

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

**Building 1A - Oakdale West Industrial Estate
SSD 7348**

Prepared for:

Goodman Property Services (Aust) Pty Ltd
The Hayesbery
1-11 Hayes Road
Rosebery NSW 2018

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Aust) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
630.30396.00400-R01-v1.0	26 September 2022	Kelsy Salmons / Chelsey Zuiderwyk	Alanna Ryan	Alanna Ryan

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1 Introduction

1.1 Development Overview

Goodman Property Services (Aust) Pty Ltd (Goodman) obtained State Significant Development Consent (SSD) 7348 on 13 September 2019 for the 'Concept Plan' and 'Stage 1 Development' of Oakdale West Industrial Estate (Oakdale West), a warehousing and a distribution hub at 2 Aldington Road, Kemps Creek in Western Sydney Employment Area.

The Concept Plan is a 'Master Plan' to guide the staged development of Oakdale West and core development controls that will form the basis for design and assessment of future development applications for the site (see **Figure 1**). The Stage 1 Development includes estate-wide earthworks, infrastructure, and services and the construction and operation of warehouses in Precinct 1 (Building 1A, 1B and 1C) (see **Figure 2**). At the time of writing, SSD 7348 has been modified on ten occasions, with the tenth modification approved by the Department of Planning and Environment (DPE) on 17 August 2022.

A copy of Development Consent SSD 7348 (as modified) is available online on the [NSW Planning Portal](#).

Oakdale West provides a logistics hub for the receipt, warehousing and distribution of products. Operational activities are approved for 24 hours a day, seven days a week and will likely include:

- General storage and warehousing;
- Unloading and loading of goods via trucks and shipping containers;
- Management of inventory in a racked and stacked environment;
- Order fulfilment, including picking and packing of finished orders for customers;
- Loading of transport vehicles;
- Management of product returns;
- Inspection of goods for quality assurance purposes; and
- Product embellishment.

Building 1A has a site area of 111,141 m² and comprises the following key components:

- The development involves the construction of a warehouse, a three-storey ancillary office, external parking, gatehouse, refuelling area, energy complex, trailer workshop, and on-site truck/trailer parking;
- 472 Carparking spaces, Hardstand and Light Duty Areas;
- A primary site access for light and commercial vehicles, and secondary exit only for light vehicles; and
- The site has approval to operate 24 hours per day seven days a week.

For the purposes of this document, the development is described in:

- *Environmental Impact Statement, Oakdale West Estate – State Significant Development Application* (EIS) prepared by Urbis (2017), including all specialist assessments and other appendices;
- *Oakdale West Estate SSD 7348 S4.55(2), Modification No.2 – Environmental Assessment Report* prepared by Urbis (2019), including all specialist assessments and other appendices;

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- *Assessment Report Section 4.55(1A) Modification, SSD 7348 Modification 6 – 2 Aldington Road, Kemps Creek* prepared by Keylan Consulting (2020), including all specialist assessments and other appendices;
 - *Assessment Report Section 4.55(1A) Modification, SSD 7348 Modification 7 – 2 Aldington Road, Kemps Creek* prepared by Keylan Consulting (2021), including all specialist assessments and other appendices (Keylan 2021);
 - *SSD 7348 MOD 8, Oakdale West Stage – S.4.55(1A) Application to Modify Architecture Plans* prepared by Goodman (2021), including appendices (Keylan 2021a);
 - Oakdale West Industrial Estate SSD 7348 – Modification Application 9, prepared by Keylan Consulting (2021b); and
 - Oakdale West Industrial Estate SSD 7348 – Modification Application 10, prepared by Goodman.

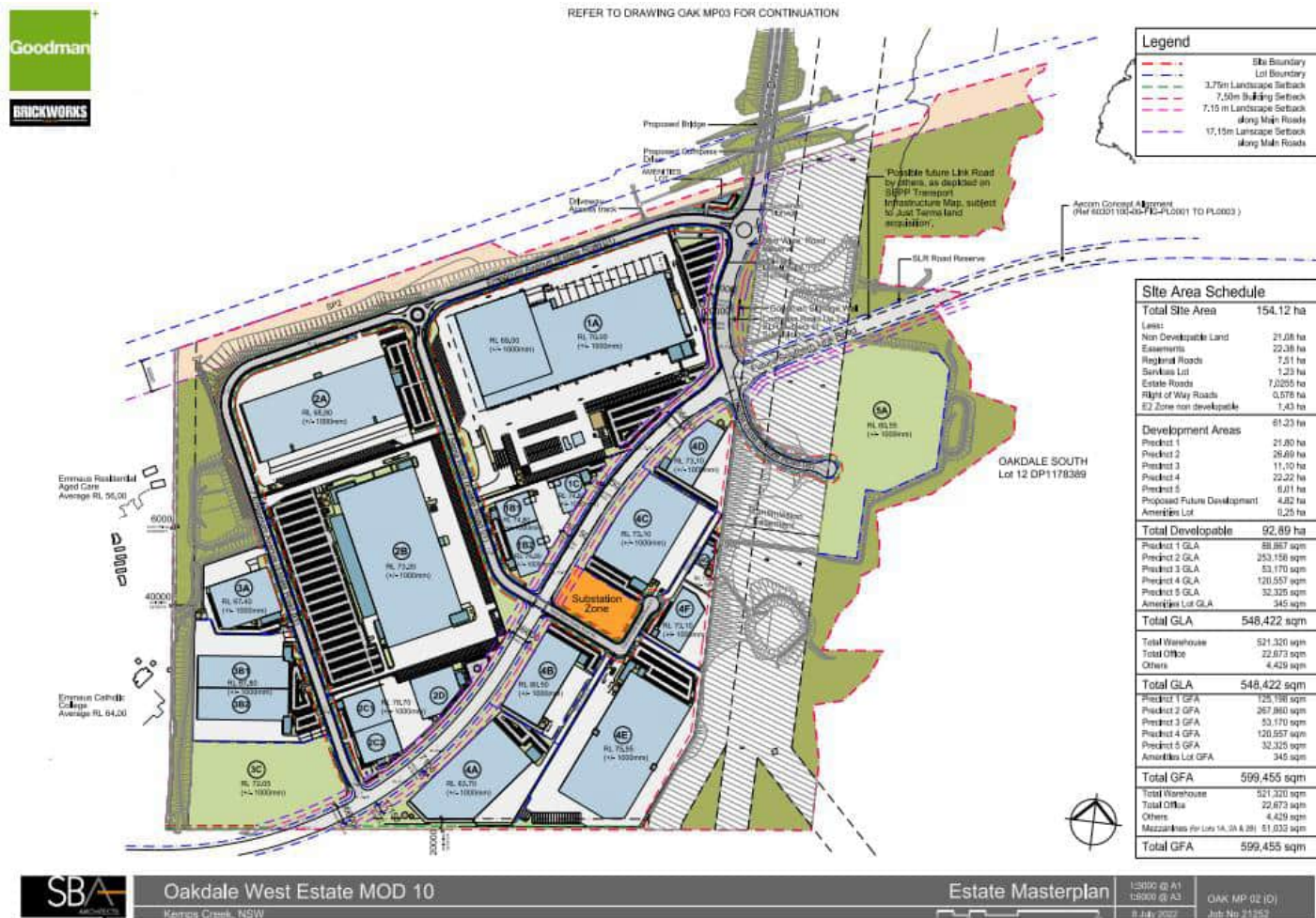


Figure 1 Oakdale West Site Layout

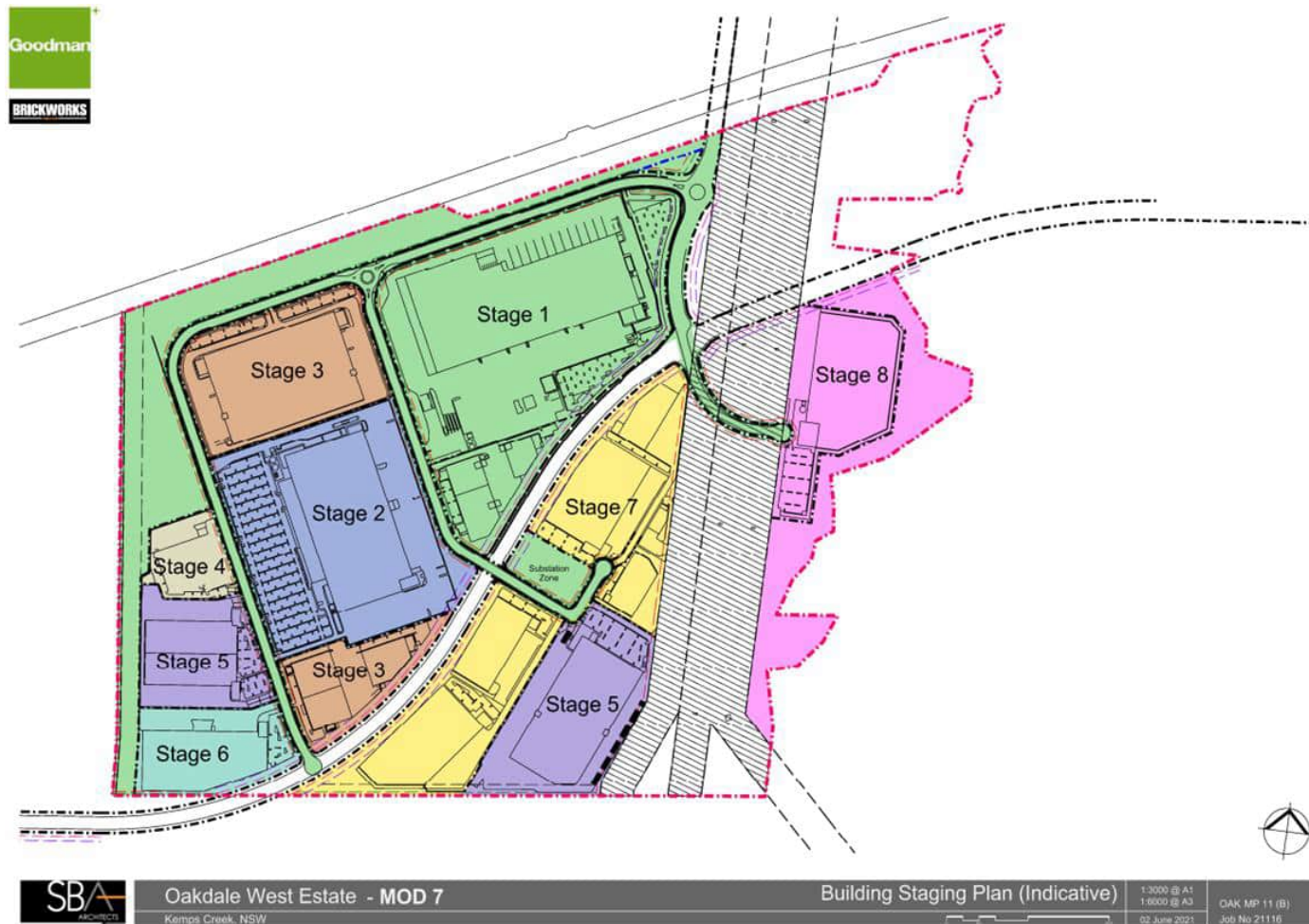


Figure 2 Oakdale West Staging Plan

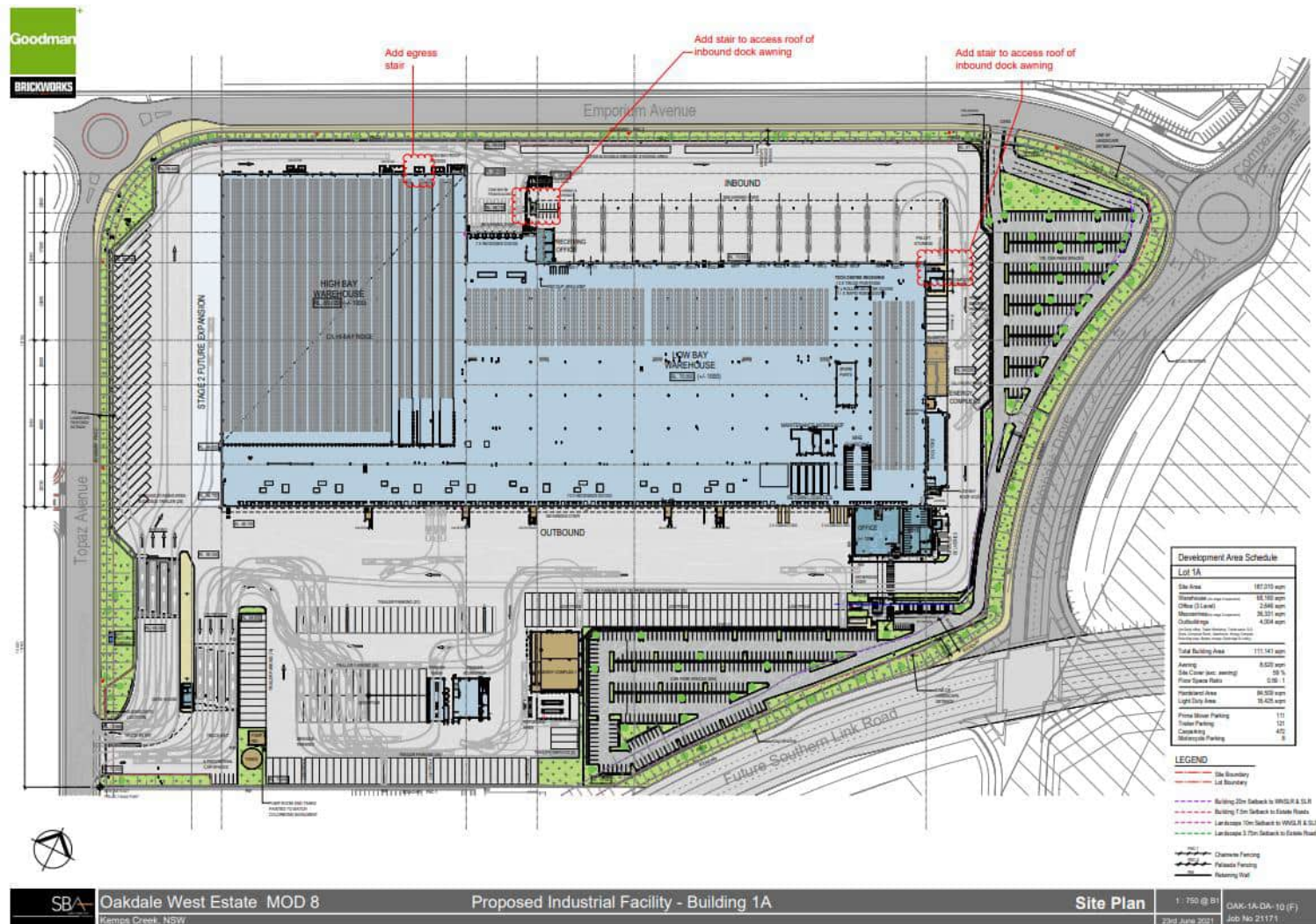


Figure 3 Building 1A

1.2 OEMP Context

This Operational Environmental Management Plan (OEMP) has been prepared to address the scope and objectives listed below for the operation of Building 1A Precinct 1 under SSD 7348 (see **Figure 3**), and in consideration of *Guideline for the Preparation of Environmental Management Plans* (Department of Infrastructure, Planning and Natural Resources 2004).

Reference should also be made to the *Oakdale West Industrial Estate OEMP* (SLR 2022b) which details management requirements applicable to all developments within the Estate.

This OEMP contains the following key components:

- Environmental management framework, including key contacts, roles and responsibilities, and regulatory requirements;
- Environmental incidents and Non-Compliance management strategy;
- Complaints management strategy;
- Environmental management commitments and responsibilities;
- Monitoring, inspections and reporting requirements;
- Contingency Management Plan; and
- Inclusion of specialist management plans listed below:
 - Community Communication Strategy;
 - Operational Traffic Management Plan;
 - Salinity Management Plan;
 - Waste Management Plan;
 - Flora and Fauna Management Plan;
 - Vegetation Management Plan;
 - Landscape Management Plan; and
 - Sustainability Management Plan.

1.2.1 Scope

This OEMP has been prepared to satisfy Conditions D118 and D130-132 of Development Consent SSD 7348 in relation to Building 1A. The specific requirements of these consent conditions, along with where these requirements have been addressed within this document, are listed in **Table 1**.

In addition to this, all conditions of consent from SSD 7348 relevant to this OEMP are attached as **Appendix A**, including reference to where they have been addressed.

Table 1 OEMP Scope

Condition	Section
D118. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	
a) details of: <ul style="list-style-type: none"> i. the relevant statutory requirements (including any relevant approval, licence or lease conditions); ii. any relevant limits or performance measures and criteria; and iii. the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, Stage 1 or any management measures; 	<ul style="list-style-type: none"> i. Section 3.3 ii. Section 4 iii. OWE OEMP specialist management plans
b) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Section 4
c) a program to monitor and report on the: <ul style="list-style-type: none"> i. impacts and environmental performance of Stage 1; and ii. effectiveness of the management measures set out pursuant to paragraph (b) above; 	<ul style="list-style-type: none"> i. Section 5 ii. Section 7
d) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Section 6
e) a program to investigate and implement ways to improve the environmental performance of Stage 1 over time;	Section 5
f) a protocol for managing and reporting any: <ul style="list-style-type: none"> i. incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria); ii. complaint; iii. failure to comply with statutory requirements; and 	<ul style="list-style-type: none"> i. Section 3.5 ii. Section 3.6 iii. Section 3.5
g) a protocol for periodic review of the plan.	Section 7
D130. The Applicant must prepare an Operational Environmental Management Plan (OEMP) in accordance with the requirements of Condition D118 and to the satisfaction of the Planning Secretary.	This Plan
D131. As part of the OEMP required under Condition D130 of this consent, the Applicant must include the following:	
a) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of operation of Stage 1;	Section 3.2
b) describe the procedures that would be implemented to: <ul style="list-style-type: none"> i. keep the local community and relevant agencies informed about the operation and environmental performance of Stage 1; ii. receive, handle, respond to, and record complaints; iii. resolve any disputes that may arise; iv. respond to any non-compliance; v. respond to emergencies; and 	<ul style="list-style-type: none"> i. Section 5 ii. Section 3.6 iii. Section 3.6 iv. Section 3.5 v. Section 3.5
c) include the following environmental management plans: <ul style="list-style-type: none"> i. Landscape Management Plan (LMP) (see Condition D35); 	Note these are OWE OEMP Management Plans

Condition	Section
ii. Flora and Fauna Management Plan (FFMP) (see Condition D88);	i. Section 4.8 (App J)
iii. Waste Management Plan (WMP) (see Condition D112); and	ii. Section 4.7 (App H)
iv. Operational Traffic Management Plan (OTMP) (see Condition D69A).	iii. Section 4.6 (App G)
	iv. Section 4.4 (App E)
D132. The Applicant must:	
a) not commence operation until the OEMP is approved by the Planning Secretary; and	a) Noted
b) operate Stage 1 in accordance with the OEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).	b) OWE OEMP

In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the operation of the development.

1.2.2 Objectives

The objectives of this OEMP are to guide and assist Goodman and the Tenant to:

- Ensure the Operational Environmental Management requirements for Building 1A under SSD Consent 7348 are undertaken and adhered to in line with the relevant consent conditions;
- Establish the framework for managing and mitigating the potential for adverse environmental impacts as a result of the operation of Building 1A;
- Clearly and concisely document the commitments made in the EIS (Urbis 2017) and Response to Submissions (RTS) and SSD 7348 Modification Reports (as listed in **Section 1.1**), including relevant management plans, that are required to be implemented during operation;
- Demonstrate to DPE how the applicant proposes to meet all of its regulatory obligations including those outlined in the Conditions of consent;
- Clearly and concisely document the conditions imposed by SSD 7348 that are required to be implemented and/or complied with during operation; and
- Assist to establish Building 1A operations in a manner that avoids (where possible) or minimises impact to the surrounding environment and populace.

It is noted that this OEMP does not address workplace health and safety (WHS) requirements. These are managed in accordance with Goodman's Current Work, Health & Safety Policy.

1.2.3 Preparation

This OEMP has been prepared by SLR Consulting (Australia) Pty Ltd (SLR). SLR provides global environmental and advisory solutions from a network of offices in Asia-Pacific, Europe, North America and Africa. Author qualifications are listed in **Table 2** below:

Table 2 Author Qualifications

Name, Role & Division	Qualifications	Experience
Alanna Ryan Principal Consultant - Environmental Assessment & Management	BEnvSc Grad Cert Community Engagement	Alanna is a Principal Environmental Consultant with over 15 years industry experience in the mining sector. Experience Alanna has included Environmental Management systems (including risk assessment/management, strategies, management plans, inspections, and auditing) and statutory reporting.
Kelsy Sammons Associate Consultant Environmental Assessment & Management	BEsM	Kelsy is an Associate Consultant with over 10 years industry experience, in the mining and energy sectors. Kelsy specialises in providing technical expertise and support in building environmental performance capabilities within operations and site-based functions. She also has expertise and experience in management plans, compliance, environmental risk assessments, audit preparation, rehabilitation and environmental monitoring programs.
Chelsey Zuiderwyk Senior Project Consultant Environmental Assessment & Management	BSc B.Com	Chelsey is a Senior Project Consultant in the SLR Environmental Assessment & Management team with bachelor's degrees in science and commerce, and 10 years' experience in project management and support, most recently in environmental management. Since joining SLR, Chelsey has been involved in delivering a range of projects including Environmental Management Plans, Environmental Risk Assessments, Review of Environmental Factors, Audit preparation, Annual Reviews, Mining Operations Plans and Rehabilitation Cost Estimates. Prior to joining SLR, Chelsey worked in regional and local government across a broad range of projects including infrastructure management, communications, strategic project support and stakeholder engagement with local and state government on environmental, social and infrastructure programs.

1.2.4 Consultation

In accordance with SSD 7348, consultation in relation to operational compliance has been undertaken with the applicable stakeholders which is summarised in **Table 3**, and documentation attached at **Appendix B**.

Table 3 Consultation

Condition	Comment
SSD 7348	
<p>Notification of Commencement</p> <p>D8. The date of commencement of each of the following phases of the development must be notified to the Planning Secretary in writing, at least one month before that date, or as otherwise agreed with the Planning Secretary:</p> <p>(a) construction; and</p> <p>(b) operation.</p>	<p>Noted – The Applicant will notify The Department of the commencement of operation as per Condition D8.</p>
<p>Notification of Commencement</p> <p>D9. If the operation of the development is to be staged, the Planning Secretary must be notified in writing, at least one month before the commencement of each stage (or other timeframe agreed with the Planning Secretary), of the date of commencement and the development to be carried out in that stage.</p>	<p>Noted – The Applicant has notified The Department of the commencement of this stage of development as per Condition D9.</p>
<p>Operational Traffic Management Plan</p> <p>D69A. The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:</p> <p>(a) be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW;</p> <p>...</p>	<p>Consultation with Council and TfNSW has been conducted in accordance with Condition D69A and is provided in Appendix C of the OTMP.</p>

2 Operation Overview

2.1 Location

Oakdale West is legally described as Lot 101 to 103 in DP 1262308 and Lot 105 to 111 DP 1262310, at the far south-western extent of the Western Sydney Employment Area (WSEA) within the Penrith Local Government Area (LGA).

The Oakdale West site is a precinct in the wider Oakdale Estate development and forms part of a progressive development designed to make Oakdale a regional distribution park of warehouses, distribution centres and freight logistics facilities. The Oakdale West site is a 154 ha site located in the Oakdale Estate, a 421 ha area of land in the Western Sydney Employment Area.

Oakdale West is bound to the north by the Water NSW Pipeline and to the east by the Ropes Creek riparian corridor. Land along the eastern boundary of the site is also affected by a transmission easement associated with Transgrid infrastructure. To the east of the site is Goodman's Oakdale South Estate. Emmaus Catholic College and Emmaus Retirement Village is located to the west of the site. Other boundaries interface with adjoining rural lands used for a mix of rural-residential and agricultural.

