western boundary and Salt Pan Creek.
Land Ownership	ITG Australia TS Mid Pty Ltd (ACN 642 379 226) as trustee for HCLF Punchbowl No 1 Trust (ABN 20 796 167 054)
Existing Development	The site has been developed and currently accommodates a range of industrial buildings and structures with ancillary car parking and loading areas. The existing buildings and vehicle access arrangements are oriented to Moxon Road which forms the eastern boundary of the broader industrial precinct. Vehicular parking is provided on the hardstand areas behind the smaller warehouses located on the front boundary. Driveways off Moxon Road direct vehicles to the central hardstand area for parking between warehouse buildings. Part of the site adjoins Salt Pan Creek and the adjoining riparian corridor which contains significant trees and other vegetation. Landscaping is provided within the site front setback including large native trees, palm trees and grassed areas of varying widths. Additional trees are located along the northern side boundary of 45 Moxon Road.
Local Context	The site is located on an industrial-residential interface which requires careful consideration in terms of the amenity impacts of the existing and proposed development. The surrounding locality is described in further detail below: **North**: the land immediately to the north comprises industrial development of a similar scale and nature as the development within the subject site. **East**: low density residential development is on the opposite side of Moxon Road and beyond, primarily comprising single storey detached dwellings with some infill development, including two level dual occupancies and row housing developments **South**: Moxon Sports Club is located to the south, comprising two bowling greens, multiple playing courts and a club building with bar and bistro facilities. McLaughlin Oval is to the southeast with Salt Pan Creek and Stuart Street Reserve further south. **West**: Salt Pan Creek runs along the western boundary of the site, with industrial development, a zone substation and Fairford Road further to the west. Photographs of the surrounding land uses are provided as **Figure 6**.
Regional Context	The site is approximately 17 kilometres south-west of the Sydney CBD and approximately 13 kilometres west of Sydney Airport. It is also 2 kilometres south-east of Bankstown Station.

Descriptor	Site Details
	The region features a mix of land uses, including residential and employment generating activities. The site is located in a strategic location that is well connected to the M5, A6, Port Botany and Sydney Airport, as well as Western Sydney.
Infrastructure	The site is well-located based on its access to the metropolitan road network, including the M5 South Western Motorway via Canterbury Road (A34) and Fairford Road (A6). The A6 also provides access to the M4 Western Motorway at Auburn to the north and the Princes Highway (A1) at Heathcote to the south. The site is serviced by public transport infrastructure. The closest rail station is Punchbowl Station on the T2 Inner West & Leppington line and T3 Bankstown line, approximately 2.1km north-east of the site. Bus stops within 400m of the site include the Moxon Road stop adjacent to the site which services bus route 940, providing connection between Hurstville and Bankstown. Bus stops within 800 metres from the site include the Cullens Road south of Joyce Street stop which services bus route 941, providing connection between Hurstville and Bankstown. The site is well serviced by an extensive pedestrian network. The site is generally well-serviced with cycle routes within the Canterbury-Bankstown LGA, with a well-connected mixture of sub-regional and local cycle routes.
Site Access	Vehicle access to the site is currently provided by five crossovers from Moxon Road which connects to Canterbury Road to the north. The M5 South Western Motorway is accessible via Canterbury Road and Fairford Road.
Easements and Covenants	The site is affected by the following easements/restrictions: Lot 1 in DP 618465: Easement for transmission line Lot 23 in DP 552521: Easements to drain water and sewage and for services Lot 22 in DP 840328: Easements to drain water and sewage and for services.
Services	The site is served by existing services connections for water, sewer, electricity, gas and telecommunications.
Acid Sulfate Soils	The site is classified as Class 1 & 2.
Contamination	Investigation of the site identified some contamination in soils. This will be managed through a site remediation and environmental management strategy (see **Section 6.2.2**).
Stormwater and Flooding	The site is identified as flood prone land and is subject to flood related development controls.

Descriptor	Site Details
Bushfire Prone Land	The site is not classified as bushfire prone land.
Flora and Fauna	The site is not classified as having biodiversity values.
Aboriginal Heritage	The survey of the site concluded no Aboriginal sites were identified and therefore there is low archaeological potential.
European Heritage	The site does not have any items of heritage significance nor is it located in a conservation area.
Coastal Environment Area	The western portion of the site is identified and included on the Coastal Environmental Area Map.

Figure 6 Locality Photographs



Picture 5 View looking across Moxon Road to the low density housing from the eastern site boundary.

Picture 6 View of Moxon Sports Club located south of the site.

Picture 7 View of the adjacent property to the north of the site.

Source: Google Maps

Picture 8 View of the industrial properties on Moxon Road north of the site.

2.3 Development History

The planning history for the site as identified by the CBCity Council's DA tracker is detailed in **Table 4**.

Table 4 Historical Background of Relevant DA's

DA Reference	Address	Development Description
DA-334/2001/A	47-53 Moxon Road	Modification including alteration and additions to convert existing structure to create three factory units.
DA-906/2005	47-53 Moxon Road	Internal alterations to an existing factory warehouse unity to create two separate warehouse tenancies.

2.4 Cumulative Impacts with Future Projects

The site is located within Punchbowl which comprises an established industrial area and adjacent light industrial area strategically located in proximity to key transport nodes. It contains a range of industrial and distribution uses. Approved and likely future developments which may be relevant in the cumulative impact assessment of the proposal are summarised in **Table 5**.

Table 5 Approved and Likely Future Developments

DA Reference	Development Description	Current Status
DA588/2016	Demolition of existing structures and construction of a five storey mixed use residential building at 1608-1612 Canterbury Road.	Approved
DA037/2021	Two storey attached dual occupancy at 60 Moxon Road	Approved
DA1194/2022	Demolition of existing industrial building and the construction of a three storey industrial manufacturing building at 31 Moxon Road.	Under Assessment

DA Reference	Development Description	Current Status
DA-1231/2022	Consolidation of five lots into one, demolition of existing buildings, and construction of a two-storey warehouse development with basement parking and mezzanine offices at 1586-1606 Canterbury Road, Punchbowl.	Under Assessment
CD-998/2022, CD-999/2022, CD-1000/2022	Separate approvals for demolition of a dwelling at each lot at 47, 49, and 51 Joyce Street, Punchbowl.	Approved
CC-589/2022	Demolition of existing structures and construction of a 14 room boarding house, basement parking, and landscaping works at 39 Cullens Road, Punchbowl.	Approved
SSD-10450	Expansion of an existing resource recovery facility in Padstow, 780m west of the site.	Under Assessment

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

2.5 Feasible Alternatives

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

Hale Capital identified three project alternatives which were considered in respect to the identified need for the warehouse and distribution centre. Each of these options is listed and discussed in the following table.

Table 6 Project Alternatives

Option	Assessment
Option 1 - Do Nothing	This option to leave the site in its current condition was considered and dismissed. This approach would represent a significant loss of potential development to replace outdated and obsolete industrial units with a modern warehouse and distribution facility and employment opportunities. It would significantly impact the potential economic benefits and employment-generating potential associated with the development of land for industrial uses.
Option 2 - Alternative Location	Consideration was given to alternative industrial sites in South Sydney, Inner-West and the Inner-Southwest Sydney. These locations were not considered to be the preferred option for the proposed development as they were not as strategically located and central to Sydney Airport, Port Botany, Western Sydney and the regional and local road networks as the preferred location; or existing lease commitments prohibited the redevelopment; or existing site constraints were prohibitive to redevelopment or made the development unfeasible.

Option	Assessment
	The alternative sites were dismissed as the subject site resulted in the most beneficial outcome for the proposed development and ensures that industrial development investment results in employment opportunities as: It will be situated within a locality that is surrounded by industrial and employment generating uses; All potential environmental impacts of the proposal can be suitably mitigated within the site; The site is well connected to several key roads and intersections including the South Western Motorway, Canterbury Road and Fairford Road; The proposal can be developed with appropriate visual amenity given its surrounding context. The proposal is justified on the basis that it is compatible with the locality in which it is proposed while having no adverse economic, environmental or social impacts.
Option 3 - Alternative Design	The existing structures on site are built up to the western boundary adjacent to Salt Pan Creek. Consideration was given to similarly locating the proposed development along the western site boundary, however this option was dismissed as the alternative design did not achieve a sufficient setback to the watercourse and the riparian corridor. Instead, the rear carpark is located along the western site boundary to maximise the built form setback to the watercourse. The alternative design did not prioritise design excellence, environmental quality and the project objectives to avoid impacts and achieve greater environmental and urban design outcomes.
Option 4 – The proposal (Preferred Option)	The site was identified as being the most suitable location for the proposed warehouse and distribution centre and presents the most appropriate of the options for the following reasons: The proposal promotes the efficient use of an industrial site with obsolete buildings, which is capable of being redeveloped; The site allows for the development as a permissible use, being located within an industrial / employment area and the proposed use is in accordance with the IN2 zoning of the site; The proposal will generate employment opportunities on a designated site in an industrial precinct, thus contributing to the growth of Sydney; The site is strategically located between Port Botany, Sydney Airport, Western Sydney and the regional road network; The proposal is compatible with surrounding development and local context and will result in minimal impact on the environment, incorporating the implementation of suitable mitigation measures where required; and

Option	Assessment
	The proposal can be developed on site without having unacceptable environmental impacts including in relation to ecology, biodiversity, heritage, noise and views.

The proposal was identified as being the most suitable option as it allows for warehousing and distribution uses within an established industrial precinct. The site design and layout of the built form maintains consistency with the objectives of IN2 zone and will enhance the underlying industrial character intended for the locality. This will be achieved by the built form which responds to the industrial context of the land and is sensitive to the surrounding environment.

3 Project Description

The following sections of the EIS summarise the key numeric components of the proposed development and describe the demolition, site preparation, construction and operational phases in further detail.

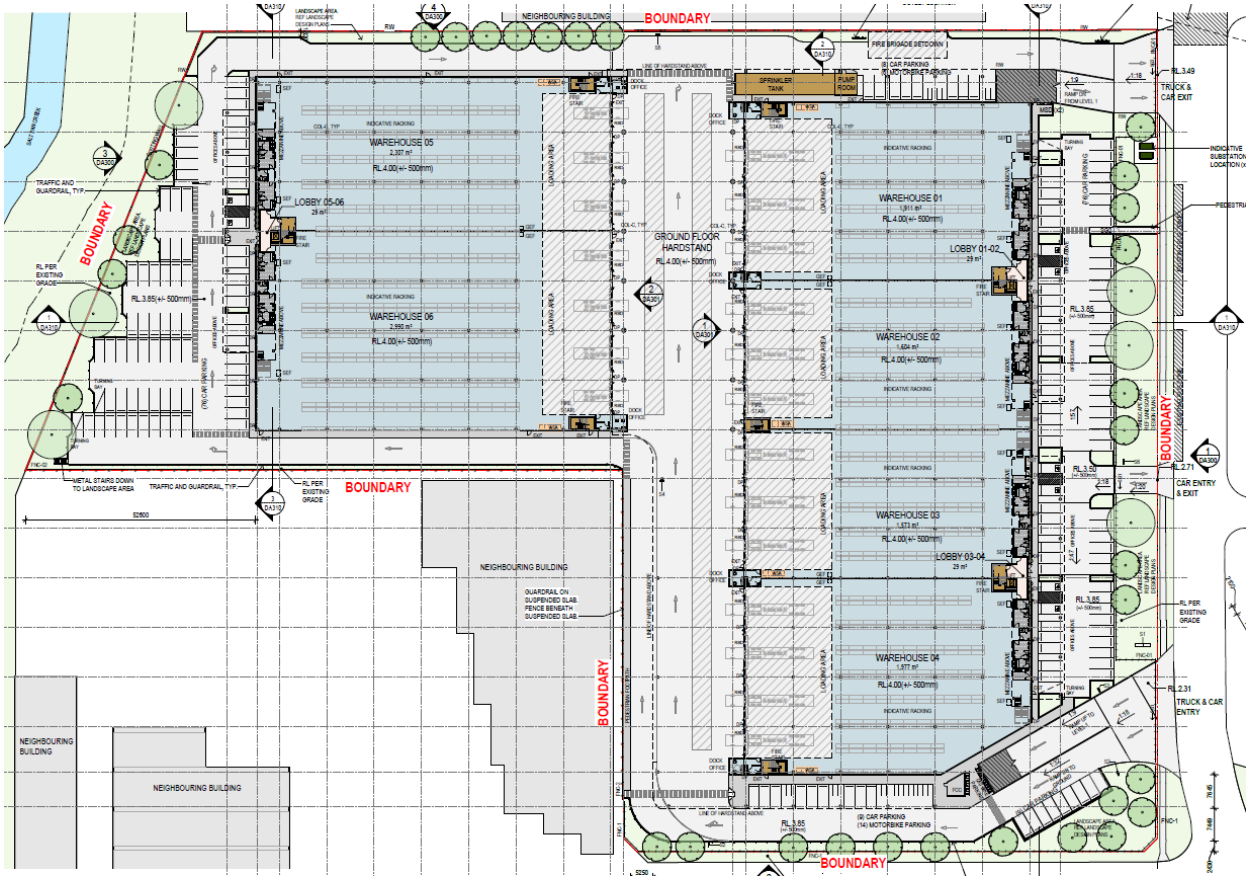
3.1 Project Overview

The project for which development consent is sought includes demolition, site preparation works, construction and use of a warehouse and distribution centre at 45-57 Moxon Road, Punchbowl.

Consent is sought for the following:

- Demolition of all existing buildings and structures, construction, fit out and operation of a two-storey warehouse and distribution centre comprising 29,309m^2 GFA including:
  - 12 warehouse and distribution tenancies with a total 25,565m^2 GFA; and
  - 3,744m^2 GFA ancillary office space.
- Provision of 20 bicycle parking spaces, 20 motorcycle parking spaces and 178 car parking spaces at ground floor level.
- Approximately 3,450m^2 of soft landscaping at ground level.
- Replacement of the five existing vehicular access from Moxon Road with three new access driveways.
- Earthworks and upgrades to existing on-site infrastructure.
- Provision of internal vehicle access road and loading docks.
- Building identification signage.
- Hours of operation 7:00am to 10:00pm Monday to Saturday.

Figure 7 Proposed Site Plan



Source: SBA Architects

The key components of the proposed development are summarised in **Table 7**. The Architectural Plans for the proposed development are provided in **Appendix B**, supported by Design Report prepared by SBA Architects which is included in **Appendix F**.

Table 7 Project Details

Descriptor	**Project Details**
Project Area	The site has a total area of 34,499m^2. The total site area is expected to be disturbed by the project
Site Description	Lot B in Deposited Plan 390488 Lot 1 in Deposited Plan 618465 Lots 221 and 222 in Deposited Plan 840328 Lot 23 in Deposited Plan 552521.
Project Description	The project comprises the demolition of existing buildings and structures and construction of a two-storey warehouse and distribution centre to be operated Monday to Saturday 7:00am to 10:00pm.
Access	The five existing vehicle crossovers are to be removed and replaced with three new crossovers located at the northern corner, centre, and southern corner of the Moxon Road site boundary. Heavy vehicle entry is provided by the southern accessway which leads to ground and level 1 loading docks. Light vehicle entry is provided by the southern accessway leading to the rear carpark, and the central accessway providing entry and exit to the front carpark. Light and heavy vehicle exit is provided by the northern access crossway only.
GFA	Total GFA of 29,309m^2, broken down as follows: 25,565m^2 of warehouse and distribution GFA; and 3,744m^2 GFA ancillary office space.
Developable Area	34,499m^2
Maximum Height	20.7 metres (RL 24.700)
Building Orientation	The proposed warehouse building is orientated north-south to internalise the breezeway and loading docks, setback from Moxon Road. Service areas including loading docks, hardstands and other operational areas are internal facing, with minimal exposure to Moxon Road and Salt Pan Creek to the rear.
Parking Spaces	At-grade parking will be provided for 178 cars.
Cycle Parking	20 bicycles 20 motorcycles
Landscaped area	3,450m^2 of soft landscaping at ground level.
Hours of Operation	7:00am to 10:00pm Monday to Saturday

Descriptor	Project Details
Capital Investment Value	$82,110,000

3.2 Detailed Description

3.2.1 Project Area

The site forms part of a larger area within the Punchbowl industrial area along Fairford Road and Canterbury Road with direct access to Bankstown centre. The site has been developed and is currently occupied by a range of older small-sized industrial buildings. Associated car park areas and minimal landscaping is also present on site, with larger trees prevalent on lot boundaries and the Moxon Road frontage.

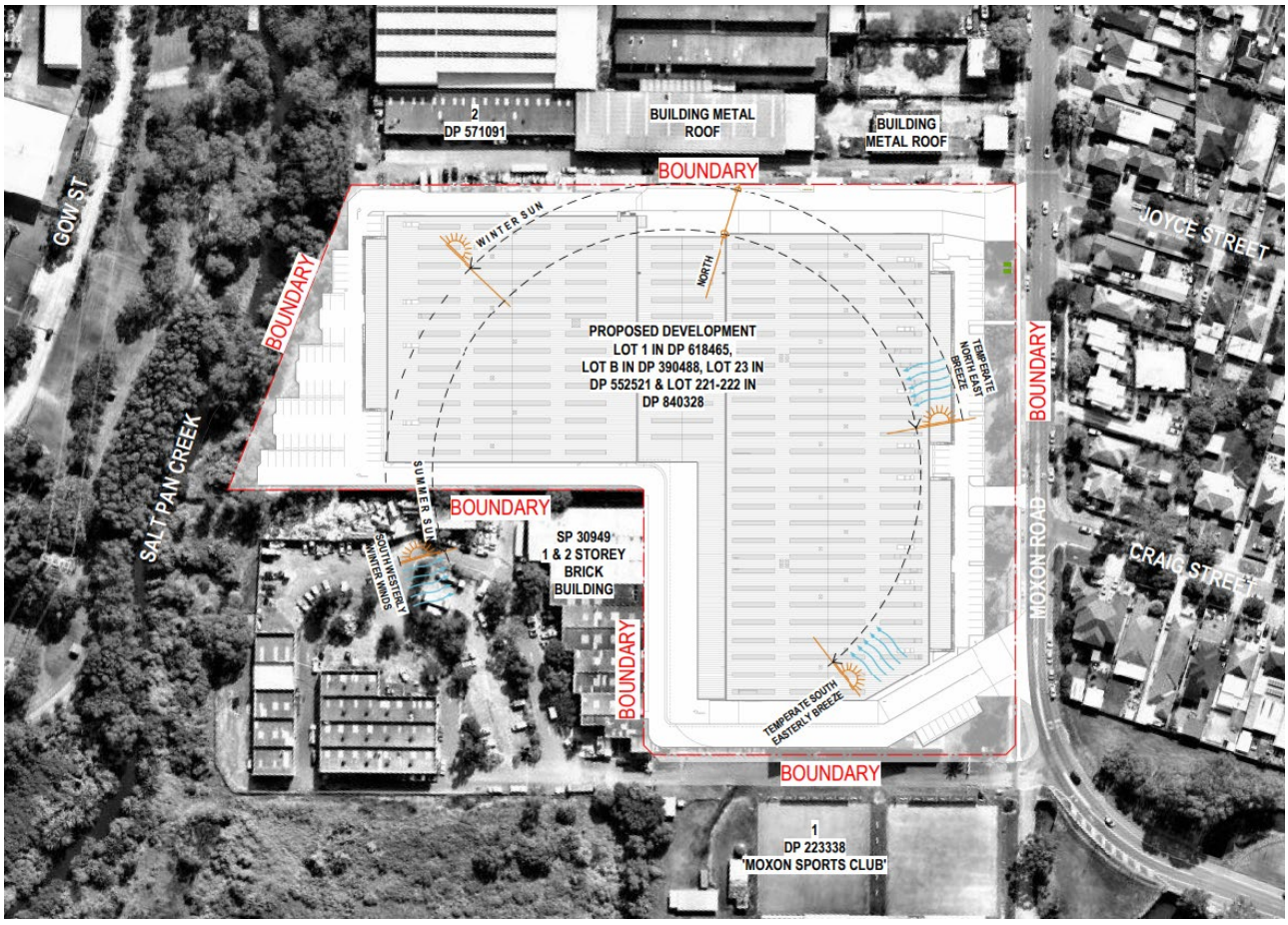
The site has an approximate street frontage of 185 metres to Moxon Road. It is bound to the west by Salt Pan Creek (adjoining the battle-axe industrial lot to the south-west), to the south by Moxon Sports Club, to the east by Moxon Road and single storey detached dwellings and to the north by existing industrial services and facilities. The adjoining battle-axe industrial lot is located on the south west boundary of the site, sharing the interface with Salt Pan Creek to the west, and Moxon Sports Club to the south.

The site is surrounded by a mix of single storey warehouse and industrial uses north of the site and further west across Salt Pan Creek. The surrounding developments to the east include low density residential.

The interface with the riparian corridor is identified as a flood planning area and this portion of the site is subject to flood risk. The existing development on the site is built within close proximity to the extent of this boundary, which is 29-30 metres from Salt Pan Creek.

The developable site area for the project is shown in **Figure 8** below.

Figure 8 Project Area



Source: SBA Architects

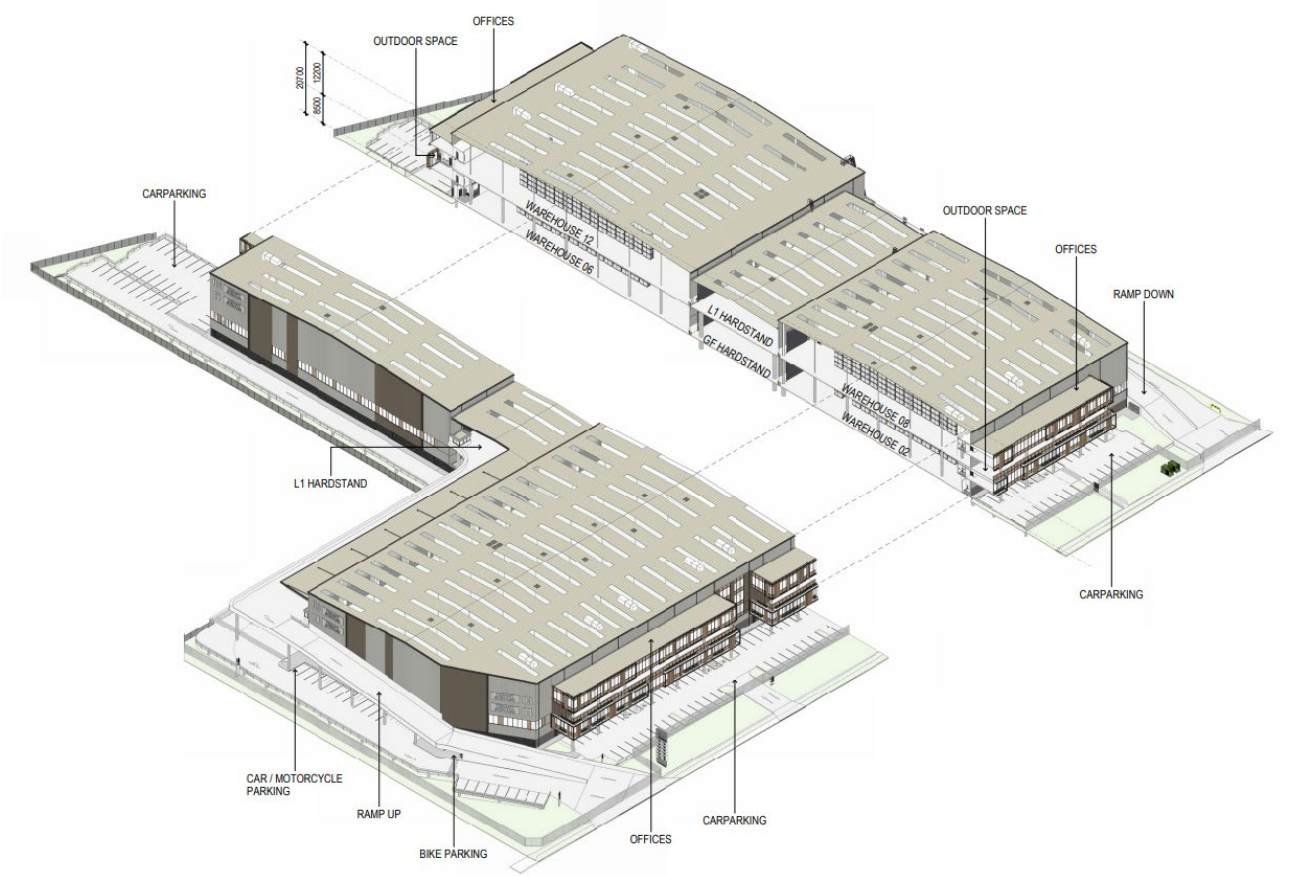
3.2.2 Physical Layout and Design

3.2.2.1 Site Layout

The proposed site layout responds to the existing site condition and has been developed with regard to functional requirements of the warehouse and distribution use. As shown in **Figure 9**, the proposal will involve:

- Construction of a new warehouse and distribution centre sited centrally to the site.
- A warehouse and distribution centre of two levels, with warehouse loading areas connected by a central covered breezeway.
- Provision of ancillary office space at ground floor mezzanine and level 1 mezzanine at the eastern and western façades of the warehouse building.
- Construction of a circular internal access road for heavy vehicles and for cars, accessed from Moxon Road. Heavy vehicle access to level 1 is provided via ramps on the northern and southern facades of the eastern portion of the warehouse.
- Construction of car parking on the eastern and western sides of the warehouse building. These areas are built on a suspended slab to achieve the required flood planning level.
- Landscaping is provided across the site at ground level including landscaping to the front setback to Moxon Road.

Figure 9 Section Perspective



Source: SBA Architects

The proposed two-storey warehouse building consists of a total of 12 tenancies. Warehouse tenancies 1-6 are located on ground floor and warehouse tenancies 7-12 on level 1. The building is designed to provide two warehouse and mezzanine levels to maximise site efficiency. Ancillary office space is located on the mezzanine levels with a shared outdoor amenity space for the tenants located on level one. The internal

breezeway defines the central core of the site and creates a clear circulation route for trucks for loading and unloading on both levels, with ramps for truck access.

The warehouse has been designed to maximise setbacks to Salt Pan Creek and residential uses as detailed in **Table 8** below. The proposed development is defined by a landscape buffer along the eastern boundary and south-eastern boundary facing Moxon Road. This boundary forms a key interface with the residential area to the east, which is addressed through an architecturally designed façade sympathetic to the surrounding context and local urban character. This is enhanced by the placement of ancillary office space, amenities and outdoor amenity space at this prominent boundary.

The riparian corridor located to the west is considered in the design with the provision of a landscaped setback along with locating parking, ancillary office space, amenities and shared outdoor amenity space on level 1 towards this interface. The driveway and parking are located on a suspended slab at ground level to achieve the required flood planning levels at the site and allow for overland flow to Salt Pan Creek.

Table 8 Proposed Site Setbacks

Location	Overall Setback Measurement	Landscaped Setback
Moxon Road – Front (east)	Minimum (offices): 20.3m Maximum (ground): 28.7m	10m
Salt Pan Creek – Rear (west)	Minimum: 12.2m Maximum: 52.6m	7.4m
Moxon Sports Club (south)	Minimum: 9m Maximum: 17.5m	2.4m
Industrial site (north)	Minimum: 10.4m Maximum: 16.6m	1.32 m – 2.88m

3.2.2.2 Design and Built Form

The design of the proposal reflects the latest best practice design to deliver a modern, multi-level warehouse and distribution centre. The proposal comprises one building with 12 warehouse and distribution centre tenancies, each with ancillary office space directly accessed from the warehouse tenancy. The warehouse and distribution centre tenancies are proposed to be fit out with racking for the storage of goods or materials. The built form has been designed to integrate ancillary office space into each of the warehouse tenancies at both the front and rear of the building (east and west façades). The office space is located at the mezzanine levels of both the ground and first level of the warehouse. The office space is proposed to be fit out with kitchenettes (joinery / sinks) and floor covering. Additionally, a shared outdoor amenity space is designed at level 1 to be utilised as a communal amenity space by tenants. This seeks to enhance the quality of amenity and to facilitate connection and interactions between office and warehouse staff.

The offices and adjoining outdoor amenity spaces activate the street frontage and enhance the interface with Moxon Road and the residential uses. The design of the building facades has been carefully considered with a range of materials and colours to break up the bulk and scale of the built form and create a welcoming aesthetic. The façade design aims to complement the site and local area and achieve a high-quality finish for the warehouse and distribution centre, whilst also remaining sympathetic to surrounding uses. Due to the extent of the glazed curtain wall, the office façade design employs vertical fins as solar shading devices for the direct sunlight coming from the east and west. Between these are cabling to allow for plant climbers to grow, providing high quality articulation to the façade. The architectural façade elements frame the outdoor amenity space on level 1. In addition, roof lights have been implemented into the roof as well as long linear window for the ground level tenancies to provide natural light into the interior.

The perimeter of the site is buffered by landscaping towards the boundaries. The proposed built form setback from Moxon Road is designed to be sympathetic to the nearby residential development. The office façade elements offer a soft transition between the streetscape and the warehouse building. Similarly, the

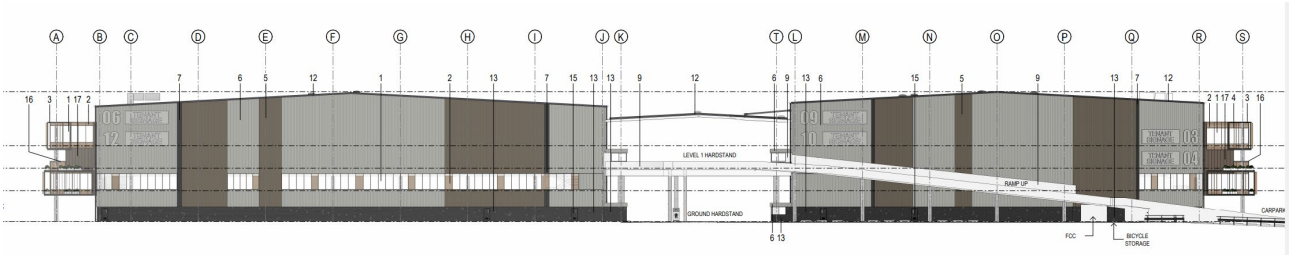
office space is set lower than the eaves of the warehouse building, which provides a greater setback to the overall height of the warehouse.

Business identification signage is proposed in the form of a pylon sign within the front setback to Moxon Road and tenant signage to the building façade for each warehouse tenancy. Signage artwork and colour are to be determined based on future tenant occupancy.

Figure 10 East Façade – 3D Perspective

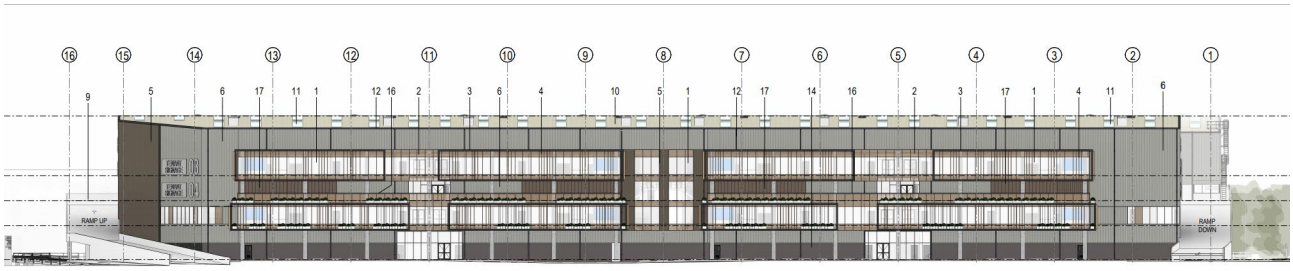
Source: SBA Architects

Figure 11 Proposed elevations

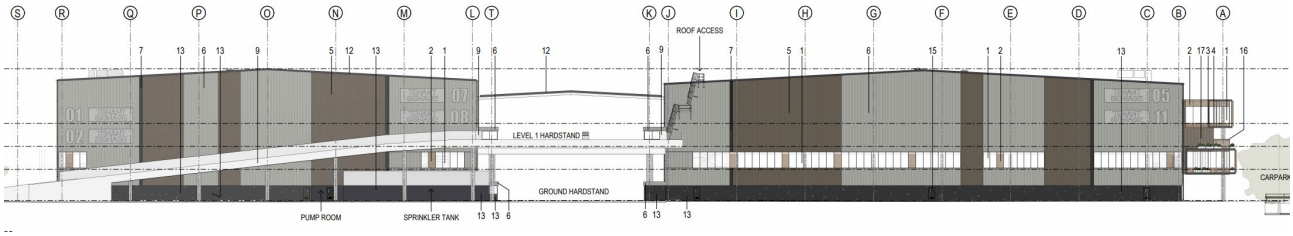


Picture 9 South elevation

Picture 10 West elevation



Picture 11 East elevation



Picture 12 North elevation

Source: SBA Architects

3.2.2.3 Access and Circulation

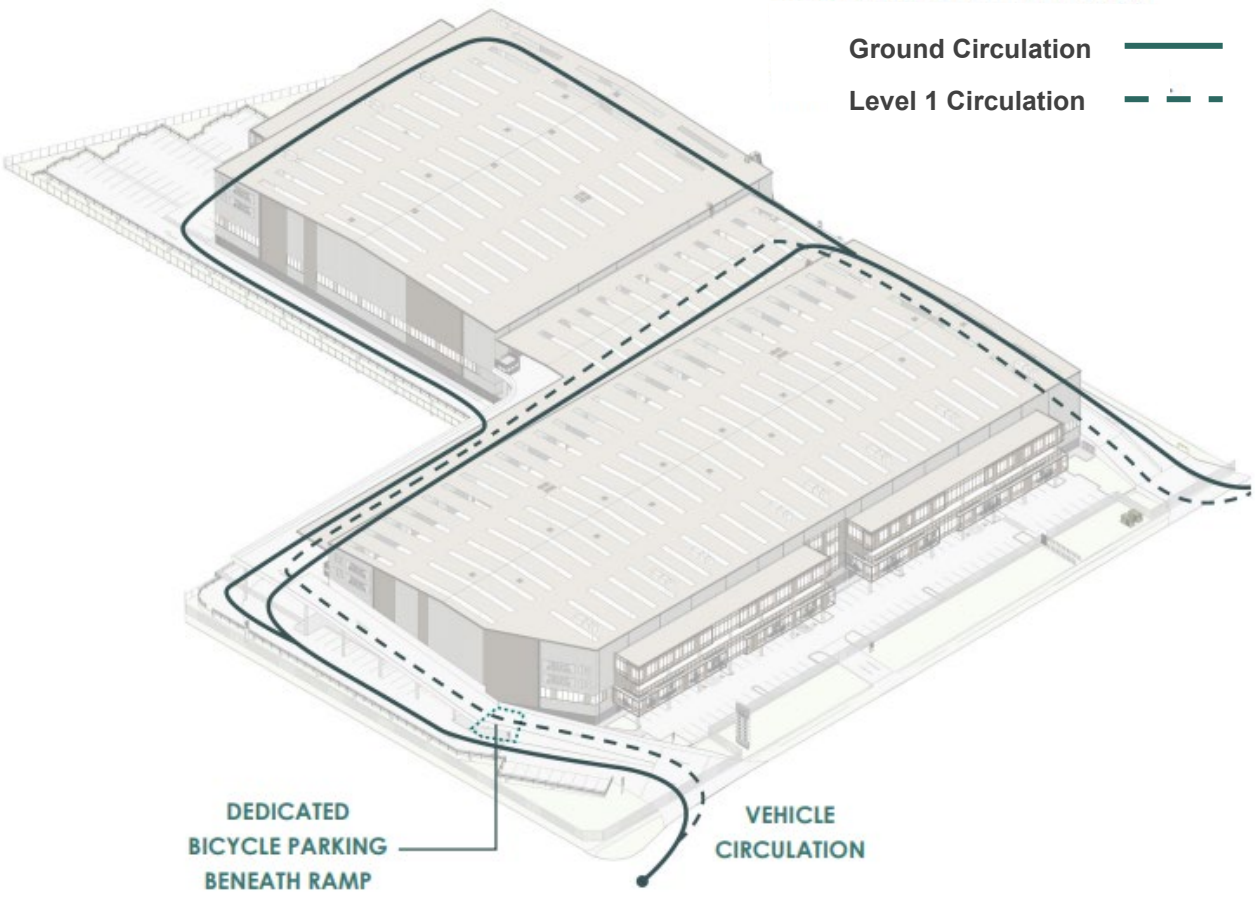
Access and circulation for the development is illustrated in **Figure 12**. Three new accessways replace the five existing accessways, with internal circulation organised into a singular direction to maximise safety and efficiency. These are:

- 1 x northern access driveway - for egress movements only for both light and heavy vehicles
- 1 x central access driveway - for ingress/ egress movements for light vehicles only
- 1 x southern access driveway - for ingress movements only for both light and heavy vehicles.

Truck access into the site is provided by the southern accessway from Moxon Road. It provides entrance for heavy vehicles towards the central breezeway and the loading dock for each warehouse. The level 1 loading docks are accessed via the ramp adjacent to this entrance. Trucks egress the site via the northern accessway.

The primary car access / egress is provided by the central accessway from Moxon Road providing access to the front car parking area. Secondary car access is provided by the southern accessway from Moxon Road providing access to the side and rear car parking areas via the one-way circulation route through the site. Cars then egress the site via the northern accessway.

Figure 12 Circulation Diagram



Source: SBA Architects

3.2.2.4 Landscaping

The Landscape Plan for the proposed development was prepared by Geoscapes (**Appendix N**). The design focuses on high quality landscaped setbacks to improve amenity along key interfaces of the site with existing residential uses and the rear Salt Pan Creek corridor.

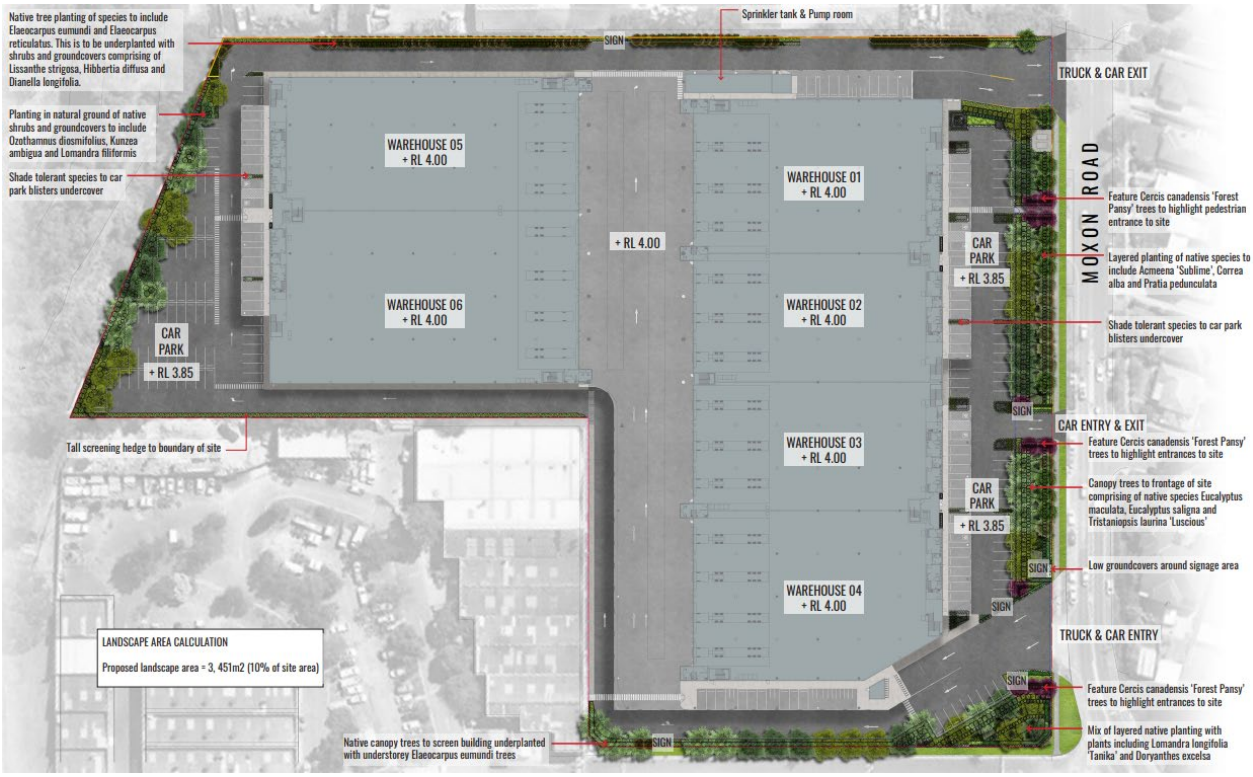
The proposal adopts the *Better Placed* objectives as a basis for the design to achieve key benefits including increased attractiveness, increase tree canopy, improved visual amenity and enhancing greenery throughout the site. The landscape design has an emphasis on providing an improved environmental quality of the landscape boundaries and setbacks including native planting. This consists of delivering vegetated setbacks along the boundaries and within the carpark areas to provide shading and screening. In addition, the warehouse buildings integrate landscape design into the façade for climbing plants.

As detailed in the Arboricultural Impact Assessment (**Appendix K**), a total of 82 trees were identified to have major, unmitigable encroachments with regard to the flood planning and civil engineering requirements and require removal to facilitate the proposed development. These trees to be removed are proposed to be replaced by the planting of 176 trees to mitigate this loss and achieve a greater tree canopy outcome.

Key components within the Landscape Plan, as indicated in **Figure 13**, include:

- Moxon Road frontage and setback
- South eastern setback from Moxon Sports Club
- Western boundary setback from Salt Pan Creek.

Figure 13 Landscape Masterplan



Source: Geoscapes

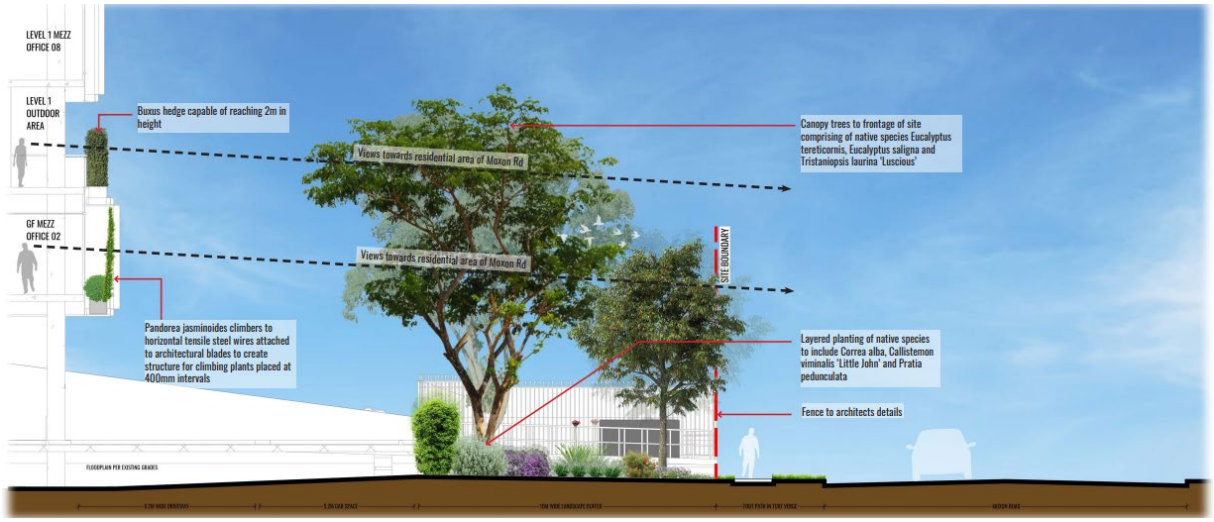
The following section details the different landscape responses in key locations of the Landscape Plan.

Moxon Road Frontage and Setback

The front setback to Moxon Road seeks to break up the building elevation from the street through the use of large canopy trees and layered shrub planting. Canopy trees and plantings are of native species, extensively planted within the landscaped setback to create a 10 metre buffer. The proposed planting has been designed to screen the adjacent car parking suspended slab edge from the public domain. Car park landscaping consists of groundcover planting and shrubs on recessed slab.

The façade employs vertical plantings to enhance the aesthetic amenity with the residential interface. An architectural blade façade with high tensile steel wire is proposed to create a structure for climbing plants to integrate into the façade design. The shared outdoor amenity space on level 1 includes planter boxes with hedge planting capable of reaching 2m in height to provide a green screen to the space and soften the edges of the building façades.

Figure 14 Site Frontage Setback and Landscaping

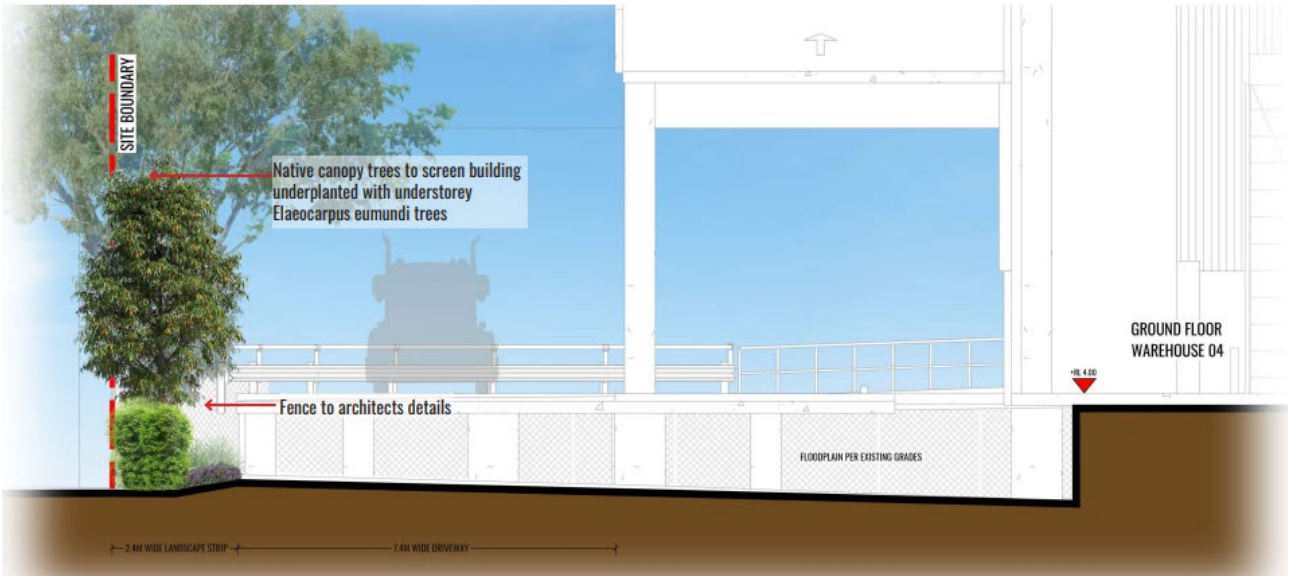


Source: Geoscapes

South Eastern Setback From Moxon Sports Club

The development provides a landscaped setback from Moxon Sports Club, which consists of a 2.4 metre wide landscape setback of tree planting along this boundary to provide screening through canopy cover. This is supported by understorey plantings of trees to increase the cover which aids in obscuring the suspended slab edge.

Figure 15 South Eastern Setback Section



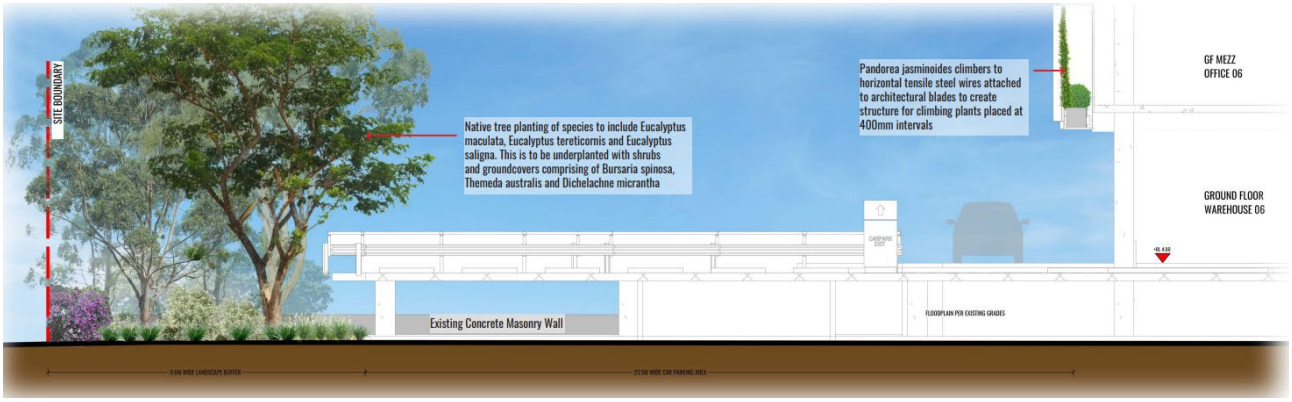
Source: Geoscapes

Western Boundary Setback From Salt Pan Creek

The landscape design at the western boundary includes a 7.4 metre wide landscape buffer to the Salt Pan Creek interface, located within the 12.2 – 52.6 metre building setback. This consists of native tree planting to provide a sensitive transition from the warehouse to the riparian corridor. It is underplanted with shrubs and groundcover to enhance the greenery and achieve greater flood risk management.

The rear carpark is complemented by planting blisters which are 5.2 meters in length. This is also supported by the vertical plantings integrated into the office space façade. Structures for climbing plants are provided on the western façade to integrate natural design features into the built form.

Figure 16 Salt Pan Creek Landscaped Setback Section



Source: Geoscapes

3.2.3 Uses and Activities

The proposal is for a warehouse and distribution centre use with ancillary office space. On-site activities associated with the warehouse and distribution use will include:

- Loading, unloading and handling of goods and materials.

- Heavy service vehicle movements and car parking.
- Arrival and departure of employees.
- Handling of goods and materials for the purposes of storage and distribution.
- Warehouse and distribution uses operating 7:00 – 10:00pm Monday to Saturday.

The purpose of the proposed ancillary office space is solely to support the function of each of the potential warehouse tenancies and enable the provision of back-of-house services. This small quantum of office space will not be occupied separately to the warehouse and distribution use.

45-57 Moxon Road is a speculative development with no tenants currently committed to occupying the tenancies within the proposed development. The facility has been designed to accommodate typical warehouse and distribution centre occupiers.

The site movement and circulation has been designed to meet the needs of this target market, accommodating freight vehicles up to a 19m in length on both levels. One way circulation allows heavy vehicles to efficiently load and unload to the warehouse space from the central breezeways. All access to the site will be via Moxon Road.

Internal operations could include manual loading, forklift use and potentially minor automation including autonomous mobile robots and chute conveyors that could be utilised by occupiers. There will be no use of overhead gantry cranes and other manufacturing equipment within the facility. It is noted that the SSDA does not seek consent for a semi-automated warehouse and distribution centre use, and that any such semi-automated use would be subject to separate approval under the EP&A Act.

It is likely that employees will attend the site in two shift patterns over the morning/afternoon. Car parking for employees and visitors is provided on site.

3.2.3.1 Site Preparation and Earthworks

Site preparation works include site remediation to remove contaminants and any identified asbestos. In addition, bulk earthworks are required to facilitate the development of the site at the required flood planning level. This seeks to achieve a large flat building pad at FFL 4.00m and hardstand area. Earthworks are also required to facilitate access via Moxon Road.

The proposal requires bulk earthworks primarily to achieve cut-to-fill balance. This is also to minimise the extent of external retaining walls which would require interface with adjacent properties to the north and south.

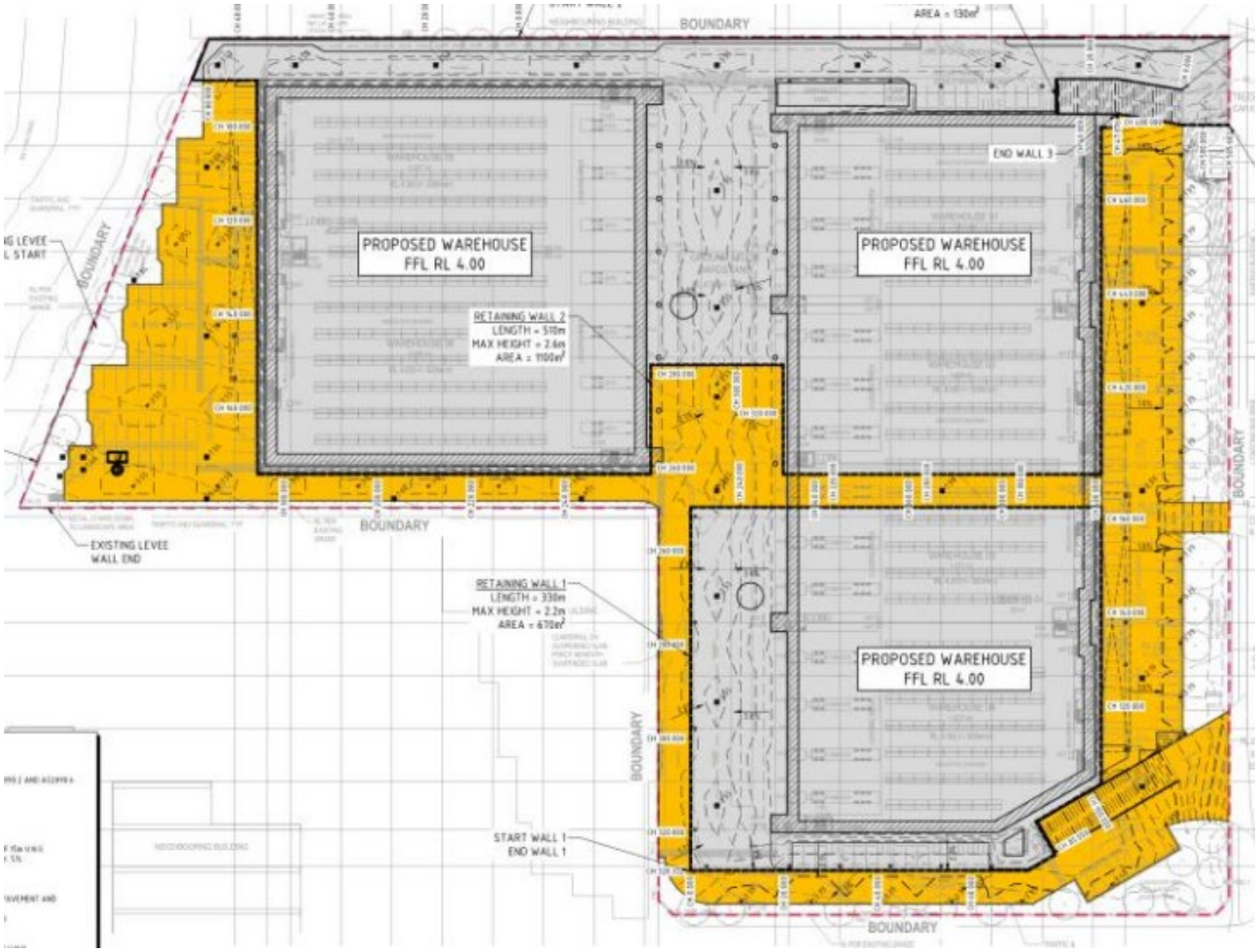
The western portion of the site which adjoins Salt Pan Creek has existing hardstand areas up to this boundary. It is not proposed, nor is it necessary, to replace the existing surfaces, mitigating any risks associated with disturbing the existing slab and any buried services. The proposed interface with Salt Pan Creek will include a retaining wall to raise the site levels and effectively avoid potential impacts from ground disturbance and flood risk.

3.2.3.2 Flood Planning and Stormwater Management

To achieve flood planning requirements and required flood conveyance, the car parking and part of the on-site circulation areas as proposed to be constructed as an on-grade suspended slab. The extent of the on-grade suspended slab is shown in **Figure 17** below.

Stormwater run-off will be collected within the proposed stormwater management system within the site. It is proposed to re-use stormwater for non-potable applications with the aim to reduce the water demand for the development by 50-70%. The rainwater harvesting system will be an in-line tank for the collection and storage of rainwater. If this becomes full, rainwater can pass through the tank and continue to be discharged via gravity into the stormwater drainage system.

Figure 17 Suspended Slab extent



Source: Costin Roe

3.2.3.3 Transport and Parking

Construction

All construction vehicles will access the site via the existing crossovers on Moxon Road during the construction stages. The accessways will be utilised by all construction vehicles travelling to and from the site. Heavy vehicles are to enter the site via the northernmost existing accessway, and light vehicles enter the site via the southernmost existing accessway.

Construction will involve the following three stages:

- Demolition works;
- Bulk earthworks and site preparation;
- Warehouse construction and construction of the new access driveways.

The detailed construction staging will be determined post approval.

Operation

The proposed warehouse will utilise the three new access driveways from Moxon Road. The following access points are proposed:

- 1 x northern access driveway - for egress for both light and heavy vehicles
- 1 x central access driveway - for ingress/ egress for light vehicles only
- 1 x southern access driveway - for ingress for both light and heavy vehicles

Heavy vehicle movements proceed from Moxon Road via the new southern accessway to the breezeways at ground and level one via the up-ramp at the southern façade of the building. Heavy vehicles will exit the breezeways at ground and level 1 via the down-ramp on the northern façade of the building to Moxon Road via the new northern site access. Car movements will proceed around the perimeter of the building to access the rear car parking spaces for the western offices. The eastern car parking area is accessed via the central access driveway.

The loading docks and servicing bays for the proposed development are located in the central covered breezeways at ground and level 1. These docks have been designed to accommodate rear and side loading, as well as heavy vehicles to continue to pass through the one-way circulation route through the site. The largest vehicles expected on site are 20m Articulated Vehicles (**AV**).

3.2.4 Development Timing

3.2.4.1 Stages

The development is proposed to be carried out in one stage.

3.2.4.2 Phases

The project will include the following phases:

- Demolition: removal of existing buildings and structures.
- Remediation: removal of site contamination and any asbestos identified as part of the site investigations.
- Site preparation: excavation and filling.
- Construction: construction of the development is anticipated to commence in Q1 2024 (subject to approval).

A construction zone will be established on site, with construction vehicle access from Moxon Road. The development is proposed to be constructed in one stage. Construction activities are proposed during standard construction hours of Monday to Friday 7am to 6pm, Saturday 8am to 1pm and no works on Sundays and public holidays. Some out of hours work may be needed to minimise disruption to the road network or for emergency works if needed.

3.2.4.3 Sequencing

The phases described above will be carried out via access from Moxon Road sequentially from east to west across the site.