As shown in **Figure 2**, Building 1A is within Precinct 1, in the north-eastern corner of Oakdale West. Building 1A is located on Lot 101 in DP 1262308.

2.2 Operational Activities

In accordance with the approved Development Consent SSD 7348, the site will be operated for warehousing and distributing purposes.

2.3 Hours of Operation

The hours of operation are Monday to Sunday, 24 hours a day.

2.4 Site Access

Warehouse 1A light vehicle movements will be facilitated via an access on Emporium Avenue to northern boundary of the OWE precinct, and truck entry is provided from Sepia Road on the western boundary of the Site. A copy of the Warehouse Plan and access crossovers have been provided in **Figure 4**.

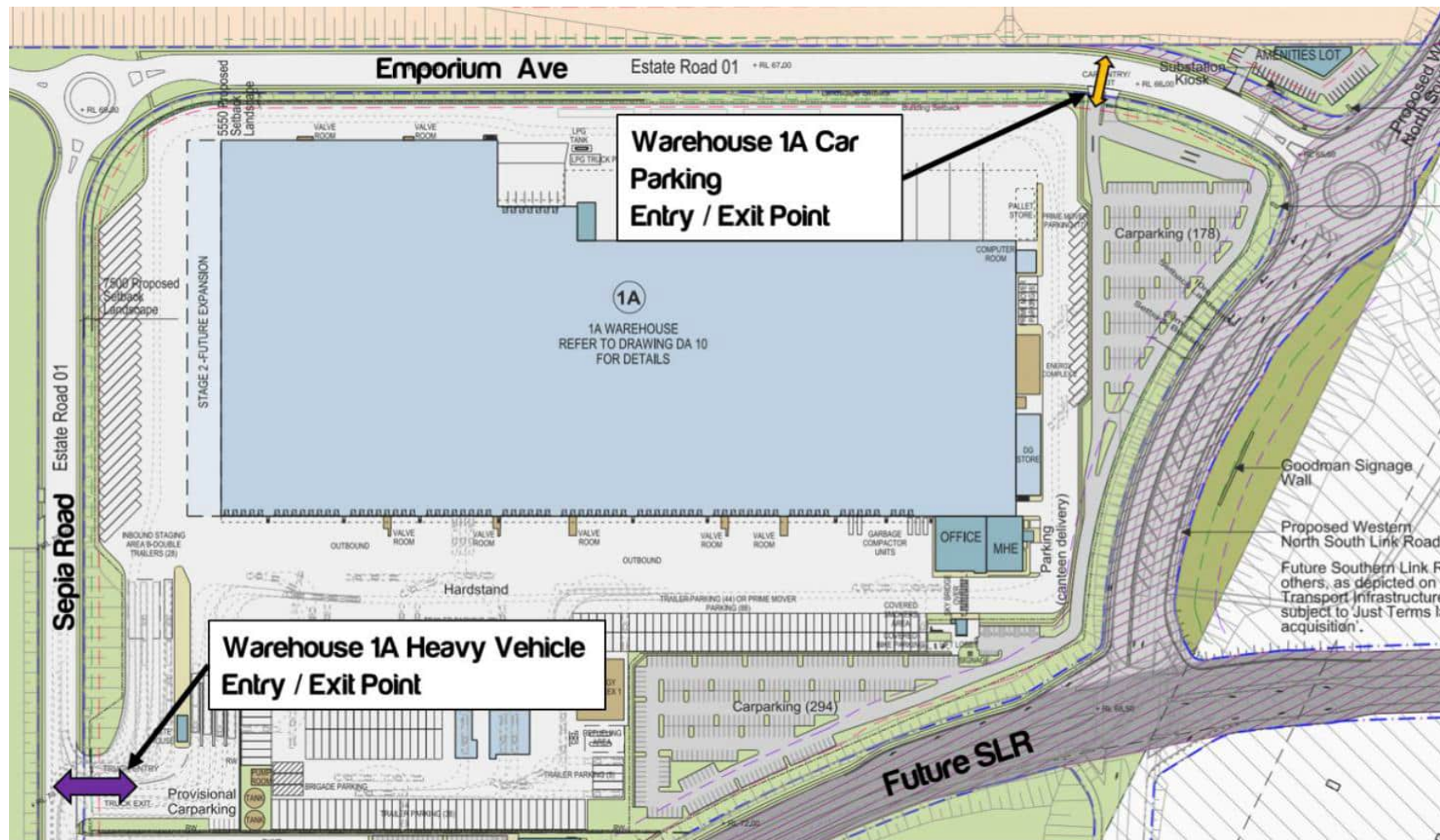


Figure 4 Warehouse 1A Plans & Access

2.5 Contact Details

The Goodman Representative will be responsible for all environmental management at Building 1A. Contact details are outlined in **Table 4**.

Table 4 Contact Details

Role	Name	Contact Details
Building 1A		
Goodman's Representative	Michael Trotnar – Senior Building Manager	0409 999 447 Michael.Trotnar@goodman.com
Tenant's Representative	T.B.C	T.B.C

2.6 Relevant Companies

2.6.1 Tenant

Building 1A has one tenancy which includes a warehouse, an office and outbuildings. The tenant is responsible for the management of various Building and Operational elements as defined within the following tables.

2.6.2 Goodman

In general, Goodman is responsible for the Estate's private infrastructure and overall management of the common vegetated areas of which there a number of key components including defendable zones, bio-retention basins, landscaped setbacks, riparian corridors and development lots including the Amenity Lot.

Goodman is only responsible for the site management of the assets it owns within Oakdale West Estate. It is to be noted that Goodman are not responsible for dedicated roads or the Zone Substation within the Estate once the respective assets ownership is transferred to the relevant utility or authority.

2.6.3 Penrith City Council

Penrith City Council will be responsible for the road network within Oakdale West, as well as the streetscape planting in the verges within the road reserves.

3 Environmental Management Framework

3.1 Goodman Corporate Responsibility and Sustainability Policy

Goodman maintains a *Corporate Responsibility and Sustainability Policy* (CRSP) (GMG 2018) with the primary purpose to:

- Communicate Goodman's commitment to sustainable operating principles endorsed by the Goodman Boards;
- Establish a sustainability mandate which supports the long-term commitment to Goodman's integrated business model;
- Support the adoption of sustainable design principles and innovations within Goodman's development specifications;
- Establish an ongoing commitment to engage with our investors, capital partners, customers, the community and industry peers on issues relating to sustainability; and
- Create a directive to engage with our supply chain to support Goodman in achieving innovative and sustainable outcomes.

Goodman have incorporated the CRSP into the design and construction of the Oakdale West Estate and will continue to be implement it throughout operations as relevant to their ongoing responsibilities.

3.2 Roles and Responsibilities

The key personnel responsible for environmental management at Oakdale West are listed in **Table 5**.

Table 5 Personnel Responsible for Environmental Management

Site	Company and Role	Responsibilities
Oakdale West Estate Infrastructure (Council Owned Roads)	Penrith City Council (Council)	<ul style="list-style-type: none"> • Ensure the dedicated internal Oakdale West Estate Road network is managed in accordance with the requirements noted under the SSD Consent.
Oakdale West Estate Infrastructure (Excluding Council Owned Roads)	Goodman's Representative (Goodman Rep)	<ul style="list-style-type: none"> • Ensure that non Council owned infrastructure is managed in accordance with the requirements noted under the SSD Consent and the OWE OEMP.
Sites / Warehouses	Goodman's Representative (Goodman Rep)	<ul style="list-style-type: none"> • Ensure the Tenant Representatives are made aware of their obligations of the OEMP (as relevant to their respective site) and that management measures are appropriately implemented and maintained; and • Advise and assist the tenant in the implementation of the OEMP, as required.
Sites / Warehouses	Tenant Representatives (Tenant Rep)	<ul style="list-style-type: none"> • Ensure that the obligations of this OEMP are implemented and communicated to all relevant parties; and • Implement the Complaints and Incident Handling Procedures, as required.

Site	Company and Role	Responsibilities
Sites / Warehouses	Tenants/employees/ contractors (T/E/C)	<ul style="list-style-type: none"> • Ensure familiarity, implementation and compliance with this OEMP and appended management plans; • Support the company's commitment to environmental management and compliance; • Work in a manner that will not harm the environment or impact on surrounding receptors; • Report all environmental incidents and complaints to the Goodman's Representative without delay; and • Report any inappropriate operational and/or environmental management practices to the Goodman's Representative without delay.

3.3 Statutory Requirements

3.3.1 SSD 7348

The consent conditions for SSD 7348 (as modified) applicable to the operation of Building 1A are listed in **Appendix A**. (N.B. The administrative conditions and conditions relating to the construction phase have not been included in **Appendix A**, only those conditions specific to site operation have been included).

The Concept Proposal shall be carried out in accordance with SSD 7348 (as modified) and also in accordance with the documents referenced under Condition B5 of the Consent:

- The EIS (Urbis 2017) and RTS;
- the plans in Appendix 1 and Appendix 2;
- SSD 7348 MOD 1;
- the Applicant's Management and Mitigation Measures in Appendix 7; and
- modifications to this consent.

In accordance with Condition B6 and D4 of the SSD 7348 consent, if there is any inconsistency between the plans and documentation referred to in Condition B5, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of SSD 7348 and directions of the Planning Secretary prevail to the extent of any inconsistency.

3.3.2 Other licences, permits, approvals and consents

In accordance with Condition B4 of the SSD 7348 consent, all licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

We note all endeavours will be made to obtain the relevant permit's/licences etc, however we are reliant on the Tenants Representative to provide the information within a timeframe reasonably requested by Goodman's Representative.

All licences, permits, and approvals/consents required for the tenant's specific operational purposes will be obtained and maintained by the Tenants Representative as required post lease approval.

Additional licences, permits, approvals and consents required throughout operation as described in SSD 7348 Consent Conditions, including the documents listed above in **Section 3.3.1** and **3.3.2** are summarised in **Table 6**.

Table 6 Other licences, permits, approvals and consents

Licence, permit, approval or consent	Person Responsible	Timing	References / Notes
All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development.	Goodman / Tenant Rep	As required	SSD 7348 Condition B4
Operation will not commence until the OTMP required by condition D69A is approved by the Planning Secretary.	Goodman	Commencement of Operation	SSD 7348 Condition D69B (a)

3.4 Environmental Training

Prior to the commencement of operation, the Tenant Representative will ensure their Operations Management Framework includes a detailed Training Plan to clearly address the training requirements outlined in the OEMP and appended management plans. The Tenant Representative will provide a copy of this Training Plan to Goodman.

Environmental training responsibilities are summarised in **Table 7** and minimum topics to be covered for environmental training are summarised in **Section 3.4.1** and **3.4.2**.

A register of all environmental training carried out, including dates, names of persons trained, and trainer name and qualification details will be established and maintained for the duration of operation.

Table 7 Training Responsibilities

Person Responsible	Reference / Notes
Goodman Representative	Ensure all Tenant's Representatives and maintenance contractors engaged by Goodman are appropriately inducted and aware of their general obligations under this OEMP
Tenant Representative	<ul style="list-style-type: none"> - Ensure all other employees and contractors are appropriately inducted and aware of their obligations under the OEMP; and - To conduct regular "toolbox talks" to ensure continuing awareness of environmental management expectations and responsibilities as applicable to their operations.

3.4.1 Environmental Induction Training

The environmental induction training will cover all elements of the OEMP and will include, as a minimum, the following:

Table 8 Environmental Induction Training

Inductions and Environmental Training	Reference / Notes
Purpose and objectives of the OEMP	Section 1.2
Obligation to minimise harm to the environment	Section 1.2.1

Inductions and Environmental Training	Reference / Notes
Hours of operation	Section 2.3
Goodman's Responsibility and Sustainability Policy	Section 3.1
Conditions of any environmental licences, permits and consent approvals	Section 3.3
Appropriate response and management of environmental incidents (for example, a chemical spill) in accordance with the incidents protocol.	Section 3.5
Appropriate response and management of complaints received from the public, government agencies or other stakeholders in accordance with the complaints protocol.	Section 3.6
General site maintenance and management expectations and requirements	Sections 4
Familiarisation with site environmental controls	Sections 4
The environmental management commitments and responsibilities in this OEMP (including appended management plans);	Sections 4 and 5

3.4.2 Toolbox Talks

Toolbox talks or similar will be held to identify environmental issues and controls when works commence in a new area of the site or a new activity, as well as when environmental issues arise on site. The toolbox talk will include but not be limited to:

- A description of the activity and the area;
- Identification of the environmental issues and risks for the area; and
- Outline the mitigations measures for the works and the area (see **Section 4**).

3.5 Incident and Non-Compliance Response and Handling Procedure

3.5.1 Performance Objective

To ensure that any incident and/or non-compliance caused by or relating to site operation is effectively responded to, reported accordingly, and any resulting adverse environment and/or human health impact is promptly prevented or effectively managed.

3.5.2 Definitions

For the purposes of this OEMP, an 'incident' as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. A 'non-compliance' is described as an occurrence, set of circumstances or development that is a breach of the consent.

Material Harm is defined within SSD 7348 as harm that:

- a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or*
- b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).*

There is the possibility of minor environmental incidents occurring as part of this project. SLR have defined a 'Minor Environmental Incident' as an incident where there has been no potential or actual material harm to the environment (see 'material harm' definition above).

Minor environmental incidents will still be handled under the process outlined in **Figure 5** except there will be no requirement for government notification. All minor or major incidents will be recorded in the Incident Register. A minor incident does not constitute a non-compliance with the Development Consent.

3.5.3 Responsibility

The Tenant's Representative is responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of an incident and/or non-compliance. All employees, contractors and subcontractors are to:

- Notify the Tenant's Representative who will notify the Goodman Representative of any hazard or potential hazard that may result in an incident and/or non-compliance, regardless of the nature or scale; and
- Take immediate action (where it is safe to do so) to prevent, stop, contain and/or minimise any adverse impact associated with an incident and/or non-compliance.

The induction and toolbox talks outlined in **Section 3.4** will be used to ensure all site employees, contractors and subcontractors are aware of and understand their obligations for incident and/or non-compliance response.

3.5.4 Register

Records of all incidents and non-compliances will be maintained in Goodman's incident register system. Details of all incidents and complaints will be retained for at least five years after the event to which they relate.

3.5.5 Notification Requirements

In the instance of an incident or non-compliance, the notification protocols outlined in **Table 9** shall be adhered to.

Table 9 Material Harm Incident and Non-Compliance Notification

Notification Requirement	Responsible	Timeframe Reference
Incidents		
Upon awareness of an incident, the Tenant's Representative shall be notified of and provided with all relevant information pertaining to the potential or actual incident.	Any person engaged as an employee or undertaking an activity with regard to the operation of Building 1A	Immediately after becoming aware of a potential or actual incident
The Tenant's Representative will notify Goodman's Representative of any incident including all relevant information pertaining to the incident.	Tenant Rep	Immediately after becoming aware of a potential or actual incident
The Goodman's Representative will notify DPE of an incident in writing via the Major Projects Website.	Goodman's Rep	Immediately

Notification Requirement	Responsible	Timeframe Reference
An Event Notification Report will be completed and provided to Goodman. This is attached to this OEMP as Appendix C .	Tenant Rep	Within 24 hours
Goodman's Representative will provide a formal written notification of an incident to DPE via the Major Projects Website.	Goodman Rep	Within 7 days after becoming aware of incident
Tenant's Representative will provide a written incident report to Goodman Representative.	Tenant Rep	Within 25 calendar days after becoming aware of incident
Goodman's Representative will provide DPE and any relevant public authorities a detailed report on the incident	Goodman Rep	Within 30 days of the incident occurring or as otherwise agreed to by the Planning Secretary
Non-Compliance		
Provide written notification of the non-compliance to the Major Projects website.	Goodman Rep	Within 7 days after becoming aware of non-compliance

Under the POEO Act, "relevant authority" means any of the following:

- The appropriate regulatory authority – the Environment Protection Authority (EPA);
- If the EPA is not the appropriate regulatory authority – the local authority for the area in which the pollution incident occurs (i.e. Council);
- NSW Public Health Unit;
- SafeWork NSW;
- Fire and Rescue NSW; and
- Water NSW (if the event has an effect on the WaterNSW pipeline corridor).

Table 10 lists the contact details for these authorities. The person reporting the pollution incident will provide the following key details:

- Location of the pollution incident/emergency;
- Nature of the pollution incident/emergency;
- Their name and contact details; and
- Details of any required assistance.

Table 10 Regulatory Authority Contact List

Regulatory Authority / Stakeholder	Key Contact	Contact Details
Department of Planning, Industry and Environment (DPIE)	Compliance Unit	1300 305 695 or 02 9228 6111 compliance@planning.nsw.gov.au
Environment Protection Authority (EPA)	Environment Line	131 555 info@environment.nsw.gov.au

Regulatory Authority / Stakeholder	Key Contact	Contact Details	
	Head office (Sydney)	02 9995 5000	
Environment, Energy and Science (EES) Group	Main switchboard	1300 361 967 info@environment.nsw.gov.au	
Penrith City Council	Main switchboard	02 4732 777 council@penrith.city	
Water NSW	Main switchboard	1300 662 077 Customer.Helpdesk@waternsw.com.au	
	Incident Notification Number – 24 hours	1800 061 069	
NSW Public Health Unit	Sydney Local Health District	Business hours: 1300 066 055 After hours: 02 9515 6111	
SafeWork NSW	Incident Notification Hotline	131 050 Select Option 3 to report a “Serious Incident or Fatality” – this will result in the incident being recorded and the appropriate person being contacted.	
Emergency Services	NSW Police NSW Fire and Rescue NSW Ambulance Service	131 444 1300 729 579 -	In case of emergency – 000

3.5.5.1 Non-Compliance Notification

A non-compliance notification will identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

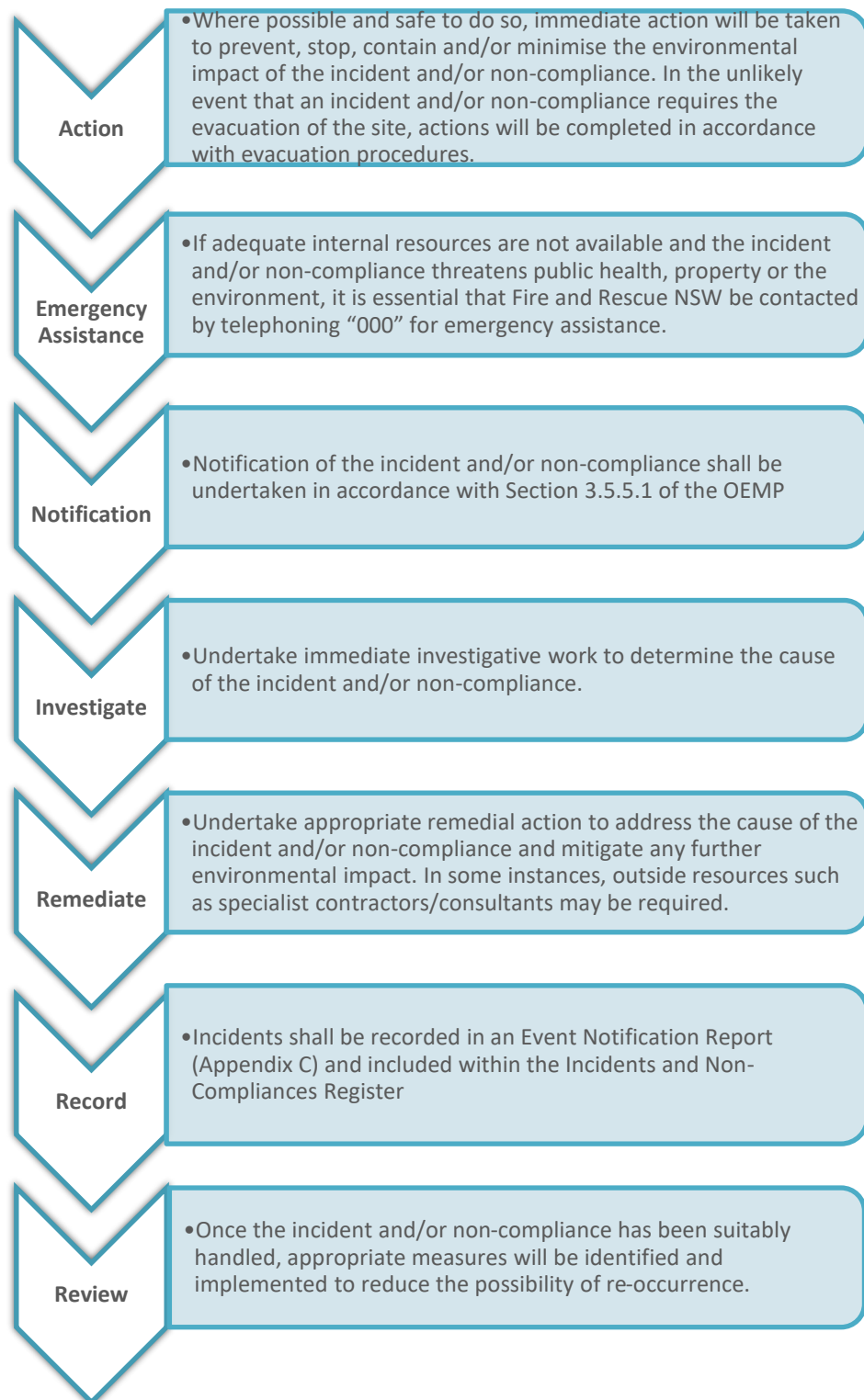


Figure 5 Incidents and Non-Compliance Handling Procedure

3.6 Complaints Response and Handling Procedure

All complaints will be handled in accordance with the *Community Communication Strategy (CCS)* (SLR, 2022) (see **Appendix D**).

All employees who take receipt of a complaint, either verbal or written, are to take note of the name and contact details of the complainant and the nature of the complaint and immediately notify the Tenant's Representative, who will then contact Goodman's Representative to commence proceedings.

The complaints handling procedure shown in **Figure 6** is duplicated from the CCS for quick reference. For further detail please consult the CCS.

3.6.1 Community Enquiries

Relevant contact details, including a phone number for community enquiries, will be included on site signage or are available on Goodman's website (oakdaleopportunities.com). All community enquiries should be forwarded to Goodman's Representative (**Section 2.5**).

3.6.2 Dispute Resolution

In the event that a dispute arises between Goodman or the Tenant and a public authority, in relation to an applicable requirement in this consent or relevant matter relating to the operation of Building 1A, either party may refer the matter to the Planning Secretary for resolution. The Planning Secretary's determination of any such dispute will be final and binding on the parties.

In the case of a dispute between the Proponent and a community member/complainant, either party may refer the matter to the DPE and/or relevant regulatory authority for consideration, advice and/or negotiation.

Additional information can be located in the CCS (SLR 2022) attached as **Appendix D**.

3.6.3 Complaints Register

A Complaints Register will be maintained for the duration of operations and will contain the following:

- A copy of the environmental complaint handling procedure contained in **Section 3.6**;
- A separate reference sheet containing the contact details listed in **Table 4**;
- Blank hard copies of the Community Correspondence Register, and
- Copies of all completed Community Correspondence Register, which are to be maintained for at least five years after the event to which they relate.

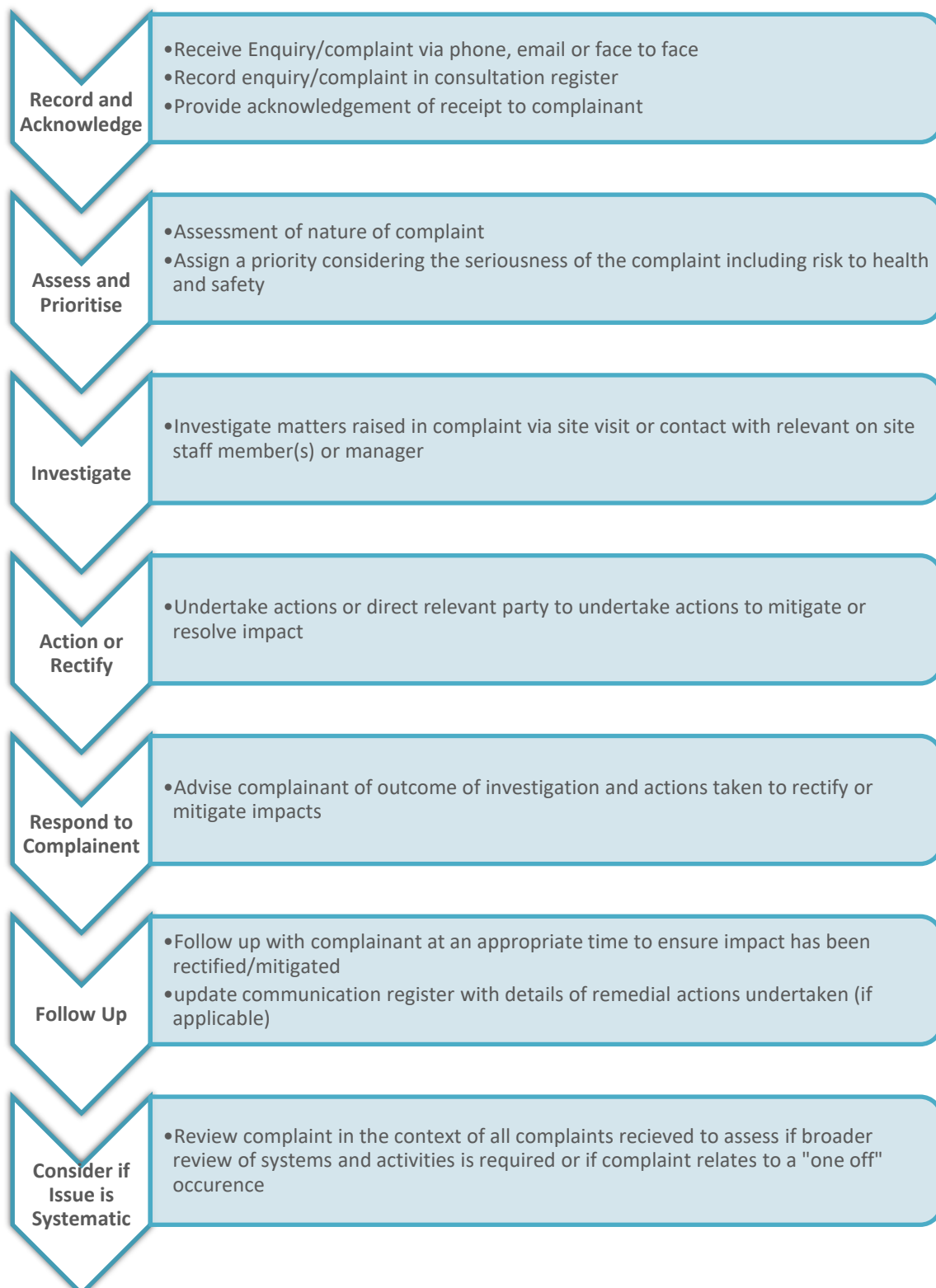


Figure 6 Complaints Handling Procedure

4 Environmental Management Commitments

Environmental aspects with the potential to be impacted by Building 1A are addressed in the following sub-sections. These issues have specific regulatory requirements and/or are considered to have the highest potential to result in a non-compliance with a legislative requirement or generate community complaints.

4.1 General

Table 11 lists the general environmental controls that will be implemented throughout the life of the development to minimise the potential for adverse impacts on the local environmental and surrounding receptors.

Table 11 General Operational Environmental Management Controls

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
All reasonable and feasible measures will be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from construction.	Tenant Rep / Goodman Rep	Ongoing	SSD 7348 Condition D1

4.2 Noise

The environmental management controls in **Table 12** will be implemented to minimise the potential for adverse noise emissions from operation.

Table 12 Operational Environmental Management Controls for Noise

Environmental Management Control	Person Responsible	Timing / Frequency	Reference / Notes
Operational noise will be managed in accordance with the operational noise limits within SSD 7348.	Tenant Rep, T/E/C	Ongoing	SSD 7348 Conditions B18, B19 and D75
All plant and equipment will be maintained and operated in a proper and efficient manner.	Tenant Rep	Ongoing	SSD 7348 Condition D21
Where practicable, all roller doors will be kept closed during the night-time period.	Tenant Rep, T/E/C	Ongoing	Best Practice
Outdoor fixed plant installed as part of the Base Building will be enclosed where possible.	Goodman Rep	Ongoing	Best Practice
Outdoor fixed plant installed post Practical Completion will be enclosed where possible.	Tenant Rep	Ongoing	Best Practice

4.3 Air Quality

Air quality impacts associated with the operational phase of Building 1A is anticipated to be negligible, with the main source of emissions likely to be exhaust emissions from heavy vehicles idling on-site. There is potential for wheel-generated dust from vehicles entering and exiting the site, however the local public road network and internal roads are all sealed.

The environmental controls in **Table 13** will be implemented to further minimise the potential for adverse air quality impacts associated with operational activities at Building 1A.

Table 13 Environmental Management Controls for Air Quality

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Operation will not cause or permit the emission of any offensive odour, as defined in the POEO Act.	Tenants Representative	Ongoing	SSD 7348 Condition D102
All vehicles and mobile plant will be switched off (i.e. not left idling) when not in use for an extended period of time.	Tenants Representative	Ongoing	Best practice

4.4 Traffic

Operational traffic at Building 1A will be managed in accordance with the Operational Traffic Management Plan (OTMP) prepared by Ason (2022) and attached as **Appendix E**.

The environmental management controls in **Table 14** will be implemented to further minimise the potential for adverse impact associated with operational traffic at Building 1A.

Table 14 Environmental Management Controls for Traffic

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
<p>All listed mitigation and management measures outlined in the OTMP will be implemented throughout operation. These mitigation measures cover the following activities:</p> <ul style="list-style-type: none"> • Pedestrian Management; • Vehicle Management; • Vehicle Queuing; • Loading and Unloading Materials; • Service Vehicle Access Rotes; • Temporary or Unplanned Works; • Dangerous Goods; • Driver Code of Conduct; • Parking Management and • Contingency Plan (also replicated in Section 6 of this OEMP). 	Goodman Rep, Tenant Rep	Ongoing	OTMP Section 4 to 6

4.5 Soil and Water

Salinity will be managed in accordance with the Salinity Management Plan (Pells Sullivan Meynink, 2015) attached as **Appendix F**.

The environmental controls in **Table 15** will be implemented to ensure the effective management of soil and water in accordance with the conditions implemented by Development Consent SSD 7348.

Table 15 Environmental Management Controls for Soil and Water

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Operation will comply with section 120 of the POEO Act, which prohibits the pollution of waters.	Tenant Representative	Ongoing	SSD 7348 Condition D82
The stormwater management system will be operated in accordance with Condition D83.	Goodman Representative	Ongoing	SSD 7348 Condition D83
Water storage basins and stormwater infrastructure owned and managed by Goodman will be managed in accordance with the manufacturers specifications.	Goodman Representative	Ongoing	Best practice
Consideration will be given to other possible rainwater reuse opportunities such as for truck washing.	Goodman Representative	Ongoing	SSD 7348 Appendix 7
Roads, footpath and hardstand surfaces will 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 (e.g. pavement joints).	Goodman Representative	Ongoing	Salinity Management Plan Section 5.4 and Section 5.5
Connections between the roads, footpath and hardstand surfaces and the surface water and stormwater drainage infrastructure will be designed, constructed and maintained to restrict infiltration into underlying soils.	Goodman Representative	Ongoing	Salinity Management Plan Section 5.4 and Section 5.5
Stormwater and surface water will be managed to restrict infiltration.	Goodman Representative	Ongoing	Salinity Management Plan Section 5.4 and Section 5.5
Guttering and down pipes will be connected and maintained.	Goodman Representative	Ongoing	Salinity Management Plan Section 5.4 and Section 5.5

4.6 Waste

As required by Condition D112 of SSD 7348, the Waste Management Plan (WMP) (SLR 2022a) prepared as part of the EIS and updated to be relevant to the operation of Building 1A. A copy of the WMP is attached as **Appendix G**.

The environmental management controls in **Table 16** will be implemented to minimise the potential for adverse waste impacts from the operation of Building 1A.

Table 16 Environmental Management Controls for Waste

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Waste will be secured and maintained within designated waste storage areas at all times and will not leave the site onto neighbouring public or private properties.	Tenant Representative	Ongoing	SSD 7348 Condition D111
The WMP will be implemented for the duration of operation.	Tenant Representative	Ongoing	SSD 7348 Condition D112
All liquid and non-liquid wastes to be taken off site will be assessed and classified in accordance with the latest version of the <i>Waste Classification Guidelines Part 1: Classifying Waste</i> (EPA 2014) and dispose of all wastes to a facility that may lawfully accept the waste.	Tenant Representative	Ongoing	SSD 7348 Condition D113
Waste generated outside the site will not be received for storage, treatment, processing, reprocessing, or disposal.	Tenant Representative	Ongoing	SSD 7348 Condition D114
All listed mitigation and management measures outlined in the WMP will be implemented throughout operation. These mitigation measures cover the following activities: <ul style="list-style-type: none"> • Targets for Resource Recovery; • Waste Streams and Classifications; • Waste Generation Rates; • Waste Storage and Servicing Requirements; • Waste Avoidance, Reuse and Recycling Measures; • Signage; and • Communication Strategies. 	Goodman Rep, Tenant Rep	Ongoing	WMP Section 6

4.7 Biodiversity

A Flora and Fauna Management Plan (FFMP) (Ecologique 2022) and Vegetation Management Plan (VMP) (Ecologique 2019) have been prepared for operation and are attached as **Appendix H** and **Appendix I** respectively.

Table 17 outlines the mitigation measures to be implemented during operation to manage any impacts to biodiversity.

Table 17 Environmental Management Controls for Biodiversity

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
Suitable measures will be implemented to manage pests, vermin and declared noxious weeds on the Site.	Goodman Representative	Ongoing	SSD 7348 Condition D115
The Site will be inspected to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on Site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in the surrounding area.			
Ongoing maintenance and management of other areas of planted native vegetation including road batters, embankments, and bio-retention basins will be in accordance with the LMP.	Goodman Representative	Ongoing	SSD 7348 Appendix 7
All listed mitigation and management measures outlined in the FFMP will be implemented throughout operation. These mitigation measures cover the following activities: <ul style="list-style-type: none"> • Weed, Pest Species and Pathogen Management; • Waste Management; and • Stop Work Procedure. 	Goodman Rep, Tenant Rep	Ongoing	FFMP Section 3 and 4
All listed mitigation and management measures outlined in the VMP will be implemented throughout operation. These mitigation measures cover the following activities: <ul style="list-style-type: none"> • Weed Control; • Soil Amelioration; • Mulching; and • Planting. 	Goodman Rep, Tenant Rep	Ongoing	VMP Section 4

4.8 Visual Amenity

The visual amenity and landscaping at Building 1A will be maintained in accordance with the Landscape Management Plan (LMP) (Scape Design 2022) and contained in **Appendix J**.

The environmental controls in **Table 18** will be implemented to minimise the visual impact of the development.

Table 18 Environmental Management Controls for Landscaping and Visual Amenity

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
<p>All listed management measures outlined in the LMP will be implemented throughout operation. These management measures focus on the implementation of maintenance works including:</p> <ul style="list-style-type: none"> Plant care; Fertilising; Spraying; and Erosion control. <p>The LMP also includes a Contingency Plan (also replicated in Section 6 of this OEMP).</p>	Goodman Rep Tenant Rep	Ongoing	LMP Section 5 and 6
Landscaping of key interfaces including the western boundary to minimise visual impact	Goodman Representative	Ongoing	SSD 7348 Appendix 7
Lighting will comply with the latest version of AS 4282.	Goodman Rep Tenant Rep	Ongoing	SSD 7348 Condition D40
Lighting will be mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Goodman Rep Tenant Rep	Ongoing	SSD 7348 Condition D40
Any security cameras will be directed away from adjacent private properties.	Goodman Rep Tenant Rep	Ongoing	SSD 7348 Condition D41
<p>All signage and fencing will be erected in accordance with the plans at Appendix 1 and Appendix 2 of the SSD 7348 Consent, as modified.</p> <p><i>Note: This condition does not apply to temporary construction and safety related signage and fencing.</i></p>	Goodman Rep Tenant Rep	Ongoing	SSD 7348 Condition D43
<p>Recharge of groundwater and potential for water logging will be minimised by:</p> <ul style="list-style-type: none"> Adopting 'waterwise' gardening principles; and Minimising use of potable water in landscaped areas. 	Goodman Rep	Ongoing	Best practice

4.9 Hazardous Goods and Contamination

Table 19 lists the management strategies for hazards, risks and emergencies as contained in SSD 7348.

Table 19 Environmental Management Controls for Hazardous Goods and Contamination

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
The storage of dangerous goods in Building 1A will not exceed the quantities provided in Condition D109.	Tenant Representative	Ongoing	SSD 7348 Condition D109
No more than 1.1 million kilograms of combustible liquid commodities will be stored at warehouse Building 1A.	Tenant Representative	Ongoing	SSD 7348 Condition D109B
Chemicals, fuels and oils will be stored in bunded areas in accordance with relevant Australian Standards and/or the <i>Storing and Handling of Liquids: Environmental Protection – Participants Manual</i> (Department of Environment and Climate Change 2007).	Tenant Representative	Ongoing	SSD 7348 Condition D110
Spill kits will be provided and maintained on site.	Tenant Representative	Ongoing	Best practice
The actions specified on the relevant safety data sheets (SDS) will be implemented in the event of a minor spill/incident of a potentially hazardous material.	Tenant Representative	Ongoing	Best practice
In the event of a major spill, the actions listed in Section 3.5 will be implemented.	Tenant Representative	Ongoing	Section 3.5

4.10 Fire Safety and Emergency

Table 20 lists the management strategies for fire safety and emergencies as contained in SSD 7348.

Table 20 Environmental Management Controls for Fire Safety and Emergency

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
The NSW Rural Fire Service <i>Planning for Bushfire Protection 2019</i> guide will be implemented where relevant to operation.	Goodman Rep Tenant Rep	Ongoing	SSD 7348 Condition D97

4.11 Community

Table 21 lists the management strategies for community communication as contained in SSD 7348 and the Community Communication Strategy (CCS) (SLR 2022) for Oakdale West, which applies to this development, is attached as **Appendix D**.

Table 21 Environmental Management Controls for Community Communication

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
<p>All strategies outlined in the CCS will be implemented throughout operation. These include:</p> <ul style="list-style-type: none"> • Communication, Management and Mitigation Tools; • Complaints Procedure; and • Contingency Management Plan (also replicated in Section 6 of this OEMP). 	Goodman Rep, Tenant Rep	Ongoing	CCS Section 5

4.12 Sustainability

Sustainability will be managed in accordance with the Sustainability Management Plan (SLR, 2019) as attached as **Appendix K** and summarised in **Table 22**.

Table 22 Environmental Management Controls for Sustainability

Environmental Management Control	Person Responsible	Timing / Frequency	References / Notes
<p>Objectives, targets and strategies will be implemented and managed for the following categories in accordance with Table 3 of the Sustainability MP 'ESD Assessment Summary':</p> <ul style="list-style-type: none"> • Design & management • Façade Performance • Social Sustainability • Minimising Transport Impact • Optimising IEQ • Minimising Energy Use • Choosing Materials • Minimising Waste • Water Conservation and Reuse • Land Use and Ecology Impact 	Goodman Rep, Tenant Rep	Ongoing	Sustainability MP Section 5.1

5 Monitoring, Reporting and Auditing

Table 23 summarises the monitoring, reporting and auditing requirements for the operation of Building 1A as set out in SSD 7348 and relevant management plans.

Prior to the commencement of operation, the Tenant Representative will ensure their Operations Management Framework includes a detailed Monitoring, Reporting and Auditing Matrix to clearly document the specific applicable forms, registers or reports that will be used (i.e. Weekly Environmental Inspection Checklist, Complaints Register etc). The Tenant Representative will provide a copy of this matrix to Goodman.

The Tenant Representative will ensure the checklists included in the Operations Management Framework, including the Daily Observations Checklist and Weekly Environmental Checklist, address all relevant monitoring, auditing and reporting commitments outlined in **Section 5 and Section 6** of the OEMP and appended management plans.

Table 23 Monitoring and Inspections Requirements

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
Daily				
1. General	The Daily Observations Checklist will be completed as part of a general environmental site inspection for the relevant environmental controls in the OEMP and specialist management plans requiring daily monitoring. Any required maintenance, process improvements or staff training identified will be undertaken to comply with OEMP commitments.	Tenant Rep	Daily	Best practice
Weekly				
2. General	The Weekly Environmental Checklist will be completed as part of a general environmental site inspection to ensure all relevant environmental controls listed in this OEMP and specialist management plans are in place. Any required maintenance, process improvements or staff training identified will be undertaken to comply with OEMP commitments.	Tenant Rep	Weekly	Best practice
3. General	<p>The Tenant Representative will report environmental performance during regular management meetings and/or 'toolbox talks'. Items to be discussed include:</p> <ul style="list-style-type: none"> Any environmental incidents that have occurred during the previous period, including the management / corrective actions taken; Any complaints that have been received during the previous period, including any management / corrective actions taken; and Any required maintenance, process improvements or staff training identified in order to comply with OEMP commitments. 	Tenant Rep	Weekly	Section 3.4

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
Monthly				
4. Sustainability	The building tuning will be provided by service contractors and overseen by an independent assessor, at least once a month within the Defects Liability Period (DLP) to ensure that services are operating effectively and efficiently. Monthly reports will be provided to the tenant for DLP.	Tenant Rep	Monthly	Sustainability MP Section 8
Half-yearly				
5. Waste	Visual assessments of bins and bin storage areas will be conducted to ensure waste is being managed to the standards outlined in the WMP.	Tenant Rep	Half-yearly	WMP Section 6.9
6. Waste	A waste audit will be conducted according to the WMP to ensure its provisions are being maintained.	Tenant Rep	Half-yearly	WMP Section 6.9
7. Sustainability	An energy audit and management review will be undertaken in accordance with the Sustainability Management Plan	Tenant Rep	Half-yearly	Sustainability MP Section 8.1
Annual				
8. General	This OEMP and all specialist management plans will be reviewed in accordance with Section 7 of this OEMP	Tenant Rep / Goodman Rep	Annually	OEMP Section 7
9. General	Compliance monitoring and reporting will be undertaken in accordance with the Compliance Monitoring and Reporting Program (SLR 2019a).	Goodman Rep	Annually	SSD 7348 Condition D139
10. General	Compliance Reports of the Development will be carried out in accordance with the Compliance Reporting Post Approval Requirements (DPE 2018).	Goodman Rep	Annually	SSD 7348 Condition D140
11. General	Each Compliance Report will be made publicly available no later than 60 days after submitting it to the DPE and notify the DPE in writing at least 7 days before this is done.	Goodman Rep	Annually	SSD 7348 Condition D141

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
12. Sustainability	The Energy Management Plan should be progressively improved and updated on an annual basis, or as required, to reflect changes to the Energy Management System and to promote continual improvement of energy management at the Project Site.	Tenant Rep / Goodman Rep	Annually	Sustainability MP Section 8.1
Event Based				
13. Incident / Non-Compliance	In the event of an Incident or Non-Compliance, follow the process outlined in Section 3.5 of the OEMP.	Tenant Rep / Goodman Rep	In the event of an Incident or Non-Compliance	OEMP Section 3.5
14. Noise	A Noise Verification Report will be prepared in accordance with Condition D75B and D75C.	Goodman Rep	Within 3 months of commencing operation and two years after commencing operation	SSD 7348 Condition D75B and D75C
15. Waste	Visual assessments of bins and bin storage areas will be conducted to ensure the waste management system is sufficient for the operation	Tenant Rep	Before collection for the first three months of operation	WMP Section 6.9
16. Landscaping	A final inspection will be undertaken prior to the completion of the Plant Establishment Maintenance Period (PEMP) (Defects Liability Period).	Goodman Rep	Prior to the completion of the PEMP.	LMP Section 5.4
17. Landscaping	A final monitoring report shall be prepared and provide a summary of all works undertaken during the plant establishment period.	Goodman Rep	Prior to handover, minimum of 18 months after the completion of works	LMP Section 5.4
18. Sustainability	All committed sustainability related measures need to be commissioned and tuned once the project is completed, to ensure all services operate to their full potential as designed.	Goodman Rep	Once the project is completed	Sustainability MP Section 8
19. Hazardous Goods and Contamination	A comprehensive Hazard Audit of Building 1A carried out in accordance with Condition D109A Pre-startup (a).	Tenant Rep / Goodman Rep	Twelve months after the commencement of operation of Building 1A and every 5 years thereafter	SSD 7348 Condition 109A
Other				
20. General	All monitoring will be undertaken in accordance with Division 9.4 of Part 9 of the EP&A Act.	Goodman Rep	Ongoing	SSD 7348 D142

Aspect	Monitoring / Inspection Requirement	Person Responsible	Timing / Frequency	References / Notes
21. Traffic	Traffic reporting and monitoring will be conducted in accordance with Section 6.1 of the OTMP.	Tenant Rep	Ongoing	OTMP Section 6.1
22. Waste	Waste reporting and monitoring will be conducted in accordance with Section 6.9 of the WMP.	Tenant Rep	Ongoing	WMP Section 6.9
23. Biodiversity	Site audits, monitoring and reporting on the progress and achievement of the VMP performance targets shall be undertaken by the Site Superintendent or other representative nominated by Goodman.	Goodman Rep	Ongoing	VMP Section 4.7
24. Landscaping	Monitoring, maintenance, irrigation and pruning will be undertaken in accordance with Section 6 of the LMP	Goodman Rep	Ongoing	LMP Section 6
25. Community	The performance of the Community Communication Strategy will be monitored in accordance with the CCS.	Goodman Rep	Ongoing	CCS Section 6
26. Sustainability	An energy usage review should be undertaken within the first few months of operation to ensure the Energy Management Plan is sufficient for the development's needs.	Goodman Rep	First few months of operation	Sustainability MP Section 8.1
27. General	Regular reporting on environmental performance will be uploaded on the dedicated website as per the reporting arrangements in any plans or programs approved under the conditions of SSD 7348.	Goodman Rep	Ongoing	SSD 7348 Condition D143

6 Contingency Management Plan

Table 24 lists the actions to be implemented if inspections, monitoring and/or auditing indicate that the mitigation measures listed in **Section 4** and the specialist management plans are not effective in managing environmental impacts.