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**)
- *Environmental Planning and Assessment Act 1979* (**EP&A Act**)
- *Environmental Planning Assessment Regulation 2021* (**the Regulations**)
- *State Environmental Planning Policy (Planning Systems) 2021* (**Planning Systems SEPP**)
- *State Environmental Planning Policy (Resilience and Hazards) 2021* (**R&H SEPP**)
- *State Environmental Planning Policy (Transport and Infrastructure) 2021* (**T&I SEPP**)
- *State Environmental Planning Policy (Industry and Employment) 2021* (**I&E SEPP**)
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (**B&C SEPP**).

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

Table 9 categorises and summarises the relevant requirements in accordance with the DPE *State Significant Development Guidelines*. A detailed statutory compliance table for the project is provided at **Appendix C**.

Table 9 Identification of Statutory Requirements for the Project

Statutory Relevance	**Action**
Power to grant approval	In accordance with Clause 3 of Schedule 1 of the Planning Systems SEPP, development for the purpose of Warehouse and Distribution Centres that has a capital investment value (**CIV**) of more than $30 million is classified as SSD: ***Warehouses or Distribution Centres*** *(1) Development that has a capital investment value of more than the relevant amount for the purpose of warehouses or distribution centres (including container storage facilities) at one location and related to the same operation.* *(2) This section does not apply to development for the purposes of warehouses or distribution centres to which section 18 or 19 applies.* *(3) In this section—* *relevant amount means—* *for development in relation to which the relevant environmental assessment requirements are notified under the Act on or before 31 May 2023—$30 million, or* The development is appropriately defined as a 'warehouse or distribution centre' in accordance with the standard definition in the LEP dictionary. The proposed works have an estimated CIV of $82,110,000 and accordingly, the proposal is SSD.

Statutory Relevance	Action
Permissibility	The site is zoned IN2 Light Industrial in accordance with the Canterbury Local Environmental Plan 2012. The proposed development is appropriately defined as a 'warehouse or distribution centre' based on the future tenant operations, vehicle profile and the catchment to be served by the proposed facility. Warehouse or distribution centres are listed as permitted with consent in the IN2 Zone.
Other approvals	
No requirements for other approvals have been identified at this stage.	

4.2 Pre-Conditions

Table 10 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 10 Pre-Conditions

Statutory Reference	Pre-condition	Relevance	Section in EIS
R&H SEPP - clause 4.6(1)	A 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.	Potential sources of contamination exist at the site but are not expected to preclude the proposed development of the site subject to the proposed remediation strategy.	**Section 6.2.2** and **Appendix C**
R&H SEPP – clause 2.8	Development consent must not be granted to development on land identified as "proximity area for coastal wetlands" on the Coastal Wetlands and Littoral Rainforests Area Map unless the consent authority is satisfied that the proposed development will not significantly impact on — (a) the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest, or (b) the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.	The site is partly identified as a Proximity Area for Coastal Wetlands. This affects the southern portion of the site, mostly towards the interface with the adjacent property at 59 Moxon Road and the western portion of the site adjacent to Salt Pan Creek. The Biodiversity Development Assessment Report (**BDAR**) identifies that the proposed development will not impact the biophysical, hydrological or ecological integrity of the adjacent coastal wetland.	**Section 6.1.6** and **Appendix C**

Statutory Reference	Pre-condition	Relevance	Section in EIS
		The development will not impact on the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland.	
R&H SEPP – clause 2.10	Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following — (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment, (b) coastal environmental values and natural coastal processes, (c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1, (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms, (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability, (f) Aboriginal cultural heritage, practices and places,	The site is partly identified as Coastal Environment Area. The BDAR confirms that the proposed development with not result in adverse impact on the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment; coastal environmental values and natural coastal processes; the water quality of the marine estate; or marine vegetation, native vegetation and fauna and their habitats. The proposal will not impact on existing public open space and safe access to the foreshore. As set out in the ACHAR, the proposal is not anticipated to result in adverse impacts on Aboriginal cultural heritage, practices and places. The proposal has been designed, sited and will be managed to avoid any adverse impacts on the Coastal Environment Area.	**Sections 6.1.6** & **6.1.11** and **Appendices C, O** & **Y.**

Statutory Reference	Pre-condition	Relevance	Section in EIS
	(g) the use of the surf zone. Development consent must not be granted to development on land to which this section applies unless the consent authority is satisfied that — (a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subsection (1), or (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.		
R&H SEPP – clause 2.11	Development consent must not be granted to development on land that is within the coastal use area unless the consent authority — (a) has considered whether the proposed development is likely to cause an adverse impact on the following— (i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability, (ii) overshadowing, wind funnelling and the loss of views from public places to foreshores, (iii) the visual amenity and scenic qualities of the coast, including coastal headlands,	The site is partly identified as Coastal Use Area. The proposed development will not result in adverse impacts on existing, safe access to and along the foreshore for members of the public; overshadowing, wind funnelling and the loss of views from public places to foreshores; or the visual amenity and scenic qualities of the coast. As set out in the ACHAR, the proposal is not anticipated to result in adverse impacts on Aboriginal cultural heritage, practices and places. As identified in the Statement of Heritage Impact, the proposal is not anticipated to result in adverse impacts on cultural	**Sections 6.1.6, 6.2.4** & **6.1.11** and **Appendices C, O, Z** & **Y.**

Statutory Reference	Pre-condition	Relevance	Section in EIS
	(iv) Aboriginal cultural heritage, practices and places, (v) cultural and built environment heritage, and (b) is satisfied that — (i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or (ii) if that impact cannot be reasonably avoided — the development is designed, sited and will be managed to minimise that impact, or (iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and (c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.	and built environment heritage. The proposal has been designed, sited and will be managed to avoid any adverse impacts on the Coastal Use Area.	

4.3 Mandatory Considerations

Table 11 outlines the relevant mandatory considerations to exercising the power to grant approval and the section where these matters are addressed within the EIS

Table 11 Mandatory Consideration

Statutory Reference	Mandatory Consideration	Section in EIS
Consideration under the EP&A Act and Regulation		
Section 1.3	Relevant objects of the EP&A Act	**Appendix C**
Section 4.15	Relevant environmental planning instruments: R&H SEPP – Hazardous & Offensive Development	**Appendix C** and **Appendix EE**
	R&H SEPP – Remediation of Land	**Section 6.2.2** and **Appendix C**

Statutory Reference	Mandatory Consideration	Section in EIS
	T&I SEPP – Traffic Generating Development	**Section 6.1.4** and **Appendix C**
	I&E SEPP – Advertising & Signage	**Appendix C**
	B&C SEPP – Vegetation in non-rural areas	**Section 6.1.6** and **Appendix C**
	Relevant planning agreement or draft planning agreement None relevant to the proposed development	**N/A**
	Development control plans *Canterbury Development Control Plan 2012* (**CDCP 2012**)	**Appendix C**
	Draft Development Control Plans *Draft Consolidated Canterbury Bankstown Development Control Plan 2021* (**CBDCP 2021**)	**Appendix C**
	The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.	**Section 6**
	The suitability of the site for the development	**Section 7.6**
	The public interest	**Section 2, 6 & 7**
Mandatory relevant considerations under EPIs		
*State Environment Planning Policy (*R&H SEPP) Hazardous and offensive development	Clause 3.11 of the R&H SEPP applies to any proposals which fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'. The proposal ensures appropriate mitigation measures are employed to reduce the impact of development with hazardous or offensive industries.	**Appendix C**
*State Environment Planning Policy (*R&H SEPP) Remediation of land	Clause 4.6 applies to land that is contaminated. Consent must not be granted unless it is satisfied that the land can be made suitable for the purpose of the development. The threshold quantities for dangerous goods that may be stored and transported at the site are not exceeded at both the individual tenancy and cumulative levels. The	**Section 6.2.2**,**Appendix C** and **Appendix EE**

Statutory Reference	Mandatory Consideration	Section in EIS
	site operations would be unlikely to result in noise or odour at levels that would cause offence.	
State Environment Planning Policy (I&E SEPP) 2021 Advertising and Signage	Clause 3.6 states that a person must not display an advertisement, except with the consent of the consent authority or except as otherwise provided by this Policy. A consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied that: The signage is consistent with the objectives of this Chapter. That the signage satisfies the criteria specified in Schedule 5.	**Appendix C**
State Environmental Planning Policy (T&I SEPP) 2021 Traffic Generating Development	The consent authority must refer development for Warehouse and Distribution centres with a site area / GFA greater than 20,000sqm with access to any road to Transport for NSW. The site meets this threshold and will need to be referred.	**Appendix C**
State Environment Planning Policy (B&C SEPP) 2021 Vegetation in non-rural areas	Clause 2.6 states a permit cannot be granted to clear native vegetation in any non-rural area of the State that exceeds the biodiversity offsets scheme threshold. The BDAR states the proposed development does not trigger that threshold and therefore complies.	**Section 6.1.6** and **Appendix C**
CLEP 2012	Objectives and land uses for IN2 Zone Part 4 – Principal development standards Part 5 – Miscellaneous provisions Part 6 – Additional local provisions	**Appendix C**
Considerations under other legislation		
BC Act – section 7.14	The likely impact of the proposed development on biodiversity values as assessed in the BDAR. The Minister for Planning may (but is not required to) further consider under that BC Act the likely impact of the proposed development on biodiversity values.	**Section 6.1.6** and **Appendix C**

Statutory Reference	Mandatory Consideration	Section in EIS
Development Control Plans		
CDCP 2012	Clause 2.10 of the Planning Systems SEPP states that development control plans (whether made before or after the commencement of this Policy) do not apply to SSD. As such, there is no requirement for assessment of the proposal against the CDCP 2012 for this SSDA. Notwithstanding this, consideration has been given to the following provisions: Part B General Controls Part E Industrial Development	**Appendix C**
CBDCP 2021	*Draft Consolidated Canterbury Bankstown Development Control Plan 2021* (**CBDCP 2021**)	**Appendix C**

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 continue to be carried out as required.

5.1 Engagement Carried out

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

- Department of Planning and Environment
- Government, agency, and utility stakeholders
- Canterbury Bankstown City Council
- Neighbouring land owners and occupants
- Community and nearby residential neighbours, specifically:
  - Moxon Road
  - Joyce Street
  - Craig Street
  - Moxon Sports Club at 61 Moxon Road
- Industrial neighbours, specifically:
  - 27-43 Moxon Road
  - Industrial units to the rear of the site at 59 Moxon Road.

The following actions were taken to inform the community regarding the project and seek feedback regarding the proposal:

- Letterbox drop: Key features of the proposal were distributed via letter to occupants of all premises in the vicinity of the site which also included inviting these stakeholders to participate in an online questionnaire survey.
- Door knock: On 28 September 2022, representatives from HillPDA and Hale Capital completed a door knock of local residents. The aim was to introduce the proponent to residents and inform them of the proposed development as a way to establish communication lines.
- Website information
- Online survey.

Consultation was also undertaken with identified stakeholders to inform the environmental impact assessment of key matters including:

- NSW Fire and Rescue
- Sydney Water
- TfNSW
- Ausgrid
- Gandangara Local Aboriginal Land Council
- Heritage NSW.

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 in the SEARs as summarised below:

- Detail how issues raised and feedback provided have been considered and responded to in the project. In particular, applicants must consult with:
  - the relevant Department assessment team.
  - any relevant local councils.
  - any relevant agencies
  - the community.

In accordance with the Regulations, the EIS will be placed on formal public exhibition once DPE 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 are summarised in the table below. A detailed community engagement table is provided as **Appendix E** which details the way in which these issues have been addressed in the EIS.

Table 12 Community Feedback

Key Issue	Respondent	Applicant Response
Strategic Context		
None applicable		
Project and Any Alternatives Considered		
Endorsement of the project methodology by Registered Aboriginal parties	Registered Aboriginal parties	The ACHAR has been finalised following the endorsement of the project methodology by the RAPs.
Relevant Statutory Issues		
Development assessment pathway	DPE	The proposal is lodged with DPE as an SSDA being a warehouse and distribution centre with a CIV over $30 million.
Stakeholder Engagement		
None applicable		
Economic, Environmental and Social Impacts		
Localised flooding – the proposed development should not exacerbate the existing flood levels and patterns.	Nearby resident	A flood planning and stormwater management assessment has been undertaken as part of the Civil Engineering Report (**Appendix BB**). The proposed development has been designed to meet CBCity Council flood planning requirements, including allowing for overland flow to Salt Pan Creek. The hydrological assessment found local post development flows from the site will be consistent with pre-development flows and demonstrates that the site discharge will not adversely affect any land,

Key Issue	Respondent	Applicant Response
		drainage systems or watercourse as a result of the development.
Traffic congestion – existing peak hour traffic is a concern if the proposed development will increase the volumes.	Multiple residents	Traffic modelling has been undertaken as part of the Transport Management & Accessibility Plan (**Appendix M**). This modelling identified that current traffic volumes on Moxon Road and Wiggs Road exceed the limit for their classification type. Notwithstanding the high baseline traffic levels, the modelling suggests that the performance of intersections near the site would not decrease significantly and that overall traffic impacts will be acceptable. The proposed operating hours will allow vehicles to access the site outside of the AM and PM peak, reducing local traffic congestion.
Truck movements – concern of unsafe truck manoeuvres on Moxon Road	Nearby resident	The proposal has been designed to discourage unsafe truck manoeuvres from occurring at the site once the proposed development is operational. The access arrangement and entry points to the site are to be constructed to the relevant standards and designed for the requirements of the largest vehicles anticipated at the site once operational, thereby minimising the need for on-street manoeuvring of large vehicles.
Current commercial tenants occupying street parking and operating outside of permitted hours	Local residents	The commercial tenant associated with the vehicles currently occupying street parking is located within the site. The construction of the proposed development would resolve this issue due to the tenant ceasing operations at the site. Additionally, the proposal provides on site car parking compliant with DCP standards. The sensitivity of residents to operations occurring outside standard business hours has been noted. A Noise and Vibration Impact Assessment (**Appendix Q**) has been undertaken as part of SSDA to assess any potential noise impacts of the proposed development on nearby residents and provide mitigation measures where required. The Noise Impact Assessment finds that the proposed hours of operation will have an acceptable impact with regard to local residential amenity.
Discussion regarding local planning controls for riparian	DPE - Water	The proposal has been designed to provide the appropriate setback to the Salt Pan Creek

Key Issue	Respondent	Applicant Response
buffer widths and the proposed riparian setback for the proposal. DPE Water suggested a formal query be submitted.		Riparian Corridor. A BDAR has been prepared and is lodged as part of the EIS (**Appendix O**).
TfNSW requested draft reporting on potential traffic impacts, and methodology for their traffic modelling. TfNSW requested to review the Traffic Impact Assessment prior to exhibition.	TfNSW	Ason Group provided the requested information to TfNSW to address the matters raised including potential traffic impacts and methodology for traffic modelling. The Transport Management and Accessibility Plan (**TMAP**) was provided to TfNSW for their review. The TMAP (**Appendix M**) provided as part of the EIS has been prepared in accordance with the feedback received from TfNSW.
Council requested a Preliminary Acid Sulfate Soil Assessment be undertaken as it is within Class 2 Acid Sulfate Soil Classification. The proposed development has the potential of removing greater than one tonne of soil from the site or lowering the water table below one metre. This is to be carried out by a suitably qualified environmental consultant in accordance with the 'Acid Sulfate Soils Assessment Guidelines'.	CB City Council	An Acid Sulfate Soil Management Plan has been prepared in accordance with the Guidelines and is included at **Appendix S**.
Council requested a Stage 2 Detailed Site Investigation be carried out by a duly qualified contaminated land consultant in accordance with Council's Contaminated Land Policy; relevant EPA Contaminated Land Management Guidelines; and National Environment Protection (Assessment of Site Contamination) Measure 1999, amended in 2013 (ASC NEPM, 2013). The DSI report must be prepared or reviewed and approved by an appropriately qualified and certified environmental consultant.	CB City Council	A Detailed Site Investigation has been prepared in accordance with the requirements and is included at **Appendix T**.

Key Issue	Respondent	Applicant Response
Council advised the site is subject to both mainstream flooding and overland flooding affectation. The proposed finished floor levels (**FFL**) indicate RL 4.00 (+/-500mm). Council requested the flood planning levels be more precise and confirmed by the final flood impact study. The flood planning levels are to be implemented based on recommendations of flood study.	CB City Council	The tolerance of +/- 500mm indicated on the Architectural Plans is in accordance with the standard level of tolerance provided at the DA stage. The final FFL will be confirmed through construction design, subject to approval of the SSDA. The Civil Engineering Report (**Appendix BB**) confirms that the proposed development will achieve the required flood planning measures.
Council requested all reasonable efforts to retain native trees, particularly along the northern boundary of the allotment and along Moxon Road frontage.	CB City Council	As set out in the Arboricultural Impact Assessment (**Appendix K**), all reasonable efforts have been made to retain trees at the site. Due to flood planning and civil engineering requirements, most trees at the site are not able to be retained. However, significant additional planting is proposed to offset potential impacts.
Council requested any landscape plan include species consistent with Plant Community Type (PCT) 3448 which is part of the Cooks River/Castlereagh Ironbark Forest, particularly along the western portion of the site. Trees required to be removed to support the development would need to be replaced at a minimum 3:1 ratio in accordance with Council's Tree Management Manual.	CB City Council	Both tree and shrub species consistent with Plant Community Type (PCT) 3448 are proposed as part of the Landscape Plan (**Appendix N**), including in the western portion of the site. Replacement tree planting has been maximised as far as possible across the site. 176 replacements trees are proposed to be planted, at a ratio of 1:2.1.
Council advised the EIS state should confirm how the proposal has appropriately avoided and minimised impacts to vegetation and associated habitat onsite. The EIS should also assess the proximity area for coastal wetlands and assess indirect impacts to Salt Pan Creek and the associated coastal wetland.	CB City Council	As part of the EIS, a BDAR has been prepared (**Appendix O**) which assesses the impacts of the proposed development on vegetation, habitat and the Salt Pan Creek coastal wetland area. The assessment of potential impacts of the proposed development on biodiversity and ecology are discussed further in **Sections 4** and **6** and **Appendix C**.

Key Issue	Respondent	Applicant Response
Council requested the proposed Vehicular Footway Crossing (**VFC**) near the northern boundary corner be amended to comply to Council's VFC policy and standard drawing S-004 having regard to minimum 2.0 metres clearance to side boundary.	CB City Council	The northern access driveway responds to the site constraints. The exit addresses multiple factors, including separation from intersection exclusion zones, suitable road grade to comply with required ramp grade and adequate space for maintaining the required flood storage offset to comply with the DCP requirements. A 2m separation from the VFC splay and boundary would decrease the flood storage offset zone and overall flood strategy balance which is undesirable. The driveway has been assessed as part of the TMAP (**Appendix M**), including a swept path analysis, and has been found to be acceptable from a safety and transport planning perspective.
Justification and Evaluation of Project as a Whole		
None applicable.		
Issues Beyond Scope or Not Relevant to Project		
None applicable.		

5.3 Engagement to be Carried out

Further community and stakeholder consultation will be undertaken through the project. Proposed consultation responds to the community feedback during the preparation of the EIS and the community participation objectives in the *Undertaking Engagement* guide.

- Ongoing consultation is proposed with the following stakeholders:
  - Local community
  - Relevant agencies
  - Registered Aboriginal Parties.

Hale Capital will continue to keep stakeholders and the community informed of the project approval process through the exhibition and determination phases.

Hale Capital will inform, consult and engage with the community during the implementation of the project consistent with the community participation objectives in the *Undertaking Engagement* guide as summarised below:

- Providing consistent, relevant, jargon-free and up to date information on the proposal, impacts, benefits, and the SSDA process through accessible, tailored open lines of communication
- Responding appropriately and in a timely manner to concerns or questions raised by the community and stakeholders
- Facilitating information flow to the project team by establishing working relationships to ensure stakeholder and community views and local knowledge are appropriately incorporated into the design of the project
- Managing expectations by closing the feedback loop through sharing how stakeholder and community views influenced the proposal.

The effectiveness of the engagement will be monitored, reviewed and adapted over time to encourage community participation in the project.

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. Further detailed information is appended to the EIS, including:

- SEARs compliance table identifying where the SEARs have been addressed in the EIS (**Appendix A**).
- Statutory compliance table identifying where the relevant statutory requirements have been addressed (**Appendix C**).
- Community engagement table identifying where feedback provided by the community during engagement have been addressed (**Appendix E**).
- Proposed mitigation measures for the project which are additional to the measures built into the physical layout and design of the project (**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 Detailed Assessment Impacts

This section of the report provides a detailed assessment of the key issues which could have a significant impact on the site and locality. It provides a comprehensive assessment of the relevant issues and the mitigation measures required to avoid, mitigate and/or offset the impacts of the project.

6.1.1 Design Quality

A Design Report was prepared by SBA Architects to demonstrate the proposal's design response to the urban context and character of the site and is attached at **Appendix F**. A site analysis was completed to understand the context, character and conditions of the existing site, which help inform the design features and aesthetic form of the proposed warehouse facility. The Design Report sets out the design response of the proposed development and how it aligns with the objectives for good design in *Better Placed*.

6.1.1.1 Existing Environment

The site analysis indicates the urban context comprises an industrial precinct with a low density residential interface along its eastern boundary. Neighbouring buildings to the north and south are industrial uses, consistent with the existing typology of the area. The site faces a residential zone on the opposite side of Moxon Road to the east, comprising of single detached and two-storey attached dwellings. To the west, the site abuts Salt Pan Creek which flows into a larger waterway to the south. South of the site is Moxon Sports Club which has a large area of green space for recreation activity.

6.1.1.2 Potential Impacts

In accordance with *Better Placed*, the proposal achieves design excellence in the following ways:

- Better Fit: The initial stages of design had taken into consideration the relationship of the development to the surrounding neighbourhood and similar industrial facilities. Functionality has been rationalised through the site whilst maintaining an appropriate interface with neighbouring uses. Attention to the various vantage points throughout the surrounding areas has informed high-quality design decisions in public faced zones. Warm materials like brick, timber and vegetation are considered in the building facades with the intention to appropriately blend with the residential context.
- Better Performance: Sustainability has driven the building design. Large areas on the roof are dedicated for solar panel arrays in addition to application of glazing and translucent panels to bring natural light into every warehouse. The east and west oriented office façades incorporate groups of equally spaced vertical shading devices mitigate solar heat gain as they diffuse natural light. The floor levels have been set above the existing levels to allow floodwater passage across the site. Bicycle parking is provided to promote sustainable methods of commuting to the site. To enhance the greenery throughout the site, dedicated landscapes and tree plantations are proposed.
- Better for Community: The building is set behind a landscaped setback, providing a generous open area in front of the façade. The fence is recessed away from the boundary along Moxon Road to allow a wider

and more engaged green space to the street and public domain. Additionally, a shared outdoor amenity space on level 1 is made available to create an enhanced amenity area for all tenancy's workers and operators.

- Better for People: Safety measures have been implemented between truck and pedestrian circulation by separating the carpark locations from truck aisles. The truck movement has been designed to create an efficient single direction flow as well as minimizing crossover with pedestrian movement. This will allow for safe and comfortable passage of pedestrians to the office and warehouse spaces. A shadow impact analysis has been done to recognise the resulting shadows of the proposed development and its negligible effect on surrounding areas.
- Better Working: Consideration of the impact to the atmosphere have been made by designing the ramps above the minimum required pitches to allow for less pressure on the trucks, which result in less noise pollution. Each tenancy's office façade has a unique solar façade device layout from the other, to allow for a sense of individuality among the overall facility, as well as create articulated viewpoints from within the offices. Each of the 12 units has a direct and clear link to the carpark, office, warehouse and hardstands.
- Better Value: The massing studies portray the result of a unified and succinct warehouse facility, subdivided into two main massings. The development provides for 12 tenancies, maximising space for activity and occupants. This adds value to the space by enhancing the efficient use of the site and adding more employment opportunity to the overall facility and area.
- Better Look and Feel: The elevations and renders illustrate the articulated office façade design with a warm material pallet applied, specifically selected to blend and bond with the residential neighbours. The offices protrude outwards from the warehouse facilities, giving a more prominent and attractive presence of the facility. The warehouse finish has a similar colour pallet and designed to complement the adjacent architectural elements and scaled appropriately given the size of the warehouse walls.

6.1.2 Built Form and Urban Design

The proposed Architectural Plans including shadow diagrams are attached at **Appendix B**. In addition, an Accessibility Review Report (**ARR**) was prepared by ABE Consulting to demonstrate how the proposed development complies with relevant accessibility requirements and is attached at **Appendix J.** This is further supported by the Regulatory Compliance Report (**RCR**) prepared by Certatude, which illustrates that the proposed development meets the required provisions of the Building Code of Australia (**BCA**) and is attached at **Appendix I**.

As set out in the Design Report, *Better Placed* objectives were addressed as part of the design strategy

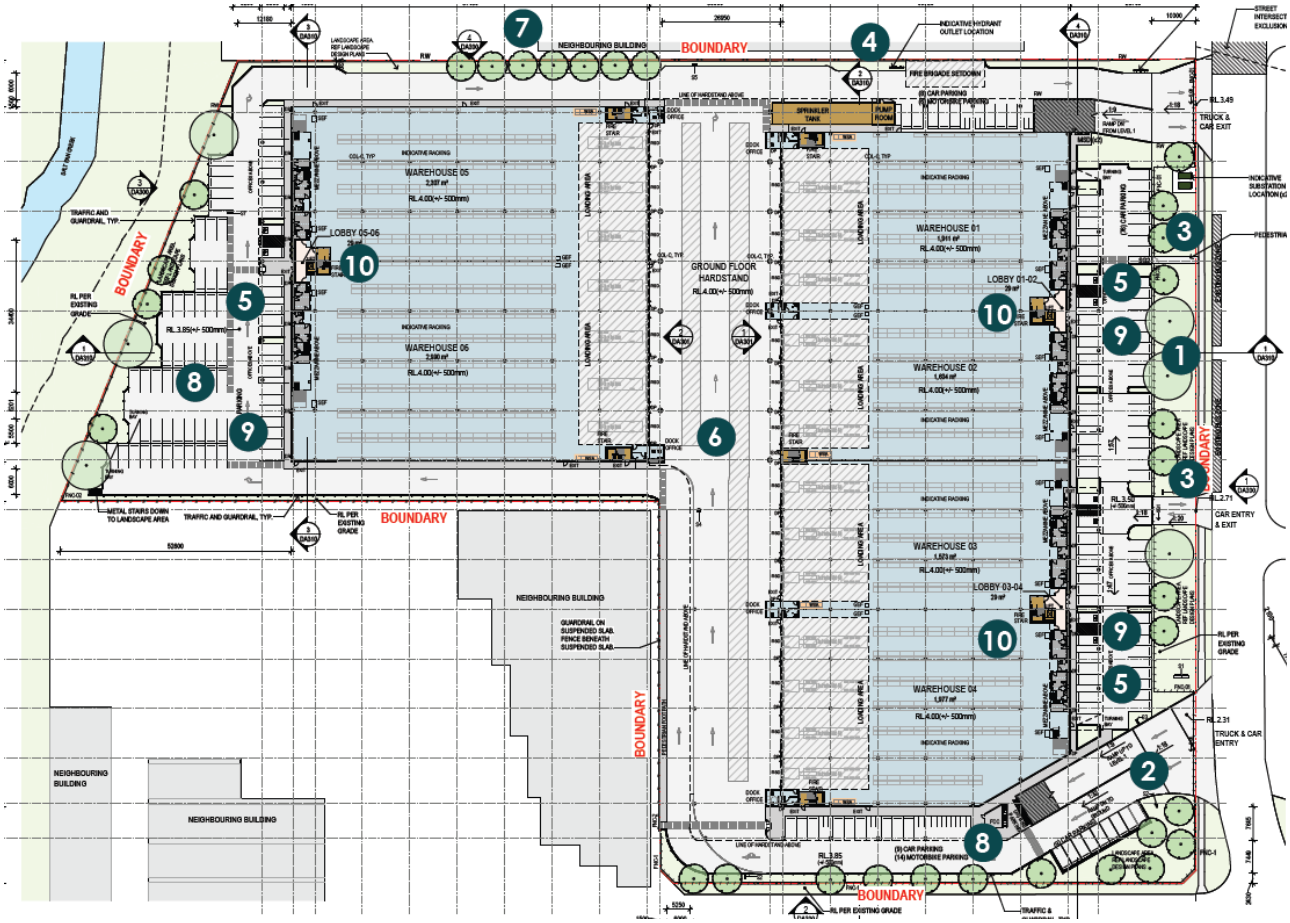
6.1.2.1 Potential Impacts

The layout and design have been carefully considered to provide a positive visual outcome and efficient use of the site. The Design Report identifies ten key design responses which summarise the development design. They are illustrated in **Figure 18**, and consist of:

1. Landscape area and vegetation along street frontage with 2.4m high black finished Palisade fencing set back from the footpath.
2. Appropriate layout of truck movement with compliant access to and from level 1 hardstand
3. Separation of truck access, pedestrian pathways and carpark access.
4. Appropriate location of fire services and brigade set down near the entrance to the site.
5. Advantageous location of offices to utilise passive solar heating and cooling from the east and west.
6. Efficient creation and proposed operation of the shared hardstand between buildings.
7. Appropriate introduction of boundary setbacks from surrounding site context, particularly on the north boundary.
8. Car parking which comply with the DCP, as well as the inclusion of motorcycle and bicycle parking within the site.
9. Creation of open, raised and shared outdoor amenity space to take advantage of the compact site space.