Table 24 Contingency Plan

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
1. Incidents and Near Misses	Trigger	No near misses or incidents	Near miss and/or minor incident occurrence	Incident and/or non-compliance occurrence
	Response	Continue OEMP implementation	Increase environmental training and monitoring to ensure mitigation measures are being implemented	Review management plans including training and mitigation measures to improve performance
2. Traffic Operational Movements	Trigger	Visual monitoring of all traffic movements within the Site does not detect unsafe movement of traffic and risk to persons and property.	Monitoring of all traffic movements within the Site detects unsafe movement of traffic and risk to persons and property.	Monitoring of all traffic movements within the Site identifies several unsafe movements of traffic and risk to persons and property.
	Response	Visual monitoring to continue daily as part of an ongoing process.	<ul style="list-style-type: none"> Review needed to address persistent unsafe movements. Modification of traffic controls to self-enforce appropriate vehicle manoeuvres within the site. 	<ul style="list-style-type: none"> Condition Amber responses, plus the direct cessation of unsafe movements. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
3. Traffic Operational Movements	Trigger	Following periods of adverse weather conditions (e.g. a significant heavy rain event), internal roads/aisles have been inspected prior to heavy vehicle traffic use and no issues found.	Internal roads / aisles have been inspected following adverse weather conditions and minor issues found (small pot holes, dirt / debris, or pooling water).	Roads have been inspected following adverse weather conditions and major issues found (failed road integrity, large diameter pot holes, fallen light poles or trees).
	Response	No further action required until next adverse weather event.	<ul style="list-style-type: none"> Any impediments to access roads will be cleared. Road maintenance teams shall repair any pot holes and remove excess water when expected traffic volumes are lowest. 	Condition Amber responses, plus install a detour around any unsafe obstacle to ensure safety for all motorists and/or pedestrians.
4. Traffic Operational Movements	Trigger	Parking occupancy less than provided on-site capacity	Parking bay requirements are within 90% of the provided spaces	Parking requirements exceed parking spaces provided.
	Response	No response required. Continue monitoring program	<p>Review and investigate parking rates and where appropriate, implement additional remediation measures such as:</p> <ul style="list-style-type: none"> Undertake additional parking reviews to determine cause of higher limit parking space issues in more detail. Review OTMP and update where necessary. Provide additional training to tenants to provide information on lowering parking demands. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> Temporary halting of activities and resuming when conditions have improved. Provide incentives for carpooling and utilising active transport measures.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
5. Traffic Operational Movements	Trigger	No unsafe pedestrian movements identified	Pedestrian behaviour identified to be risky and unsafe.	Site design/operations identified to place pedestrians in unsafe situations and multiple near miss events
	Response	No response required. Continue monitoring program	<ul style="list-style-type: none"> Review needed to address persistent unsafe movements. Modification of traffic controls to self-enforce appropriate vehicle manoeuvres within the site. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Direct cessation of unsafe movements by amending design of Site. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
6. Traffic Operational Movements	Trigger	Operational traffic volume is in accordance with permissible and programmed volume constraints	Operational traffic volumes are within 90% of the permissible volume constraints	Operational traffic volumes exceed permissible volume constraints
	Response	This operational traffic volume review shall be completed monthly for the first 6 months of operation and bi-annually thereafter.	Review and investigate operational activities, and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> Undertake review of the Site's traffic generation in more detail. Review OTMP and update where necessary. Provide additional training to tenants. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Temporary halting of activities and resuming when conditions have improved. Surveys of accesses shall be required to allow enforcement of site-specific thresholds. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
7. Traffic Operational Movements	Trigger	Loading / service bays are within operational constraints	Loading / service bays are within 90% of capacity	Loading / service bays exceed capacity.
	Response	No response required. Continue monitoring program	<p>Review and investigate operational activities, and where appropriate, implement additional remediation measures such as:</p> <ul style="list-style-type: none"> • Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. • Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> • Approved traffic thresholds to be enforced for the peak periods. • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
8. Traffic Operational Movements	Trigger	Service bays are not restricted and being utilised as intended.	Vehicles other than service vehicles are stopped within the service area	Vehicles other than service vehicles are consistently parked within the service area
	Response	No response required. Continue monitoring program	<p>Review and investigate operational activities, and where appropriate, implement additional remediation measures such as:</p> <ul style="list-style-type: none"> • Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. • Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
9. Traffic Operational Movements	Trigger	No vehicles parked adjacent to TransGrid access	Vehicle stopped adjacent to TransGrid access	Vehicle parked adjacent to, and blocking, TransGrid access
	Response	No response required. Continue monitoring program	<ul style="list-style-type: none"> Vehicle and driver to be moved from blocking the access. Provision of additional training to the tenants should be provided to ensure TransGrid easement is not to be restricted. Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> Review OTMP and update where necessary. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
11. Traffic Queuing	Trigger	No queuing identified.	Queuing identified within the Site.	Queuing identified on the public road as a direct result from activities within the Site.
	Response	No response required. Continue monitoring program.	<ul style="list-style-type: none"> Review the delivery schedules prepared by the tenant. Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. Provision of additional training to the Tenant's representative should be provided to ensure the most appropriate schedule can be created. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> Approved traffic thresholds to be enforced for each sub-tenancy. Review OTMP and update where necessary. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
12. Traffic Incidents	Trigger	No incidents observed or reported.	Near miss or minor incident occurred within the carriageway of OWE which did not require medical attention (such as tripping on raised footpath).	Major incident occurred within the carriageway of OWE which did not require medical attention (such as being hit by a truck while exiting a Site).
	Response	No action required at this stage, however continual reinforcement to the Tenant's representative to report all incidents shall continue.	Near miss to be reported to the appropriate Incident to be reported to Goodman's Representative for immediate remedy.	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> • Temporary halting of activities and resuming when incident has been remedied. • Incident to be reported to Goodman's Representative. • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
13. Noise	Trigger	Operational noise volume is in accordance with permissible and programmed volume constraints.	Operational noise volumes are within 90% of the permissible volume constraints.	Operational traffic volumes exceed permissible volume constraints.
	Response	No action. Continue ongoing monitoring activities.	<p>Review and investigate noisy operational activities, and where appropriate, implement additional remediation measures such as:</p> <ul style="list-style-type: none"> • Undertake additional noise surveys to review cause in more detail. • Review OTMP (and other sub-plans) and update where necessary. • Provide additional training to the Tenant's representative to provide information on lowering noise emissions. 	<ul style="list-style-type: none"> • Condition Amber responses, plus the following additional responses; • Surveys of each tenancy shall be required to allow enforcement of site-specific thresholds. • Review OTMP and update where necessary. • Provide additional training to the Tenant's representative to provide information on lowering noise emissions. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
14. Infiltration Prevention	Trigger	No water pooling around hardstand surfaces and hardstand surfaces well maintained.	Minor water pooling and/or some degradation of hardstand surfaces.	Ongoing minor or major water pooling and/or some degradation of hardstand Surfaces.
	Response	Continue OEMP implementation.	Remediate as required.	A suitably trained person to undertake a review of the area/s. Remediate as soon as practicable.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
15. Irrigation	Trigger	Irrigation system operating at optimum frequency.	Irrigation system yet to be installed.	Irrigation system fails.
	Response	No response required. Continue to monitor.	Provide additional hand watering until system is installed.	Provide additional hand watering until system is repaired. The irrigation system must be fully functional at all times to ensure that all plants, trees and lawns receive adequate water at optimal frequency.
16. Plant failure	Trigger	No significant plant failure is present. Monitoring verifies that there is <5% of plants failing.	Monitoring verifies there is plant failure at a rate between 5-10%.	Monitoring verifies there is plant failure at a rate greater than 10%.
	Response	No response required. Continue to monitor.	If the cause of failure is due to a controllable situation then correct situation prior to replacing plants. All planting areas are to be free of grass and weed. Replace plants with one of similar size and quality and identical species of variety of the ones failed.	If the cause of failure is due to a controllable situation then correct situation prior to replacing plants. All planting areas are to be free of grass and weed. Replace plants with one of similar size and quality and identical species of variety of the ones failed.
17. Revegetation failure	Trigger	Revegetation is growing to desired design surface levels.	Monitoring verifies that weed emergence has occurred.	Monitoring verifies that weed emergence and plant failure has occurred.
	Response	No response required. Continue to monitor.	Refer to LMP for monitoring requirements once problem has been identified. Possible solutions include the removal of weeds as per Section 5.3.7 of the LMP.	Refer to LMP for monitoring requirements once problem has been identified. Possible solutions include removal of weeds and re-seeding of revegetation cover crop as per Section 5.3.7 of the LMP.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
18. Slope failure	Trigger	No significant erosion is present that would constitute a safety hazard or compromise the capability of supporting the end land use. Monitoring verifies there are no gully or tunnel erosion features, or rill erosion >200mm deep.	Monitoring verifies there is gully or tunnel erosion features, or rill erosion 200mm deep.	Monitoring verifies there is gully or tunnel erosion features, or rill erosion >200mm deep.
	Response	No response required. Continue to monitor.	A suitably trained person to inspect the site. Investigate opportunities to install water management infrastructure to address erosion. Remediate as appropriate.	Undertake a review of the drainage of the area and provide recommendations to appropriately remediate the erosion. Remediate as soon as practicable.
19. Vegetation Management	Trigger	Vegetation is being managed in a stable and healthy condition as per the VMP.	Vegetation management needs minor improvement.	Vegetation is not in a stable and healthy condition and performance measures (Table 4-1 of the VMP) are not being met.
	Response	Continue OEMP implementation	Undertake additional training. Follow the VMP management and maintenance actions.	Suitably qualified personnel engaged to undertake maintenance work. Any defective work is rectified.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
20. Wildlife protection	Trigger	No unexpected wildlife is encountered in the estate.	Unexpected uninjured wildlife is encountered in the estate.	Unexpected injured/deceased wildlife is encountered in the estate.
	Response	Continue OEMP implementation.	<p>Stop Work Procedure:</p> <ul style="list-style-type: none"> Stop Work / Prevent personnel and contractors from entering area where fauna encountered Tenant's to notify relevant Goodman's Representative Manager to assess if animal can be encouraged to leave site voluntarily and safely or if WIRES or wildlife carer is required to capture and relocate animal. 	<p>Stop Work Procedure:</p> <ul style="list-style-type: none"> Stop Work / Prevent personnel and contractors from entering area Tenant's to notify relevant Goodman's Representative Goodman's Representative to immediately contact WIRES or other relevant wildlife carer.
21. Waste	Trigger	Monitoring/Inspections/Audits show waste and recycling is managed/segregated as per WMP and best practice	Monitoring/Inspections/Audits show waste and recycling management/segregation could be improved.	Monitoring/Inspections/Audits show waste and recycling management/segregation is poor and needs immediate improvement.
	Response	Continue OEMP implementation.	Undertake additional staff training and re-examine signage.	Undertake additional staff training, re-examine signage, review collection services provided and the WMP.
22. Bushfire	Trigger	No bushfire or bushfire prone weather.	Bushfire prone weather during summer.	Bushfire in the vicinity of the site.
	Response	Continue OEMP implementation.	Ensure grass is kept short and vegetation is minimal at the site. Weather is to be monitored twice daily for chance of bushfire.	Stop work and contact NSW Fire and Rescue on '000'. Evacuate the site as directed by NSW Fire and Rescue.

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
23. Submission	Trigger	General feedback/comment (no complaint or query).	Enquiry made by formal or informal channels.	Complaint made by formal or informal channels.
	Response	Acknowledge receipt and record in consultation register. No further response required.	Acknowledge receipt and record in consultation register. Direct enquiry to relevant person for actioning and response within 5 days.	Acknowledge receipt and record in consultation register. Respond to complaint immediately if possible, if not direct enquiry to relevant person for actioning and provide complainant with a follow up verbal response on what action is proposed within two hours during construction works (including night and weekend works) and 24 hours at other times.
24. Media	Trigger	Positive story in print, online, radio or television.	Neutral or advisory story in print, online, radio or television.	Negative story in print, online, radio or television.
	Response	Record in consultation register and advise Goodman media/marketing team. No further response required.	Record in consultation register and advise Goodman media/marketing team. No further response required.	Record in consultation register and advise Goodman Project Team for further action and response. Contact relevant person for actioning and response within 48 hours

Key Element	Trigger / Response	Condition Green	Condition Amber	Condition Red
25. Unscheduled Event	Trigger	Event occurring outside of plan or schedule without impact or potential impact.	Event occurring outside of plan or schedule with minor impact or potential impact.	Event occurring outside of plan or schedule with major impact or potential impact.
	Response	No response required. Identify opportunities for improvement to manage potential future events.	Contact relevant person for actioning and response within 48 hours. Acknowledge in consultation register. Identify opportunities for improvement to manage potential future events.	Contact relevant person for actioning and response immediately. Acknowledge in consultation register. Identify opportunities for improvement to manage potential future events.
26. Political Interest	Trigger	General or non-specific enquiry by Local, State or Federal political representative.	Enquiry or complaint relating to minor issue by Local, State or Federal political representative.	Enquiry or complaint relating to major issue by Local, State or Federal political representative.
	Response	Goodman Project Team to prepare and provide response or assign response task to relevant staff member for comment. Record in consultation register.	Goodman Project Team to prepare and provide response within 48 hours. Record in consultation register.	Goodman Project Team to prepare and provide response within 24 hours. Record in consultation register.
Sustainability	Trigger	Energy and water usage reviews indicate systems are performing efficiently and employees are following energy savings procedures correctly.	Reviews indicate that energy savings procedures are not carried out effectively.	Reviews indicate that excessive water and energy usage is occurring.
	Response	Continue OEMP implementation	Undertake additional staff training, re-examine signage and procedures.	Undertake additional staff training, re-examine signage, review the Sustainability MP.

7 Review

Review of the OEMP will be undertaken regularly by Goodman's Representative in and will comprise, as a minimum, the following:

- Identification of areas of opportunity for improved environmental performance;
- Analysis of the causes of non-compliances, including those identified in environment inspections and audits;
- Verification of the effectiveness of corrective and preventative actions; and
- Highlighting any changes in procedures resulting from process improvement.

Condition D133 of SSD 7348 also states that all strategies, plans and programs required under SSD 7348 will be reviewed within three months of:

- The submission of a Compliance Report under Condition D141;
- The submission of an incident report under Condition D135;
- The approval of any modification of the conditions of this consent; or
- The issue of a direction of the Planning Secretary under Condition D2(b) which requires a review.

This OEMP will also be reviewed and, if necessary, revised in the following circumstances:

- Where there is any change to the scope of the operation activities and/or disturbance footprint;
- Where it is identified that the environmental performance is not meeting the objectives of the OEMP; and/or
- At the request of a relevant regulatory authority.

As per Condition D134 the revised documents will be sent to DPE within 6 weeks of review. All employees and contractors will be informed of any revisions to the OEMP by the Goodman Representative.

8 References

- Ason (2022) Operational Traffic Management Plan, Lot 1A- Oakdale West Industrial Estate
- Department of Environment (2018) Compliance Reporting Post Approval Requirements
- Department of Environment and Climate Change (2007) Storing and Handling of Liquids: Environmental Protection – Participants Manual
- Department of Infrastructure, Planning and Natural Resources (2004) Guideline for the Preparation of Environmental Management Plans
- Ecologique (2019) OWE Vegetation Management Plan
- Ecologique (2022) OWE Building 1A Flora and Fauna Management Plan
- EPA (2014) Waste Classification Guidelines Part 1: Classifying Waste
- Goodman (2018) Corporate Responsibility and Sustainability Policy
- Goodman (2021) OWE SSD 7348 MOD 8, Application to Modify Architecture Plans
- Goodman (2022) OWE SSD 7348 MOD 10, Application to Modify Architecture Plans
- Keylan Consulting (2020) SSD 7348 Modification 6 Assessment Report
- Keylan Consulting (2021) SSD 7348 Modification 7 Assessment Report
- Keylan Consulting (2021a) OWE SSD 7348 MOD 8, Application to Modify Architecture Plans – Appendices
- Keylan Consulting (2021b) SSD 7348 Modification Application 9
- Pells Sullivan Meynink (2015) OWE Salinity Management Plan
- Scape Design (2022) OWE Lot 1A Landscape Management Plan
- SLR (2019) OWE Stage 1 MOD 2 Sustainability Management Plan
- SLR (2019a) Compliance Monitoring and Reporting Program
- SLR (2022) Community Communications Strategy, OWE – Concept and Stage 1
- SLR (2022a) OWE Waste Management Plan Lot 1A
- SLR (2022b) Oakdale West Industrial Estate OEMP
- Urbis (2017) Environmental Impact Statement, Oakdale West Estate – State Significant Development Application
- Urbis (2019) OWE SSD 7348 Modification No.2 – Environmental Assessment Report

Appendix A:

Relevant Consent Conditions

Development Consent

Section 4.38 of the Environmental Planning and Assessment Act 1979

As delegate of the Minister for Planning and Public Spaces under delegation executed on 11 October 2017, I I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

Anthea Sargeant
Executive Director
Compliance, Industry and Key Sites

Sydney

2019

The Department has prepared a consolidated version of the consent which is intended to include all modifications to the original determination instrument.

The consolidated version of the consent has been prepared by the Department with all due care. This consolidated version is intended to aid the consent holder by combining all consents relating to the original determination instrument but it does not relieve a consent holder of its obligation to be aware of and fully comply with all consent obligations as they are set out in the legal instruments, including the original determination instrument and all subsequent modification instruments.

CONSOLIDATED CONSENT

SCHEDULE 1

Application Number:	SSD 7348
Applicant:	Goodman Property Services (Aust) Pty Ltd
Consent Authority:	Minister for Planning and Public Spaces
Site:	Lot 26 DP 1269741 Lot 105 DP 1262310 Lot 107 DP 1262310
Development:	<p>A Concept Proposal including:</p> <ul style="list-style-type: none">• concept layout of 18 warehouse buildings inclusive of dock offices and ancillary offices providing 556,824 square metres of gross lettable area, built over seven development stages;• concept layout of development lots, internal roads, drainage, landscaping, noise walls, basins and biodiversity offsets; and• development controls. <p>A Stage 1 Development including:</p> <ul style="list-style-type: none">• bulk earthworks across all five stages including retaining walls and noise walls;• lead in services including but not limited to drainage, power, sewer, water and telecommunications;• service infrastructure to Precinct 1, including drainage, power, sewer, water and telecommunications;• construction and operation of three warehouse buildings inclusive of dock offices and ancillary offices in Precinct 1 (1A, 1B and 1C) providing 88,867 square metres of gross lettable area;• Western North-South Link Road and associated subdivision, basins and drainage;• estate roads 1, 2, and 6 and 8 and eastern part of road 7;• landscaping of Stage 1, the western boundary, Western North-South Link Road, estate roads 1, 2, and 6 and 8 and the eastern part of road 7, detention basins and the amenity lot• subdivision of Stage 1 lots and road infrastructure including the services (substation) lot;• stormwater drainage infrastructure for Lots 2A and 2B and all basins;• temporary works to facilitate construction including but not limited to swales, haul road (construction access), landscaping and basins; and

CONSOLIDATED CONSENT

- works including construction of traffic signals at Lenore Drive/Grady Crescent/WNSLR intersection; **and**
- **works within Lot 9 DP1157476 including reconfiguration of car park, relocation of car park access on Lockwood Road, infrastructure, landscaping and all works associated with the WNSLR.**

SSD 7348 – Mod 1

SSD 7348 – Mod 2

SSD 7348 – Mod 3

SSD 7348 – Mod 4

SSD 7348 – Mod 5

SSD 7348 – Mod 6

SSD 7348 – Mod 7

SSD 7348 – Mod 8

SSD 7348 – Mod 9

SSD 7348 – Mod 10

CONSOLIDATED CONSENT

SUMMARY OF MODIFICATIONS

Application Number	Determination Date	Decider	Modification Description
SSD-7348-Mod-1	27 March 2020	Department	Changes to pad levels across the Concept Proposal, amendments to bio-retention basins and changes to the biodiversity offset strategy
SSD-7348-Mod-2	21 April 2020	Department	Changes to Stage 1 pad levels, building layouts and the height of Building 1A
SSD-7348-Mod-3	3 April 2020	Department	Changes to the Concept Proposal layout, Stage 2 area and height of Building 2
SSD-7348-Mod-4	24 March 2020	Department	Include an additional lot for construction works for the WNSLR
SSD-7348-Mod-5	5 November 2020	Department	Increase in SLR road reserve and associated reduction in building and landscaping setbacks, amendments to Precinct 1A layout and car parking spaces, quantities of dangerous goods to be stored in Building 1A, setting up an alternative biodiversity offset site, and extension to required completion date for the noise barrier
SSD-7348-Mod-6	10 March 2021	Department	Changes to Concept for Precincts 1 and 2, Increase height of Building 2A, Reduce floor area and amend design of Buildings 1B and 1C, Remove speed limits, Construct Road 8 in Stage 1, Increase Ropes Creek vegetation management area
SSD-7348-Mod-7	7 October 2021	Director	Changes to Precincts 3 and 4 including earthworks, retaining walls, building layouts in Precinct 4 and estate road 7
SSD-7348-Mod-8	10 September 2021	Department	Amendments to architectural plans for Stage 1 Buildings 1A, 1B and 1C.
SSD-7348-Mod-9	8 December 2021	Department	Amendments to the layout of Buildings 2A, 2C and 2D and increased height of Building 2C
SSD-7348-Mod-10	XX August 2022	Department	Modification to: <ul style="list-style-type: none"> update Precinct 1 signage plans, including façade signage.