10. Appropriate isolated, central lobby spaces to access both the warehouse and office areas.

Figure 18 Design Response



Source: SBA Architects

The building is divided into two massings with a breezeway in between. The breezeway creates a clear one-way circulation for trucks to load and unload on both level loading areas. The 'L' shape of the neighbouring battle axe block permits the warehouse to wrap the site and allow for east and west facing offices to maximise natural daylighting. In addition, skylights have been implemented into the roof canopy as well as long linear window strips for the ground level warehouses to provide natural light into the interior.

Three ancillary office spaces are provided at the east and west facades of the warehouse. These have been intentionally positioned to maximise the opportunity to connect and engage with the surrounding context of Salt Pan Creek and Moxon Road. This design choice was also made to ensure warehouse activities was contained within the central core of the site and reduce any impacts to the surrounding amenity.

Detailed consideration has been given to the building façades, particularly the façade to Moxon Road, including articulation and careful selection of materials and fenestration. The façade of the development has been thoughtfully designed, with modern architectural materials and finishes which complement the character of the area. The form of the building has been shaped to provide visual relief and the treatment of the facades and materiality provide articulation and visual interest.

The vehicle access ramps have been carefully considered to avoid adverse visual impacts, including their siting in relation to primary sightlines and choice of materials to improve appearance. The public domain has also been considered in the location of building entries and ancillary offices to activate the site frontages.

The proposed development is designed to appropriately fit into the surrounding industrial zone and character of the site. The following design features and strategies seek to achieve integration of the building into the area and landscape:

- High quality landscape street frontage to effectively compliment and connect the warehouse to the context of the area. The dense native trees are proposed in the front and rear setbacks that will provide a natural, greenscape screen from the surroundings.

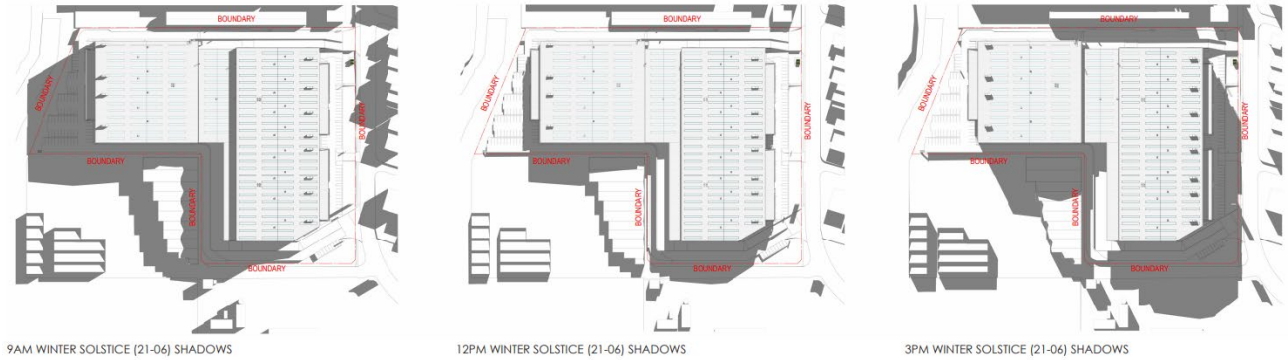
- The office space, extending outward with an articulated façade pattern, creates a softer transition of form to blend in with the proposed landscape and have a welcoming scale and presence.
- Office façade treatment responds to the east and west orientation and takes advantage of the passive heating and cooling as well as natural light gain.
- Selection of colours and materials seek to reflect the surrounding buildings and create a unique façade articulation.

The shadow diagrams included in the Architectural Plans (**Appendix B**) demonstrate the proposed solar access impacts to surrounding properties. An extract is provided as **Figure 19** below which demonstrates the proposed impacts at 21 June between 9am and 3pm.

The diagrams show the greatest shadow impact will be experienced by the adjoining industrial building to the south-west during the morning period when both the front and rear components of the proposed development will create shadow impacts. Most of the site benefits from solar access throughout the relevant assessment timeframe (9am to 3pm), however, there is some additional overshadowing of the existing building during the afternoon period when the rear part of the proposed development casts shadows over the north\-eastern corner of the adjoining property.

The proposed shadow impacts are considered acceptable based on the industrial nature of the site, the shadows on 21 June representing the 'worst case scenario' throughout the year and the solar access which is available to the building during the midday period and across most of the site between 9am and 3pm.

Figure 19 Shadow Diagrams – Winter Solstice



Source: SBA Architects

Accessibility

The ARR has assessed the proposed development to determine the compliance status against 'deemed to satisfy' requirements of the Building Code of Australia 2019 Amendment 1, The Disability (Access to Premises – Buildings) Standards 2010 and the pertinent Australian Standards. It concluded that with the adoption of the recommendations/performance solutions proposed, the design of the development can readily achieve compliance with the aforementioned BCA provisions.

Building Code of Australia

The RCR undertakes an assessment of the proposed development against the provisions of the BCA. From a review of the Architectural Plans, the Report finds that the proposed development can readily achieve compliance with the relevant provisions of the BCA.

6.1.3 Visual Impact

A Visual Impact Assessment (**VIA**) was prepared by Geoscapes and is attached at **Appendix L**. The VIA assesses the changes to the physical landscape that may positively or negatively impact on local character. The VIA undertakes both an objective analysis and a subjective professional judgement to determine the level of visual impact. This is also compared to best practice guidance, information and data analysis.

A site visit was conducted in November 2022 to verify results of a desktop study and evaluate the existing visual character of the area. In addition, a drone was used to take panoramic photographs at four separate locations within the site boundary to identify the site context, key features and the existing landscape character, and allow a judgement to be undertaken on which receptors in the wider context.

A Light Spill Assessment (**LSA**) has been undertaken by Cundall and is attached at **Appendix FF**. The LSA assesses the impacts of any light spill from the proposed exterior lighting to the development on neighbouring properties.

6.1.3.1 Existing Environment

The site information, the site visit and aerial photography conveys that the most sensitive visual receptors of the development are likely to be located in Punchbowl to northeast and east. Views will be experienced from adjacent nearby streets within the residential dwellings and apartment blocks that overlook the site.

Receptors were selected based on their viewpoints for the VIA. Viewpoints have been taken from publicly accessible areas with some also close to private individual properties. Nine receptors were selected as shown in **Figure 20**.

Figure 20 Viewpoint Locations

SCHEDULE OF VIEWPOINTS

VP Number	Address	Southings	Eastings	Elevation AHD
1	M5 South-Western Motorway	33°56'26.92"S	151°02'24.45"E	5m
2	Moxon Sports Club, Punchbowl	33°56'18.6"S	151°02'37.7"E	3.7m
3	Moxon Road (Approach from South), Punchbowl	33°56'17.6"S	151°02'39.4"E	5.1m
4	Wiggs Road Near McLaughlin Oval, Punchbowl	33°56'18.0"S	151°02'46.0"E	4.6m
5	Adjacent to 1 Craig Street, Punchbowl	33°56'13.9"S	151°02'37.5"E	3.6m
6	Adjacent to 18 Joyce Street, Punchbowl	33°56'10.4"S	151°02'41.5"E	6.4m
7	Moxon Road (Approach from North), Punchbowl	33°56'08.8"S	151°02'34.9"E	5.8m
8	Gow Street Recreation Area, Punchbowl	33°56'14.2"S	151°02'23.4"E	5m
9	Petbarn, Punchbowl	33°56'03.3"S	151°02'22.9"E	5.1m

Source: Geoscapes

The VIA identifies the site is located to the east of an industrial/commercial area and is surrounded by industrial type buildings to the north and south. The site is separated from the industrial area to the west by Salt Pan Creek.

To the east is low density residential housing. Landscape character is also heavily defined by the arterial road network of the M5, A34 and A6. These carry a large volume of commuters and commercial vehicles through western Sydney. To the south is Moxon Sports Club, McLaughlin Oval and Salt Pan Creek Reserve. Dense vegetation either side of the M5 results in larger recreational and open space areas to the south being isolated from the influence of industrial development.

Overall, the landscape character surrounding the site can be defined as a mix of industrial, commercial and residential with some areas of recreational open space.

6.1.3.2 Potential Impacts

Visual Impact

The existing site is characterised as a mix of industrial, commercial and residential. Therefore, the proposed development would not be out of character with the existing context, nor any future character defined by the CLEP 2012 or nearby approved development.

The assessment finds that out of the nine viewpoints assessed, two residential receptors immediately to the east and Moxon Sports Club are likely to receive moderate visual impacts from the proposed development, illustrated in **Figure 21**. All other visual impacts assessed are not significant, with four of the viewpoints assessed having minor or negligible significance. The moderate/minor visual impacts of the proposal are proposed to be mitigated through planting and architectural design. The results of the assessment are provided in Error! Reference source not found..

Table 13 Level of Visual Impact at Selected Viewpoints

Viewpoint	**Visual Receptor Sensitivity**	**Magnitude of Change**
V1. M5 South-Western Motorway - Looking North	Medium	Low
V2. Moxon Sports Club - Looking Northwest	Medium	Hight
V3. Moxon Road (Approach from South), Punchbowl - Looking Northwest	Medium	Medium
V4. Wiggs Road Near McLaughlin Oval, Punchbowl - Looking West	Medium	Low
V5. Opposite 1 Craig Street, Punchbowl - Looking West	Medium	High
V6. Adjacent to 18 Joyce Street, Punchbowl - Looking Southeast	High	Low
V7. Moxon Road (Approach from North), Punchbowl - Looking South	Medium	Medium
V8. Gow Street Recreation Area, Punchbowl - Looking East	Low	Very low
V9. Petbarn, Punchbowl - Looking Southeast	Low	Low

Figure 21 Photomontage of Existing and Proposed Views

Picture 13 V2. Moxon Sports Club - Looking Northwest

Picture 14 V3. Moxon Road (Approach from South), Punchbowl - Looking Northwest

Picture 15 V5. Opposite 1 Craig Street, Punchbowl - Looking West

Source: Geoscapes

Light Spill

The indicative exterior lighting design has been proposed to reduce light pollution with adaptive controls to manage the lighting systems brightness to reduce the need to have the system on at night when areas are not in operation. The indicative lighting design is compliant with AS/NZS 4282:2019 Control of the Obtrusive Effects of Outdoor light.

The LSA finds that there is no obtrusive light spill from the proposed indicative exterior lighting design of the development affecting the neighbouring properties on Moxon Road or adjacent industrial properties and Moxon Sports Club. The assessed illuminance levels are well below the Australian Standard allowance and acceptable for the proposed operational times.

The LSA finds that the residence that has the potential to be affected by heavy vehicle headlights egressing the site is 48 Moxon Road. The front of the residence is on an angle and setback from the boundary, with the nearest window approximately 19.7m and the furthest approximately 21.8m from the development boundary, During the night time hours between 6:00pm and 10:00pm (winter) and 7:00pm and 10:00pm (summer) it is anticipated that there will be approximately a maximum of three heavy vehicles exiting the complex.

The LSA undertakes a worst case scenario assessment and finds that the peak intensity of a heavy vehicle headlight will impact the residence from the ground level to approximately 0.45m above ground, which is minimal and below most domestic furniture. It is noted that heavy vehicles currently exit the site at night time across the existing five driveways adjacent to the residential area and that, at night, Moxon Road is lit by street lighting and two-way vehicular traffic. On this basis, it is considered that the headlight impact of up to approximately three heavy vehicles exiting the site across a time period of three to four hours (ie. on average less than one vehicle per hour) affecting up to a height of 0.45m on the façade on one residence is considered an acceptable environmental impact.

6.1.3.3 Mitigation Measures

A landscape buffer of 10m is proposed to the Moxon Road setback consisting of native canopy trees and layered planting. A landscape strip of 2.4m is also proposed to the boundary with Moxon Sports Club consisting of native canopy trees underplanted with understorey trees. The proposed landscape setbacks will filter and blend the development into its surrounding context and filter views of the development. Similarly, this will also achieve adequate privacy screening for the surrounding residential properties. The proposed hedge planting to the outdoor amenity space will provide screening to further ensure any impacts to neighbouring residential properties are minimised.

Visual impacts can be significantly reduced through good architectural design for surrounding people and locations. Consideration has been given to high-quality building finishes and colours as part of the façade design.

6.1.4 Traffic, Transport and Accessibility

Ason Group were engaged to prepare a Transport Management and Accessibility Plan for the project which is attached at **Appendix M**. The purpose of the TMAP is to demonstrate the site is compliant and consistent with the access, traffic and parking requirements prescribed by Council and TfNSW. It also details if the local road network and confirm that parking provision can appropriately accommodate the proposed trip generation facilitated by the project.

To assess the impact of the proposed development, SIDRA modelling (Signalised & Unsignalised Intersection Design and Research Aid) has been undertaken to evaluate the performance of four key intersections near the site, as listed below:

- Canterbury Road/ Stacey Street
- Canterbury Road/ Moxon Road
- Belmore Road/ Wiggs Road
- Belmore Road/ M5 Interchange.

6.1.4.1 Existing Environment

Access to the site is currently provided by five driveways along Moxon Road for all vehicle types. The site is currently functioning and is occupied by tenants from various industries. There is a private access road running parallel to the southern boundary of the site, however it does not provide access to the site. The site has no other public road frontages.

The road network surrounding the site includes a mix of State, regional and local roads. Key roads and intersections within the study area are shown in **Figure 22**. It is noted that there are no school zones located within the study area.

The National Heavy Vehicle Register (**NHVR**) currently identifies an existing approved B-double route which is located along Wiggs Road up to Cullens Road from Belmore Road and the M5 interchange. **Figure 22** demonstrates that a small section of Wiggs Road has B-double approval, while Moxon Road adjacent to the site does not. It is proposed that the largest vehicles expected to access the site are 20m Articulated Vehicles (**AVs**). If access by 26.0m B-Doubles was to be proposed in the future, an application to the NHVR would be required to obtain approval.

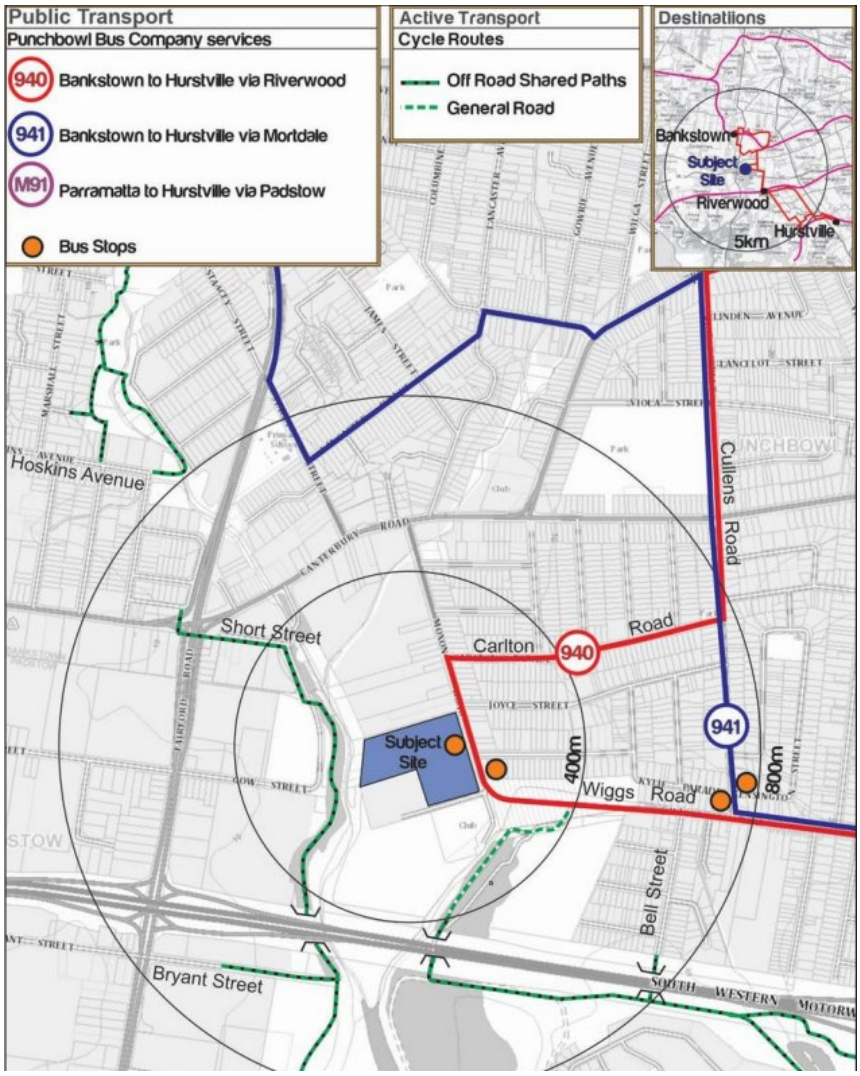
The site is well serviced by local public transport infrastructure. The key train and bus services local to the site are shown in **Figure 23**. There are adequate public transport services, with a focus on bus services. Several bus stops are located within 400 metres and 800 metres walking distance from the site. This includes directly adjacent to the site along Moxon Road. In addition, the site is generally well serviced with cycle routes within the LGA, consisting of a mixture of sub-regional and local cycle routes.

A survey of the existing traffic generation of the site found this to be 18 vehicle trips (33% heavy vehicles) and 14 vehicle trips (18% heavy vehicles) during the AM and PM peak respectively. The majority of trips were generated between 8:00am and 6:00pm. The survey found the site generated primarily light vehicles with two-axle Heavy Rigid Vehicles accounting for 29 trips of the daily trips generated.

Figure 22 Road Hierarchy

Source: Ason Group

Figure 23 Public and Active Transport Network



Source: Ason Group

6.1.4.2 Potential Impacts

Access

The proposal involves an overall reduction of the existing Moxon Road access driveways from five to three access driveways. The proposal seeks to rationalise the access driveways to Moxon Road across the site boundary, minimising potential impacts on Moxon Road. The proposed access driveways on Moxon Road, internal roads and warehouse hardstand areas on the ground floor and level 1 has been designed to accommodate access and circulation requirements for vehicles up to a 20.0m Articulated Vehicle. As set out in the TMAP, a swept path assessment has been undertaken for the proposed development, demonstrating the suitability of the proposed site arrangement to accommodate the nominated design vehicles (**Figure 24**).

It is noted that a section of proposed northern access driveway is in a prohibited location based on Figure 3.1 of AS2890.1:2004, due to being in close proximity to the intersection fronting the proposed access driveway. However, there is already an existing access driveway at the same location and recognising that there has been no crash history near the access, the proposed access driveway location can be deemed acceptable.

The internal ramps have been reviewed, with ramp grades and lengths being generally compliant with the requirements outlined within the relevant Australian Standards. Ramps have been designed for vehicles up to 20m Articulated Vehicles in accordance with AS2890.2:2018.

All service areas are to be designed with reference to the relevant Australian standard and provide for the movement of vehicles up to and including a 20 metre Articulated Vehicle. It is anticipated that service areas shall be designed and comply with AS 2890.2:2018. It is noted that 20m Articulated Vehicle utilising the northernmost eastern dock at the ground level hardstand would encroach the pedestrian crossing when reversing into the dock. It is determined that this encroachment is acceptable provided that this area is supplemented with appropriate line marking & signs (i.e., pedestrian crossing symbolic, beware of pedestrian warning sign/s) to increase both driver and pedestrian awareness. This movement is expected to be quite infrequent and happens in a section with reasonable sight distance. As set out in the mitigation measures, future operations and traffic management arrangement of the service / hardstand area shall be subject to an operational Traffic Management Plan to allow for identification of tenants' requirements and a customised traffic management arrangement specifically to support the operational needs of the tenants.

Figure 24 Swept path assessment

Picture 16 Ground level southern access swept path assessment

Picture 17 Ground level northern access swept path assessment

Source: Ason

A swept path assessment has also been undertaken for the Moxon Road/Canterbury Road intersection. It is noted that Canterbury Road is an approved National Heavy Vehicle Regulator (**NHVR**) B-Double route, and as such, these roads have been assessed as acceptable to accommodate 20m Articulated Vehicles. The use of these roads and this intersection by heavy vehicles has been determined as acceptable by TfNSW as the road authority and any non-compliances of this intersection with regard to swept paths is not an impact as a result of the proposed development. The Belmore Road/Wiggs Road intersection is also an approved NHVR B-Double route, and as such, is acceptable with regard to heavy vehicle access for the site. The proposed development will not have any impact on the acceptability of existing intersections for access to/from the site.

Parking Provision

- Car Parking:

  The provision of car parking for the site has been assessed against the rates and requirements for an "Office and Warehouse" development as outlined within the CDCP 2012. The TMAP highlights the provision of 178 car spaces meets the Canterbury DCP 2012 minimum requirement (178 spaces). parking spaces finds the spaces are compliant with the relevant Australian standards.

- Accessible Parking:

  The accessible parking requirements for the proposal is eight car spaces. The proposal provides eight accessible spaces and hence complies with the CDCP 2012. Accessible spaces have been designed in accordance with the relevant Australian standard with parking space and adjacent shared zone.

- Bicycle Parking:

  CDCP 2012 requirements for bicycle parking are based on number of staff. The Cost Summary Report indicates 472-585 staff are to be employed at the site depending on whether the proposed warehouses will have a conventional fit-out or will be semi-automated. It is noted that the SSDA does not seek consent for a semi-automated warehouse and distribution centre use, and that any such semi-automated use would be subject to separate approval under the EP&A Act. For a maximum employment rate of 585 staff, the CDCP 2012 requires 30 bicycle racks. Notwithstanding, 585 staff is the total number of staff to be employed on-site, rather than the total number of staff on-site at any given time. As such, reference is made to average industrial staff densities from the TfNSW Technical Direction. An average employee rate of 1 staff per 129m^2 within the Sydney area for the Riverwood, Business Park comprising of similar

land use, has been adopted. With a proposed GFA of 29,309m^2 an average of 225 full time equivalent staff is projected for the development to be on site at any given time. In this regard, a guideline of 11 bicycle spaces to be provided. As such the proposed provision of 20 bicycle parking racks is considered to meet the anticipated bicycle parking requirement based on the number of staff on site at any one time.

Bicycle parking facilities for office and warehouse staff are in accordance with the vertical parking layout as presented in Figure B7 of AS2890.3:2015. Minimum access aisle width for bicycles is in accordance with Table 2.1 of AS2890.3:2015 for vertical bicycle parking spaces.

- End of Trip Facilities (**EOT**):

  The site requires two showers and two change rooms to satisfy the CDCP 2012 EOT facilities provision. the proposal provides 48 showers and 48 change rooms spread across site for males and females, satisfying the CDCP 2012 requirement for the 12 warehouse tenancies.

- Motorcycle Parking:

  The CDCP 2012 does not provide a requirement for motorcycle parking. However, the proposal provides for 20 spaces to encourage modes of travel other than car travel.

Traffic Assessment

To assess the impact of the proposed development, SIDRA modelling has been undertaken to evaluate the performance of four key intersections near the site, as listed below:

- Canterbury Road/ Stacey Street
- Canterbury Road/ Moxon Road
- Belmore Road/ Wiggs Road
- Belmore Road/ M5 Interchange.

These intersections were assessed using two separate network scenarios, the first comprising of intersections on Canterbury Road, and the other containing intersections on Belmore Road. For Future Project Case scenarios, the access to the proposed development was also modelled, and included in the northern network, south of the Canterbury Road/ Moxon Road intersection.

Traffic surveys have been undertaken on the access driveways on the western side of Moxon Road, between Wiggs Road and Joyce Street, existing currently within the site boundary of the proposed development, concurrently with the intersection turn counts to identify the existing traffic generation of the site. With respect to the proposed traffic generation, reference has been made to the *RMS Guide to Traffic Generating Developments – Updated Traffic Surveys Technical Direction 2013 (TDT2013/04a)*, specifically for the traffic generation rates for Business Parks and Industrial Estates. For this assessment, the rates for Sydney Average have been used. Application of these traffic generation rates to the proposed development results in the following AM, PM, and daily traffic volumes:

- AM Peak: 152 trips per hour
- PM Peak: 164 trips per hour
- Daily: 1,348 trips per day.

As the site is proposed to operate between 7:00AM to 10:00PM, it is envisaged that the trip movements associated with the development may be spread out across the operational hours more evenly. As such, trips are anticipated to be scheduled outside of network peak hours (especially trips associated with staff movements) which may generally minimise the site's impact to the surrounding road network. It is noted that the warehouses are currently speculated, hence adoption of the trip rates results in a more conservative approach for the TMAP assessment.

The existing SIDRA intersection performance results are summarised in **Figure 25**, which outlines generally good performance at all intersections in regard to Level of Service (**LOS**). Reported Degree of Saturation (**DOS**), however, showed that some movements were approaching capacity, with the Canterbury Road / Stacey Street intersection reporting a DOS over 0.90 in both peaks. Critical movements highlighted in the SIDRA models were the southbound right turn from Stacey Street onto Canterbury Road and the two right turn movements from Canterbury Road into either Stacey Street or Moxon Road. In the AM peak, the

Belmore Road / M5 WB intersection also reported a DOS over 0.90. This was reported on the southern approach, with the model showing a 170m northbound queue on approach to the M5.

Figure 25 Existing Intersection Performance

Intersection	Peak Period	AVD (s)	LOS	DOS
Canterbury Road / Stacey Street	AM	24	B	0.92
	PM	28	C	0.91
Canterbury Road / Moxon Road	AM	15	B	0.75
	PM	18	B	0.83
Belmore Road / Wiggs Road	AM	15	B	0.54
	PM	16	B	0.57
Belmore Road / M5 EB	AM	18	B	0.88
	PM	18	B	0.79
Belmore Road / M5 WB	AM	26	B	0.91
	PM	16	B	0.56

Source: Ason

An assessment of the Future Base Case scenarios for both 2024 and 2034 has been undertaken, and the SIDRA modelling results are shown in **Table 14**.

In both the AM and PM 2024 scenarios, all intersections still operated at a LOS of C or better, however the DOS was reported to approach 1.00 at numerous intersections. The Canterbury Road/ Stacey Street intersection showed several movements reaching capacity by 2024. The southbound right turn from Stacey Street operated at a LOS of F in the AM peak with high DOS. In the PM peak the southbound left turn and the westbound right turn at this intersection were identified as the critical movements, also both operating at a LOS of F. In both cases, this performance is comparable to the existing base case, with average intersection delays increasing by no more than 10 seconds.

The 2034 scenarios showed degraded performance compared to the 2024 scenarios. The intersections of Canterbury Road, Stacey Street and Moxon Road, all reported a DOS over 1.00 in both the AM and PM peaks, recording a LOS of E or F. Poor performance was observed on both right turn movements between Stacey Street and Canterbury Road. Additionally, SIDRA reported poor performance on the eastbound direction on approach to Stacey Street, as well as poor westbound performance on approach to Moxon Road. This was driven by limited storage between the intersections, resulting in queues from the limiting the throughput of upstream intersections.

Table 14 Future Base Case Intersection Performance

Intersection	**Peak Period**	**AVD (s)**		**LOS**		**DOS**	
		2024	2034	2024	2034	2024	2034
Canterbury Road / Stacey Street	AM	28	66	B	E	0.95	1.14
	PM	32	80	C	F	0.94	1.12
Canterbury Road / Moxon Road	AM	16	69	B	E	0.80	1.09
	PM	30	108	C	F	0.94	1.22

Intersection	Peak Period	AVD (s)		LOS		DOS	
		2024	2034	2024	2034	2024	2034
Belmore Road / Wiggs Road	AM	15	15	B	B	0.55	0.62
	PM	16	16	B	B	0.58	0.65
Belmore Road / M5 EB	AM	18	19	B	B	0.91	0.94
	PM	23	64	B	E	0.73	1.03
Belmore Road / M5 WB	AM	32	97	C	F	0.95	1.14
	PM	19	21	B	B	0.66	0.78

Source: Ason

Table 15 below shows the intersection performance for the 2024 and 2034 Future Project Case scenarios as a result of the proposed development. The 2024 Project Case Scenarios typically showed comparable performance to the corresponding Future Base Case Scenarios. All intersection reported the same LOS as the Future Base Case, other than the Canterbury Road/ Stacey Street intersection, where LOS degraded from a B to a C. Reported DOS remained below 1.00 and did not increase by more than 0.02. In the 2024 PM peak similar patterns were observed, with most intersections operating the same LOS in the Project Case Scenario. LOS at the Canterbury Road/ Moxon Road intersection did, however, degrade from a C to a D. This intersection also showed an increase in DOS of 0.08, resulting in the DOS to exceed 1.00 in the Project Case Scenario.

As with the 2024 assessment, the 2034 Future Project Case Scenarios showed comparable performance to the Future Base Case in terms of DOS. In the 2034 Future Base Case Scenarios, multiple intersections were reported to be significantly exceeding their capacity without the additional development demand. As such, greater degradation was observed in the AVD and LOS model outputs when comparing the Future Base Case to the Future Project Case, although the additional demand generated by the development was relatively low. In the AM peak, the Canterbury Road/ Stacey Street intersection operated at a LOS F under the 2034 Project Case demand, compared to and E in the Future Base Case. This was driven by increasing delays in the eastbound direction. DOS on this approach was over 1.00 in both the Future Base and Project Case Scenarios, increasing from 1.06 to 1.13. This resulted in an increase in delays of up to 50 seconds on the approach, and an increase in average intersection delay of 25 seconds. Due to increased eastbound congestion on approach to Stacey Street, and the subsequent reduction in throughput, delays at the Canterbury Road/ Moxon Road intersection reduced by seven seconds in the 2034 Future Project Case.

In both the 2024 and 2034 scenarios, the site accesses themselves operated well, all achieving a LOS A in both peaks and DOS remaining below 0.30 in 2034.

Table 15 Future Project Case Intersection Performance

Intersection	Peak Period	AVD (s)		LOS		DOS	
		2024	2034	2024	2034	2024	2034
Canterbury Road / Stacey Street	AM	42	66	C	E	0.98	1.14
	PM	34	80	C	F	0.95	1.12
Canterbury Road / Moxon Road	AM	17	69	B	E	0.80	1.09
	PM	50	108	D	F	1.03	1.22

Intersection	Peak Period	AVD (s)		LOS		DOS	
		2024	2034	2024	2034	2024	2034
Belmore Road / Wiggs Road	AM	15	15	B	B	0.56	0.62
	PM	16	16	B	B	0.65	0.65
Belmore Road / M5 EB	AM	18	19	B	B	0.91	0.94
	PM	24	64	B	E	0.76	1.03
Belmore Road / M5 WB	AM	36	97	C	F	0.97	1.14
	PM	19	21	B	B	0.68	0.78

Source: Ason

Overall, the SIDRA modelling assessment has shown comparable performance between the Existing 2022 Base and 2024 Future Base Case Scenarios. Further growth between 2024 and 2034 does however result in significant increases in congestion on Canterbury Road as well as at the M5 interchange. This resulted in these intersections operating at an unsatisfactory level in the 2034 Future Base Case.

The proposed development is expected to marginally increase demands across the modelled network (an increase between 0.8% and 3.3% in 2024 and 0.6% and 2.8% in 2034). Figure 38 presents the additional development demand for each of the key intersections, as a percentage of the Future Base Case intersection demand. The figure outlines that the Belmore Road / Wiggs Road intersection is impacted the most by the development in terms of demand increases. The intersection of Belmore Road / Wiggs Road operated at a LOS B in all modelled scenarios.

It is important to note that, with reference to *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments, Appendix F.1.5*, typically if development traffic is less than 5% then it does not warrant details intersection assessment, noting that it is unlikely to have any material impact on those intersections. SIDRA did report some intersections where delays increased by up to 25 seconds under the Future Project Case demand, however in these instances, the movements operating at an unsatisfactory level reported a DOS well over 1.00 in the Future Base Case, indicating that they were already exceeding their capacity. The additional demand did not result in a material increase in DOS, and although delay increased, this can be an unreliable performance measure in oversaturated environments. A visual summary of modelled DOS and LOS, across all intersections and scenarios, is provided in **Figure 26**. No mitigation measures are required as a result of the proposed development, based on road network performance. The development increases traffic demand at key intersections by less than 4% in either peak hour or is unlikely to have a material impact on intersection performance.

Figure 26 SIDRA modelling outcomes summary

Source: Ason

As set out in the TMAP, the detailed assessment of the future intersection performance demonstrates that the majority of the increased traffic demand can be attributed to the future year base growth (ie growth in traffic volumes unrelated to the proposed development). The impact of the proposed development is considered to be relatively negligible, being no more than 3.3% at any intersection. Based on the minor impact of the proposal, the TMAP finds that the development is supportable on traffic modelling grounds and will not generate a requirement for mitigation measures to be provided at any intersection. The TMAP concludes the proposed development will not result in any adverse traffic impacts as the development complies satisfactorily with the relevant Council controls. The proposed warehouse and distribution centre will be acceptable and appropriate with regards to traffic planning grounds. Engagement with TfNSW was undertaken as part of the preparation of the TMAP. TfNSW has endorsed the TMAP and confirmed that no further additional assessments for the proposal required.

Road Safety Audit

A Road Safety Audit (**RSA**) has been undertaken for the site access/egress and interface with Moxon Road. The RSA finds that the development does not result in additional road safety issues and that the proposed reduction in the number of access driveways to the site from five to three minimises the number of conflict points on Moxon Road.

Construction Traffic and Parking Assessment

Construction traffic generation is not expected to exceed the existing operational traffic generation of the proposal. Light vehicle traffic generation will generally be associated with staff movements to and from the site. Considering the typical construction work hours, the peak periods are likely to occur outside of traditional road network peak periods. Heavy vehicle movements generated by construction of the proposal

has also been assessed. The TMAP finds that the construction traffic volumes are lower than the volumes anticipated for the operational stage of the proposal.

A small amount of on-site parking for key contractors and staff is expected to be provided throughout the construction works. The number and location of this temporary on-site parking is expected to change throughout the various construction phases. Public transport is an accessible mode of transport to the site which will be encouraged to reduce reliance on private vehicles.

6.1.4.3 Mitigation Measures

Construction

A Preliminary Construction Traffic Management Plan (**CTMP**) has been prepared in advance of development approval and, as such, relevant conditions of consent have not yet been provided. It is expected that the final CTMP shall demonstrate the proposed management of the impact in relation to construction traffic. The Preliminary CTMP includes the following management measures:

Temporary exclusion fencing (chain mesh fencing) will be erected along the entire boundary of the Site and will be maintained for the duration of the construction program.

Handling of all materials throughout the construction shall adhere to the following.

- It is proposed that all material loading will occur within the construction site boundary.
- No loading is proposed to occur outside of the provisioned areas.
- Equipment, materials, and waste will be kept within the construction site boundary.

All vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site.

An authorised Traffic Controller is to be present on-site throughout the construction stage of the project.

Operation

With regard to the design of on-site traffic measures, a Traffic Management Plan (**TMP**) is proposed to be prepared for the site. The TMP should include a signage and line marking plan, any desirable traffic management devices (eg. speed humps, wheel stops, warning devices etc.) and be prepared prior to the issue of the Construction Certification.

A Green Travel Plan (**GTP**) has been prepared to set out a package of site-specific measures to promote and maximise the use of sustainable travel modes, including walking, cycling, public transport and car sharing. Preparation of the GTP will assist in:

- Removing barriers to active travel for all site employees and visitors; and
- Maximising the number of people who walk, cycle or utilise public or active transport to and from the site.

6.1.5 Trees and Landscaping

An Aboricultural Impact Assessment (**AIA**), including a Tree Protection Management Plan, has been prepared by Canopy Consulting and is attached at **Appendix K**. The report details the relative retention values of all trees that may be affected by the project, assess the impacts of the project and provides recommendations to minimise negative impacts.

6.1.5.1 Existing Environment

84 existing trees were identified in the assessment of the proposal, including a mix of locally indigenous, native and exotic species. The AIA identifies that the trees at the eastern and northern site boundary appear to have been planted, as some trees are in sporadic landscaped areas throughout the site. The vegetation surveyed outside the western boundary is assumed to be self-sown. Significant trees were primarily native and indigenous species located along the Moxon Road frontage.

The existing trees on site have been allocated a significance rating and retention value. The encroachment type relative to tree retention value and recommendation is summarised in **Figure 27**.

Figure 27 Impact Assessment Summary

		Retention Value				
Recommendation	*Encroachment Type*	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal	Grand Total
Remove	Major	17	36	19	10	82
Remove Total		17	36	19	10	82
Retain - generic	Minor			1		1
	Nil		1			1
Retain - generic Total			1	1		2
Grand Total		**17**	**37**	**20**	**10**	**84**

Source: Canopy Consulting

6.1.5.2 Potential Impacts

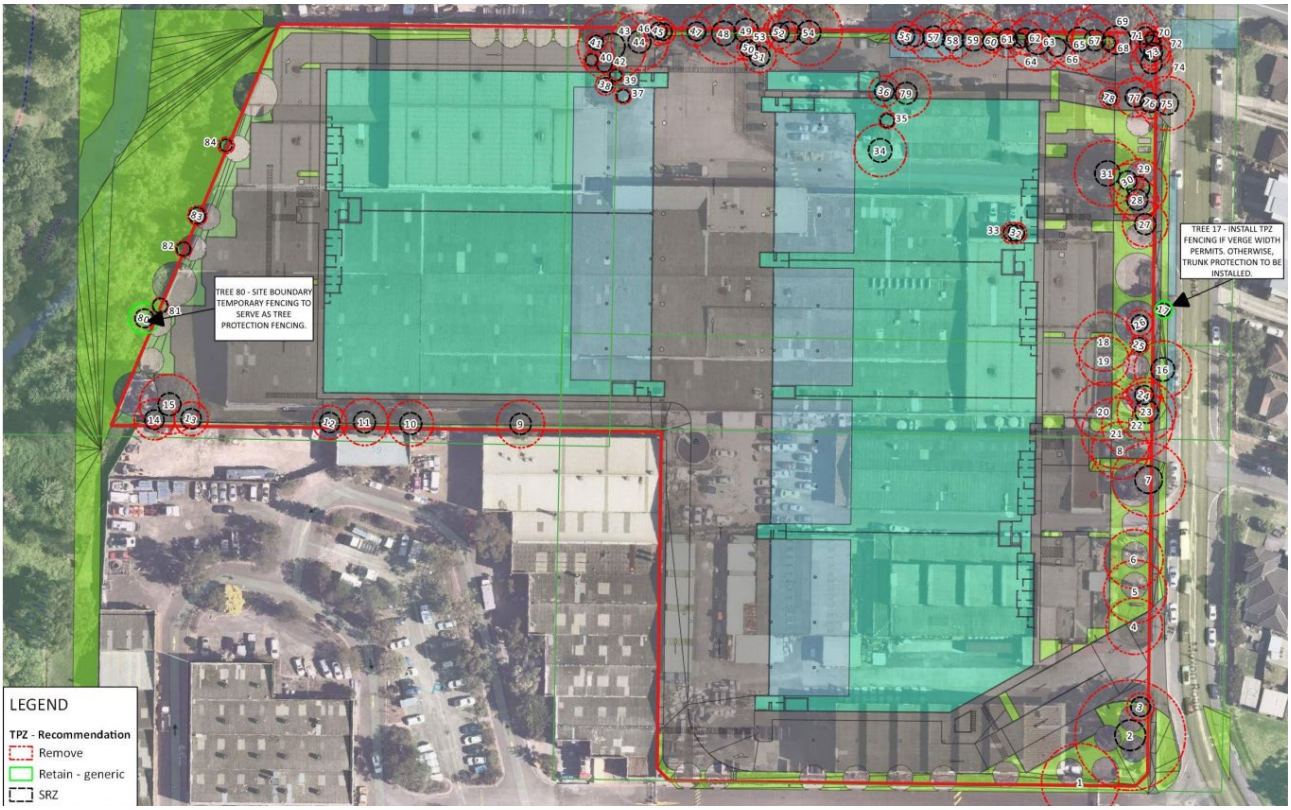
82 trees have major, unmitigable encroachments into their Tree Protection Zone (**TPZ**) and Structural Root Zone (**SRZ**) due to the required flood planning levels, including associated civil engineering works. These include two street trees in the road reserve (Council-owned land) on Moxon Road, one of which is dead. Of the trees proposed to be removed:

- 17 are High Retention Value
- 36 are Medium Retention Value
- 19 are Low Retention Value
- 10 are a Priority for Removal.

Two existing trees will be retained, including Tree 80 which has a minor TPZ encroachment but can be retained as the area lost to encroachment can be offset. Tree 17, a street tree in the road reserve, has no direct encroachment and can be retained with tree protection measures. The locations of trees proposed to be removed and retained are shown in **Figure 28** below.

To mitigate the proposed tree removal, it is proposed to plant 176 replacement trees as part of the landscape design. The assessment indicates the current cover within the site boundary is 2,621m^2 which is projected to increase to 2,793m^2 at maturity of the proposed tree planting.

Figure 28 Tree Removal and Retention Plan



Source: Canopy Consulting

6.1.5.3 Mitigation Measures

Construction

Tree protection measures for trees proposed to be removed are provided according to encroachment type and should be increased relative to the level of encroachment. AS 4970-2009 outlines the types of TPZ encroachment and mitigation measures required to ensure long term viability which are summarised in **Table 16**. These measures are only required if a tree is to be retained.

Table 16 Mitigation Measures

Encroachment Type	Mitigation Measures
Nil	Where indirect or inadvertent encroachments may occur due to haul routes or machinery movement tree protection should be installed
Minor	The area lost to encroachment must be offset elsewhere and contiguous to the TPZ. Detailed root investigations should not be required. Tree protection must be installed and maintained.
Major	The Project Arborist must demonstrate the tree(s) will remain viable. Root investigations using non-destructive methods may be required to clarify or confirm the impacts to trees to be retained. The area lost to encroachment must be offset elsewhere and contiguous to the TPZ.

Encroachment Type	Mitigation Measures
	All works and excavations within the TPZ must be supervised by the Project Arborist. Tree protection must be installed and maintained for project duration. Additional measures such as mulching or temporary irrigation may be required.

Operation

Offset planting is proposed as part of the development to achieve equal or improved canopy and landscaping outcomes in practical locations. A total of 176 trees are proposed to replace the 82 existing trees to be removed and offset the canopy loss. The proposed plantings seek to achieve an enhanced landscaped design for the site and also achieve aesthetic visual screening of the proposed development for the surrounding land uses.

6.1.6 Biodiversity

A Biodiversity Development Assessment Report (**BDAR**) was prepared by Ecologique to identify and assess any biodiversity impacts associated with the development and is attached at **Appendix O**.

6.1.6.1 Existing Environment

Landscapes features relevant to the proposal have been assessed from within a 1500 metre buffer zone around the site. The applicable landscape features are summarised below.

- NSW (Mitchell) landscapes BDAR assessment area:
  - Georges River Alluvial Plain (100%).
- Rivers and stream classified according to stream order:
  - Salt Pan Creek is a 3rd order Strahler order stream shown on hydro line mapping, however the tributaries upstream of the subject land are channelised (concrete lined) and/or piped.
- Connectivity of different areas of habitat:
  - The site does not contain any regionally important biodiversity corridors but provides connectivity from south to north towards the Salt Pan Creek estuary.
- Geological features such as karst, caves, crevices, cliffs, rocks and other geological features of significance and for vegetation clearing proposals, soil hazard features:
  - No areas of geological significance have been identified within the BDAR assessment area.
- Areas of outstanding biodiversity value occurring on the subject land and assessment area:
  - No outstanding biodiversity values occur within the BDAR assessment area.
- Soil landscapes:
  - Site soils are expected to deviate from their natural state due to past urban development. The subject land is located on the Birrong Fluvial soil landscape, whereas much of the surrounding soil landscapes in the BDAR assessment area is mapped as ‘disturbed terrain’.

Native Vegetation within the site extends over 0.34 ha which comprises predominantly planted native tree species overlying mown grass or in garden beds.

The assessment also confirmed that the site does not provide habitat of any importance to threatened species recorded from the locality. This is due to multiple reasons including the highly modified nature of the subject land, artificial lighting and industrial noise levels.

Figure 29 Native Vegetation on Site

Source: Ecologique

6.1.6.2 Potential Impacts

Prescribed impacts were assessed, which include impacts on the habitat of threatened species or ecological communities from development that is not directly caused as a result of vegetation clearing. The BDAR considers the potential impacts of:

- Development on the habitat of threatened species or ecological communities associated with:
  - karst, caves, crevices, cliffs, rock outcrops and other geological features of significance;
  - human-made structures;
  - non-native vegetation.
- Areas connecting threatened species habitat, such as movement corridors.
- Water quality, water bodies and hydrological processes that sustain threatened entities (including from subsidence or upsidence from underground mining).
- Threatened and protected animals from turbine strikes from a wind farm.
- Threatened species or fauna that are part of a Threatened Ecological Community (**TEC**) from vehicle strikes.

The option to avoid and minimise vegetation clearing is not possible due to the flood prone nature of the site and the requirement to provide safe refuge on the site for users during an extreme flood event. This requires substantial earthworks (filling) across the site, which precludes the retention of the existing vegetation. However, the assessment also found no ecosystem or candidate species credit species have been incidentally recorded on the site and the proposal is not considered to represent a prescribed impact.

In addition, indirect impacts from the proposed development were assessed to identify their consequence to the site and surrounds. The assessment of indirect impacts is provided in the **Table 17** below.

Table 17 Assessment of Indirect Impacts

Indirect Impact	**Consequence**
Inadvertent impacts on adjacent habitat or vegetation	
Increased Sedimentation Short term – Construction Phase	Vegetation clearing and earthworks can expose soils and subsoils, which following rainfall may erode and mobilise soils in runoff, potentially smothering ground layer vegetation (in turn affecting health through a decrease in photosynthesis) or impact on water quality in downstream aquatic ecosystems.
Introduction of weeds and pathogens Short term – Construction Phase	Construction activities have the potential to both spread existing weed infestations, introduce new weed species, and introduce or spread soil borne pathogens on machinery and equipment. The condition of retained and neighbouring vegetation could be decreased.
Reduced viability of adjacent habitat due to:	
Light Spill Long term	The proposal will result in an increase in light levels above that which already exists, due to the built industrial footprint within the southern site portion. However, the retained native vegetation does not provide habitat of importance to any nocturnal fauna and the consequence of increased light impacts is considered a low risk.
Habitat Connectivity	Habitat connectivity will not be impacted by the proposed development.
Water bodies, water quality and hydrological processes Short and Long term	The stormwater management for the development has been designed in accordance with City of Canterbury-Bankstown requirements and ensuring acceptable impacts relating to the development. The hydrological assessment shows local post development flows from the site will be consistent with pre-development flows and demonstrates that the site discharge will not adversely affect any land, drainage systems or watercourse as a result of the development.

6.1.6.3 Mitigation Measures

Mitigation of construction impacts will be specified within a project Construction and Environmental Management Plan (**CEMP**). The proposal's potential indirect impacts on biodiversity values will be mitigated through a range of measures, which would include, but may not be limited to, the following:

- Pre-clearance and clearance management of vegetation;
- Pre-demolition clearance surveys will be undertaken of all buildings for microbat roosting habitat;
- Fauna rescue and relocation protocol;
- Euthanasia protocol;
- General biosecurity duty compliance;
- Unexpected finds protocol; and
- Monitoring and reporting strategies.

These are to be documented in a Flora and Fauna Management Plan as a subplan to the project's Construction Environmental Management Plan.

Furthermore, adaptive management for uncertain impacts is not applicable to the proposal as it is considered unlikely to result in any uncertain impacts that require adaptive management.

6.1.7 Air Quality

RWDI were engaged to prepare an Air Quality Impact Assessment (**AQIA**) which is attached at **Appendix P**. The AQA assesses the potential construction and operational air quality impacts associated with the proposed development in accordance with the NSW Environmental Protection Agency (**EPA**) and other relevant air quality criteria.

6.1.7.1 Existing Environment

The closest residential receptors are located to the east of the site, with the closest being approximately less than 50 metres being the residential properties on the eastern side of Moxon Road.

Data on existing background pollution concentrations was obtained from DPE Air Quality Monitoring Network. The nearest air quality monitoring station (**AQMS**) measuring is located approximately 5 km north of the proposed development, in Chullora. A summary of the ambient air quality monitoring data collected from 2020 at the Chullora AQMS is presented in **Figure 30**.

Figure 30 Ambient Air Quality Monitoring Concentrations

Pollutant	Averaging Period	Concentration (µg/m³)
Total suspended particulates (TSP)	Annual[1]	51
Particulate matter ≤10 µm (PM_{10})	Annual[2]	21
	24-hour[3]	37
Particulate matter ≤2.5 µm ($PM_{2.5}$)	Annual[2]	9
	24-hour[3]	19
Nitrogen dioxide (NO_2)	Annual[2]	98
	1-hour[4]	17

Source: RWDI

6.1.7.2 Potential Impacts

Likely air emission sources during the construction and operation of the development are summarised in the table below. As a detailed construction programme has not yet been developed and the end users of the site are known, these potential sources have been identified based on typical warehouse development and usage.

Table 18 Construction and Operation Potential Air Emissions

Stage	Source
Construction	Demolition: Likely to be the shortest activities and of least impact; Small number of structures to be removed using trucks, excavators, and hand tools. Clearing works.
	Earthworks

Stage	Source
	Bulk earthworks required that will involve many trucks, excavators, dozers, and associated equipment.
	Construction of warehouses and internal road network: Given the staging, this work is likely to be the longest duration; Building works likely to involve many truck movements, cranes, and power tools; Typical equipment includes concrete trucks, asphalt pavers, and vibratory rollers.
Operation	Off-site and on-site vehicular movements including trucks idling; Forklift movements.

Construction

The sensitivity of receptors was determined and identified as below:

- Industrial Receivers
  - Medium sensitivity to dust soiling.
  - Medium sensitivity to human health.
- Residential Receivers
  - High sensitivity to dust soiling.
  - High sensitivity to human health.

The assessment identifies that the proposed earthworks and haulage activities are considered to have a medium risk of both dust soiling and human health impacts if no dust mitigation measures were implemented. However, with the implementation of recommended mitigation measures (refer **Section 6.1.7.3**), no significant air quality impacts are expected to occur during the construction of the proposed development.

Operation

The significant sources of emissions associated with the operation of the development are identified as:

- Truck movements on paved roads
- Diesel exhaust from idling vehicles.

Assessment of air quality impacts on nearby receptors during the operation of the project indicates that particulate matter and Nitrogen Dioxide (**NO_2**) concentrations due to the operation of the proposed development would comply with the established criteria at all the receptors.

Therefore, there would be no adverse air quality impacts associated with the construction and operation of the proposed industrial development.

6.1.7.3 Mitigation Measures

Construction

The following mitigation measures are recommended to minimise construction dust impacts:

- Communications:
  - Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.

  - Displays the name and contact details of the Responsible Person accountable for air quality and dust issues on the site boundary.
  - Displays the head or regional office contact information.
  - Develop and implement a Dust Management Plan.
- Site Management:
  - Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
  - Make the complaints log available to relevant authorities (Council, EPA, etc).
  - Record exceptional incidents that cause dust and/or air emissions, either on or off site, and the actions taken to resolve the situation in the logbook.
- Monitoring:
  - Undertake daily on-site and off-site inspections at nearby receptors to monitor dust. Record inspection results and make available to relevant authorities. This should include regular dust soiling checks of surfaces such as street furniture, cars, and window. Specific real-time dust monitoring is not necessary for this project.
  - Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Preparing & Maintaining the Site:
  - Plan site layout so that dust generating activities are located away from receptors, as far as possible.
  - Avoid site runoff of water or mud
  - Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If being re-used, keep materials covered or contained in a way which prevents dust, for example dust suppression.
  - Cover, seed, or fence stockpiles to prevent wind erosion.
- Construction Vehicles and Sustainable Travel:
  - Ensure all vehicles switch off engines when stationary – no idling vehicles.
  - Impose and signpost a maximum-speed-limit of 25km/h on surfaced and 15km/h on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).
- Measures for General Construction Activities:
  - Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
  - Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
- Measures Specific to Haulage
  - Use water-assisted dust sweeper(s) on the access and local roads, as necessary.
  - Avoid dry sweeping of large areas.
  - Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
  - Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
  - Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

– Access gates to be located at least 10m from receptors where possible.

Operation

Predicted ambient impacts from operational activities do not indicate that mitigation measures are required, however it is proposed to consider the following mitigation measures:

- Limit unnecessary idling of truck engines on-site.
- Ensure truck maintenance is up to date.

6.1.8 Noise and Vibration

A Noise and Vibration Impact Assessment (**NVIA**) was prepared by RWDI and is attached at **Appendix Q**. The NVIA aligns with the applicable NSW Environment Protection Authority (**EPA**) guidelines. Criteria for operational, construction, and traffic noise limits were derived from the relevant criteria and scenarios were simulated using a validated computer noise model.

The purpose of the NVIA is to determine the potential impacts of noise emissions associated with industrial and vehicle noise sources upon nearby sensitive receivers. It also addresses noise emissions created by additional road traffic generated by the project and noise and vibration impacts during the construction and operation stages.

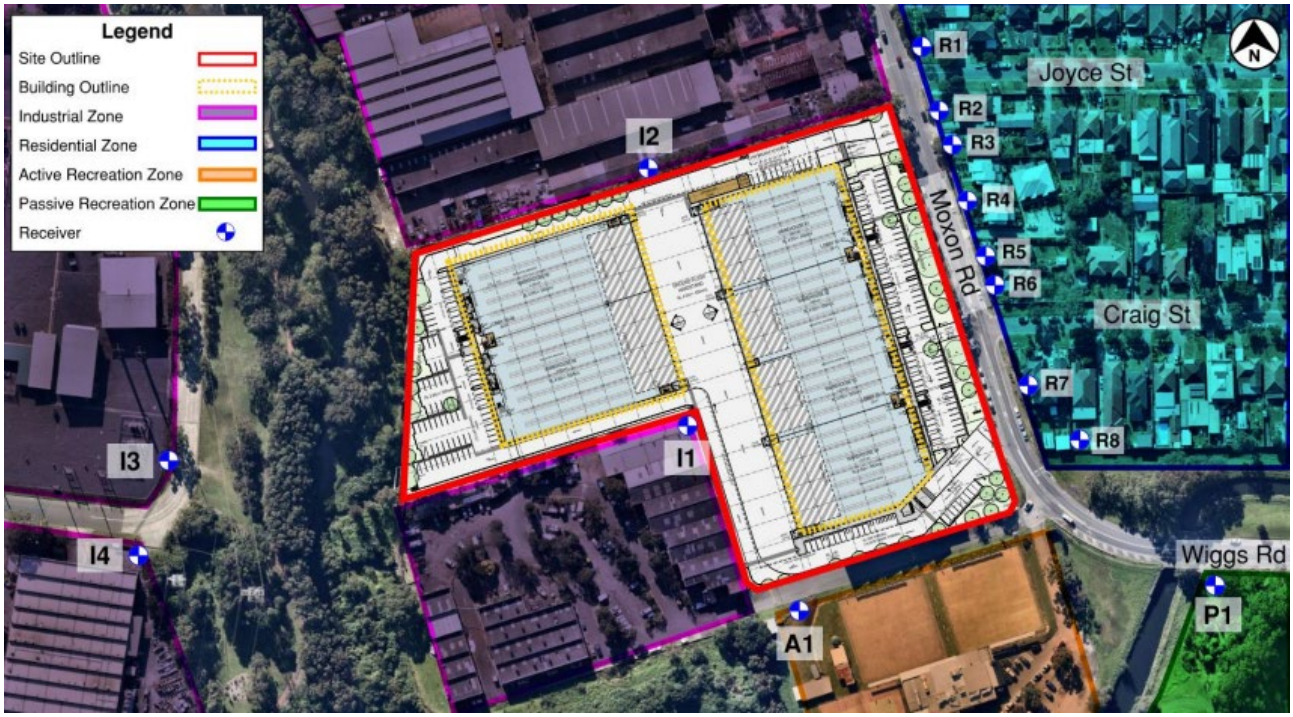
6.1.8.1 Existing Environment

Sensitive receivers were identified based on the existing context of the site, which comprises an industrial-residential interface. The nearest residential receivers are directly across the road from the site. Other nearby sensitive receivers include Moxon Sports Club and the public access playing field. **Table 19** details the nearest sensitive receivers, which are also depicted in the aerial imagery in **Figure 31**.

Table 19 Nearest Sensitive Receivers

Receiver ID	Receiver Type	Receiver Address
R1	Residential	46 Moxon Road, Punchbowl
R2	Residential	48 Moxon Road, Punchbowl
R3	Residential	50 Moxon Road, Punchbowl
R4	Residential	52-54 Moxon Road, Punchbowl
R5	Residential	56 Moxon Road, Punchbowl
R26	Residential	58 Moxon Road, Punchbowl
R7	Residential	60 Moxon Road, Punchbowl
R8	Residential	1 Craig Street, Punchbowl
P1	Passive Recreation	McLaughlin Oval, Punchbowl
A1	Active Recreation	Moxon Sports Club, Punchbowl
I1	Industrial	57 Moxon Road, Punchbowl
I2	Industrial	41 Moxon Road, Punchbowl
I3	Industrial	1 Gow Street, Padstow
I4	Industrial	2 Gow Street, Padstow

Figure 31 Site Aerial and Surrounding Receivers



Source: RWDI

Short and long term noise measurements were completed to understand the existing noise environment around the site. Unattended monitoring was conducted at 3/52 Moxon Road and 1 Craig Street from 25 October to 3 November 2022. Attended monitoring was conducted at the same addresses, as well as at 10 Craig Street during the daytime on 3 November 2022.

Figure 32 Noise Monitoring Locations

Source: RWDI

The measured noise levels at the unattended noise monitoring locations are presented in **Figure 33**.

Figure 33 Unattended Noise Measurements – Background (LA90) Noise Levels

Noise Monitor Location	Time of Day [1]	Rating Background Level (RBL) $L_{A90, period}$ dBA	$L_{Aeq,period}$ dBA	$L_{Aeq,period}$ due to Traffic dBA
U1	Day	50	62	62
	Evening	49	62	59
	Night	44	58	58
U2	Day	47	63	59[2]
	Evening	48	62	55[2]
	Night	44	53	52[2]

Source: RWDI

No continuous noise sources from the existing industrial site were audible during any of the attended monitoring, or logger distribution visits. Intermittent sources of noise from the existing industrial site were limited to occasional car or truck entries to the site, which had a contribution equal or lesser to vehicles travelling on Moxon Road to other destinations. The NVIA identifies that existing traffic noise levels already exceed the recommended levels for local roads.

Existing vibration monitoring was conducted at 15 metres from an existing speed hump, considered representative of the worst case scenario where trucks slow and enter the site access driveway opposite the nearest residential receiver.