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CONSOLIDATED CONSENT

DEFINITIONS

Applicant	Goodman Property Services (Aust) Pty Ltd, or any person carrying out any development to which this consent applies
Biodiversity Covenant	A restriction on the use of land forming part of the Erskine Park Biodiversity Corridor, as shown on Figure in Appendix 6
Building 1A	Warehouse building 1A including high-bay (39 metres) and low-bay (27 metres) components, located on Lot 1A as described in the EIS and RtS for MOD 2
Bulk earthworks	As described in the EIS and RtS
Certifying Authority	A person who is authorised by or under section 6.17 of the EP&A Act to issue Part 6 certificates
CEMP	Construction Environmental Management Plan
CAQMP	Construction Air Quality Management Plan
Concept Proposal	Concept layout of 22 warehouse buildings and ancillary offices built over five development stages, as described in the EIS and RtS
Conditions of this consent	Conditions contained in Schedules B to D of this document
Consent Authority	The relevant consent authority for development in accordance with the EP&A Act
Construction	The demolition and removal of buildings or works, the carrying out of works for the purpose of the development, including bulk earthworks, and erection of buildings and other infrastructure permitted by this consent
Council	Penrith City Council
CTMP	Construction Traffic Management Plan
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site
Department	NSW Department of Planning, Industry and Environment
Development	The development described in the EIS and RtS, including construction and operation of 18 warehouse buildings, offices and associated infrastructure, as modified by the conditions of this consent and shown on the plans in Appendix 1, Appendix 2 and Appendix 3 and as modified by SSD 7348 MOD 1, SSD 7348 MOD 2, SSD 7348 MOD 3, SSD 7348 MOD 4, SSD 7348 MOD 5, SSD 7348 MOD 6, SSD 7348 MOD 8, SSD-7348-MOD-9 and SSD-7348-MOD-10.
DA	Development Application submitted in accordance with the EP&A Act
EIS	The Environmental Impact Statement titled <i>Oakdale West Estate</i> , prepared by Urbis dated November 2017, submitted with the application for consent for the development, including any additional information provided by the Applicant in support of the application
ENM	Excavated Natural Material
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
Environmental Representative Protocol	The document of the same title published by the Department
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)

CONSOLIDATED CONSENT

EPL	Environment Protection Licence under the POEO Act
Erskine Park Biodiversity Corridor	The land described in the <i>Biodiversity Management Plan Erskine Park Employment Area</i> , HLA-Envirosciences, 2006 and shown on Figure in Appendix 6
Evening	The period from 6 pm to 10 pm
Feasible	Feasible relates to engineering considerations and what is practical to build
FFMP	Flora and Fauna Management Plan
Fibre ready facility	As defined in Section 372W of the <i>Telecommunications Act 1997</i>
GLA	Gross lettable area
GFA	Gross floor area
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage item	An item as defined under the <i>Heritage Act 1977</i> (NSW), and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i> (NSW), the World Heritage List, or the National Heritage List or Commonwealth Heritage List under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth), or anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance <i>Note: "material harm" is defined in this consent</i>
Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
Landscape Bund	Landscaping along the western boundary of the Site, included as part of Stage 1 works as described in the EIS and RTS and shown on Error! Reference source not found.4 in Appendix 2
LMP	Landscape Management Plan
Material harm	Is harm that: <ul style="list-style-type: none"> a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
Minister	NSW Minister for Planning and Public Spaces (or delegate)
Mitigation	Activities associated with reducing the impacts of the development prior to or during those impacts occurring
Monitoring	Any monitoring required under this consent must be undertaken in accordance with section 9.40 of the EP&A Act
NCC	National Construction Code
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
NRAR	NSW Natural Resources Asset Regulator
OEH	(former) NSW Office of Environment and Heritage (now Biodiversity and Conservation of the Department)
OEMP	Operational Environmental Management Plan

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Operation	The use of warehouse buildings for storage and distribution of goods upon completion of construction
Penrith DCP	Penrith Development Control Plan 2014
Planning Agreement	Planning Agreement titled <i>Oakdale West Estate Planning Agreement</i> , between the Minister for Planning and Public Spaces, Goodman Property Services (Aust) Pty Ltd and BGMG 11 Pty Limited as trustee for the BGMG 1 Oakdale West Trust, executed on 5 August 2019 and included in Appendix 4
PCA	Principal Certifying Authority in accordance with the EP&A Act
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
POEO Act	<i>Protection of the Environment Operations Act 1997</i> (NSW)
Roads Authority	As defined in Dictionary of the <i>Roads Act 1993</i> (NSW)
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements.
Registered Aboriginal Parties	Means the Aboriginal persons identified in accordance with the document entitled <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW)
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Relevant Roads Authority	The authority responsible for ownership and maintenance of the applicable road
RMS	(former) NSW Roads and Maritime Services (now TfNSW)
RtS	The Response to Submissions titled <i>Oakdale West Estate SSDA 15_7348 Response to Submissions</i> prepared by Urbis dated 8 May 2018 and document titled <i>Oakdale West Estate SSDA 15_7348 Response to Matters Raised by the Department of Planning</i> , prepared by Urbis dated 12 October 2018
Sensitive receivers	A location where people are likely to work, occupy or reside, including a dwelling, school, hospital, office or public recreational area
Site	The land defined in Appendix 1
SLR	(proposed) Southern Link Road as shown in the WSEA SEPP and the Broader WSEA SLRN Options Refinement Report prepared by AECOM, 2014
SSD 7348 MOD 1	The section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd titled 'Section 4.55(1A) Modification Application (SSD 7348 MOD 1) Oakdale West Estate – Amendments to Concept Plan and Stage 1 development', dated 16 December 2019.
SSD 7348 MOD 2	The section 4.55(2) modification application prepared by Goodman Property Services (Aust) Pty Ltd titled 'Section 4.55(2) Modification Application (SSD 7348 MOD 2) Oakdale West Estate – Amendments to Concept Plan and Stage 1 development', dated 12 December 2019.
SSD 7348 MOD 3	The section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd titled 'Oakdale West Industrial Estate Concept Plan and Stage 1 Modification (SSD 7348 MOD 1), dated January 2020.
SSD 7348 MOD 4	The section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd titled 'mod 4, SSD 7348 – S4.55(1A) Application to Modify the Consent to Include Works on Lot 9 DP 1157476, dated 17 February 2020.
SSD 7348 MOD 5	The section 4.55(1A) modification application prepared by Urbis, titled Oakdale West Estate SSD 7348, Section 4.55(1A) Modification No. 5 Environmental Assessment Report, dated 23 July 2020

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SSD 7348 MOD 6	The section 4.55(1A) modification application prepared by Keylan Consulting Pty Ltd, titled 'Assessment Report Section 4.55(1A) Modification, SSD 7348 Modification 6', dated 10 February 2021.
SSD 7348 MOD 7	The Section 4.55(1A) modification application prepared by Keylan Consulting Pty Ltd, titled 'Assessment Report Section 4.55(1A) Modification, SSD 7348 Modification 7', dated July 2021
SSD 7348 MOD 8	The section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd, titled 'SSD 7348 MOD 8 Oakdale West Stage – S.4.55(1A) Application to Modify Architecture Plans', dated 9 July 2021.
SSD 7348 MOD 9	The Section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd, titled 'Oakdale West Industrial Estate SSD 7348 – Modification Application 9', dated 11 November 2021
SSD 7348 MOD 10	The Section 4.55(1A) modification application prepared by Goodman Property Services (Aust) Pty Ltd, titled 'SSD7348 MOD 10, Oakdale West Stage – s.4.55(1A) Application to Modify Architecture Plans', dated 4 July 2022.
Stage	Each component or Stage of works to deliver the Concept Proposal, as shown on Figure 2 in Appendix 1 , or as amended by an approved Staging Plan under this consent
Stage 1	Bulk earthworks across the Site, construction and operation of three warehouse buildings (1A, 1B and 1C), the WNSLR and associated infrastructure and construction of the landscape bund along the western boundary of the Site, as described in the EIS and RTS and shown on the plans in Appendix 2 and Appendix 3
TfNSW	Transport for New South Wales
VENM	Virgin Excavated Natural Material
Vicinity of the site	Bakers Lane, Kemps Creek
WAD	Works Authorisation Deed issued by TfNSW (former RMS)
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
Water Pipelines	Two Sydney drinking water pipelines located on land owned by Water NSW along the northern boundary of the Site
WMP	Waste Management Plan
WNSLR	Western North-South Link Road as shown in the WSEA SEPP and the plans in Appendix 3
WSEA	Western Sydney Employment Area
WSEA SEPP	State Environmental Planning Policy (Western Sydney Employment Area) 2009
WSFL	Western Sydney Freight Line corridor as shown in TfNSW Western Sydney Freight Line Corridor Identification – Consultation, March 2018
Year	A period of 12 consecutive months

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SCHEDULE B CONDITIONS FOR THE CONCEPT PROPOSAL

FUTURE DEVELOPMENT APPLICATIONS

- B1. In accordance with section 4.22 of the EP&A Act, each stage of the Concept Proposal (excluding Stage 1) is to be subject to future development applications (DAs). Future DAs are to be consistent with this development consent.
- B2. To avoid any doubt, this Concept Proposal consent does not permit the construction or operation of any Development, except for the Stage 1 DA covered by **Schedule D**.
- B3. This Concept Proposal consent does not approve the building layouts shown on **Lots 3A, 3B, 3C, 3D, 3E, 3F, 3G and 4A** on **Figure 1** in **Appendix 1**. The location of the buildings on these lots must be assessed by separate DAs, and must satisfy the interface requirements of Conditions C3 and C4.

STATUTORY REQUIREMENTS

- B4. The Applicant shall ensure that all licences, permits, and approvals/consents are obtained as required by law and maintained as required throughout the life of the Concept Proposal. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals/consents.

TERMS OF CONSENT

- B5. The Applicant shall carry out the Concept Proposal in accordance with the:
- (a) EIS and RtS;
 - (b) the plans in **Appendix 1** and **Appendix 2**;
 - (c) **SSD 7348 MOD 1**;
 - (d) the Applicant's Management and Mitigation Measures in **Appendix 7**; and
 - (e) **modifications to this consent**.
- B6. If there is any inconsistency between the plans and documents referred to above, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
- B7. The Applicant shall comply with any reasonable requirement(s) of the Planning Secretary arising from the Department's assessment of:
- (a) any reports, plans or correspondence that are submitted in accordance with this consent; and
 - (b) the implementation of any actions or measures contained within these reports, plans or correspondence.

LIMITS OF CONSENT

- B8. This consent lapses five (5) years after the date from which it operates, unless any Stage of the Development has physically commenced on the land to which the consent applies before that date.
- B9. The following limits apply to the Concept Proposal:
- (a) the maximum GLA for the land uses in the Development shall not exceed the limits in **Table 1**;
 - (b) a minimum 60 metre (m) wide corridor along the northern Site boundary shall not be developed and shall be maintained and preserved for the future WSFL corridor, in accordance with the requirements of TfNSW;
 - (c) the building layouts and footprints shown on **Lots 3A, 3B, 3C, 3D, 3E, 3F, 3G and 4A** on **Figure 1** in **Appendix 1**, are not approved. The position, layouts and footprints of the buildings on these lots must be assessed by separate DAs, and must satisfy the interface requirements of Conditions C3 and C4;
 - (d) **any rooftop mechanical plant on buildings on Lots 2C, 2D, 2E, 3A, 3B, 3C, 3D, 3E, 4A, 4B and 4E are not to be operated during the night-time period;**

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- (e) forklifts are not to operate during the night-time period on Lots 2C, 2D, 2E, 3B, 3C, 3D, 3E, 4A and 5A; and
- ~~(f) vehicles associated with the Development shall adhere to the following speed limits when using estate roads within the Development:~~
 - ~~(i) 25 kilometres per hour for heavy vehicles; and~~
 - ~~(ii) 40 kilometres per hour for light vehicles.~~
- (g) all traffic associate with operation of the Development shall use the West North South Link Road, and the future SLR, to access the site and shall not use Bakers Lane or Aldington Road

Table 1: GLA Maximum for Concept Proposal

Land Use	Maximum GLA square metres (m ²)
Total Warehousing	529,625
Total Office	22,770
Other	4,429
Total GLA	556,824

Notes: Other includes but is not limited to the skybridge, gatehouse, dangerous goods store and energy complex in Building 1A.

- B10. The Applicant shall ensure the Concept Proposal is consistent with the development controls in **Table 2:**

Table 2: Development Controls

Development Aspect	Control
Minimum building setbacks from:	
• Southern Link Road	17.15 m
• Western North-South Link Road	20 m
• Local estate Roads	7.5 m
• Western site boundary	40 m
• Southern site boundary	20 m (excluding parking areas)
Rear boundary setbacks within the estate	5 m
Side boundary setbacks within the estate	0 m, subject to compliance with fire rating requirements
Height	15 m
- Building 1A	39 m
- Building 2A	18 m
- Building 2B	28 m
- Building 2C	22.2 m
Minimum lot size	5,000 m ²
Minimum frontage	40 m (excluding cul-de-sacs) 35 m minimum lot width at the building line
Site coverage	Maximum of 65 per cent (excluding awnings)

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- B11. Notwithstanding the controls listed in **Table 2** in Condition B10, no warehouse building in the Concept Proposal, except **Building 1A in Precinct 1** and Buildings 2A, 2B and 2C in **Precinct 2**, shall exceed a ridgeline height of 13.7 m, excluding roof mounted mechanical plant and solar panels.
- B12. The Applicant shall lodge the proposed revisions to the *Penrith Development Control Plan 2014* (Penrith DCP), in accordance with **Table 2** in Condition B10, with Council within 6 months of the date of this consent.
- B13. The Applicant shall ensure the Concept Proposal provides car parking in accordance with the following rates:
- (a) 1 space per 300 m² of warehouse GFA;
 - (h) 1 space per 40 m² of office GFA; and
 - (i) 2 spaces for disability parking for every 100 car parking spaces.
- B14. The Applicant shall provide bicycle racks, and amenity and change room facilities for cyclists in accordance with *Planning Guidelines for Walking and Cycling* (December 2004, NSW Department of Infrastructure, Planning and Natural Resources and the Roads and Traffic Authority).

STAGING PLAN

- B15. Prior to the commencement of construction of any stage of the Concept Proposal, the Applicant shall prepare a Staging Plan for the Development, to the satisfaction of the Planning Secretary. The plan shall:
- (a) be prepared in consultation with Council, utility and service providers and other relevant stakeholders;
 - (b) describe how the implementation of the Concept Proposal, would be staged to ensure it is carried out in an orderly and economic way and minimises construction impacts on adjacent sensitive receivers;
 - (c) show the likely sequence of DAs that will be lodged to develop the Site, with the estimated timing for each Stage and identification of any overlapping construction and operational activities;
 - (d) include concept design for the staged delivery of landscaping, focusing on early implementation of screen planting to minimise the visual impact of subsequent development stages; and
 - (e) include conceptual design for the provision of services, utilities and infrastructure to the Site.
- B16. The Applicant must:
- (a) not commence construction of any stage of the Development until the Staging Plan required by Condition B15 is approved by the Planning Secretary; and
 - (b) implement the most recent version of the Staging Plan approved by the Planning Secretary.
- B17. The Planning Secretary may require the Applicant to address certain matters identified in the Staging Plan. The Applicant must comply with any such requirements of the Planning Secretary given as part of the Staging Plan approval.

Notes:

- *The Applicant may amend the Staging Plan as desired, with the approval of the Planning Secretary.*
- *The Staging Plan is intended to broadly describe the development sequence for the Site and the delivery of infrastructure for all stages. It is not required to provide detailed design for latter Stages.*

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NOISE LIMITS

B18. The Applicant shall ensure the Development does not exceed the noise limits in **Table 3** at the receiver locations N1, N2, N3, N4 and N5 shown on the plan in **Appendix 5**.

Table 3: Noise Limits dB(A)

Location	Day	Evening	Night	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{AMax}
N1 Emmaus Village Residential	44	43	41	52
N3 Kemps Creek – nearest residential property	39	39	37	52
N4 & N5 Kemps Creek – other residences	39	39	37	52
N9 to N14	47	42	42	52
N2 Emmaus Catholic College (school)	When in use: 45 L _{eq} (1h)			

Notes:

1. Noise generated by the development is to be measured in accordance with the relevant procedures and modifications, including certain meteorological conditions, of the Noise Policy for Industry (EPA, 2017). Refer to the plan in Appendix 2 for the location of residential sensitive receivers.
2. ~~or background + 5 dB, whichever is higher.~~

B19. The noise limits in **Table 3** do not apply to receiver N3, **N4 and N5** if the Applicant has a Noise Agreement with the relevant landowner to exceed the noise limits, and the Applicant has provided written evidence to the Planning Secretary that an agreement is in place.

BUSHFIRE PROTECTION

B20. The Applicant shall ensure the Development complies with:

- (a) the relevant provisions of *Planning for Bushfire Protection 2019*;
- (b) the construction standards and asset protection zone requirements recommended in the Oakdale Industrial Estate - West Bushfire Protection Assessment, prepared by Australian Bushfire Protection Planners Pty Ltd, dated September 2016 and updated 13 January 2020, and the SSD-7348 (MOD 6) Bushfire Hazard Assessment prepared by Blackash Bushfire Consulting, dated 12 November 2020 and SSD-7348 (MOD 7) Bushfire Hazard Assessment prepared by Blackash Bushfire Consulting, dated 27 May 2021; and
- (c) AS2419.1 – 2005 Fire Hydrant Installations for firefighting water supply.

TRANSGRID EASEMENT

B21. The Applicant must:

- (a) provide safe and unobstructed access for TransGrid plant and personnel to access the transmission towers, lines and easement on the Site, 24 hours a day, 7 days a week;
- (b) comply with the requirements of TransGrid for any works in the TransGrid easement; and
- (c) advise TransGrid of any proposed amended or modified encroachment into the easement.

ENDEAVOUR ENERGY

B22. The Applicant must comply with the requirements of Endeavour Energy for the provision of land for a new zone substation as shown on the plans in the RtS.

WATER NSW

B23. The Applicant must:

- (a) provide safe and unobstructed access for Water NSW plant and personnel to access the water pipelines corridor adjacent the Site, 24 hours a day, 7 days a week;
- (b) comply with the requirements of Water NSW for any works adjacent to or over, the water pipelines corridor; and
- (c) advise Water NSW of any proposed amended or modified encroachment into the water pipelines corridor.

AMENITIES LOT

B24. The amenities lot located north of Estate Road 1, as shown on the plans in **Appendix 1**, must only provide for small-scale local services such as commercial, retail, community facilities and landscaping that service or support the needs of local employment-generating uses.

SCHEDULE C CONDITIONS FOR FUTURE DEVELOPMENT APPLICATIONS

DEVELOPMENT CONTRIBUTIONS

- C1. Future DAs shall identify whether any Development Contributions Plan made by Council (under Section 7.11 of the EP&A Act) applies to that stage of the Concept Proposal (excluding Stage 1).
- C2. Prior to the issue of a Construction Certificate for any stage of the Development, the Applicant shall pay contributions to Council in accordance with the relevant Development Contributions Plan identified in accordance with Condition C1.

INTERFACE WITH RESIDENTIAL AREAS

- C3. Future DAs for warehouses on **lots 3A, 3B, 3C, 3D, 3E, 3F, 3G and 4A** shall be accompanied by an Urban Design Assessment. The assessment must:
 - (a) be prepared by an independent urban design consultant;
 - (b) be prepared in consultation with Council and the Emmaus Catholic College;
 - (c) detail the key objectives for the interface with the sensitive receivers on the western and southern Site boundaries, including consideration of optimal uses and operational hours;
 - (d) determine the optimal building location and setbacks on the western and southern boundaries, noting the design controls in Condition B10 are the minimum setback requirements;
 - (e) present the optimal design for the building layouts along the western and southern site boundaries with detailed justification for the preferred option;
 - (f) identify appropriate orientations and architectural treatments for the facades facing sensitive receivers; and
 - (g) incorporate noise mitigation into the layout and design of buildings, internal roads, loading docks and parking areas to ensure the Development can meet the noise limits in Condition **Error! Reference source not found.**
- C4. Prior to the commencement of construction of warehouses or office buildings on lots **3A, 3B, 3C, 3D, 3E, 3F, 3G and 4A**, the Applicant must obtain approval from the Consent Authority for the preferred design option, including uses, building and loading dock layouts, setbacks, façade treatments and colours.

VISUAL AMENITY

Landscaping

- C5. Future DAs shall be accompanied by a Landscape Assessment. The assessment must:
 - (a) be prepared by a qualified landscape design consultant;
 - (b) be prepared in consultation with Council;
 - (c) describe how the landscaping for the relevant Stage of the Development is consistent with the Staging Plan approved in accordance with Condition B15;
 - (d) describes the landscaping works to be completed as part of the relevant Stage of the Development and details a program for monitoring the success of landscaping works over time;
 - (e) assesses the condition of and adequacy of landscaping completed as part of earlier Stages of the Development, in providing visual screening for adjacent sensitive receivers; and
 - (f) details any additional landscaping or rehabilitation works required to ensure the visual impacts of the Development are minimised for the adjacent sensitive receivers.

Outdoor Lighting

- C6. Future DAs must ensure compliance with *AS/NZS 1158.3.1:2005 Pedestrian Area (Category P) Lighting* and *AS/NZS 4282:2019 Control of Obtrusive Effects of Outdoor Lighting*.

Signage

- C7. Future DAs must ensure illuminated signage is oriented away from the sensitive receivers on the western and southern Site boundaries.

Reflectivity

- C8. The visible light reflectivity from materials used on the façades and roofs of the warehouses and office buildings shall be designed to minimise glare. A report demonstrating compliance with these requirements must be submitted to the satisfaction of the Certifying Authority for each future warehouse and office building prior to the issue of the relevant Construction Certificate.

TRANSPORT, ACCESS AND PARKING

- C9. Future DAs shall be accompanied by a transport, access and parking assessment. The assessment must:
- (a) assess the impacts on the safety and capacity of the surrounding road network and access points during construction and operation of the relevant Stage;
 - (b) demonstrate internal roads and car parking complies with relevant Australian Standards and the car parking rates in Condition B13;
 - (c) detail the scope and timing of any required road upgrades to service the relevant Stage; and
 - (d) detail measures to promote non-car travel modes, including a Sustainable Travel Plan identifying pedestrian and cyclist facilities to service the relevant Stage of the Development.

NOISE AND VIBRATION

- C10. Future DAs shall be accompanied by a noise and vibration impact assessment. The assessment must:
- (a) identify the noise and vibration impacts during construction and operation;
 - (b) demonstrate compliance with the noise limits in Condition **Error! Reference source not found.**;
 - (c) provide an analysis of all external plant and equipment, including but not limited to, forklifts, air conditioners and refrigeration systems;
 - (d) incorporate noise mitigation measures, such as increased building setbacks, building insulation, noise barriers, layout of truck loading areas or source controls, to demonstrate the noise limits in Condition B18 can be achieved;
 - (e) detail the timing to construct the noise walls shown in **Appendix 5**, to ensure noise from operation of the Development does not exceed the noise limits in Condition B18**Error! Reference source not found.**; and
 - (f) recommend mitigation and management measures to be implemented to minimise noise during construction.

STORMWATER MANAGEMENT

- C11. Future DAs shall demonstrate the design of the warehouses, offices and hardstand areas are consistent with (or the latest revision of) the:
- (a) *Civil, Stormwater and Infrastructure Services Report*, prepared by At&L, dated October 2018; and
 - (b) *Flood Impact Assessment: Oakdale West Estate*, prepared by Cardno, dated 27 March 2017.

BUSHFIRE PROTECTION

- C12. The Applicant shall ensure future DAs comply with:
- (a) the relevant provisions of *Planning for Bushfire Protection 2019*;
 - (b) the construction standards and asset protection zone requirements recommended in the Oakdale Industrial Estate - West Bushfire Protection Assessment, prepared by Australian

Bushfire Protection Planners Pty Ltd, dated September 2016 and updated 13 January 2020, and the SSD-7348 (MOD 6) Bushfire Hazard Assessment prepared by Blackash Bushfire Consulting, dated 12 November 2020 and SSD-7348 (MOD 7) Bushfire Hazard Assessment prepared by Blackash Bushfire Consulting, dated 27 May 2021; and

- (c) AS2419.1 – 2005 Fire Hydrant Installations for firefighting water supply.

TRANSGRID EASEMENT

- C13. The Applicant must consult with TransGrid, prior to lodging DAs for Stages 4 and 5 of the Development as shown on **Figure 2** in **Appendix 1**, and any other Stage or road infrastructure that may affect the TransGrid easement. The Applicant must design, construct and operate each Stage of the development in accordance with the reasonable requirements of TransGrid relating to their use of the TransGrid easement.
- C14. The Applicant must consult with TransGrid, prior to lodging DAs for buildings in Stage 5 adjacent to Ropes Creek, to identify and implement any required flood management measures within the transmission line easement.

ENDEAVOUR ENERGY

- C15. The Applicant must obtain relevant approvals from Endeavour Energy, prior to the construction of any utility works to service each Stage of the Development.

WATER NSW

- C16. The Applicant must consult with Water NSW, prior to lodging DAs for works on Lot 2A adjoining the water pipelines corridor, to identify and implement any requirements of Water NSW for protection of the water pipelines corridor.

WASTE

- C17. Future DAs shall include a Waste Management Plan prepared in accordance with the *NSW Waste Classification Guidelines* (DECCW, 2009).

CONSTRUCTION MANAGEMENT

- C18. A Construction Environmental Management Plan (CEMP) shall be submitted to the Consent Authority for each stage of the Concept Proposal prior to the commencement of construction of the relevant stage. The CEMP must:
- (a) be prepared by a suitably qualified and experienced environmental consultant, or the Environmental Representative appointed for Stage 1 of the Development;
 - (b) be prepared in consultation with relevant Government agencies, infrastructure and utility providers, including but not limited to, TransGrid, Endeavour Energy, Water NSW and TfNSW, where relevant for each stage;
 - (c) detail the construction activities to be undertaken in the relevant Stage of the Development;
 - (d) include detailed procedures for managing the environmental impacts of construction, including stormwater, erosion and sediment controls, dust, noise and traffic management; and
 - (e) detail the roles and responsibilities for environmental management on the Site.

COMMUNITY COMMUNICATION STRATEGY

- C19. No later than one month before the commencement of construction of any stage of the Development, a Community Communication Strategy (CCS) must be prepared and submitted to the Planning Secretary for approval.