6.1.8.2 Potential Impacts

Operational

Operational noise emissions have been predicted at the most sensitive receivers to the north and east of the site, and to commercial receivers neighbouring the site. Assumptions were adopted for mechanical assessment purposes for the proposed development and for vehicle assessment purposes based on the Transport Management and Accessibility Plan produced by Ason Group. The vehicle assumptions have also been informed by operational details provided by Hale Capital or RWDI experience.

The total predicted noise levels at surrounding receivers during daytime peak hour are presented in **Figure 34**. Based on these predictions, it was found that during the day, exceedances are expected at four residential receivers (R2-R3, R7-R8) and Moxon Sports Club located to the south of the site (A1).

These receivers had the highest predicted noise level of 57 dBA generated by traffic sources on site. The affected residences are those opposite the driveways of the site. Noise monitoring of the L^{AEQ} (the equivalent continuous sound level) period at residences due to existing traffic on Moxon Road was measured as 62 dBA. Having regard to the existing noise levels at these sensitive receivers, the character of noise from site will be indistinguishable from the traffic noise sources on Moxon Road and other public roads. The increase in absolute noise levels at receivers is expected to be in the order of 1 dB, and therefore negligible.

The exceedance at Moxon Sports Club is similarly generated by traffic noise sources. The times that the bowling club is likely to be in use are unlikely to coincide with peak traffic periods on site. Approximately 3 dBA variance is expected between peak and non-peak periods with regard to traffic noise sources. On this basis, noise levels at the receiver during the use of the Sports Club are likely to be compliant with criteria, or negligibly exceeding, and as a result no practical noise impacts are expected at this receiver.

The Level 1 outdoor amenity space is anticipated to be used by small numbers of staff the majority of the time, however there is the potential for infrequent use up to a maximum capacity of 16 people. The NVIA has undertaken a conservative assessment of the use of this terrace by staff and finds that no exceedances to the daytime or evening NSW Noise Policy for Industry (**NPfI**) Project Noise Trigger Levels are predicted.

Predicted noise levels during the evening period are presented in **Table 20**. Based on predictions using heavy and light vehicle volumes supplied by Ason Group, no exceedances to the NPfI are expected at surrounding receivers during the evening time.

In addition, the site is not proposed to operate during the night time period (10pm-7am), and therefore no sleep disturbance assessment has been completed for the project. The NVIA considered night time noise impacts as a result of exhaust fans, however, as the exhaust fans are controlled by pollution sensors and there are no vehicle movements at night, it is assumed that no mechanical services operate during night time.

Figure 34 Operational Noise Levels at Receivers - Daytime

Location	Predicted Noise Level during period Peak Hour $L_{Aeq,15min}$ dBA		Project Noise Trigger Criteria[1] $L_{Aeq,15min}$ dBA	Compliance (Y/N)
	Standard MET	NE MET		
R1	52	52	53	Y
R2	55	55	53	**N (2)**
R3	54	54	53	**N (1)**
R4	52	53	53	Y
R5	52	52	53	Y
R6	52	53	53	Y
R7	58	58	52	**N (6)**
R8	54	55	52	**N (3)**
P1	47	48	48	Y
A1	56	57	53	**N (4)**
I1	64	64	68	Y
I2	45	45	68	Y
I3	42	43	68	Y
I4	43	44	68	Y

Source: RWDI

Table 20 Operational Noise Levels at Receivers - Evening

Location	Predicted Noise Level during period Evening $L_{Aeq,15min}$ dBA		Project Noise Trigger Criteria[1] $L_{Aeq,15min}$ dBA	Compliance (Y/N)
	Standard MET	NE MET		
R1	44	44	47	Y
R2	45	46	47	Y
R3	45	45	47	Y
R4	45	45	47	Y
R5	45	45	47	Y
R6	45	45	47	Y
R7	47	47	47	Y
R8	43	44	47	Y
P1	42	43	48	Y
A1	46	46	53	Y
I1	62	62	68	Y
I2	39	39	68	Y
I3	41	42	68	Y
I4	43	44	68	Y

Source: RWDI

The NVIA considered the potential impacts of annoying noise characteristics such as tonal noise, low frequency noise, intermittent noise and duration. The NVIA found the only potentially tonal source to be reversing beepers which may be deployed on trucks. The noise generated by the proposal is consistent with the existing noise profile of Moxon Road and will not be discernibly different from existing scenarios. The predicted noise level of reversing beepers at all receivers was found to be a minimum of 11 dB below the noise levels of other sources and expected to be inaudible at residential receivers.

Overall the NVIA finds that during the daytime peak period, exceedances to the NPfI criteria are expected at the residential receivers opposite the entry and exit driveways, and to Moxon Sports Club south of the site. All exceedances are controlled by vehicle sources, producing noise levels less than the existing level of traffic noise from Moxon Road. No mitigation measures to vehicular sources were deemed feasible or reasonable.

Due to the location of receivers relative to the driveway, and nature of vehicle sources, it is not feasible to apply line of site noise mitigation to reduce the noise levels at the receivers. However, the character of noise from vehicles on site will be indistinguishable from traffic sources on public roads, and based on the existing traffic noise levels the increase in total noise level at receivers is expected to be approximately 1 dBA in the worst case. Therefore the noise from trucks on site will be indistinguishable to noise from the same vehicles on public roads, and will result in a negligible increase to noise levels at the most affected receivers, which we consider to be an acceptable acoustic outcome

The exceedance at the bowling green is similarly controlled by traffic noise sources. The times that Moxon Sports Club is likely to be in use are unlikely to co-occur with peak traffic periods. Based on experience, an approximately 3 dBA variance is expected between peak and non peak periods as concerns traffic noise sources. On this basis, noise levels at the bowling club during the use of the bowling green are likely to be compliant with criteria, or negligibly exceeding, and as a result no practical noise impacts are expected at this receiver.

Existing traffic noise levels already exceed NSW Road Noise Policy Guidelines. Changes to traffic noise levels as a result of traffic generated by the redevelopment associated with the development of the site are expected to be ≤1.5 dBA, and no perceptible change to existing traffic noise impacts are anticipated, resulting in compliance with the Road Noise Policy.

No exceedances to recommended vibration criteria are predicted.

Construction

Noise modelling of the construction noise emissions was undertaken using aerial imagery, ground topography and the proposed design. As a detailed list of equipment likely to be used during construction is not available at this stage, this information was based on other similar projects. The typical equipment expected to be used is assumed for three construction stages are:

- Site clearing, demolition, and earthworks
- Concrete works
- Building construction.

Preliminary assumptions are applied to provide noise predictions, which can be revisited at detailed design stage. Consistent with the requirements of the Interim Construction Noise Guideline 2009, and to inform the scheduling of construction activity and management of noise during the detailed design phase, the construction noise impacts are based on the expected worst-case scenario.

The typical noise levels during construction at the surrounding receivers are detailed in **Figure 35**. Each of the construction activities are representative of the noisiest construction periods where there may be simultaneous operation of noise intensive construction plant on site.

Figure 35 Predicted Construction Noise Impacts

Stage	Location	Noise Level – $L_{Aeq,15min}$ dBA					
		Predicted Max. Noise Level[1]	Noise Affected Noise Management Levels (NMLs)				Highly Noise Affected NML
			Day [2] Standard	Day OOH	Eve OOH [3]	Night OOH [4]	
Demolition and Clearing	R1-R6	**62-70**	60	55	54	49	75
	R7-R8	**63-69**	57	52	53	49	
	Passive Recreation	**54**	60	60	60	60	
	Active Recreation	**69**	65	65	65	65	NA
	Industrial	47-72	75	75	75	75	
Pad and Hardstand Works	R1-R6	**61-67**	60	55	54	49	75
	R7-R8	**59-68**	57	52	53	49	
	Passive Recreation	**51**	60	60	60	60	
	Active Recreation	65	65	65	65	65	NA
	Industrial	45-72	75	75	75	75	
Construction	R1-R6	**62-67**	60	55	54	49	75
	R7-R8	**59-67**	57	52	53	49	
	Passive Recreation	**53**	60	60	60	60	
	Active Recreation	**66**	65	65	65	65	NA
	Industrial	49-69	75	75	75	75	

Source: RWDI

The results of the preliminary assessment indicate noise levels are expected to be equal to or exceed noise management levels (**NMLs**) at all non-industrial receivers during all construction phases. The predicted worst case NMLs exceedance at any receiver is 12 dBA which is at R7 during demolition of the nearest existing buildings.

The assessment is based on a 'worst case scenario' including the simultaneous operation of noise intensive construction plant on the site. It is considered likely the construction noise levels would frequently be lower than the levels assessed. The NVIA recommends all reasonable and feasible noise mitigation measures are implemented to minimise construction noise impacts on the surrounding residential receivers (refer **Section 6.1.8.3**).

Noise Management Levels for Construction phase have been developed based on the EPA Interim Construction Noise Guideline. Exceedances to these levels are expected at all non-industrial receivers and during all stages of construction works. A maximum 12 dB exceedance is predicted for the nearest residential receiver when demolition works are occurring in proximity to the eastern boundary.

Given this exceedance, all reasonable and feasible construction noise mitigation measures should be implemented through the development and implementation of a Construction Noise Management.

No vibration impacts from construction are anticipated provided that the nominated safe working distances are adhered to. Vibration impacts are possible at neighbouring industrial sites if vibration intensive equipment is to be operated in close proximity to the site boundary.

6.1.8.3 Mitigation Measures

Construction

It is required that project-specific NMLs are established for noise affected receivers. If construction noise levels are predicted to be above the established NMLs, reasonable mitigation and management measures are proposed to minimise noise emissions, including through site specific construction noise management plans. Proposed mitigation measures are:

- A detailed Construction Noise and Vibration Management Plan should be prepared and include:
  - Identification of nearby residences and other sensitive land uses;
  - Description of approved hours of work;
  - Description and identification of construction activities, including work areas, equipment and duration;
  - Description of what work practices (generic and specific) will be applied to minimise noise;
  - Consider the selection of plant and processes with reduced noise emissions;
  - A complaints handling process;
  - Noise monitoring procedures;
  - Overview of community consultation required for identified high impact works;
  - Overview of community consultation process and assessment required for identified additional works outside of standard construction hours; and
  - Induction and training will be provided to relevant staff and sub- contractors outlining their responsibilities with regard to noise.
- Administrative Controls:
  - Operate during approved hours
  - Appropriate training of onsite staff
  - Undertake community consultation and respond to complaints in accordance with established project procedures
  - Turning off machinery when not in use
  - Respite periods for pile drivers and rock breakers (if applicable)
  - Conducting regular maintenance of plant to ensure that they are operating as efficiently and quietly as practicable
- Engineering Controls:
  - Portable temporary screens
  - Screen or enclosure for stationary equipment
  - Maximising the offset distance between noisy plant items and sensitive receivers
  - Avoiding using noisy plant simultaneously and / or close together, adjacent to sensitive receivers
  - Orienting equipment away from sensitive receivers
  - Carrying out loading and unloading away from sensitive receivers
  - Using dampened tips on rock breakers
  - Using noise source controls, such as the use of residential class mufflers, to reduce noise from all plant and equipment including bulldozers, cranes, graders, excavators and trucks
  - Selecting site access points and roads as far as reasonably practicable away from sensitive receivers

- Using spotters, closed circuit television monitors, “smart” reversing alarms, or “squawker” type reversing alarms in place of traditional reversing alarms
- Employ non noise-generating structures such as site offices, storage sheds, stockpiles and tanks as noise barriers.

6.1.9 Ground and Water Conditions

PSM completed a Geotechnical Investigation (**GI**), including a Salinity Management Plan (**SMP**) to assess the soil and groundwater conditions. A copy of the report is attached as **Appendix R**.

Fieldwork was undertaken in October and November 2022 in which eight boreholes were completed. Standard penetration testing was undertaken on site at approximately 1.5 m intervals in soil units. In addition, a water logger has been installed for continuous groundwater monitoring.

The objective of the Salinity Management Plan is to effectively manage site salinity, to minimise the effect of the proposed development on the salinity processes and to protect the proposed development from salinity damage.

In addition, JBS&G were engaged to prepare an Acid Sulfate Soil Management Plan (**ASSMP**) to identify the procedures to be implemented to manage the potential environmental risk associated with disturbance of acid sulfate soils should they be encountered during construction works.

6.1.9.1 Existing Environment

As set out in the GI, the existing site conditions were investigated and are summarised in the following table.

Table 21 Description of Site Conditions

Site Condition	Description
Geological Setting	According to the 1:100,000 Penrith Geological Map, the site is underlain by Quaternary SAND Sediments comprising silty to peaty quartz sand, silt and clay.
Acid Sulfate Soil Risk	The 1:25,000 Acid Sulfate Soil Risk Map indicates the site is within a ‘disturbed terrain’ zone due to its close proximity to a ‘high probability of occurrence’ zone.
Surface Conditions	Majority of the site was covered in concrete slabs or asphalt pavement with some cracks observed. Two functioning groundwater monitoring wells were found.
Subsurface Conditions	Topsoil: 0m depth Pavement/concrete slab: 0m depth Existing Fill: 0.1-0.3m depth Alluvial: 1.5-2.2m depth, mainly encountered at the western part of the Site: Residual Soil: 0.5-3.2m depth Bedrock A: 2.3-4.8m depth Bedrock B: 5.4-8.8m depth
Salinity	It is assessed that the soils on site are classified in a range from “Non-saline” to “Moderately-saline”.

6.1.9.2 Proposed Impacts

Based on the geotechnical investigation undertaken on site, the GI does not find any major geotechnical issues that would preclude the site to be re-developed as an industrial warehouse facility.

- Variability in Existing Fill and Alluvium

  The additional filling work within the proposed warehouse pads and the surcharge loads on the slab will induce additional loads onto the ground on the compressible material underneath. The design and construction of structures founded on or near ground surface are proposed to account for load induced settlement and differential settlement.

- Existing Slab

  As part of the development, the existing on-grade slabs are proposed to be retained. There is no geotechnical impediment to retaining the existing slab. Burying the existing slab is anticipated to help mitigate the effects of differential settlement.

- Groundwater

  The measured groundwater level varies across the site in a range of 0.4m to 1.5m below ground. Based on the proposed bulk earthworks, the finished surface levels of the warehouse building pad are over 2m above the groundwater levels on site. Thus, the groundwater levels are not likely to be encountered within the warehouse pads.

The GI concludes that the proposed development has close to no impact on the soil resources, surface and groundwater resources from a geotechnical point of view.

6.1.9.3 Mitigation Measures

Geotechnical

The following geotechnical management measures proposed for the retention of the existing slab:

- The earthworks contractor to run a compactor over the concrete pavement when proof-rolling. Requirement to be included in the earthworks specification.
- Any pipes and terminated existing buried utilities, eg. stormwater pits etc., should be removed and backfilled, so there are no voids remaining in the landform.
- A minimum of 1m thick of engineered fill to be placed on top of existing slab.

Salinity Management

The following salinity management measures are proposed as part of the SMP.

Table 22 Salinity Management Measures

Component	Management Measure
Earthworks	Vegetation cover should be estimated and maintained on permanent batters upon completion to control erosion. The final surface of all areas of the development should be graded to prevent the ponding of surface water. Erosion control of temporary batters, stockpiles and disturbed areas should be planned prior to undertaking the earthworks and implemented during the earthworks, including: – Grading and sealing partially completed surfaces – Installation of clearly visible fencing and traffic control measures to prevent unnecessary trafficking f areas and ensuring site disturbance – Establishing set vehicular access points and roads. Sediment control implemented by means of sediment traps and silt fencing where necessary.

Component	Management Measure
Imported soils	Fill materials to be imported to sire to be assessed for suitability for the intended use.
Gardens and landscaped areas	Selection of plant species should consider the soil conditions, including moderate salinity, relatively poor fertility and clayey low permeability soil profiles. Successful revegetation is likely to require use of nutrient rich soil. Potential of water logging to be minimised by: – Adopting plant species with minimal watering requirements – Adopting 'waterwise' gardening principles – Minimise use of potable water in landscaped areas – Properly designed and implemented irrigation systems.
Roads, footpaths and hardstand areas	Roads, footpath and hardstand surfaces should be graded, and the grades maintained at all times to prevent ponding of surface water at locations where this can result in infiltration into the underlying soils Connections between roads, footpath and hardstand surfaces and the surface water and stormwater drainage infrastructure should be designed, constructed and maintained to restrict infiltration into underlying soils Services that are to be located below the roads, footpath and hardstand surfaces should be installed, where practical, at the time of construction
Surface water, stormwater and drainage	Disturbance of natural drainage patterns should be reduced. Where these are disturbed or altered appropriate artificial drainage should be installed Stormwater and surface water should be managed to restrict infiltration Temporary water retaining structures used during construction should be managed to restrict infiltration Guttering and down pipes should be connected and maintained.
Durability of concrete structures in contact with the ground	The design of structural concete members in contact with the ground (exclude piles) to adopt an A2 exposure classification as defined in AS3600:2018 The design of concrete cast in situ piles adopt a "Mild" to "Non-aggressive" classification as defined in AS2159:2009.

Acid Sulfate Soils Management

The ASSMP prescribes management procedures to identify acid sulfate soils (**ASS**) potential acid sulfate soils (**PASS**) material and implement appropriate mitigation measures. The general ASS site management strategy is provided below.

Table 23 Site Management Strategy

Stage	Management Strategy
Pre-disturbance Works	Prior to the commencement of any ground disturbance works, including demolition and piling activities, the following preparations should be implemented:

Stage	Management Strategy
	The sequencing of proposed piling, excavation, services installation and other activities should be planned in detail, taking into account the time and space necessary to complete the ASS/PASS management activities outlined in this document. The planning should provide a contingency for treatment of additional quantities of materials in the event that requirements for the disturbance of additional ASS/PASS material is identified following the commencement of site works, or heavy rainfall/storm events result in significant additional quantities of collected impacted water; The actual areas of ASS/PASS occurrence where disturbance/excavation will occur during each stage of works (piling, excavation, services installation etc.) as part of the site activities should be identified and suitable location(s) for treatment areas close to the areas of disturbance identified. Based on the proposed works, the available space for treatment and the approximate volume anticipated to be disturbed, staging of the disturbance activities should then be planned such that sufficient drying and mixing time can be achieved for all materials needing treatment. The staging should also allow for adequate time to obtain the results of verification testing before the material is placed at the final location or removed from the site.
Neutralisation Chemicals	A small-scale treatment trial be implemented at the commencement of site works prior to broad scale implementation of alternative neutralising compounds. The small-scale trials should document the effectiveness of the revised approach. Consideration as to the feasibility of dewatering material and associated management of separated water and solids will also be required.
Treatment Area Design	<u>Small Quantities</u> For small scale disturbance activities, it is anticipated that a large, lined skip bin or suitable structure could be used as a 'treatment cell' to minimise the potential for release of acidic leachate or partially treated soil. This may be appropriate for the treatment of piling spoil or minor trenching activities. <u>Significant Excavation Quantities</u> Should quantities of material disturbed in a staged manner exceed that able to be managed in a large skip bin, a treatment area should be established with consideration of the following: The treatment area should be established separate to the area of disturbance but able to be accessed from the area of disturbance by plant/vehicles transporting the material to be treated and material to be removed from the treatment area at the completion of stabilisation activities; The treatment areas should be sufficiently large to facilitate a pre-treatment stockpile area, a treatment pad, water/sediment collection and treatment measures, post treatment stockpile storage area and lime storage area; The treatment area should be isolated from major external surface water catchments, including overland surface water flow and potential flood water, excavation flooding by rainfall events, by ground surface contouring, installation of

Stage	Management Strategy
	perimeter drains or bunds covered with an impervious layer (concrete, geomembrane, compacted non-ASS clay, etc.); Pre-treatment and post-treatment stockpile areas should be separately bunded or drained to minimise the potential for re-acidification of treated material; A sufficient supply of aglime should be kept on site at all times for the treatment of ASS to be neutralised within the treatment area, for application on exposed excavation faces where ASS is expected or suspected; and for wet weather events where existing applications will require replacement and/or treatment of acidic water is necessary. Receipts, dockets and other field records showing the storage locations of all chemicals and location of all applications of neutralising agents must be kept.
General Site Management	All soils must be treated as ASS material until such a time as the material is demonstrated to be non-ASS material or treatment effectively reduces the risk associated with the material and validation results meet the relevant specifications. ASS/PASS materials that have been excavated (or otherwise brought to the ground/water surface) should be immediately transferred to the treatment area or treated in-situ as soon as practicable to minimise the quantity of soil, sediment and/or water requiring treatment and the risk of environmental harm to the site and/or down-gradient receptors. Bunding, diversion drains, contaminated water treatment/containment etc. may be used to contain surface water run-off from ASS storage and treatment areas. However, ASS materials must not be used in the construction of bunds and other diversion devices. Equipment used in the treatment of ASS shall be washed with an alkaline solution at the completion of each work period to minimize corrosion of equipment.
Excavation Works	Any material identified as non-ASS is to be removed from within the ASS zone footprint and treatment area; Materials identified as ASS, or suspected to comprise physical properties indicative of ASS should be assumed to be ASS unless demonstrated otherwise; Works including disturbance of ASS materials will be subject to field testing upon initial exposure of each soil horizon. If either the field criteria or laboratory analysis results indicate the material is considered to be ASS, then the material will require treatment
Treatment of Excavated PASS Material	Treatment of ASS soils will comprise the addition of sufficient quantities of finely ground neutralising agent and provide a factor of safety to compensate for potential impurities in the neutralising agent, non-homogenous mixing and limitations to the solubility of the neutralising agent. This will need to be determined on the basis of analysis data collected. The excavated ASS material will be immediately transferred to the treatment area and placed either in a stockpile within the pre-treatment stockpile area or

Stage	Management Strategy
	immediately on the treatment pad. Treatment of excavated material should occur within one day of excavation of the material.
Water Management During Treatment	Water will be neutralised, where required by the addition of lime (or equivalent alkaline product) within a dedicated treatment tank or lined detention basin. Lime shall be added incrementally and thoroughly mixed within the treatment vessel. In the event water volumes greater than the capacity of the water treatment holding capacity are produced during the acid sulfate soil management activities, consideration should be given to offsite disposal of water via a licensed contractor or treatment of water using neutralisation chemical dosing within holding tanks prior to re-irrigation of open excavations once the pH of the water has been demonstrated to be suitable.

6.1.10 Water Management and Flooding Risk

A Civil Engineering Report (**CER**) was prepared by Costin Roe Consulting to provide a Water Cycle Management Strategy and Flooding Risk Assessment, attached at **Appendix BB**. The CER demonstrates the legal points of discharge and that a suitable stormwater management strategy is available for the proposed development.

6.1.10.1 Existing Environment

The site currently has a developed drainage system on each lot that collects stormwater and discharges it to Salt Pan Creek.

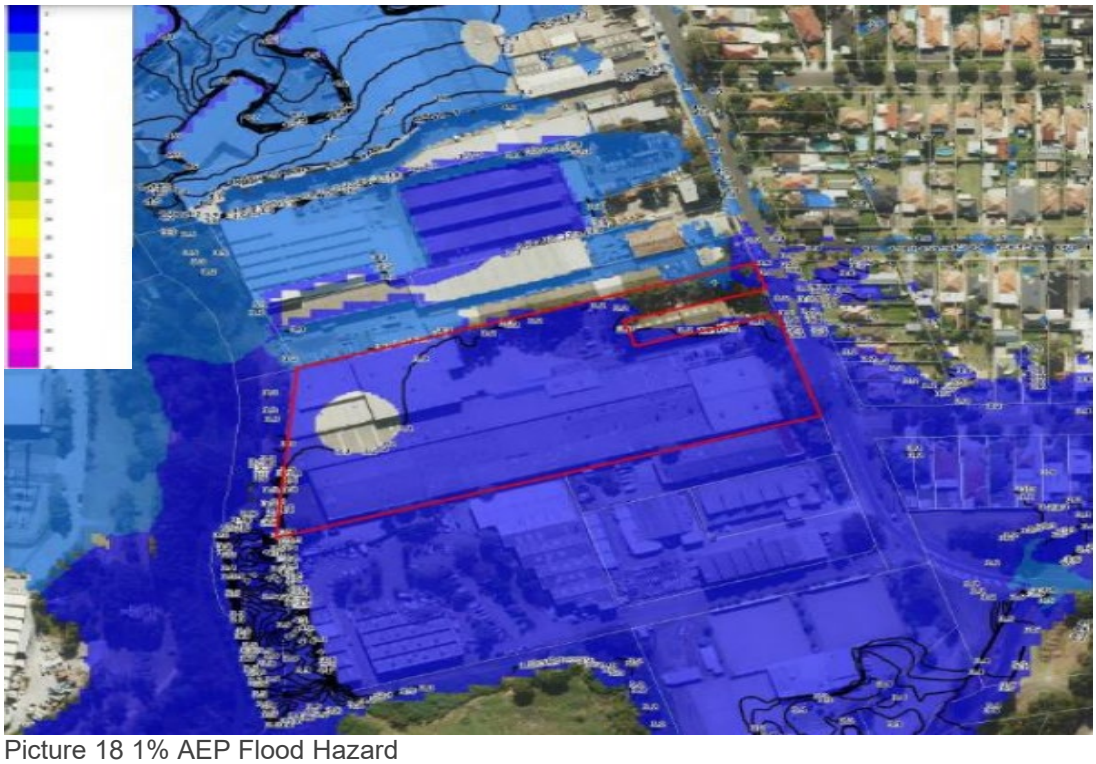
The existing site is currently fully developed. It comprises residual drainage associated with former uses on the site. There are no existing local runoff management measures or on-site detention systems. The existing run-off is based on a developed impervious condition given the long period on which the contributing catchment has comprised large impervious surface present on the site.

Council's flood assessment confirms that the site is not affected by mainstream flooding in the local 1% AEP flood event. It is also not affected by flooding in the 1% AEP flood event associated with the Salt Pan Main Stream.

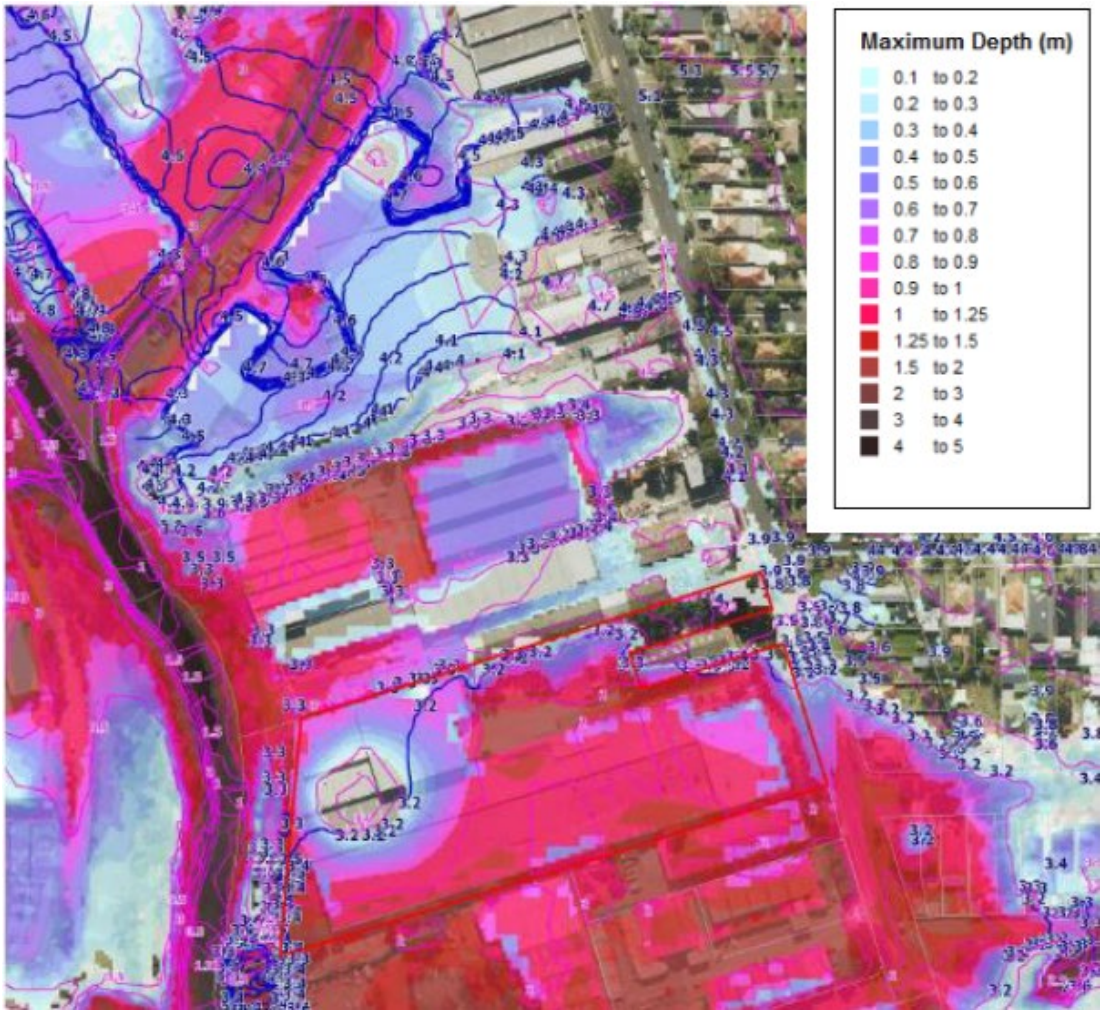
Figure 36 demonstrates low levels of flooding occurs on majority of the site. **Figure 36** also identifies that there is flooding at depth located over the external portions of the site in the 1% AEP storm. The site is impacted by the 1% AEP Flood which, per Council's SSR, is RL3.30m AHD.