The CCS is to provide mechanisms to facilitate communication between the Applicant, Council and the community (including adjoining affected landowners, schools, businesses, and others directly impacted by Stage 1), during design, construction and operation. The CCS must:

- (a) assign a central contact person to keep the nearby sensitive receivers regularly informed throughout the Development;
- (b) detail the mechanisms for regularly consulting with the local community throughout the Development, such as holding regular meetings to inform the community of the progress of the development and report on environmental monitoring results;
- (c) detail a procedure for consulting with nearby sensitive receivers to schedule high noise generating works, vibration intensive activities or manage traffic disruptions;
- (d) include contact details for key community groups, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders; and
- (e) include a complaints procedure for recording, responding to and managing complaints, including:
 - (i) email, contact telephone number and postal addresses for receiving complaints;
 - (ii) advertising the contact details for complaints before and during operation, via the local newspaper and through onsite signage;
 - (iii) a complaints register to record the date, time and nature of the complaint, details of the complainant and any actions taken to address the complaint; and
 - (iv) procedures for the resolution of any disputes that may arise during the course of the Development.

C20. The Applicant must:

- (a) not commence construction of the relevant stage of the Concept Proposal until the CCS required under Condition C19 has been approved by the Planning Secretary; and
- (b) implement the CCS for each stage of the Concept Proposal and following the completion of operation of the Development.

SCHEDULE D CONDITIONS FOR STAGE 1 DA

PART 1 – GENERAL CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- D1. In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of Stage 1 development, and any rehabilitation required under this consent.

TERMS OF CONSENT

- D2. Stage 1 of the Development may only be carried out:
- (a) in compliance with the conditions of this consent;
 - (b) in accordance with all written directions of the Planning Secretary;
 - (c) in accordance with the EIS and RTS;
 - (d) in accordance with the plans in **Appendix 2** and **Appendix 3**;
 - (e) **in accordance with SSD 7348 MOD 1**;
 - (f) in accordance with the Applicant's Management and Mitigation Measures in **Appendix 7**; and
 - (g) **in accordance with modifications to this consent.**
- D3. Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:
- (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and
 - (b) the implementation of any actions or measures contained in any such document referred to in Condition D3(a).
- D4. The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in Condition D2(c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in Condition D2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.

LIMITS OF CONSENT

- D5. This consent lapses five (5) years after the date from which it operates, unless Stage 1 has physically commenced on the land to which the consent applies before that date.
- D6. The following limits apply to Stage 1:
- (a) the maximum GLA for the land uses shall not exceed the limits in **Table 4**; and
 - (b) a minimum 60 m wide corridor along the northern Site boundary shall not be developed and shall be maintained and preserved for the future WSFL corridor, in accordance with the requirements of TfNSW.
 - (c) **all construction traffic associated with the Stage 1 warehouse buildings (Buildings 1A, 1B and 1C) must use the West North South Link Road to access the site.**

Table 4: GLA Maximum for Stage 1

Land Use	Maximum GLA (m ²)
Total Warehousing	81,286
Total Office	4,151

Other	4,004
Total GLA	89,440

Note: Other includes, but is not limited to, the skybridge, gatehouse, dangerous goods store and energy complex in Building 1A

- D7. The Applicant shall ensure Stage 1 is consistent with the development controls in **Table 2: Development Controls** in Condition B10.

NOTIFICATION OF COMMENCEMENT

- D8. The date of commencement of each of the following phases of Stage 1 must be notified to the Department in writing, at least one month before that date, or otherwise agreed with the Planning Secretary:
- (a) construction; and
 - (b) operation.
- D9. If the construction or operation of Stage 1 is to be delivered in sub-stages, the Department must be notified in writing at least one month before the commencement of each sub-stage, of the date of commencement and the works to be carried out in that sub-stage.

EVIDENCE OF CONSULTATION

- D10. Where conditions of this consent require consultation with an identified party, the Applicant must:
- (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and
 - (b) provide details of the consultation undertaken including:
 - i. the outcome of that consultation, matters resolved and unresolved; and
 - ii. details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS

- D11. With the approval of the Planning Secretary, the Applicant may:
- (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and
 - (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).
- D12. If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.
- D13. If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.

PROTECTION OF PUBLIC INFRASTRUCTURE

- D14. Before the commencement of construction of Stage 1, the Applicant must:
- (a) consult with the relevant owner and provider of services that are likely to be affected, to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure;

- (b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the Site (including roads, gutters and footpaths); and
 - (c) submit a copy of the dilapidation report to the Planning Secretary and Council.
- D15. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out Stage 1; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of Stage 1.

PROTECTION OF WATER NSW INFRASTRUCTURE

- D16. Before the commencement of construction of Stage 1, the Applicant must:
- (a) prepare a dilapidation report identifying the condition of all infrastructure within the water pipelines corridor, in the vicinity of the WNSLR bridge crossing;
 - (b) implement all practical measures to protect this infrastructure, as required by Water NSW; and
 - (c) repair, or pay the full costs associated with repairing, any water supply infrastructure that is damaged by carrying out Stage 1.

DEMOLITION

- D17. All demolition must be carried out in accordance with *Australian Standard AS 2601-2001 The Demolition of Structures* (Standards Australia, 2001).

STRUCTURAL ADEQUACY

- D18. All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the National Construction Code (NCC).

Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

COMPLIANCE

- D19. The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of Stage 1.

DEVELOPER CONTRIBUTIONS

Planning Agreement

- D20. The Applicant shall provide all monetary contributions and/or works-in-kind contributions under Subdivision 2 of Division 7.1 of Part 7 of the EP&A Act, in accordance with the Planning Agreement entered into between the Minister for Planning, Goodman Property Services (Aust) Pty Ltd (the developer) and BGMG 11 Pty Limited as trustee for the BGMG 1 Oakdale West Trust (the landowner) executed on 5 August 2019 and as attached in **Appendix 4**.

OPERATION OF PLANT AND EQUIPMENT

- D21. All plant and equipment used on site, or to monitor the performance of Stage 1 must be:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

EASEMENTS

- D22. Within 12 months of commencing operation of Stage 1, or a timing otherwise agreed with Council, an easement under section 88A and/or restriction or public positive covenant under section 88E

of the *Conveyancing Act 1919* (NSW) naming the Council as the prescribed authority, which can only be revoked, varied or modified with the consent of the Council, and provides for a drainage outlet swale from bio-retention basin 1, must be registered on title of Lot 19 DP 1250578.

EXTERNAL WALLS AND CLADDING

- D23. The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the NCC.
- D24. Before the issue of a Construction Certificate and an Occupation Certificate, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use or used in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels comply with the requirements of the NCC.
- D25. The Applicant must provide a copy of the documentation given to the Certifying Authority to the Planning Secretary within seven days after the Certifying Authority accepts it.

UTILITIES AND SERVICES

- D26. Before the construction of any utility works associated with Stage 1, the Applicant must obtain relevant approvals from service providers.
- D27. Before the commencement of operation of Stage 1, the Applicant must obtain a Compliance Certificate for water and sewerage infrastructure servicing Stage 1, under section 73 of the *Sydney Water Act 1994* (NSW).
- D28. Before the issue of a Subdivision or Construction Certificate for Stage 1, the Applicant (whether or not a constitutional corporation) is to provide evidence, satisfactory to the Certifying Authority, that arrangements have been made for the provision of communication facilities to Stage 1.
- D29. The Applicant must demonstrate that the carrier has confirmed in writing they are satisfied that the fibre ready facilities are fit for purpose.

TRANSGRID EASEMENT

- D30. The Applicant must:
 - (a) provide safe and unobstructed access for TransGrid plant and personnel to access the transmission towers, lines and easement on the Site, 24 hours a day, 7 days a week;
 - (b) comply with the requirements of TransGrid for any works in the TransGrid easement on the Site; and
 - (c) advise TransGrid of any proposed amended or modified encroachment into the easement.

WATER NSW

- D31. The Applicant must:
 - (a) comply with the requirements of Water NSW for any works adjacent to, or over, the water pipelines corridor;
 - (b) consult with Water NSW during detailed design of Stage 1 works near the corridor including:
 - (i) design of drainage upgrade works within the corridor;
 - (ii) batters and access tracks;
 - (iii) final bridge design for the WNSLR;
 - (c) obtain from Water NSW, an access consent and construction licence to work within the water pipelines corridor, prior to the commencement of construction;
 - (d) consult with Water NSW during preparation of the CEMP, in accordance with Condition D119, and attend a site visit with Water NSW personnel, prior to finalising the CEMP, to mark the exact works area for the WNSLR bridge crossing; and
 - (e) notify any incidents that affect or could affect the water pipelines corridor to Water NSW on the 24-hour Incident Notification Number **1800 061 069**, as a matter of urgency.

WORKS-AS-EXECUTED PLANS

- D32. Before the issue of the final Occupation Certificate for Stage 1, works-as-executed drawings signed by a registered surveyor demonstrating that the stormwater drainage and finished ground levels have been constructed as approved, must be submitted to the PCA.

APPLICABILITY OF GUIDELINES

- D33. References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.
- D34. However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

ADVISORY NOTES

- AN1. All licences, permits, approvals and consents as required by law must be obtained and maintained as required for Stage 1. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.

PART 2 – ENVIRONMENTAL PERFORMANCE CONDITIONS

VISUAL AMENITY

Landscape Management Plan

- D35. Prior to the commencement of construction of Stage 1, the Applicant must prepare a Landscape Management Plan (LMP), to the satisfaction of the Planning Secretary. The plan must form part of the CEMP in accordance with Condition D119 and the OEMP in accordance with Condition D130 and must:
- (a) be prepared in consultation with Council;
 - (b) detail procedures for the retention of existing native vegetation in the north-western corner of the Site and protection of this vegetation from construction impacts;
 - (c) include visual impact mitigation measures for construction including but not limited to:
 - (i) the location of site sheds, compounds and machinery parking areas, avoiding the western and southern site boundaries, or other locations highly visible from adjacent residential properties;
 - (ii) ~~procedures for progressive grassing of exposed soil, as soon as reasonably practicable after disturbance, focusing on areas where building construction will occur at a later stage; The contractor shall employ the use of a dust suppressing polymer agent ideally with a green tint to reduce the visual impact of the exposed building pads & to assist in reducing the dust generated on site.~~
 - (d) detail the works required to construct the landscape bund along the western boundary of the Site, as shown on Error! Reference source not found.4 in **Appendix 2**, including provision for the landscaping to incorporate mature trees (no less than 75 litre pot size);
 - (e) include a schedule of works which prioritises the construction of the landscape bund along the western boundary of the Site, as shown on **Figure 4** in **Appendix 2**.
 - (f) include a program for implementing the landscape bund as soon as reasonably practicable, and no later than prior to operation of Stage 1;
 - (g) describe the integration of landscaping with fixed elements, including retaining walls and noise walls;
 - (h) describe the monitoring and maintenance procedures to ensure the success of the landscaping works over the life of the Development; and
 - (i) **update the LEMP to include modifications to the western bund, bio-retention basin 2/3 and the noise wall approved under MOD 3.**
- D36. The Applicant must:
- (a) not commence construction of Stage 1 until the LMP is approved by the Planning Secretary.
 - (b) must implement the most recent version of the LMP approved by the Planning Secretary; and
 - (c) include the monitoring and maintenance procedures contained in the LMP within the OEMP required in accordance with Condition D130.

Landscaping

- D37. The Applicant must complete the landscape bund along the western boundary of the Site as shown on **Figure 4** in **Appendix 2** within six months of commencing any construction including bulk earthworks.
- D38. The Applicant must maintain all landscaping implemented as part of Stage 1, as shown on Error! Reference source not found.4 in **Appendix 2**, for the duration of the Development. If the monitoring carried out as part of Condition D35 indicates that any aspect of the landscaping has not been successful, the Applicant must undertake re-planting and rehabilitation works, as soon as reasonably practicable.

Setbacks

- D39. The Applicant must ensure building services including tanks are integrated into the building design and landscaped areas to reduce visibility from public areas, unless otherwise required by an authority or Australian Standard, to be located within the front boundary setback.

Lighting and Security Cameras

- D40. The Applicant must ensure the lighting associated with Stage 1:
- (a) complies with the latest version of AS 4282-1997 - *Control of the obtrusive effects of outdoor lighting* (Standards Australia, 1997); and
 - (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.
- D41. The Applicant must ensure any security cameras installed as part of Stage 1 are directed away from adjacent private properties.

Reflectivity

- D42. The visible light reflectivity from building materials used in the facades and roofs of the warehouses and offices must be designed to minimise glare. A report demonstrating compliance with these requirements is to be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.

Signage and Fencing

- D43. All signage and fencing must be erected in accordance with the plans at Appendix 1 and Appendix 2, as modified.**

Note: This condition does not apply to temporary construction and safety related signage and fencing.

- D43A. Prior to construction of any signage for Stage 1, the Applicant must consult with Council on the final signage strategy.**

- D44. All fencing along building frontages must be located behind the landscape setbacks and not along the front boundary. The fencing must be a maximum height of 2.1 metre and be an open style.

- D44A. Notwithstanding the controls listed in Condition D44, the Applicant may construct a 2.4 m high boundary fence between Lots 1A and 1B/1C.**

- D45. The Applicant must:
- (a) remove existing rural fencing along the water pipelines corridor adjacent the site and dispose to an appropriate waste facility licensed to accept the waste;
 - (b) install and maintain temporary security fencing along the water pipelines corridor adjacent the site, for the duration of construction, or until a permanent fence is installed;
 - (c) install permanent 2.4-metre-high fencing along the water pipelines corridor adjacent the site, including the approaches to the WNSLR bridge over the water pipelines corridor and above retaining walls, unless otherwise agreed with Water NSW;
 - (d) install concrete barriers or barrier guard rails (including barriers leading up to bridge structure) to the WNSLR where there is potential for large vehicles to drive over retaining walls and into the water pipelines corridor. Barriers must be rated to withstand impact from B-Double size vehicles; and
 - (e) install cranked throw screens on both sides of the WNSLR bridge crossing the Water NSW water pipeline corridor.

- D45A. Prior to construction of Building 1A, the Applicant must submit a final architectural design for Building 1A detailing building articulation, colour schemes and signage. The Applicant must not commence construction of Building 1A until the final architectural design is approved by the Planning Secretary.**

WESTERN NORTH-SOUTH LINK ROAD (WNSLR)

General Requirements

- D46. The Applicant must design and construct the WNSLR in accordance with the requirements of:
- (a) Council, the PCA and any approval issued under section 138 of the *Roads Act 1993* including the Works Authorisation Deed (WAD);
 - (b) TfNSW for the bridge crossing of the future WSFL; and
 - (c) Water NSW for the bridge crossing of the water pipelines corridor.
- D47. The Applicant must design and construct the intersections of the WNSLR with Estate Road 1 and Lockwood Road to the satisfaction of the relevant roads authority.

D47A. Prior to the commencement of construction of car park access for Lot 9, DP1157476 (57-87 Lockwood Road, Erskine Park NSW 2759), the Applicant must submit a Section 138 Application (including payment of fees together with any applicable bonds) to Penrith City Council for obtaining a *Roads Act 1993* approval. The Section 138 Application may include but is not limited to the following works:

- vehicular crossings (including kerb reinstatement of redundant vehicular crossings);
- road opening for utilities and stormwater (including stormwater connection to Council infrastructure); and
- road occupancy or road closures.

All works shall be carried out in accordance with the *Roads Act 1993* approval, the development consent including the stamped approved plans, and Penrith City Council's specifications.

Note: contact Penrith City Council's City Works Department on (02) 4732 7777 for further information regarding the application process.

Works at Lenore Drive/Grady Crescent/WNSLR Intersection

- D48. Prior to the commencement of construction of the Lenore Drive/Grady Crescent/WNSLR intersection (the intersection), the Applicant must finalise the detailed design, including a Traffic Signal Plan, for the intersection works. The detailed design must:
- (a) cut back the median further with a taper in Grady Crescent to accommodate the dual B-Double swept paths turning from WNSLR onto Lenore Drive; and
 - (b) include an angled pedestrian crossing on the south-eastern corner of the intersection so that pedestrians are not confused by the pedestrian lantern on the opposite side of the intersection.
- D49. The Applicant must enter into a WAD for works at the intersection with TfNSW (former RMS). The WAD must be executed prior to the submission of the detailed design required under condition D48 to TfNSW for approval.
- D50. The Applicant must design the proposed traffic control light at the intersection in accordance with Austroads guidelines, RMS Signal Design Manual and Australian Codes of Practice. The traffic control light design must be endorsed by a suitably qualified practitioner whose qualification has been approved by TfNSW (former RMS).
- D51. The Applicant must submit the certified copies of the traffic signal design plans to TfNSW (former RMS) for approval prior to the issue of a Construction Certificate.
- D52. The Applicant must submit a request to TfNSW (former RMS) Network Operations Team to obtain relevant approvals to remove the signalised pedestrian crossing on the eastern leg of the intersection.
- D53. The Applicant must carry out all public utility adjustment/relocation works necessary for the intersection works as required by relevant public utility authorities and/or their agents.
- D54. The Applicant must make a ten (10) year maintenance contribution for the intersection to TfNSW (former RMS).

D55. The intersection works must be carried out at no cost to TfNSW (former RMS).

Pre-Construction

D56. Prior to the commencement of construction of the WNSLR, the Applicant must:

- (a) obtain the written consent of the Minister for Planning and Public Spaces under the Biodiversity Covenant, to construct the WNSLR over the Erskine Park Biodiversity Corridor; and
- (b) provide evidence to the satisfaction of the Planning Secretary, demonstrating the design of the WNSLR and bridge crossings have been agreed with the relevant roads authority, Council, TfNSW and Water NSW.

Consultation

D57. The Applicant must develop a schedule for consultation with and approval by TfNSW for the construction of the bridge foundations over the future WSFL, including geotechnical and structural certification as required by TfNSW. The schedule must form part of the CEMP required by Condition D119.

D58. The Applicant must develop a schedule for consultation with and approval by Water NSW for the construction of the bridge over the water pipelines corridor. This schedule must form part of the CEMP required by Condition D119.

Pre-Operation

D59. Prior to operation of any Stage of the Development, the Applicant must complete construction of the WNSLR to the satisfaction of the relevant roads authority and the PCA.

D60. Prior to the commencement of operation of the WNSLR, the Applicant must provide works-as-executed drawings to Water NSW for the WNSLR bridge. The drawings must clearly show any changes to the bridge design or the works adjacent to the water pipelines corridor.

D61. Prior to the commencement of operation of the WNSLR, the Applicant must design and construct a stormwater management system for the WNSLR. The system must:

- (a) be designed by a suitably qualified and experienced person(s);
- (b) be generally in accordance with the conceptual design in the RtS;
- (c) ensure that the system capacity has been designed in accordance with AUSTROADS guidelines;
- (d) achieve the pollutant reduction targets specified in RMS's *Water Sensitive Urban Design (WSUD) Guidelines* (March 2016) and Council's *Water Sensitive Urban Design (WSUD) Policy* (December 2013); and
- (e) ensure the outlet structures are designed in accordance with NRAR's *Guidelines for Controlled Activities on Waterfront Land* (May 2018).

Dedication of Infrastructure and Land

D62. Prior to the completion of construction of the WNSLR, the Applicant must consult with Water NSW regarding land subdivision and stratum arrangements for the acquisition and dedication of Water NSW land to Council for the WNSLR bridge.

D63. Following completion of construction of the WNSLR to the satisfaction of the relevant roads authority, the Applicant must dedicate the WNSLR and its associated land owned by Water NSW and BGMG 11 Pty Limited as trustee for the BGMG 1 Oakdale West Trust, to the relevant roads authority in accordance with the requirements of the Planning Agreement.

D64. The Applicant shall retain care, control and ownership of bio-retention basin no. 1 associated with the WNSLR.

TRANSPORT, ACCESS AND PARKING

Construction Traffic Management Plan

D65. Prior to the commencement of construction of Stage 1, the Applicant must prepare a Construction Traffic Management Plan (CTMP) to the satisfaction of the Planning Secretary. The CTMP must form part of the CEMP required by Condition D119 and must:

- (a) be prepared by a suitably qualified and experienced person(s);
- (b) be prepared in consultation with Council, Mamre Anglican School, Emmaus Catholic College, Emmaus Catholic Care Village and Trinity Catholic Primary School;
- (c) detail specific measures to manage construction traffic to avoid school drop off and pick up times (Monday to Friday 8 am – 9.30 am and 2.30 pm – 4 pm) and Higher School Certificate exam periods, including any temporary infrastructure arrangements and traffic safety measures;
- (d) detail the measures to be implemented to ensure road safety and network efficiency during construction, including scheduling deliveries of heavy plant and equipment outside of peak periods, or during school holidays where possible;
- (e) detail heavy vehicle routes, access and parking arrangements;
- (f) include a Driver Code of Conduct to:
 - i. minimise the impacts of construction on the local and regional road network;
 - ii. minimise conflicts with other road users including the students, staff, visitors and residents of the neighbouring schools and aged care village;
 - iii. minimise road traffic noise, both on Bakers Lane and from construction vehicles on Site; and
 - iv. ensure truck drivers use specified routes and adhere to the speed restrictions on Bakers Lane;
- (g) include a program to monitor the effectiveness of these measures;
- (h) detail procedures for early notification to residents and the community (including local schools), of any potential disruptions to routes; and
- (i) **update the CTMP to include modifications to construction traffic management approved under MOD 2 and MOD 3.**

D66. The Applicant must:

- (a) not commence construction of Stage 1 until the CTMP required by Condition D65 is approved by the Planning Secretary; and
- (b) implement the most recent version of the CTMP approved by the Planning Secretary for the duration of construction.

Estate Roads and Intersections

D67. The Applicant must design and construct the internal estate roads and intersections to accommodate the turning path of a B-Double, to the satisfaction of the Relevant Roads Authority.

D68. Following the issue of a Subdivision Certificate, the estate roads shall be dedicated to the Relevant Roads Authority. Prior to any dedication, the Applicant shall ensure construction of the estate roads has been completed to the satisfaction of the Relevant Roads Authority and measures (such as a performance bond) are in place for any prescribed maintenance period, to the satisfaction of the Relevant Roads Authority.

Operating Conditions

D69. The Applicant must ensure:

- (a) internal roads, driveways and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) are constructed and maintained in accordance with the latest version of *AS 2890.1:2004 Parking facilities Off-*

street car parking (Standards Australia, 2004) and *AS 2890.2:2002 Parking facilities Off-street commercial vehicle facilities* (Standards Australia, 2002);

- (b) **parking for Stage 1 is provided in accordance with the EIS and RtS for MOD 5;**
- (c) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant Austroads guidelines;
- (d) Stage 1 does not result in any vehicles queuing on the public road network;
- (e) heavy vehicles associated with Stage 1 are not parked on local roads or footpaths in the vicinity of the Site;
- (f) all vehicles are wholly contained on site before being required to stop;
- (g) all loading and unloading of materials are carried out on Site;
- (h) all trucks entering or leaving the Site with loads have their loads covered and do not track dirt onto the public road network; and
- (i) the proposed turning areas in the car parks are kept clear of any obstacles, including parked cars, at all times.

Operational Traffic Management Plan

D69A The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:

- (a) **be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW;**
- (b) **detail the numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation;**
- (c) **include measures to maintain road safety and network efficiency;**
- (d) **detail measures to minimise traffic noise, including procedures for receiving and addressing complaints from the community about Stage 1 related traffic and noise;**
- (e) **include a Driver's Code of Conduct that addresses:**
 - (i) **travelling speeds and adherence to site-specific speed limits;**
 - (ii) **procedures to ensure drivers adhere to designated heavy vehicle routes; and**
 - (iii) **procedures to ensure drivers implement safe driving practices.**

D69B The Applicant must:

- (a) **not commence operation of Stage 1 until the OTMP required by condition D69A is approved by the Planning Secretary; and**
- (b) **implement the most recent version of the OTMP approved by the Planning Secretary for the duration of operation.**

NOISE

Hours of Work

D70. The Applicant must comply with the hours detailed in **Table 5**, unless otherwise agreed in writing by the Planning Secretary.