Council has identified that the site is affected by an overland flow path for excess stormwater runoff from the upstream catchment to the south and west of the site. Existing site levels are between RL1.45 and RL4.25, and the 1% AEP flood level identified in the adjacent site is RL3.30. This equals to approximately 1.85 metres above the existing levels within the site.

Figure 36 CBCity Stormwater System Report



Picture 18 1% AEP Flood Hazard



Picture 19 1% AEP Flood Depth

Source: Costin Roe

6.1.10.2 Potential Impacts

Surface Water Drainage System

The drainage system proposed is described as:

- In-ground piped drainage system designed to the 5% AEP (1 in 20yr ARI);
- Site discharge via the existing drainage towards Salt Pan Creek.
- Treatment of stormwater via an end-of-line Gross Pollutant Trap;
- Conveyance of overland flow from the site through the hardstand and carparking areas to Salt Pan Creek.

Water quality and re-use are to be considered in the design to ensure that any increase in the detrimental effects of pollution is mitigated, Council Water Quality Objectives are met and that the demand on potable water resources is reduced.

Dedicated flow paths have been designed to convey all storms up to and including the 100-year ARI. These flow paths will convey stormwater from the site to the detention systems prior to discharge.

Water Quantity Management Features

A hydrological analysis was completed to estimate the impact of the development site on peak flows at the downstream extent of the site. There are no proposed water quantity measures based on the outcomes of the assessment. Attenuation of stormwater runoff from the development is not required. It is noted that the existing site is currently fully developed and does not contain a detention system.

Impervious site coverage is not increased which means peak runoff will not be increased as part of the proposal. Therefore, the development will not adversely impact flooding upstream or downstream of the property without on-site detention.

The CER demonstrates that the combined peak flow runoff (from the local catchment and larger Wiggs Road Channel catchment) in the Creek will not increase as a result of the development. Hence the development will not adversely impact flooding upstream or downstream of the property. Similarly, the impacts on receiving waterway is negligible.

Rainwater reuse measures will be provided as part of this development design. Rainwater reuse will be required to reduce demand on non-potable uses by 50-70%. The reduction in demand will target non-potable uses such as toilet flushing and irrigation.

Stormwater Treatment System

During the operational phase of the development, the proposed stormwater quality treatment system incorporating the use of a treatment train of a Gross Pollutant Trap and is proposed to mitigate any increase in stormwater pollutant load generated by the development. Best management practices have been applied to the development to ensure that the quality of stormwater runoff is not detrimental to the receiving environment.

There is a need to target pollutants that are present in stormwater runoff to minimise the adverse impact these pollutants could have on downstream receiving waters. A series of stormwater quality improvement devices (SQIDs) have been incorporated in the design of the development. The proposed management strategy will include the following measures:

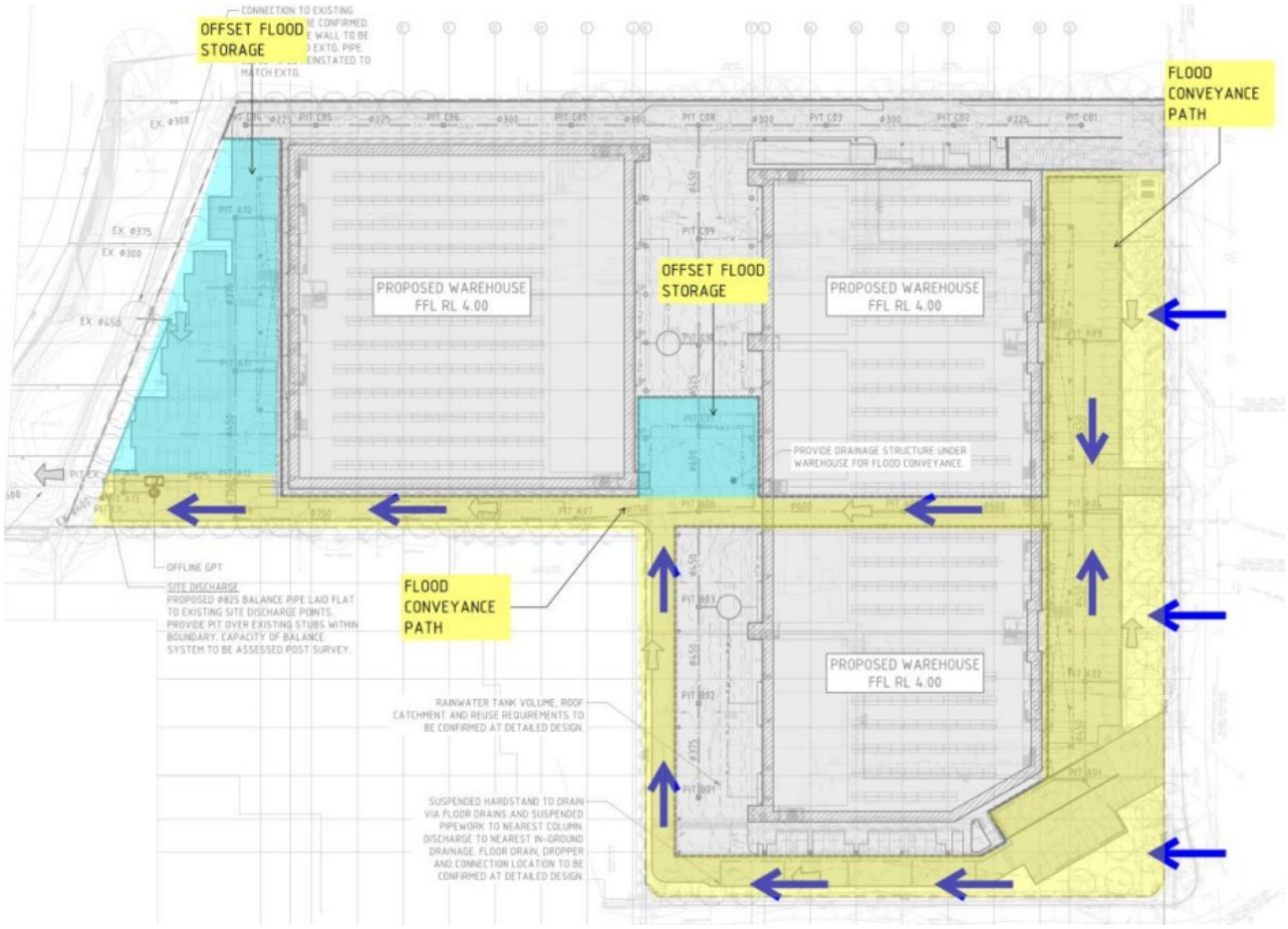
- Primary treatment of external areas will be made via an end-of-line Gross Pollutant Trap.
- Some treatment will also be present by provision of rainwater reuse tanks on development sites through reuse and settlement within the tanks.

Flooding

All buildings are above the PMF flood level to avoid unacceptable impacts from flooding and large rainfall events, including local runoff and overland flow paths. An overland flow path has been designed to convey waters from Moxon Road to Salt Pan Creek. The proposed development does not increase runoff from existing conditions and, as such, the site discharge will not adversely affect any land drainage system or watercourse. **Figure 37** depicts the flow paths for the proposed flow management strategy.

Based on the assessment and management strategy proposed, the development meets current Council flood policy and shows acceptable impacts in relation to flooding and flood safety.

Figure 37 Stormwater Drainage Plan



Source: Costin Roe

6.1.10.3 Mitigation Measures

The hydrological assessment of the local site drainage confirms that recommended water quality and quantity measures will ensure that no adverse impacts result on receiving waterways as a result of the development. It is recommended that the management strategies highlighted by Costin Roe be approved and incorporated into the future detailed design.

Construction

During the construction phase, a Sediment and Erosion Control Plan will be in place to ensure the downstream drainage system and receiving waters are protected from sediment laden runoff.

Floodplain Management Considerations

The introduction of a Flood Planning Level (**FPL**) is an important flood risk management measure. The NSW Floodplain Development Manual, 2005 recommends that the FPL generally be based on the 100-year ARI event. It suggests that, whilst this event can be varied, it should only be done in exceptional circumstances.

It is considered appropriate to adopt the 1% AEP event for the proposed industrial development. The Floodplain Development Manual recommends a freeboard of 0.5m for most new industrial developments and it is considered appropriate that this recommended freeboard be for adopted for the proposed development. The FPL defined in the Floodplain Development Manual is noted to be consistent with that of Council.

6.1.11 Aboriginal Cultural Heritage

Austral Archaeology were engaged to prepare an Aboriginal Cultural Heritage Assessment Report (**ACHAR**) for the proposed development which is attached at **Appendix Y**. It seeks to identify the potential harm that may occur to Aboriginal Cultural heritage values within the site as a result of the proposal.

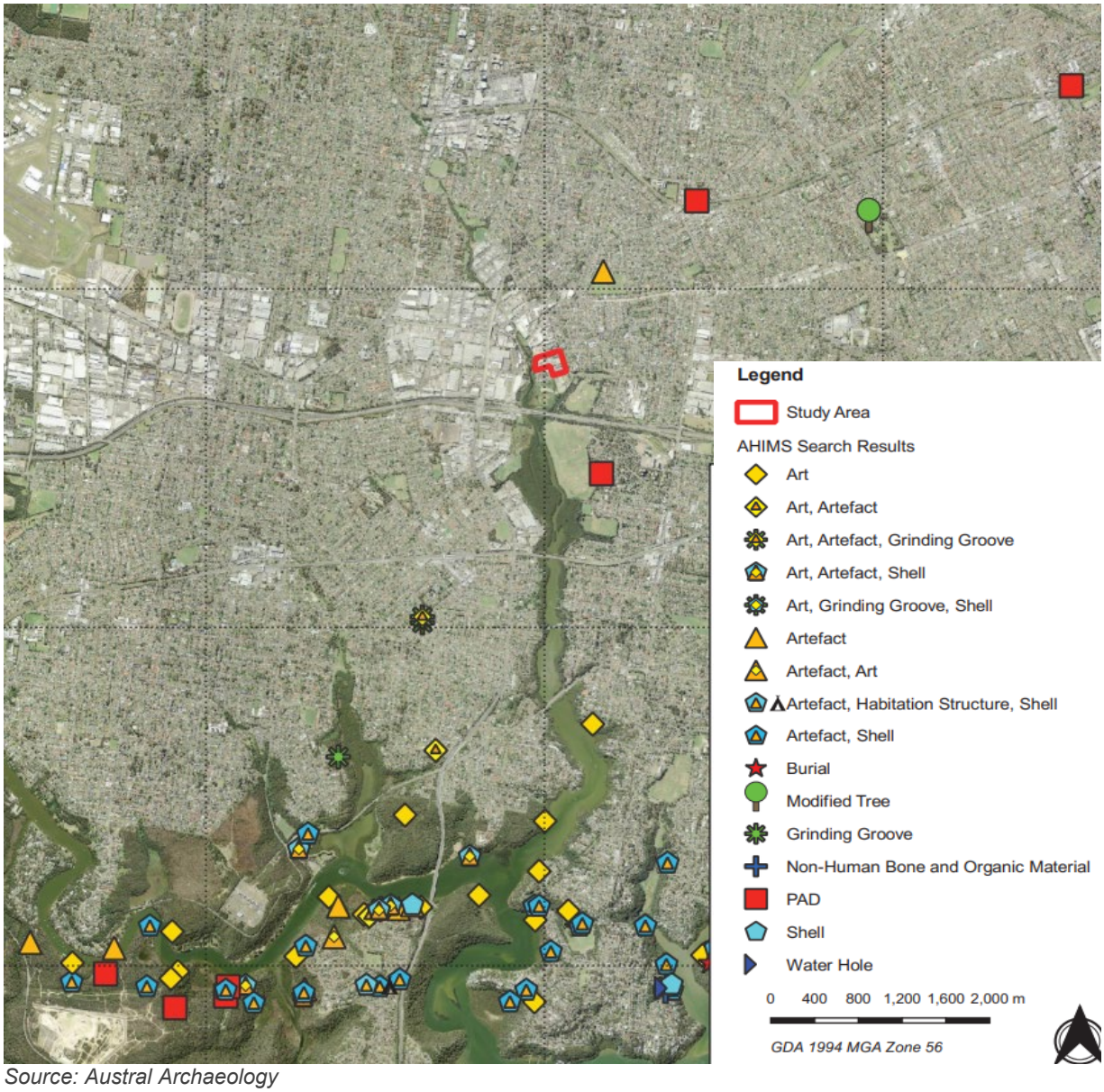
The Aboriginal Cultural Heritage Assessment (**ACHA**) included stakeholder consultation, in which several groups registered as Aboriginal stakeholders with an interest in the project. All participating groups were provided with a draft ACHAR for their review and comment before the finalisation of the ACHAR.

6.1.11.1 Existing Environment

A search of the Heritage NSW Aboriginal Heritage Information Management System database was completed in October 2022. It found 106 previously recorded sites within a 5 kilometre radius of the site.

Art (pigment or engraved) was highlighted to be the predominant Aboriginal Heritage site type, with over 34% of known sites belonging to this category. These sites usually occur as isolated finds of scatter, but are also represented in combination with other site features. The map in **Figure 38**, outlines the distribution of sites, which are concentrated in landforms associated with the Georges River.

Figure 38 Location of AHIMS sites



Source: Austral Archaeology

Austral Archaeology conducted a survey in August 2022 targeting landforms with the potential to contain Aboriginal Cultural Heritage Items and to identify and record sites visible on the ground surface. The survey had an effective coverage of 0.01% due to the extensive modification of the site hampering the visibility of the natural ground surface.

The entire site was identified to have been heavily modified to facilitate the existing industrial warehouses and associated carparks and roads. The site has been entirely levelled and concreted with the only 'natural' landscapes consisting of manmade gardens and a small area at the southeast of the site, which is currently utilised for water and gas infrastructure and has therefore undergone both surface and subsurface disturbance.

An assessment of the Burra Charter Significance Values was conducted for the subject site. The results are summarised in **Table 24** and provide a holistic assessment of significance.

Table 24 Assessment of Significant Heritage Values

Criteria	**Assessment**
Social Value	The Consultation Requirements specify that the social or cultural values of a place can only be identified through consultation with Aboriginal people. No comments

Criteria	Assessment
	were made on the social or cultural significance during consultation. Based on this assessment, the study area is considered to have low social and spiritual significance values.
Historic Value	The original Crown Grant was allocated to Thomas Moxon in 1810, for agricultural purposes until the 20th century when it was subdivided into residential blocks. It was then developed for industrial purposes by the 1970's. In the 1990's it was completely modified and developed into the industrial landscape which is present today and would have destroyed the potential remains for historical remains to be preserved. The study area is considered to have little aesthetic significant values.
Scientific Value	No Aboriginal sites or landforms of potential significance have been located within the study area or in its immediate surroundings. The overall research value of the site is therefore considered to be very low.
Aesthetic Value	The site has been heavily modified and developed following its past uses for agriculture and industrial activity. Neighbouring properties have been subject to similar impacts with little or no natural landforms remaining in the region. The eastern portion of the site is built on reclaimed estuary deposits and therefore will not contain any in situ subsurface artefacts. The western portion of the site is located on alluvial flood plains and is therefore less likely to retain Aboriginal cultural heritage. The study area is considered to have little aesthetic significant values.

The ACHAR outlines that no Aboriginal sites were identified at any point of the assessment. Therefore, the site has been assessed as having low archaeological potential to contain Aboriginal Cultural Heritage. While the Georges River and its associated tributaries and landforms remain to be a highly significant feature of the landscape, the heavy modification of the site has greatly decreased the overall cultural heritage values that may have once been associated with the site.

6.1.11.2 Potential Impacts

The subject land has undergone significant changes to the natural landscape over time. Therefore, such past land uses significantly impacted archaeological record. As the survey of the site concluded no Aboriginal sites were identified and therefore there is low archaeological potential. Subsequently, the proposed works are not identified to harm or impact any known Aboriginal heritage values.

6.1.11.3 Mitigation Measures

Construction

Considering the archaeological context, environmental information, consultation with local Aboriginal community, and the findings of the predicted impacts of the proposed development, the following mitigation measures are proposed to manage potential impacts:

- In the event that unexpected finds occur during any activity within the site, all works must in the vicinity must cease immediately. The find must be left in place and protected from any further harm.
- If unexpected finds occur during any activity within the study area, all works must in the vicinity must cease immediately. The find must be left in place and protected from any further harm. Depending on the nature of the find, the following processes must be followed:
  - If, while undertaking the activity, an Aboriginal object is identified, it is a legal requirement under Section 89A of the NPW Act to notify Heritage NSW, as soon as possible. Further investigations and an AHIP may be required prior to certain activities recommencing.

  - If, human skeletal remains are encountered, all work must cease immediately and NSW Police must be contacted, they will then notify the Coroner's Office. Following this, if the remains are believed to be of Aboriginal origin, then the Aboriginal stakeholders and Heritage NSW must be notified.

- All contractors undertaking earthworks on site should be briefed on the protection of Aboriginal heritage objects under the National Parks and Wildlife Act 1974 and the penalties for damage to these items.
- It is recommended that Hale Capital continues to inform the Aboriginal stakeholders about the management of Aboriginal cultural heritage within the site throughout the completion of the project.

6.1.12 Social Impact

Hill PDA Consulting has prepared a Social Impact Assessment (**SIA**) for the proposed development as attached at **Appendix CC**. It assesses the existing social environment of the subject site and identifies both positive and negative social impacts associated with the proposed development. The mitigation measures outlined in the report seek to maximise social benefits and minimise negative impacts to the community.

6.1.12.1 Existing Environment

The SIA details an overview of key social and demographic features of the area and its social locality. The social locality has been defined as the Punchbowl Statistical Area Level 2 (**SA2**).

The demographic snapshot is based on 2021 Census data for Punchbowl. It highlights:

- The population was 21,544 people living in 7,117 dwellings with an average household size of 3.2.
- The median age was 33, much younger than Greater Sydney's median age of 37 years. There was 12.9% of the population aged 65 years and over, compared to 15.2% in Greater Sydney.
- 58.1% of dwellings were separate houses and 23.0% were flats or apartments.
- Median weekly household income was $1,384, much lower than Greater Sydney's at $2,077.
- There were 409 local workers who were employed in Punchbowl industrial area. The largest industries of employment here were in Construction (25.2%), Retail Trade (18.8%) and Manufacturing (17.4%).

Table 25 Summary of Punchbowl's Social Baseline

Social Baseline	Description
Social Advantage and Disadvantage	Relative socio-economic disadvantage The Statistical Area Level 1s (**SA1s**) immediately surrounding the subject site have higher levels of disadvantage, potentially indicating: Fewer households with higher incomes Fewer residents with qualifications Fewer residents in high skilled occupations
	Relative socio-economic advantage and disadvantage There are no advantaged areas and a concentration of moderate-highly disadvantaged SA1s. All SA1s are within the first to firth deciles, with concentrations within the second and third deciles. This indicates Punchbowl (SA2) has a greater concentration SA1s with moderate-high levels of socio-economic disadvantage.
Crime	A review of the Bureau of Crime Statistics and Research data revealed strong hotspots for theft (motor vehicle) and domestic assault within 400 metres of the site, with significant hot spots for malicious damage to property and theft (break and enter

Social Baseline	Description
	dwelling) also recorded. Theft (break and enter non dwelling) and non-domestic assault did not record significant hotspots within 400 metres of the site. As the proposal does not represent a significant change of use, it is anticipated that it would have minimal effect on crime rates. It is also possible that the intensification of development on the site may assist in providing passive surveillance in the area associated with worker movements.
Social Infrastructure	The availability of social infrastructure in the vicinity of the site is limited and includes several parks, sports facilities, child care facilities, accredited training providers and a primary school. Relevant social infrastructure includes open spaces and child care centres, which could see an increase in demand from workers at the proposed development during construction and operation. The proposal is unlikely to have any significant impact on schools, health care facilities, and similar forms of social infrastructure that predominantly service local residents.

6.1.12.2 Potential Impacts

Construction

The report predicts the likely social impacts arising from the proposal, which have been considered at the construction phase. An evaluation of social impacts is summarised in **Table 26**.

Table 26 Social Impact Evaluation During Construction Phase

Detail	Evaluated	Residual Impact
Impacts to the amenity of the surroundings and the health and wellbeing of neighbouring residents and workers, caused by dust from construction. Impacts to the health and wellbeing of neighbouring residents and workers from the release of hazardous building materials during construction.	Possible + Minor = Medium	Unlikely + Minor = Low
Impacts to the amenity, way of life, and access for neighbouring premises (including the Moxon Sports Club) during construction.	Possible + Minor = Medium	Very unlikely + Minimal = Low
Negative impacts to amenity for surrounding residents and workers caused by noise and vibration from construction activity, which impact upon quiet enjoyment of surroundings, way of life and health and wellbeing.	Possible + Moderate = Medium	Possible + Minor = Medium
Impacts on way of life, accessibility and livelihoods for surrounding residents, workers and businesses from increased congestion on surrounding roads associated with additional construction vehicle movements.	Possible + Moderate = Medium	Unlikely + Minor = Low
Impacts to the livelihoods and way of life of surrounding businesses and pedestrians from changed access during construction.	Possible + Minor = Medium	Unlikely + Minor = Low

Detail	Evaluated	Residual Impact
Potential impacts to way of life and accessibility for surrounding residences resulting from reduced availability of parking during construction.	Possible + Minor = Medium	Possible + Minor = Medium
Reduced aesthetic value and amenity from vegetation clearing to facilitate the construction, temporarily reducing the quantity of natural environment features in the surroundings of the site	Almost certain + Minimal = Low	Almost certain + Minimal = Low
Positive impacts to the livelihoods of local residents through the creation of additional employment opportunities on-site arising from construction activity (direct and indirect).	Almost certain + Moderate (positive) = High (positive)	Almost certain + Moderate Almost certain + Moderate

Operation

The report predicts the likely social impacts arising from the proposal, which have been considered at the operational phase. An evaluation of social impacts is summarised in **Table 27**.

Table 27 Social Impact Evaluation During Operation Phase

Detail	Evaluated	Residual Impact
Impacts to the way of life, health and wellbeing, and enjoyment of surroundings of residents, workers, businesses and patrons of the Moxon Sports Club due to noise emissions from the operation of mechanical plant facilities and vehicle movements.	Possible + Moderate = Medium	Unlikely + Minor = Low
Potential impacts to accessibility and livelihoods for local residents, workers and businesses, resulting from increased road congestion associated with additional vehicles accessing the site during operations.	Possible + Moderate = Medium	Possible + Minimal = Low
Impacts to the way of life and access for surrounding residents, workers and visitors, associated with changes to surrounding parking availability from on-site uses.	Possible + Minor = Medium	Unlikely + Minor = Low
Impacts to the way of life and accessibility for local residents and workers resulting from additional demand for and pressure on child care services arising from an increase in workers on the site.	Unlikely + Minimal = Low	Unlikely + Minimal = Low
Potential benefits to the way of life and livelihoods of the local community though the creation of new employment opportunities on site	Likely + Major (positive) = High (positive)	Almost certain + Major (positive) = High (positive)
Positive impacts on surroundings through increased provision of landscaping and tree plantings on site (along the street frontages and in setbacks), resulting in improvements to amenity, aesthetic features, and the natural environment	Possible + Minor (positive) = Medium (positive)	Almost certain + Minor (positive) = Medium (positive)

Detail	Evaluated	Residual Impact
Health and wellbeing benefits for neighbouring residents from increased intensity of development and activity at the site, which could improve passive surveillance in the area and increase perceived and/or actual safety	Possible + Minimal (positive) = Low (positive)	Possible + Minimal (positive) = Low (positive)
Changes to flooding regime arising from built form, causing risk to livelihoods and safety.	Possible + Minor = Medium	Unlikely + Minimal = Low

The SIA finds that the proposal would result in significant positive social impacts:

- Improvements to access for local residents and workers through on-street parking availability
- Major benefits to livelihoods and communities through the generation of 185 job years during construction, and between 472 and 585 job years once operational, as well as flow-on benefits through the wider regional and local economy
- Improved aesthetic quality of the site through construction of new structures and provision of high quality landscaping and plantings
- Increased activity at the site and passive surveillance could improve perceived and actual safety in the area.

The SIA identifies that noise generated at the site during construction would be reduced in significance by the application of appropriate mitigation measures, however, would remain as a negative social impact for neighbouring residents and commercial operations. However, the majority of potential negative social impacts that could result from the construction and operation of the proposal are generally considered to have been sufficiently mitigated.

Although it is identified that the proposed development would result in a minor negative social impact for neighbouring residents during certain construction activities, the SIA finds that overall, the proposed development would produce an overall benefit to the social environment.

6.2 Standard Assessment Impacts

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

6.2.1 Ecologically Sustainable Development

An Ecologically Sustainable Development (**ESD**) Report has been prepared by Sustainable Development Consultants, attached at **Appendix H**. It has been prepared to assist the design, construction and operation of the proposed development to achieve a range of best practice sustainable development objectives. The Report identifies initiatives necessary to ensure that the proposed development meets sustainability requirements, particularly in relation to *Greenhouse Gas and Energy Efficiency* and *Ecologically Sustainable Development*.

6.2.1.1 Findings

The following outlines the initiatives that will be implemented into the development throughout design, construction and operation.

- **Greenhouse Gas and Energy Efficiency**: The project seeks to minimise energy use through efficient heating and cooling systems, lighting, and superior building envelope. The proposed office floors of the development will meet and exceed the requirements of the National Construction Code – Section J Energy Efficiency, which will be demonstrated through detailed thermal performance modelling.
- **Climate Change, Urban Ecology, and Heat Island Effect Mitigation**: The development will aim to reduce the negative impacts on site's ecological value as a result of urban development. It will also incorporate initiatives to adapt to a changing climate and mitigate urban heat island effects.

- **Management**: Building management initiatives will be implemented to improve sustainability outcomes relating to the operation of the buildings by building management and occupants.
- **Indoor Environmental Quality**: The development will aim to create a healthy indoor environment free from toxins with an ample supply of daylight and outside air.
- **Transport**: Industrial estates rarely have much in the way of sustainable transport options. The proposed site does however include bicycle facilities and has access to some connecting public transport options
- **Water**: The development will aim to use water efficiently through the installation of efficient fixtures and fittings and via reuse of rainwater and fire system test water
- **Materials**: The development will aim to promote the use of recycled materials and materials with lower embodied energy and environmental impacts
- **Emissions**: The development will aim to reduce the impacts of 'point source' pollutants from the project. This includes chemical, biological, and physical pollutants.
- **Innovation**: The development will aim to demonstrate that the project is applying sustainability principles in a broader sense than just on a project scale

6.2.1.2 Mitigation Measures

Table 28 Mitigation Measures

Mitigation Measure	Responsibility/Implementation
Greenhouse Gas and Energy Efficiency	
Thermal and Energy Performance Reduction in greenhouse gas emissions resulting from energy consumption will be achieved across the development through a range of measures, including the following: ▪ Improved building form and thermal envelope building fabric, including increased insulation and double glazing; ▪ Energy efficient HVAC systems; ▪ LED lighting with illumination power densities equal to or less than the maximum as set out in Part J6 of the relevant NCC; ▪ Lighting controls such as sensors and timers for external lighting and lighting in infrequently used areas, such as corridors and toilets; ▪ The provision of instantaneous hot water units. With these initiatives, buildings will achieve a 10% improvement in energy consumption compared to a reference building. Building Sealing All windows, doors, exhaust fans and pipe penetrations will be constructed to minimise air leakage as required by the provisions outlined in Section J3 of the relevant NCC.	Architect, Services consultant, ESD consultants. Construction documentation.
Climate Change, Urban Ecology, and Heat Island Effect Mitigation	
Reduced Average Rainfall and Extreme Rainfall Events ▪ Oversize rainwater tanks and employ drought resistant landscaping to reduce the overall water load required for irrigation.	Hydraulic Engineer, Landscape Architect

Mitigation Measure	Responsibility/Implementation
▪ Size all downpipes capable of withstanding high volumes of water flowing over the roofs, with eaves gutters designed for 1 in 20yr storm event, and surface drainage & box gutters designed for 1 in 100yr storm events.	
Temperature Extremes Air conditioners will be designed to handle higher specified conditions than required in Sydney. Consider including water fountains throughout the warehouse areas to ensure staff can easily hydrate during hotter temperatures.	Service Engineers
Management	
▪ Green Star Accredited Professional ▪ Environmental Performance Targets ▪ Building Systems Tuning ▪ Metering and Monitoring ▪ Formalised Environmental Management System	Builder, Architect and Services Consultant. Construction and Design Development.
Indoor Environmental Quality	
▪ Ventilation System ▪ Provision of Outdoor Air ▪ Exhaust or Elimination of Pollutants ▪ Minimum Lighting Comfort ▪ Glare reduction ▪ Daylight ▪ Volatile Organic Compounds	Electrical Engineer, Architect, Mechanical Consultant. Design Development and Construction Documentation.
Water	
▪ Efficient fixtures ▪ Rainwater collection and reuse ▪ Drought resistant landscaping ▪ Water efficient irrigation systems.	Landscape consultant, Architect, Civil Engineer. Construction Documentation and Design Development.
Materials	
Concrete: A minimum of 50% of the concrete mix will contain recycled water (rainwater or purchased recycled water). Embodied carbon will also be reduced through use of Supplementary Cementitious Materials as appropriate for the mix and use of concrete.	Builder, Services Engineer. Construction Documentation.

Mitigation Measure	Responsibility/Implementation
Steel: supplied from responsible steel makers with World Steel Association, Climate Action Program membership Low CO2-e Materials: Where possible, materials will be selected that have lower embodied emissions.	

6.2.2 Contamination and Remediation

A Detailed Site Investigation (**DSI**) was prepared by JBS&G to characterise the contamination status of the site, and to determine the suitability for ongoing commercial/industrial use as attached at **Appendix T**.

This investigation is supported by a Preliminary Long Term Environmental Management Plan (**LTEMP**), a Remediation Action Plan (**RAP**) and a Hazardous Building Material Survey (**HBMS**) also prepared by JBS&G.

The Plans seek to manage residual environment hazards and asbestos impacted surface soils during site remediation works, and develop a long-term management plan to ensure no unacceptable health or ecological risks from impacts left in-situ.

6.2.2.1 Findings

Samples of fill material and natural soils within accessible areas of the site were analysed for a range of identified potential contaminants of concern including asbestos. It found:

- Heavy metal concentrations were reported to be below the criteria.
- 14 soil samples reported heavy metal (nickel, copper or zinc) concentrations exceeding ecological criteria. The heavy metal concentrations are considered to be attributable to background conditions in soil in an urban environment.
- The limited vegetation in proximity to these locations is in good condition.
- One specific concentration Total Recoverable Hydrocarbons (**TRH**) was found to be slightly exceeding ecological criteria in one location. This location is sealed with a concrete slab and therefore no potentially complete ecological exposure pathways are identified to be associated with this exceedance. During future redevelopment this location should remain below a sealed surface.
- Friable asbestos above health criteria has been reported in four of the six surface sediment samples collected. This is a consequent of weathering / breakdown of the asbestos products on the site, and the ensuing dispersion of asbestos fibres. Potential asbestos impacts are anticipated in near surface soils across the site adjoining the extent of the buildings.
- Actual or potential acid sulfate soils were identified at site as part of the assessment and will require management.
- Groundwater from nine locations across the site were analysed for a range of identified potential contaminants of concern. Groundwater with elevated levels of heavy metals was recorded in all monitoring wells at the site. The elevated levels of heavy metals in site groundwater are not considered to require management.

A HBMS was prepared by JBS&G (**Appendix X**) which sought to determine the presence, quantity, and condition of any hazardous materials within the buildings prior to the proposed demolition works. All identified hazardous materials are recorded in the Hazardous Materials Register. The HBMS finds that there are a number of hazardous building materials which present a significant and immediate exposure risk to current and future site occupants, in their current condition.

Table 29 Hazardous Building Materials Summary

Hazard	Location
Friable Asbestos Hazards	Identified to the internal surfaces within each of the structures at the site and friable asbestos containing sediment/soils have been identified to the gutters of each structure and surrounding ground surfaces. The source of the asbestos fibre contamination is assumed to be attributed to weathering and break down of the cement matrix of the asbestos containing corrugated fibre cement sheet roof. Additionally, unsealed and exposed sections of friable asbestos pipe lagging have been identified within the structure at 55A Moxon Road and Structure D at 55-57 Moxon Road.
Non-Friable Asbestos Hazards	The remaining Asbestos Containing Material (**ACM**) identified at the site is in a stable non-friable state.
Lead Containing Dust	The identification of lead impacted dusts is in parallel with friable asbestos impacted dusts throughout the site
Lead Based Paints	Lead based paints were identified in almost all existing structures. Its condition is observed to be poor-fair.
Synthetic Mineral Fibres	Suspected Synthetic Mineral Fibres (**SMF**) materials were identified in various forms throughout the site. The typical forms of SMF identified are internal insulation to hot water systems and boilers, insulation lagging to ducting, insulation batts within ceiling and wall cavities, insulation to roof sarking, and suspended ceiling tiles.
Polychlorinated Biphenyls	Detailed inspection of capacitors in light fittings could not be undertaken due to the electricity supply to the fittings being active. Therefore, Polychlorinated Biphenyls (**PCB**) containing capacitors are assumed to be present within the light fittings throughout the site.

6.2.2.2 Mitigation Measures

Based on the findings of this investigation it is considered that a site management strategy is required to address identified asbestos contamination in soils. JBS&G have prepared a RAP (**Appendix U**) and preliminary LTEMP (**Appendix X**), which describes the required management strategy including any necessary remediation and validation works to ensure the site is suitable for proposed redevelopment.

Construction

The site management plan identified in the RAP consists of:

- Stockpile Management: All materials stockpiled onsite will be managed by the Principal Contractor for the duration of the remediation works. The following procedures will be implemented by the Site Owner or party completing the works:
  - No new stockpiles of contaminated materials are permitted to be stored at the site at any stage during the remedial program;
  - All stockpiles of soil or other materials shall be placed away from drainage lines gutters or stormwater pits or inlets; and
  - All stockpiles of soil or other materials likely to generate dust or odours shall be covered (where practical).
- Site Access: All vehicle access to the site shall be stabilised to prevent the tracking of sediment onto the roads and footpaths. All materials must be removed from the entry point on a daily, or as required, basis. Soil washings from wheels shall be collected and disposed of in a manner that does not pollute waters.

- Excavation Pump-out: As all proposed remediation works will take place above the existing ground level no excavation pump is anticipated as part of the proposed remediation.
- Landscaping / Rehabilitation: Once sufficient imported material has been placed to achieve the required design levels then all exposed soil on the site surface shall be progressively covered in the appropriate surface finishes approved in the project development consent. Primarily this will be in the form of concrete slabs, however some small areas will also be finished with landscaped vegetation at the surface.
- Vibration: The use of plant and machinery for the remediation works shall not cause vibrations to be felt or capable to be measured at any premises in proximity of the site.
- Hazardous Materials: Hazardous and / or intractable wastes are not anticipated to be generated from the remediation works, however should this circumstance arise it will be treated as an unexpected find (Section 9.1) and shall be removed and disposed of in accordance with the requirements of NSW EPA, SafeWork NSW and the relevant regulations by the Party Responsible for completing the works. In particular, any hazardous wastes will be transported by a NSW EPA licensed transporter.
- Community Consultation: The client will be responsible for any community consultation that may be required in relation to the remediation works.
- Unexpected Finds Protocol: The nature of any residual hazards which may be present at the site are likely to be detectable through visual or olfactory means. As a precautionary measure to ensure the protection of the workforce and surrounding community, should any unexpected potentially hazardous substance be found, an unexpected finds protocol is to be followed.

Operation

The LTEMP will be incorporated into the overall maintenance and environmental management procedures for all workplaces at the site. The management procedures are to be implemented during all routine intrusive works at the site including any potential future small-scale earthworks on the site (e.g. excavation for service installation or maintenance, tree planting). Major works within the area will require specific management controls.

There are two types of intrusions that may be undertaken at the site that would require management:

- Disturbance of the capping soils (shallow intrusive works); or
- Breach of the marker layer generally comprising excavations undertaken beyond a depth of 0.5 m below the ground surface.

Where shallow intrusive works are required, the following management measures will apply:

- Approval for the works must be sought from the person/s with management or control of the workplace who is responsible for the enforcement of this LTEMP. A standing / long-term approval would be appropriate for persons engaged as gardeners / maintenance workers within the site.
- Site personnel or contractors required to conduct intrusive works at the site must be inducted into the LTEMP and must be aware of their responsibilities with regard to health and safety.
- A copy of the LTEMP is to be supplied to all persons conducting intrusive works on the site.
- Air monitoring is not required provided the environmentally impacted material beneath the marker layer is not disturbed.
- The marker layer shall not be disturbed, and any capping materials disturbed should be reinstated consistent with the description in Section 2.5.2 of this LTEMP. Where disturbed, the capping materials should be separately stockpiled, managed and reinstated consistent with this LTEMP (as applicable and appropriate). This shall include re-instatement of any areas of hardstand where hardstand is required to be removed.
- Any repairs to the capping and/or pavement (i.e. hardstand) overlying the marker layer shall be recorded and changes should be detailed in an updated survey plan, if required.

Where deep intrusive works are required, the following management measures will apply:

- Prior to any deep intrusive work commencing, approval for the works must be sought from the person/s with management or control of the workplace who is responsible for the enforcement of the LTEMP will assess whether the works are necessary or if there is an alternative that will not result in exposure of environmentally impacted soil and whether the works are required to be carried out by a specialist contractor. The person/s with management or control of the workplace must also review and approve the Job Safety Risk Assessment and Safe Work Method Statement for the works and ensure that site personnel and/or contractors who will undertake the works understand the requirements of the LTEMP.
- Site personnel or contractors required to conduct deep intrusive works at the site must be inducted into the LTEMP and must be aware of their responsibilities with regard to health and safety.
- A copy of the LTEMP is to be supplied to all persons conducting deep intrusive works on the site.
- The works area must be isolated from casual entry using temporary barriers and only personnel inducted in the requirements of the site LTEMP will be permitted to enter the works area.
- Sufficient space must be provided within the works area to allow stockpiling of spoil from excavations, if required.
- In the event that materials from under the marker layer must be excavated, a water supply must be provided to the works area for the purpose of maintaining potential environmentally impacted soil in the excavations and stockpiles in a moist state.
- Personnel entering the works area must wear appropriate PPE.
- Decontamination procedures must be undertaken.
- Stockpiles of excavated spoil must be managed.
- Air monitoring to be undertaken.
- Once the works are complete, the capping and marker layer shall be reinstated with materials of similar nature as were originally present, as described in this LTEMP. Where materials are imported for use in the capping layer, if required, they must be validated as suitable for the site use.
- Areas of removal of hardstand / paving must be replaced with hardstand / paving in the reinstatement of the site.
- Any repairs to the capping and/or pavement shall be recorded and changes should be detailed in an updated survey plan, if required.

6.2.3 Waste Management

A Waste Management Plan (**WMP**) was prepared by JBS&G Australia and is attached at **Appendix W**. The WMP identifies the likely waste streams generated during the works, provides indicative estimations of waste quantities, and proposes management, reuse, recycling and disposal procedures during the excavation, construction and operational works for the redevelopment.

A HBMS was prepared by JBS&G to provide recommendations on the requirements for the removal of identified hazardous materials in accordance with regulations and guidance in force, as attached at **Appendix X**.

6.2.3.1 Findings

Construction

Indicative quantities of waste likely to be generated during construction (excluding excavation and other enabling works) have been calculated based on published waste generation rates for construction projects. **Table 30** summarises the waste types and indicative volumes that have been estimated for construction of warehouses.

Table 30 Guide to Waste Composition and Volumes – Construction

Material	Estimated Waste %	Conversion Factor (Density) (tonnes per m³)	Estimated Waste (m³)	Estimated Waste (t)
Hard material	32%	1.2	1435.2	1722.2
Timber	24%	0.3	1076.4	322.9
Plastics	15%	0.13	672.7	87.5
Cement sheet	9%	0.5	403.6	201.8
Gypsum material	6%	0.2	269.1	53.8
Metals	6%	0.9	269.1	242.2
Paper / card	4%	0.1	179.4	17.9
Vegetation	3%	0.15	134.5	20.2
Soil	1%	1.6	44.8	71.8
Total	**100%**	-	**4485**	**2740**
Other	0.3%	0.3	13.5	4.0

Source: JBS&G

Operation

Potential waste streams and quantities generated is assessed on general warehouse and office uses. Indicative quantities of waste are assumed as the site will be categorised as 'wholesale trade' and 'offices' under the CBCity guidelines (2021) and will operate seven days a week, from 7am to 10pm. Waste generation rates of the office areas have been calculated to account for administerial waste etc. An estimated waste, recycling and food waste generation can be predicted for the assumed site use as a warehouse centre.

Table 31 Estimated Average Waste and Recycling Generation Rates

Premises Type	Area of Space (m²)	Average Waste Generation	Average Recycling Generation
Wholesale trade[1]	25,565	100 L / per day / per 100m²	50 L / per day / per 100m²
Offices	3,744	10 L / per day / per 100m²	15 L / per day / per 100m²
Expected Generation	-	175,206 L / per week	90,224 L / per week
Total Expected Waste Generation	-	265,430 L / per week	

Source: JBS&G

6.2.3.2 Mitigation Measures

Site specific waste management measures have been developed in line with the waste hierarchy and in accordance with the relevant legislative requirements and guidelines.

Construction

Table 32 Construction Waste Management Measures

Measure	Description
Avoidance and Reduction of Waste	Develop a procurement policy which considers waste avoidance measures. Refine waste stream estimates to ensure adequate site storage and segregation.

Measure	Description
	Refine estimated volumes of materials for construction.
Reuse and Recycling	Incorporation of waste management into development staging to promote reuse of materials across the site. Ensure areas for waste segregation are easily accessible and clearly defined. Ensure contractors are familiar with onsite waste storage areas for appropriate waste segregation
Treatment and Disposal	Ensure wastes which cannot be reused or recycled and require disposal are clearly segregated from those which have the potential to be reused. Provide segregated bins for subcontractors to dispose of construction waste
Waste Stream Management	None.

Hazardous Building Materials

Identified and suspected hazardous building materials have been identified at the site. In accordance with the Work Health and Safety Regulation (2017), a person in control of a business or undertaking must keep a copy of the site hazardous materials register and make it available to any staff, visitors (where relevant) or contractors when requested. The following measures are identified to manage the identified hazardous materials.

- Friable Asbestos Hazards
  - Access to the internal areas of each structure is restricted until further notice or appropriate asbestos remediation works are completed. If access to the building is required, care should be taken to avoid any activities that may disturb settled dust and personal protective equipment (**PPE**) adopted to preclude potential inhalation exposures to dusts. Minimum PPE requirements of P2 half face respirators, disposable coveralls and gloves should be worn by any persons who require to enter the building.
  - Remediation of the identified friable asbestos dust and accessible sediment/soils (i.e. roof gutters are not considered accessible) shall be completed as a matter of urgency and application of a sealant or barrier layer to the underside of the corrugated asbestos cement roof lining to prevent any further release of asbestos fibres shall also be completed.
  - Notification of the identified workplace incident shall be made to the regulator (SafeWork NSW) in accordance with the WHS Act (2011).
  - All site workers shall be offered the opportunity to undergo health monitoring.
- Non-friable Asbestos Hazards
  - All identified and suspected ACM are to be recorded on a site Hazardous Building Materials Register in accordance with Clause 425 of the Work Health and Safety Regulation (2017) with a register kept on-site and managed and updated under the responsibility of the site controller/owner
  - Appropriate warning labels shall be applied to occurrences of non-friable asbestos materials, in accordance with SWNSW 2019b;
  - The Hazardous Materials Register must be updated following any changes to the condition of ACM identified within the register.
- Lead Containing Dust
  - Lead containing dust identified poses an immediate lead exposure hazard. It will be removed in conjunction with the friable asbestos impacted dusts removal works.

- Lead Based Paints
  - Where peeling or deteriorated they should be removed under controlled conditions by an experienced contractor and repainted to encapsulate the potential exposure pathway. A lead management plan (or hazardous material management plan) should be prepared for the site detailing the procedures to manage the remaining lead paints. These management procedures should involve program of regular inspection to ensure that the materials do not deteriorate further.
  - Prior to demolition works, identified lead based paints should be removed under controlled conditions by an experienced contractor.
- Synthetic Mineral Fibres
  - The SMF materials can remain in situ and condition monitored on a regular basis. Alternatively, these SMF materials can be removed with the building and demolition waste with care taken not to generate fibres. Appropriate PPE is recommended.

Operation

Table 33 Operational Waste Management Measures

Measure	Description
Avoidance and Reduction of Waste	Develop a procurement policy which considers waste avoidance measures Refine waste stream estimates to ensure adequate on-site storage and waste segregation, and to inform future procurement policies
Reuse and Recycling	Incorporate waste management into site management procedures to promote reuse and/or recycling of materials. Consider opportunities for materials reuse and/or recycling where practicable.
Waste Storage Systems	If any of the warehouses are used by a third party, they will be required to provide their own operational waste management plan.
Waste Collection Point	None.

6.2.4 Environmental Heritage

A Statement of Heritage Impact (**SHI**) was prepared by Austral Archaeology to assess the potential impact from the development on the significance of any environmental heritage or archaeological values that may be present within the site and is attached at **Appendix Z**. A physical inspection of the site was conducted in December 2022.

6.2.4.1 Findings

The site has undergone various phases of heavy disturbance, which would have impacted surface and subsurface archaeological deposits, if present. The site is not listed on any heritage registers and does not contain any known heritage values. Historical research has determined that there is low archaeological potential within the site. The site has associations with the Kalmer pottery of the 1950s, which is of local heritage significance, however, little remains present which would directly link development to the Kalmers. Therefore, the site contains no extant heritage values.

The proposed development would impact the entirety of the site through the demolition of current structures, groundwork excavations and construction of the proposed warehouse. As the current warehouses were constructed in the 20th and 21st century, they do not contain any significant elements and have no heritage value. No further historical heritage assessment is required within the site.

6.2.4.2 Mitigation Measures

Based on these findings, several management measures are proposed within the SHI as listed below.

- Although not required, consideration could be given to installing a heritage interpretation panel in the foyer or outside of the new development detailing the association of the site with the Kalmar pottery.
- If historical archaeological relics not assessed or anticipated are found during the works, all works in the immediate vicinity are to cease immediately and Heritage NSW must be notified in accordance with the conditions of the Section 60 permit. A qualified archaeologist is to be contacted.
- If Aboriginal archaeological material or deposits are encountered during earthworks, all works affecting that material or deposits must cease immediately to allow an archaeologist to make an assessment of the find.

6.2.5 Infrastructure and Utilities

Landpartners have prepared a Service Infrastructure Assessment (**IA**) to identify the existing services on site and determine the demand requirements of the proposed development, as attached at **Appendix AA**. The IA identifies if any infrastructure upgrades are required onsite and offsite to facilitate the development.

6.2.5.1 Findings

The IA identified the servicing capability of the site, summarised in the following table. The IA finds that the proposed development will be adequately serviced based on the below existing infrastructure and infrastructure upgrades on site.

Table 34 Servicing Capability of the Site

Service	Availability
Potable Water	Estimated Potable Water Demand: - Average Day Demand 23kl/day - Max Day Demand 47kl/day Potable water reticulation systems exist adjacent to the site. Two 150mm water main provides frontage to the site for connection of potable water supply. A feasibility application has been lodged with Sydney Water.
Waste Water	Estimated Waste Water Demand 22kl/day The site is served by a 225mm sewer main within the site. This 225mm sewer main connects to a 375mm sewer carrier adjacent to the southern boundary of the site. Due to the proposed development the extent of the 225mm main within the site can be reduced by an application to Sydney Water to abandon and recover a substantial section of the existing sewer main. Adequate waste water capacity exists to serve the proposed development.
Electricity	The site is currently serviced by two existing Ausgrid padmount substation established onsite and high voltage feeders within Moxon Road. Electrical demand has been calculated as 2.0MVa by clients Level 3 ASP consultant. Applications for decommissioning the existing padmount substation and provision of a new padmount substation will be required to facilitate the proposed new development. New substations will be installed to support the proposed development.

Service	Availability
Telco	NBN is the network provider for the area and has established underground fibre optic cables within Moxon Road.
Gas	Jemena have a 210kPa gas reticulation main in Moxon Road immediately along the frontage of the site. This main is available for connection.

The existing electrical substations located onsite are proposed to be decommissioned and assets recovered. The existing 225mm sewer within the site will be substantially decommissioned due to the footprint of the proposed development. A small section of the sewer will remain to facilitate connection of the internal waste water hydraulic services planned for the development to connect to Sydney Water reticulation system.

The IA identifies the infrastructure staging and delivery plan. All assets will be delivered through the service utility organisations asset creation path and this instance those assets will be developer funded.

- Sydney Water Infrastructure
  - Sydney Water has a standard asset creation path through their Sec 73 process.
  - The development does not have any substantial impact on the delivery of potable water and waste water services to the site and as such no amplification of existing Sydney Water assets is expected.
  - The site is already serviced by Sydney Water assets so no staging of delivery of any Sydney Water asset is required.
- Electricity
  - Decommissioning of the existing electrical substations can commence once the Level 3 ASP consultant receives Ausgrid approval.
  - Provision of a new padmount substation(s) with high voltage feeder connection to existing Ausgrid assets in Moxon Road will occur as per Ausgrid's normal asset creation path. The new substation(s) will be installed during the development process for the new building.
- Telco and Gas
  - Existing assets exist to serve the proposed development.

6.2.6 Resilience and Hazards

A Resilience and Hazards Report (**RHR**) has been prepared by Riskcon and is attached at **Appendix EE**. The RHR assesses the risk profile of the development upon the surrounding land uses to determine whether it is acceptable within the context of the surrounding land zoning.

6.2.6.1 Findings

The RHR undertook a review of dangerous goods that may be stored at the proposed warehouse facility and the associated vehicle movements, for both individual tenancies and for cumulative effect across the development. The RHR finds that the threshold quantities for the dangerous goods that may be stored or transported are not exceeded. Therefore, the requirements of Chapter 3 of R&H SEPP are not applicable to the project.

The RHR also undertook a review of the potential to cause offense which found that the site operations would be unlikely to result in noise or odour to occur at levels which would cause offense.

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 site location and design of the proposal has been carefully considered to ensure any potential impacts of the development are minimised, particularly having regard to the industrial-residential interface.

The proposal seeks to meet the objectives of the project through enabling industrial uses and employment opportunities to be delivered on site. The proposal seeks to deliver an innovative and modern employment-generating development on an existing, outdated industrial site. The proposal creates a total of 29,309m^2 GFA, critical employment facilities and floorspace within an existing industrial area which would attract modern tenants and greater job opportunities. The proposal seeks to make efficient use of the site by consolidating multiple lots to deliver employment opportunities in both the short and long-term.

The layout and design of the proposal has been developed to maximise benefits on the public domain and provide enhancements to the streetscape and local context. The proposal incorporates a modern, attractive façade design with carefully considered articulation to provide a positive relationship to surrounding land uses. The proposed development incorporates an increased setback to Moxon Road and the Salt Pan Creek riparian corridor. A greater setback is provided on the Moxon Road frontage, which includes a 10 metre landscape buffer. This is to enhance the planting and landscape outcomes of the site, whilst also improving visual amenity with the residential area across the road. The proposal includes extensive uplift in relation to landscaping and planting including native species.

The façade is of a high quality design with the aim to act as a soft transition between the streetscape and warehouse buildings. Offices are provided along the east and west facades to provide visual interest and engage with surrounding context. The offices have been intentionally located to face the neighbouring residential area and the Salt Pan Creek corridor in order to achieve a positive connection and welcoming aesthetic. This orientation means the warehouses and associated activities are contained to the central core of the facility, being screened from the residential area and Salt Pan Creek.

7.2 Strategic Context

The proposal is consistent with State and local strategic planning policies. The site is highly suitable for the proposed development being an existing industrial site within a long-standing industrial area. The proposal will deliver additional industrial floorspace in an industrial employment zone to meet growth and demand.

The generation of additional employment for the Southern City Region will also contribute to the 30-minute city vision set in the Region Plan. The proposal will provide a range of employment opportunities of benefit to the local community and broader Sydney region.

7.3 Statutory Context

The relevant State and local environmental planning instruments are listed in **Section 4** and assessed in **Appendix C**. 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 addressed in **Appendix C**.
- This EIS has been prepared in accordance with the SEARs as required by Schedule 2 of the EP&A Regulations.
- Consideration is given to the relevant matters for consideration as required under the BC Act and the SSD is supported by a BDAR accordingly.
- This SSDA pathway has been undertaken in accordance with the Planning Systems SEPP as the proposed development is classified as SSD.

- Concurrence from TfNSW will be required as per the T&I SEPP for 'traffic generating development'.
- The proposal complies with all relevant provisions under the CLEP 2012 as detailed in **Appendix C**. The proposed development is consistent with the objectives of the IN2 zone.
- The proposed development has been assessed in accordance with the R&H SEPP and the development complies with the relevant clauses.
- The proposal generally accords with the relevant provisions of the CDCP 2012 as outlined in **Appendix C**.

7.4 Community Views

As set out in **Section 5**, feedback received during the stakeholder engagement has informed the development of the design of the proposal as well as the preparation of the EIS.

Consultation feedback received during the finalisation and assessment of the application will continue to be taken into consideration.

7.5 Likely Impacts of the Proposal

The proposed development has been assessed considering the potential environmental, economic and social impacts as outlined below:

- **Natural Environment**: the proposal addresses the principles of ecologically sustainable development in accordance with the requirements at Clause 194 of the Regulations and as outlined below:
  - 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. The proposal will not have any unacceptable environmental impact on Salt Pan Creek, the riparian corridor or identified coastal management area. The proposal will not impact any Critically Endangered Ecological Community and the development will not result in any threat of serious environmental damage or degradation.
  - 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 development represents sustainable development by making best use of the existing site, proposing considered improvements and uplift to existing environmental values through landscape design and water quality and quantity management.
  - Conservation of biological diversity and ecological integrity: The project seeks to improve and enhance the existing vegetation on site and the interface with Salt Pan Creek to the western site boundary. This is through increased tree planting onsite to achieve greater tree canopy, landscaped setbacks and planting integrated into building facades. The proposal will not have any unacceptable impacts on the conservation of biological diversity and ecological integrity.
  - 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 environmental impacts in relation to air quality, ecology, 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 H**) identifies a number of different sustainability initiatives including energy savings, energy efficiency, rainwater capture and reuse, improved thermal performance of the building fabric, and reduction in greenhouse gas emissions. It demonstrates the proposed development will meet best practice ESD outcomes, in which these initiatives will serve to provide occupants with lower running costs, as well as benefits to the surrounding environment with an ecologically and economically sustainable development.
- **Built Environment**: the proposal has been assessed in relation to the following key built environment impacts:

  - Visual Impacts: As set out in **Section 6** and the VIA, the proposed development is expected to generally create minor to moderate visual impacts including for people who experience direct views of the development from the residential dwellings on Moxon Road and Moxon Sports Club. Visual impacts will be significantly mitigated through the high-quality building design, as well as the proposed landscaping and extensive tree planting in the site setbacks.
  - Traffic Impacts: As set out in **Section 6** and the TMAP, the local road network will continue to perform at an acceptable level of service as a result of the proposed development and the proposal is not expected to result in any adverse impacts on the surrounding road network during operation.
  - Trees and Landscaping: As set out in **Section 6**, the AIA and Landscape Plans, the proposal includes significant landscaped setbacks which is an improvement to the existing quality of the site. The proposed planting offsets and exceeds the number of trees to be removed to achieve improved canopy cover targets. The proposal provides a significant landscaping uplift to the site, including native species, particularly in relationship to the public domain.
  - Air Quality: As set out in **Section 6** and the AQIA, the operation of the proposal would result in the achievement of all air quality criteria. Accounting for the background air quality conditions, and adopting worst-case assumptions in relation to truck idling, the proposal will not have any unacceptable air quality impacts associated with the construction and operation of the proposed development.
  - Noise and Vibration: As set out in **Section 6** and the NIA, exceedances are expected at the residential receivers opposite the entry and exit driveways, and to Moxon Sports Club during the operational phase at daytime peak period. These exceedances are controlled by vehicle sources. However, as the existing traffic noise levels already exceed NSW Road Noise Policy Guidelines the changes to traffic noise as a result of traffic generated by the development are expected to be ≤1 dB, and no perceptible change to existing traffic noise impacts are anticipated, resulting in compliance with the Road Noise Policy. The construction phase is measured to have exceedances at all non-industrial receivers during all stages of construction works. All reasonable and feasible construction noise mitigation measures should be implemented to avoid unreasonable or unacceptable impacts during this temporary period.

- **Social**: The proposal will have positive social impacts by enabling employment generating uses to be delivered on site in the short-term, providing local employment opportunities both in the construction and operational phases. It will provide up to 585 jobs per year when operational and 269 jobs during construction.
- **Economic**: The proposal will have positive economic impacts through enabling the delivery of operational industrial uses on site which will result in investment and economic benefit for Punchbowl as well as the wider region.

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

7.6 Suitability of the Site

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

- The warehouse and distribution centre use is permissible within the IN2 zone and in accordance with the zone objectives including to provide a wide range of warehouse land uses; to encourage employment opportunities; and to minimise any adverse effect of industry on other land uses.
- The project is consistent with the relevant State and local strategic and statutory policies.
- The site is located within an existing industrial area and the character and scale of the development is in keeping with the site's context, without having any unacceptable impacts on residential amenity.
- The site is highly accessible to both the transport and regional freight network and makes use of a brownfield site to deliver sustainable development.

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.
- No adverse environmental, social or economic impacts will result from the proposal.
- The proposal will provide up to 854 jobs during the construction and operation stages. It will stimulate local investment and deliver significant economic output and value add to the economy.
- The issues identified during the stakeholder engagement have been addressed through the development of the design of the proposal and the assessment of the impacts.

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 Disclaimer

This report is dated 17 July 2023 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 Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Hale Capital Development Management **(Instructing Party)** for the purpose of EIS **(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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SEARS Compliance

URBIS

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ESD Report

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Arboricultural Impact Assessment

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Noise and Vibration Impact Assessment

Geotechnical Investigation

Acid Sulfate Soil Management Plan

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Preliminary Long Term Environmental Management plan

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Appendix FF Light Spill Assessment