Table 5: Hours of Work

Activity	Day	Time
Construction	Monday – Friday	7 am to 6 pm
	Saturday	8 am to 1 pm
Operation	Monday – Sunday (including public holidays)	24 hours

- D71. Works outside of the hours identified in Condition D70 may be undertaken in the following circumstances:
- (a) works that are inaudible at the nearest sensitive receivers;
 - (b) works agreed to in writing by the Planning Secretary;
 - (c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
 - (d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

Construction Noise Limits

- D72. Stage 1 must be constructed with the aim of achieving the construction noise management levels detailed in the *Interim Construction Noise Guideline* (DECC, 2009) (as may be updated or replaced from time to time). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the Construction Noise and Vibration Management Plan required by Condition D73.

Construction Noise and Vibration Management Plan

- D73. The Applicant must prepare a Construction Noise and Vibration Management Plan (CNVMP) for Stage 1, to the satisfaction of the Planning Secretary. The CNVMP must form part of a CEMP in accordance with Condition D119 and must:
- (a) be prepared by a suitably qualified and experienced noise expert;
 - (b) describe procedures for achieving the noise management levels in EPA's *Interim Construction Noise Guideline* (DECC, 2009) (as may be updated or replaced from time to time);
 - (c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;
 - (d) include strategies to minimise impacts to sensitive receivers, including, where practicable, starting noisy equipment away from sensitive receivers and implementing respite periods;
 - (e) include strategies that have been developed with the sensitive receivers identified in **Appendix 5** for managing high noise generating works;
 - (f) describe the community consultation undertaken to develop the strategies in Condition D73(e);
 - (g) include a monitoring program that:
 - (i) includes a protocol for determining exceedances of the relevant conditions in this approval;
 - (ii) evaluates and reports on the effectiveness of the noise and vibration management measures;
 - (iii) include procedures to relocate, modify, mitigate or stop work to ensure compliance with relevant criteria; and
 - (h) include a complaints management system that would be implemented for the duration of Stage 1.
- D74. The Applicant must:
- (a) not commence construction of Stage 1 until the CNVMP required by Condition D73 is approved by the Planning Secretary; and
 - (b) implement the most recent version of the CNVMP approved by the Planning Secretary for the duration of construction.

Operational Noise Limits

D75. The Applicant shall undertake operation of Stage 1 in a manner that ensures the Development complies with the noise limits for the Concept Proposal in Condition **Error! Reference source not found.** of this consent.

Noise Barrier

D75A The Applicant must install the noise barriers located on the western boundary, as shown on Figure 6 in Appendix 5, to the satisfaction of the Planning Secretary. The noise barriers must be completed no later than 30 November 2020, unless otherwise agreed by the Planning Secretary.

Noise Verification

D75(b). A Noise Verification Report must be prepared by a suitably qualified and experienced acoustic consultant and submitted to the satisfaction of the Planning Secretary at the following stages of the development:

- (a) within three months of commencing operation of any buildings on the site; and
- (b) two years after commencing operation of any buildings on the site.

D75(c). The Noise Verification Reports required by Condition D75(b) must include:

- (a) an analysis of compliance with the noise limits in Condition B18, undertaken in accordance with the *NSW Noise Policy for Industry* (EPA 2017) and Australian Standard AS 1055:2018 Acoustics – Description and measurement of environmental noise (Australian Standards 2018);
- (b) a detailed maximum noise level event assessment undertaken in accordance with the *NSW Noise Policy for Industry* (EPA 2017);
- (c) an assessment of the performance and effectiveness of applied noise mitigation measures, including the noise barrier; and
- (d) identification of additional noise control measures to be implemented to address any exceedances of the limits in Condition B18 and details of when these measures would be implemented and how their effectiveness would be measured and reported to the Planning Secretary.

VIBRATION

Vibration Criteria

D76. Vibration caused by construction works on the site, as measured at any residence or structure outside the site, must be limited to:

- (e) for structural damage, the latest version of *DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures* (German Institute for Standardisation, 1999); and
- (f) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: a technical guideline* (DEC, 2006) (as may be updated or replaced from time to time).

D77. Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in Condition D76.

D78. The limits in Conditions D76 and D77 apply unless otherwise outlined in a CNVMP, approved as part of the CEMP required by Condition D119 of this consent.

SOILS & WATER

Imported Soil

D79. The Applicant must prepare a Fill Importation Protocol for Stage 1. The protocol must form part of the CEMP required by Condition D119 and must detail the measures to:

- (a) ensure only VENM, ENM, or other material approved in writing by EPA is brought onto the site;
- (b) keep accurate records of the volume and type of fill to be used; and

- (c) make these records available to the Department upon request.

Erosion and Sediment Control

- D80. The Applicant must prepare an Erosion and Sediment Control Plan for Stage 1, including the WNSLR, to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with Condition D119 and must:
- (a) be prepared by a suitably qualified and experienced person(s);
 - (b) be generally consistent with the Erosion and Sediment Control Plans in the RTS and those prepared by the contractor for each sequence of the works, as approved by the PCA;
 - (c) include detailed erosion and sediment controls developed in accordance with the relevant requirements of *Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book* (Landcom, 2004) guideline; and
 - (d) include procedures for maintaining erosion and sediment controls in efficient working order for the duration of construction, to ensure Stage 1 complies with Condition D82.
- D81. Prior to the commencement of bulk earthworks as part of Stage 1, the Applicant must implement erosion and sediment controls identified by Condition D80 and maintain those controls throughout bulk earthworks and construction, to ensure stormwater flows do not increase in any downstream areas. The Environmental Representative, appointed in accordance with Condition D123, shall make a written statement to the Planning Secretary confirming the erosion and sediment controls are operational, prior to the commencement of bulk earthworks and other construction activities required for Stage 1.

Discharge Limits

- D82. Stage 1 must comply with section 120 of the POEO Act, which prohibits the pollution of waters.

Stormwater Management System

- D83. The Applicant must design, construct and operate a stormwater management system for Stage 1 that:
- (a) is designed by a suitably qualified and experienced person(s);
 - (b) is generally in accordance with the conceptual design in the RtS;
 - (c) is in accordance with applicable Australian Standards;
 - (d) ensures the system capacity is designed in accordance with *Australian Rainfall and Runoff* (Engineers Australia, 2016), *Managing Urban Stormwater: Council Handbook* (EPA, 1997) and *Stormwater Drainage Specifications for Building Development* (Penrith Council, May 2018);
 - (e) ensures peak stormwater flows from the Site do not exceed pre-development flows in any downstream areas for all rainfall events up to and including the 1 in 100-year average recurrence interval (ARI);
 - (f) ensures peak stormwater flows from the Site do not exceed existing flows in the Water NSW drainage lines and water pipelines corridor; and
 - (g) achieves the pollutant reduction targets specified in Council's *Water Sensitive Urban Design (WSUD) Policy*, (December 2013).
- D84. All stormwater drainage infrastructure on the Site, including bio-retention basins, shall remain under the care, control and ownership of the registered proprietor of the lots.
- D85. The Applicant shall create a drainage easement for the outlet swales from the bio-retention basins on the site, in accordance with the requirements of Council and Condition D22.

Groundwater

- D86. If groundwater is intersected during construction of Stage 1, the Applicant must:
- (a) obtain the necessary water licences or approvals from NRAR; and
 - (b) develop a Groundwater Management Plan (GMP) for the testing, dewatering, storage, movement and treatment of groundwater, to the satisfaction of NRAR.

Waterfront Land

D87. The Applicant must carry out all works on or adjacent to waterfront land in accordance with the Department of Industry *Guidelines for Controlled Activities on Waterfront Lands 2012*.

BIODIVERSITY

Flora and Fauna Management Plan

D88. The Applicant must prepare a **Terrestrial and Aquatic** Flora and Fauna Management Plan (FFMP) for Stage 1, to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with Condition D119 and must:

- (a) be prepared by a suitably qualified and experienced person(s);
- (b) describe procedures to manage impacts on biodiversity values during earthworks, clearing and dam decommissioning;
- (c) include procedures for clearing marking and protecting the areas of vegetation to be retained on the Site, including the mature vegetation in the north-western corner and the **Biodiversity Offset Area, established in accordance with Condition D91 adjacent to Ropes Creek; and Riparian Corridor adjacent to Ropes Creek in accordance with the Vegetation Management Plan (VMP) prepared under Condition D91;**
- (d) detail the specific erosion and sediment controls to protect the retained vegetation.

D89. The Applicant must:

- (a) not commence bulk earthworks until the FFMP required by Condition D88 is approved by the Planning Secretary; and
- (b) implement the most recent version of the FFMP approved by the Planning Secretary for the duration of bulk earthworks and construction.

Offsets for Stage 1

D90. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must retire **472 173** ecosystem credits to offset the removal of **4.44 4.36** hectares of native vegetation on the Site.

Note: *If the Applicant seeks a variation to the offset rules, the Applicant must demonstrate that reasonable steps have been taken to find like-for-like offsets in accordance with Section 10.5.4.2 of the FBA and Appendix A of the OEH's NSW Biodiversity Offsets Policy for Major Projects 2014.*

In accordance with Principle 3 of the OEH's NSW Biodiversity Offsets Policy for Major Projects 2014, the Policy does not allow variations to the offset rules to be applied to 'threatened species and ecological communities that are considered nationally significant (listed under the Environmental Protection and Biodiversity Conservation Act 1999)'. These must be offset in a like for like manner.

~~D91. The Applicant shall establish a Biodiversity Offset Area on the Site, consistent with the area described in the RtS, in accordance with a Biodiversity Stewardship Agreement with the Biodiversity Conservation Trust.~~

Vegetation Management Plan

D91. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must prepare and implement a Vegetation Management Plan (VMP) for the restoration and rehabilitation of 4.2 ha of Riparian Corridor adjacent to Ropes Creek to meet the objectives of the Water Management Act 2000.

~~Biodiversity Management Action Plan~~

~~D92. The Applicant must maintain the Biodiversity Offset Area on the Site in accordance with a Biodiversity Management Action Plan approved by the Biodiversity Conservation Trust.~~

Offsets for the WNSLR

- D93. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must:
- (a) offset 0.42 ha of vegetation lost in the Erskine Park Biodiversity Corridor as a result of the WNSLR by carrying out planting within the area shown in green edging on **Figure** in **Appendix 6**; and
 - (b) plant the area shown in green edging on **Figure** of **Appendix 6** with species similar to those identified for zone 4a, on the south-eastern side of Ropes Creek, in the Biodiversity Management Plan Erskine Park Employment Area (HLA-Envirosciences, 2 May 2006).
- D94. The Applicant shall monitor and maintain the planting for a period of six months to ensure a minimum 85% survival rate of the planting.
- D95. The Applicant must notify the Planning Ministerial Corporation at least one month before the completion of planting to enable the Planning Ministerial Corporation to arrange ongoing maintenance.

Snake Management Measures

- D96. Prior to construction of Stage 1, the Applicant must implement snake management measures to limit, to the extent practicable, movement of snakes from the Site into the adjacent school and retirement village on the western boundary of the Site. The measures shall be detailed in the CEMP required by Condition D119 and shall include, but not be limited to, provision of alternative snake habitat on Site, fencing along the western boundary and installation of snake deterrents.

BUSHFIRE PROTECTION

- D97. The Applicant shall ensure Stage 1 complies with:
- (a) [the relevant provisions of Planning for Bushfire Protection 2019](#);
 - (b) the construction standards and asset protection zone requirements recommended in the Oakdale Industrial Estate - West Bushfire Protection Assessment, prepared by Australian Bushfire Protection Planners Pty Ltd, dated September 2016, [and updated 13 January 2020](#), and the [SSD-7348 \(MOD 6\) Bushfire Hazard Assessment prepared by Blackash Bushfire Consulting, dated 12 November 2020](#); and
 - (c) *AS2419.1 – 2005 Fire Hydrant Installations* for firefighting water supply.

AIR QUALITY

Dust Minimisation

- D98. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.
- D99. During construction of Stage 1, the Applicant must ensure that:
- (a) exposed surfaces and stockpiles are suppressed by regular watering;
 - (b) all trucks entering or leaving the Site with loads have their loads covered;
 - (c) trucks associated with Stage 1 do not track dirt onto the public road network;
 - (d) public roads used by these trucks are kept clean; and
 - (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.

Construction Air Quality Management Plan

- D100. Prior to the commencement of construction of Stage 1, the Applicant must prepare a Construction Air Quality Management Plan (CAQMP) to the satisfaction of the Planning Secretary. The CAQMP must form part of the CEMP required by Condition D119 and must:
- (a) be prepared by a suitably qualified and experienced person(s);
 - (b) detail and rank all emissions from all construction activities, including particulate emissions;

- (c) describe a program that is capable of evaluating the performance of the construction and determining compliance with key performance indicators;
- (d) identify the control measures that will be implemented for each emission source; and
- (e) nominate the following for each of the proposed controls:
 - (i) key performance indicator;
 - (ii) monitoring method;
 - (iii) location, frequency and duration of monitoring;
 - (iv) record keeping;
 - (v) complaints register;
 - (vi) response procedures; and
 - (vii) compliance monitoring.

D101. The Applicant must:

- (a) not commence construction of Stage 1 until the CAQMP required by Condition D100 is approved by the Planning Secretary; and
- (b) implement the most recent version of the CAQMP approved by the Planning Secretary for the duration of construction.

Odour Management

D102. The Applicant must ensure Stage 1 does not cause or permit the emission of any offensive odour, as defined in the POEO Act.

ABORIGINAL HERITAGE

Statutory Requirements

D103. Prior to the commencement of construction of Stage 1, the Applicant must register identified Aboriginal items or objects on the OEH's Aboriginal Heritage Information Management System (AHIMS) Aboriginal Sites Register.

Archaeological Test Excavation

D104. Prior to the commencement of construction of Stage 1, the Applicant must undertake archaeological test excavation in the identified area of archaeological sensitivity adjacent to Ropes Creek and the ridgeline immediately to the west, that would be impacted by Stage 1. The test excavation must:

- (a) be undertaken in accordance with a methodology developed in consultation with registered Aboriginal parties;
- (b) be undertaken in accordance with the requirements of the Heritage and Community Engagement, Department of Premier and Cabinet (former NSW OEH Heritage Division); and
- (c) include a report detailing any further work, including archaeological salvage and monitoring, conducted in the presence of Aboriginal stakeholders.

D105. The Applicant must not commence construction of Stage 1 until the Archaeological Test Excavation Report is provided to the Heritage and Community Engagement, Department of Premier and Cabinet (former NSW OEH Heritage Division) and the Planning Secretary.

Unexpected Finds Protocol

D106. If any item or object of Aboriginal heritage significance is identified on Site:

- (a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;
- (b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and
- (c) the Biodiversity and Conservation Division of the Department must be contacted immediately.

D107. Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the *National Parks and Wildlife Act 1974* (NSW).

HISTORIC HERITAGE

Unexpected Finds Protocol

D108. If any archaeological relics are uncovered during construction of Stage 1, then all works in the immediate vicinity of the relic must cease immediately. Unexpected finds must be evaluated and recorded in accordance the requirements of Department of Premier and Cabinet, Heritage (former NSW OEH Heritage Division).

HAZARDS AND RISK

Dangerous Goods

D109. The storage of dangerous goods in Building 1A must not exceed the quantities provided in Table 6.

Table 6: Maximum storage quantities of dangerous goods

Class	Description	Packing Group	Quantity (kg)
1.4	Explosives	n/a	20,000
2.1	Flammable gas (LPG)	n/a	4125 (7,500 L)
2.1	Flammable gas (LPG) – kitchen	n/a	247.5 (450 L)
2.1	Flammable gas (aerosols)	n/a	70,000
2.2	Non-flammable, non-toxic gas (aerosols)	n/a	25,000
3	Flammable liquids	II & III	300,000
4.1	Flammable solids	III	24,000
5.1	Oxidising agents	III	25,000
6.1	Toxic substances	III	45,000
8	Corrosive substances	II & III	60,000
9	Miscellaneous Dangerous Goods	III	105,000

D109A

Pre-Construction

- (a) The Applicant must prepare the studies set out under section (b) and (c) below (the pre-construction studies). Construction, other than of preliminary works that are outside the scope of the hazard studies, must not commence until study recommendations have been considered and, where appropriate, acted upon. The Applicant must submit the studies to the Planning Secretary no later than one month prior to the commencement of construction of Building 1A (other than preliminary works), or within such further period as the Planning Secretary may agree.
- (b) A Fire Safety Study for Building 1A. This study must cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study must meet the requirements of Fire and Rescue NSW.
- (c) A Final Hazard Analysis (FHA) of Building 1A, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. The FHA must report:
 - layout of dangerous goods storage area for specific dangerous goods classes; firewall and fire safety requirement between the dangerous goods storage and Energy Complex 2;
 - implementation of all recommendations of the Preliminary Hazard Analysis prepared by RiskCon Engineering dated 24 October 2019
 - compliance with all relevant standards.

Pre-Commissioning

- (a) Prior to commissioning Building 1A, the Applicant must develop and implement the plans and systems set out under subsection (b) to (c) below. The Applicant must

submit to the Planning Secretary documentation describing the plans and systems no later than two months prior to the commencement of commissioning of Building 1A, or within such further period as the Planning Secretary may agree.

- (b) A comprehensive Emergency Plan and detailed emergency procedures for Building 1A. This plan must include detailed procedures for the safety of all people outside of the project who may be at risk from the project. The plan must be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.
- (c) A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document must clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. The Safety Management System must be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'. Records must be kept on-site and shall be available for inspection by the Planning Secretary upon request.

Pre-startup

Hazard Audit

- (a) Twelve months after the commencement of operation of Building 1A and every five years thereafter, or at such intervals as the Planning Secretary may agree, the Applicant must carry out a comprehensive Hazard Audit of Building 1A and within one month of each audit submit a report to the Planning Secretary.
The audits must be carried out at the Applicant's expense by a qualified person or team, independent of the development, and must be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'.

D109B The Applicant must not store more than 1.1 million kilograms of combustible liquid commodities at warehouse Building 1A.

Bunding

D110. The Applicant must store all chemicals, fuels and oils used on Site in appropriately banded areas in accordance with the requirements of all relevant Australian Standards, and/or EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Manual* (Department of Environment and Climate Change, 2007).

WASTE MANAGEMENT

Waste Storage

D111. Waste must be secured and maintained within designated waste storage areas at all times and must not leave the Site onto neighbouring public or private properties.

Waste Management Plan

D112. The Applicant must implement the Waste Management Plan (WMP) in the EIS for the duration of construction and operation of Stage 1.

Statutory Requirements

D113. The Applicant must assess and classify all liquid and non-liquid wastes to be taken off Site in accordance with the latest version of EPA's *Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014) and dispose of all wastes to a facility that may lawfully accept the waste.

D114. Waste generated outside the Site must not be received at the Site for storage, treatment, processing, reprocessing, or disposal.

Pests, Vermin and Noxious Weed Management

D115. The Applicant must:

- (a) implement suitable measures to manage pests, vermin and declared noxious weeds on the Site; and
- (b) inspect the Site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on Site in sufficient numbers to pose an environmental hazard or cause the loss of amenity in the surrounding area.

Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Biosecurity Act 2015 (NSW).

CONTAMINATION

D116. Prior to the commencement of construction of Stage 1, the Applicant must prepare an unexpected finds protocol to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the CEMP in accordance with Condition D119 and must ensure any material identified as contaminated is disposed offsite, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the Site.

COMMUNITY ENGAGEMENT

D117. The Applicant must consult with the community regularly throughout Stage 1, including consultation with the nearby sensitive receivers identified in **Appendix 5**, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders. Community engagement shall be undertaken in accordance with the Community Communication Strategy approved in accordance with Condition C19.

PART 3 – ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

MANAGEMENT PLAN REQUIREMENTS

D118. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:

- (a) details of:
 - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - (ii) any relevant limits or performance measures and criteria; and
 - (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, Stage 1 or any management measures;
- (b) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
- (c) a program to monitor and report on the:
 - (i) impacts and environmental performance of Stage 1; and
 - (ii) effectiveness of the management measures set out pursuant to paragraph (b) above;
- (d) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
- (e) a program to investigate and implement ways to improve the environmental performance of Stage 1 over time;
- (f) a protocol for managing and reporting any:
 - (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);
 - (ii) complaint;
 - (iii) failure to comply with statutory requirements; and
- (g) a protocol for periodic review of the plan.

Note: *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

D119. The Applicant must prepare a Construction Environmental Management Plan (CEMP) for Stage 1, including the WNSLR, in accordance with the requirements of Condition D118 and to the satisfaction of the Planning Secretary. The Applicant may prepare separate CEMPs for the Stage 1 works and the WNSLR, addressing all relevant requirements of this consent.

D120. Prior to finalising the CEMP, the Applicant must consult with TfNSW (including the former RMS), Council and Water NSW. The Applicant must also attend a site visit with Water NSW personnel to mark the exact works area for the WNSLR bridge crossing.

D121. As part of the CEMP required under Condition D119 of this consent, the Applicant must include:

- (a) detailed procedures for managing bulk earthworks to avoid adverse water quality impacts on Ropes Creek, including, but not limited to:
 - (i) any staging of earthworks to minimise disturbed areas;
 - (ii) limits on the areal extent of earthworks;
 - (iii) progressive grassing of exposed areas, as soon as reasonably practicable, focusing on areas where building construction will occur at a later stage;
- (b) Landscape Management Plan (LMP) (see Condition D35);

- (c) Construction Traffic Management Plan (CTMP) (see Condition D65);
- (d) Consultation Schedule for TfNSW and Water NSW (see Conditions D57 and D58);
- (e) Construction Noise and Vibration Management Plan (CNVMP) (see Condition D73);
- (f) Fill Importation Protocol (see Condition D79) and Erosion and Sediment Control Plan (see Condition D80);
- (g) Flora and Fauna Management Plan (FFMP) (see Condition D88);
- (h) Snake Management Measures (see Condition D96);
- (i) Construction Air Quality Management Plan (CAQMP) (see Condition D100);
- (j) Unexpected Finds Protocol (see Conditions D106 and D108);
- (k) Unexpected Contamination Protocol (see Condition D116); and
- (l) a Community Consultation and Complaints Handling Procedure.

D122. The Applicant must:

- (a) not commence construction of Stage 1 until the CEMP is approved by the Planning Secretary; and
- (b) carry out the construction of Stage 1 in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.

ENVIRONMENTAL REPRESENTATIVE

D123. The Applicant must engage an Environmental Representative (ER) to oversee construction of Stage 1. Construction of Stage 1 must not commence until an ER has been approved by the Planning Secretary and engaged by the Applicant.

D124. The Planning Secretary's approval of an ER must be sought no later than one month before the commencement of construction of Stage 1, or within another timeframe agreed with the Planning Secretary.

D125. The proposed ER must be a suitably qualified and experienced person who was not involved in the preparation of the EIS or RtS and is independent from the design and construction personnel for Stage 1.

D126. The Applicant may engage more than one ER for Stage 1, in which case the functions to be exercised by an ER under the terms of this approval may be carried out by any ER that is approved by the Planning Secretary for the purposes of Stage 1.

D127. For the duration of construction of Stage 1, or as agreed with the Planning Secretary, the approved ER must:

- (a) receive and respond to communication from the Planning Secretary in relation to the environmental performance of Stage 1;
- (b) consider and inform the Planning Secretary on matters specified in the terms of this consent;
- (c) consider and recommend to the Applicant any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;
- (d) review the CEMP identified in Condition D119 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this consent, and if so:
 - (i) make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or
 - (ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary/Department for information or are not required to be submitted to the Planning Secretary/Department);

- (e) regularly monitor the implementation of the CEMP, and any other documents identified by the Planning Secretary, to ensure implementation is being carried out in accordance with the document and the terms of this consent;
- (f) as may be requested by the Planning Secretary, help plan, attend or undertake audits of Stage 1 commissioned by the Department including scoping audits, programming audits, briefings, and site visits;
- (g) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints;
- (h) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an **Environmental Representative Monthly Report** providing the information set out in the Environmental Representative Protocol under the heading "Environmental Representative Monthly Reports." The **Environmental Representative Monthly Report** must be submitted within seven calendar days following the end of each month for the duration of the ER's engagement, or as otherwise agreed with the Planning Secretary.

D128. The Applicant must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition D127 (including preparation of the ER monthly report), as well as:

- (a) the complaints register; and
- (b) a copy of any assessment carried out by the Applicant of whether proposed work is consistent with the consent (which must be provided to the ER before the commencement of the subject work).

D129. The Planning Secretary may at any time commission an audit of an ER's exercise of its functions under Condition D142. The Applicant must:

- (a) facilitate and assist the Planning Secretary in any such audit; and
- (b) make it a term of their engagement of an ER that the ER facilitate and assist the Planning Secretary in any such audit.

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

D130. The Applicant must prepare an Operational Environmental Management Plan (OEMP) in accordance with the requirements of Condition D118 and to the satisfaction of the Planning Secretary.

D131. As part of the OEMP required under Condition D130 of this consent, the Applicant must include the following:

- (a) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of operation of Stage 1;
- (b) describe the procedures that would be implemented to:
 - (i) keep the local community and relevant agencies informed about the operation and environmental performance of Stage 1;
 - (ii) receive, handle, respond to, and record complaints;
 - (iii) resolve any disputes that may arise;
 - (iv) respond to any non-compliance;
 - (v) respond to emergencies; and
- (c) include the following environmental management plans:
 - (i) Landscape Management Plan (LMP) (see Condition D35);
 - (ii) Flora and Fauna Management Plan (FFMP) (see Condition D88);
 - (iii) Waste Management Plan (WMP) (see Condition D112).

D132. The Applicant must:

- (a) not commence operation until the OEMP is approved by the Planning Secretary; and
- (b) operate Stage 1 in accordance with the OEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).

REVISION OF STRATEGIES, PLANS AND PROGRAMS

D133. Within three months of:

- (a) the submission of a Compliance Report under Condition D141;
- (b) the submission of an Environmental Representative Monthly Report under Condition D127;
- (c) the submission of an incident report under Condition D135;
- (d) the approval of any modification of the conditions of this consent; or
- (e) the issue of a direction of the Planning Secretary under Condition D2(b) which requires a review,

the strategies, plans and programs required under this consent must be reviewed.

D134. If necessary, to either improve the environmental performance of Stage 1, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.

Note: *This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of Stage 1.*

REPORTING AND AUDITING

Incident Notification, Reporting and Response

D135. The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in **Appendix 8**.

Non-Compliance Notification

D136. The Department must be notified in writing to compliance@planning.nsw.gov.au within seven (7) days after the Applicant becomes aware of any non-compliance.

D137. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

D138. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Compliance Reporting

D139. No later than 6 weeks before the date notified for the commencement of construction, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2018) must be submitted to the Department.

D140. Compliance Reports of the Development must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018).

D141. The Applicant must make each Compliance Report publicly available no later than 60 days after submitting it to the Department and notify the Department in writing at least 7 days before this is done.

Monitoring and Environmental Audits

D142. Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing.

Note: *For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.*

ACCESS TO INFORMATION

D143. At least 48 hours before the commencement of construction until the completion of all works under this consent, the Applicant must:

- (a) make the following information and documents (as they are obtained or approved) publicly available on its website:
 - (i) the documents referred to in Condition D2 of this consent;
 - (ii) all current statutory approvals for the Development;
 - (iii) all approved strategies, plans and programs required under the conditions of this consent;
 - (iv) the proposed staging plans for the Development if the construction, operation or decommissioning of the Development is to be staged;
 - (v) regular reporting on the environmental performance of the Development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - (vi) a comprehensive summary of the monitoring results of the Development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - (vii) a summary of the current stage and progress of the Development;
 - (viii) contact details to enquire about the Development or to make a complaint;
 - (ix) a complaints register, updated monthly;
 - (x) the Compliance Report of the Development;
 - (xi) audit reports prepared as part of any monitoring or environmental audit of the Development and the Applicant’s response to the recommendations in any audit report;
 - (xii) any other matter required by the Planning Secretary; and
- (b) keep such information up to date, to the satisfaction of the Planning Secretary.

APPENDIX 1 CONCEPT PROPOSAL

Table 7: Schedule of Approved Plans – Concept Proposal

Architectural Plans prepared by SBA Architects			
Drawing	Title	Issue	Date
OAK MP 02	Estate Masterplan	D	22 November 2021
OAK MP 03	Western North South Link Road	B	30 July 2020
OAK MP 05	Precinct 1 Plan	F	30 July 2020
OAK MP 06	Precinct Plan	C	24 November 2020
OAK MP 07	Indicative Ultimate Lot Layout	C	2 June 2021
OAK MP 08	Site Analysis Plan	B	30 July 2020
OAK MP 11	Building Staging Plan (Indicative)	B	2 June 2021
OAK MP 12	Signage Precinct 1 Plan	F	2 August 2022
OAK MP 13	Fire Protection Plan	F	25 November 2020

Landscape Plans prepared by Scape Design Landscape Architecture			
Drawing	Title	Issue	Date
L.SK.000	Cover Sheet	B	8/01/21
L.SK.100	Landscape Master Plan – OWE MOD 6	B	8/01/21
L.SK.101	Street Trees & Planting Masterplan	B	8/01/21
L.SK.102	Planting Schedule – OWE MOD 5	B	8/01/21
L.SK.200	Landscape Sections – OWE MOD 5	A	26/10/20
L.SK.00 – 07, 105, 106, 200, 201 and 202	Landscape Drawing Set – OWE Lots 2A, 2C and 2D	-	23/11/21

B1. Civil Plans prepared by AT&L			
Drawing	Title	Issue	Date
15-272-C0000	Cover Sheet	A11	4-6-21
15-272-C0001	General Arrangement Master Plan	A15	4-6-21
15-272-C0002	Existing Site Plan	A14	4-6-21
15-272-C0003	Precinct Plan	A15	4-6-21
15-272-C0004	Stage 1 SSD Approval Extents Sheet 1 of 2	A18	4-6-21
15-272-C0005	Stage 1 SSD Approval Extents Sheet 2 of 2	A13	4-6-21
15-272-C0006	Cut/Fill Plan	A13	4-6-21
15-272-C0007	Stormwater Drainage Catchment Plan (Pre-Developed)	A11	4-6-21
15-272-C0008	Stormwater Drainage Catchment Plan (Developed)	A11	4-6-21
15-272-C0009	Erosion and Sediment Control Master Plan	A14	4-6-21
15-272-C0010	Typical Sections Sheet 1	A13	4-6-21

15-272-C0011	Typical Sections Sheet 2	A11	4-6-21
15-272-C0012	Typical Sections Sheet 3	A12	4-6-21
15-272-C0013	Typical Sections Sheet 4	A10	4-6-21
15-272-C0014	Typical Sections Sheet 5	A1	4-6-21
15-272-C0020	Western North-South Link Road General Arrangement Plan	A12	4-6-21
15-272-C0021	Western North-South Link Road Stormwater Drainage Catchment Plan (Pre-Developed)	A11	4-6-21
15-272-C0022	Western North-South Link Road Stormwater Drainage Catchment Plan (Developed)	A11	4-6-21
15-272-C0023	Western North-South Link Road Proposed Land Acquisition Plan	A15	4-6-21
15-272-C1003	Precinct General Arrangement Plan	A18	4-6-21
15-272-C1004	Typical Site Sections Sheet 1 of 6	A14	4-6-21
15-272-C1005	Typical Site Sections Sheet 2 of 6	A13	4-6-21

REFER TO DRAWING OAK MP03 FOR CONTINUATION

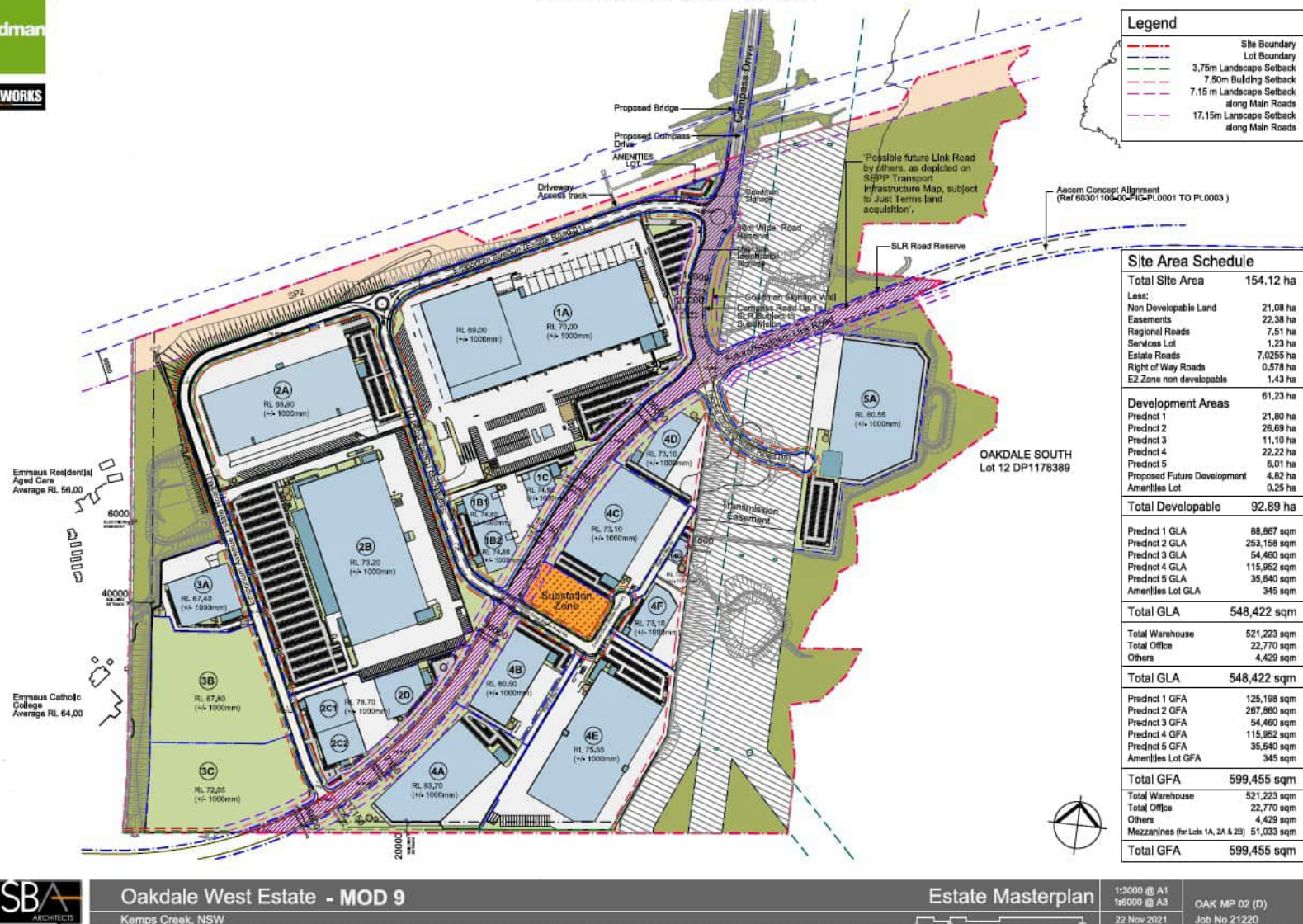


Figure 1: Concept Proposal Layout (MOD 9)



Figure 2: Staging Plan (MOD 7)

APPENDIX 2 STAGE 1 DA PLANS

Table 8: Schedule of Approved Plans – Stage 1 DA

Architectural Plans prepared by SBA Architects		
Drawing	Title	Date
OAK MP 04 (Z)	SSDA Stage 1 Development — Precinct 1	21 Sept 2018
OAK MP 05 (Z)	Precinct 1 Plan	21 Sept 2018
OAK MP 12 (12)	Signage Precinct 1 Plan	21 Sept 2018
Building 1A plans prepared by SBA Architects		
OAK 1A DA 10 (H)	Site Plan/Floor Plan	04 May 2018
OAK 1A DA 11 (C)	Roof Plan	03 April 2017
OAK 1A DA 12 (C)	Office Plan — Ground Floor	06 Sept 2016
OAK 1A DA 13 (C)	Office Plan — First Floor	06 Sept 2016
OAK 1A DA 14 (C)	Elevations Office	06 Sept 2016
OAK 1A DA 15 (C)	Elevations 1A	03 April 2017
OAK 1A DA 16 (D)	Sections	4 May 2018
Building 1B plans prepared by SBA Architects		
OAK 1B DA 20 (F)	Site Plan/Floor Plan	17 April 2018
OAK 1B DA 21 (C)	Roof Plan	06 Sept 2016
OAK 1B DA 22 (B)	Office Plan	06 Sept 2016
OAK 1B DA 24 (B)	Elevations Office	06 Sept 2016
OAK 1B DA 25 (B)	Elevations 1B	06 Sept 2016
OAK 1B DA 26 (B)	Sections	06 Sept 2016
Building 1C plans prepared by SBA Architects		
OAK 1C DA 30 (H)	Site Plan/Floor Plan	17 April 2018
OAK 1C DA 31 (C)	Roof Plan	03 April 2017
OAK 1C DA 32 (B)	Office Plan — Ground Floor	06 Sept 2016
OAK 1C DA 33 (B)	Office Plan — First Floor	06 Sept 2016
OAK 1C DA 34 (B)	Elevations Office	06 Sept 2016
OAK 1C DA 35 (C)	Elevations Sheet 1	03 April 2017
OAK 1C DA 36 (C)	Elevations Sheet 2	03 Sept 2017
OAK 1C DA 37 (C)	Sections	03 April 2017

Landscape Plans prepared by Site Image Landscape Architects			
Drawing	Title	Issue	Date
ELW-101	-	G	11.10.2018
ELW-102	-	G	11.10.2018
ELW-103	-	G	11.10.2018
ELW-104	-	G	11.10.2018
ELW-105	-	G	11.10.2018
ELW-106	-	G	11.10.2018
ELW-107	-	G	11.10.2018
ELW-108	-	G	11.10.2018
ELW-109	-	G	11.10.2018
ELW-110	-	G	11.10.2018
ELW-111	-	G	11.10.2018
ELW-112	-	G	11.10.2018
ELW-113	-	G	11.10.2018
ELW-114	-	G	11.10.2018
WNSLR-101	-	G	11.10.2018
WNSLR-102	-	G	11.10.2018
ELW-502	Plant Schedule	G	11.10.2018
OLW-001	Precinct 1 Landscape Plan	G	11.10.2018
OLW-501	Planting Palette	G	11.10.2018

Civil Plans prepared by AT&L			
Drawing	Title	Issue	Date
15-272-C0004	Stage 1 SSD Approval Extents Sheet 1 of 2	A5 A7	11-10-18 24-07-19
15-272-C0005	Stage 1 SSD Approval Extents Sheet 2 of 2	A4 A6	21-09-18 24-07-19
15-272-C0020	Western North-South Link Road General Arrangement Plan	A3 A5	21-09-18 24-07-19
15-272-C0021	Western North-South Link Road Stormwater Drainage Catchment Plan (Pre-Developed)	A5	24-07-19
15-272-C0022	Western North-South Link Road Stormwater Drainage Catchment Plan (Developed)	A3 A5	21-09-18 19-07-19
15-272-C0023	Western North-South Link Road Proposed Land Acquisition Plan	A8	24-07-19
15-272-C1000	Cover Sheet	A6	24-07-19
15-272-C1001	Drawing List	A6	24-07-19
15-272-C1002	General Notes	A6	24-07-19
15-272-C1003	Precinct General Arrangement Plan	A8	24-07-19
15-272-C1004	Typical Site Sections Sheet 1 of 6	A4 A8	21-09-18 20-03-20
15-272-C1005	Typical Site Sections Sheet 2 of 6	A4 A6	21-09-18 24-07-19
15-272-C1006	Typical Site Sections Sheet 3 of 6	A4 A8	21-09-18 20-03-20
15-272-C1007	Typical Site Sections Sheet 4 of 6	A3 A5	21-09-18 24-07-19
15-272-C1008	Typical Site Sections Sheet 5 of 6	A3 A6	11-10-18 20-03-20
15-272-C1009	Typical Site Sections Sheet 6 of 6	A4 A6	28-09-18 20-03-20
15-272-C1010	Typical Road Sections	A3 A5	21-09-18 24-07-19
15-272-C1011	Contour Plan	A5	20-03-20
15-272-C1014	Bulk Earthworks Cut/Fill Plan	A6	20-03-20
15-272-C1015	Earthworks and Stormwater Drainage Plan Sheet 1 of 20	A3 A5	21-09-18 24-07-19
15-272-C1016	Earthworks and Stormwater Drainage Plan Sheet 2 of 20	A3 A5	21-09-18 24-07-19
15-272-C1017	Earthworks and Stormwater Drainage Plan Sheet 3 of 20	A3 A5	21-09-18 24-07-19
15-272-C1018	Earthworks and Stormwater Drainage Plan Sheet 4 of 20	A3 A5	21-09-18 24-07-19
15-272-C1019	Earthworks and Stormwater Drainage Plan Sheet 5 of 20	A3 A5	21-09-18 24-07-19
15-272-C1020	Earthworks and Stormwater Drainage Plan Sheet 6 of 20	A3 A5	21-09-18 24-07-19
15-272-C1021	Earthworks and Stormwater Drainage Plan Sheet 7 of 20	A3 A5	21-09-18 24-07-19
15-272-C1022	Earthworks and Stormwater Drainage Plan Sheet 8 of 20	A3 A5	21-09-18 24-07-19
15-272-C1023	Earthworks and Stormwater Drainage Plan Sheet 9 of 20	A3 A5	21-09-18 24-07-19
15-272-C1024	Earthworks and Stormwater Drainage Plan Sheet 10 of 20	A3 A5	21-09-18 24-07-19
15-272-C1025	Earthworks and Stormwater Drainage Plan Sheet 11 of 20	A3 A5	21-09-18 24-07-19
15-272-C1026	Earthworks and Stormwater Drainage Plan Sheet 12 of 20	A3 A5	21-09-18 24-07-19

15-272-C1027	Earthworks and Stormwater Drainage Plan Sheet 13 of 20	A3 A5	21-09-18 24-07-19
15-272-C1028	Earthworks and Stormwater Drainage Plan Sheet 14 of 20	A3 A5	21-09-18 24-07-19
15-272-C1029	Earthworks and Stormwater Drainage Plan Sheet 15 of 20	A4 A6	04-10-18 24-07-19
15-272-C1030	Earthworks and Stormwater Drainage Plan Sheet 16 of 20	A3 A5	21-09-18 24-07-19
15-272-C1031	Earthworks and Stormwater Drainage Plan Sheet 17 of 20	A3 A5	21-09-18 24-07-19
15-272-C1032	Earthworks and Stormwater Drainage Plan Sheet 18 of 20	A3 A5	21-09-18 24-07-19
15-272-C1033	Earthworks and Stormwater Drainage Plan Sheet 19 of 20	A3 A5	21-09-18 24-07-19
15-272-C1034	Earthworks and Stormwater Drainage Plan Sheet 20 of 20	A3 A5	21-09-18 24-07-19
15-272-C1040	Roadworks and Stormwater Drainage Plan Sheet 1 of 10	A3 A5	21-09-18 24-07-19
15-272-C1041	Roadworks and Stormwater Drainage Plan Sheet 2 of 10	A3 A5	21-09-18 24-07-19
15-272-C1042	Roadworks and Stormwater Drainage Plan Sheet 3 of 10	A3 A5	21-09-18 24-07-19
15-272-C1043	Roadworks and Stormwater Drainage Plan Sheet 4 of 10	A3 A5	21-09-18 24-07-19
15-272-C1044	Roadworks and Stormwater Drainage Plan Sheet 5 of 10	A3 A5	21-09-18 24-07-19
15-272-C1045	Roadworks and Stormwater Drainage Plan Sheet 6 of 10	A3 A5	21-09-18 24-07-19
15-272-C1046	Roadworks and Stormwater Drainage Plan Sheet 7 of 10	A3 A5	21-09-18 24-07-19
15-272-C1047	Roadworks and Stormwater Drainage Plan Sheet 8 of 10	A3 A5	21-09-18 24-07-19
15-272-C1048	Roadworks and Stormwater Drainage Plan Sheet 9 of 10	A2 A4	21-09-18 24-07-19
15-272-C1049	Roadworks and Stormwater Drainage Plan Sheet 10 of 10	A2 A4	21-09-18 24-07-19
15-272-C1050	Road and Longitudinal Sections Sheet 1 of 5	A3 A5	21-09-18 24-07-19
15-272-C1051	Road and Longitudinal Sections Sheet 2 of 5	A3 A5	21-09-18 24-07-19
15-272-C1052	Road and Longitudinal Sections Sheet 3 of 5	A3 A5	21-09-18 24-07-19
15-272-C1053	Road and Longitudinal Sections Sheet 4 of 5	A3 A5	21-09-18 24-07-19
15-272-C1054	Road and Longitudinal Sections Sheet 5 of 5	A3 A5	21-09-18 24-07-19
15-272-C1058	Western Boundary Layout and Sections	A4	24-07-19
15-272-C1059	Southern Boundary Layout and Sections	A4	24-07-19
15-272-C1062	Bio-Retention Basin No. 3 Detail Plan Sheet 1 of 2 Bio-Retention Basin 2 and 3 Detail Plan Sheet 1 of 2	A3 A5	21-09-18 24-07-19
15-272-C1063	Bio-Retention Basin No. 3 Detail Plan Sheet 2 of 2 Bio-Retention Basin 2 and 3 Detail Plan Sheet 2 of 2	A2 A4	21-09-18 24-07-19
15-272-C1064	Bio-Retention Basin No. 5 Detail Plan Sheet 1 of 2 Bio-Retention Basin 4 Detail Plan Sheet 1 of 2	A1 A3	21-09-18 24-07-19
15-272-C1065	Bio-Retention Basin No. 5 Detail Plan Sheet 2 of 2 Bio-Retention Basin 4 Detail Plan Sheet 2 of 2	A3 A5	21-09-18 24-07-19
15-272-C1066	Bio-Retention Basin No. 6 Detail Plan Bio-Retention Basin 5 Detail Plan	A3 A5	21-09-18 24-07-19

15-272-C1068	Stormwater Drainage Catchment Plan (Pre-developed)	A4	24-07-19
15-272-C1069	Stormwater Drainage Catchment Plan (Post-developed)	A4	24-07-19
15-272-C1070	Retaining Wall General Arrangement Plan	A4 A6	11-10-18 24-07-19
15-272-C1071	Retaining Wall Profiles Sheet 1 of 7	A3 A5	21-09-18 24-07-19
15-272-C1072	Retaining Wall Profiles Sheet 2 of 7	A3 A5	21-09-18 24-07-19
15-272-C1073	Retaining Wall Profiles Sheet 3 of 7	A3 A5	21-09-18 24-07-19
15-272-C1074	Retaining Wall Profiles Sheet 4 of 7	A3 A5	21-09-18 24-07-19
15-272-C1075	Retaining Wall Profiles Sheet 5 of 7	A3 A5	21-09-18 24-07-19
15-272-C1076	Retaining Wall Profiles Sheet 6 of 7	A3 A5	21-09-18 24-07-19
15-272-C1077	Retaining Wall Profiles Sheet 7 of 7	A2 A4	21-09-18 24-07-19
12-272-C1080	Stage 1 Services and Utilities Coordination Plan Sheet 1 of 6	A3 A5	21-09-18 24-07-19
12-272-C1081	Stage 1 Services and Utilities Coordination Plan Sheet 2 of 6	A3 A5	21-09-18 24-07-19
12-272-C1082	Stage 1 Services and Utilities Coordination Plan Sheet 3 of 6	A3 A5	21-09-18 24-07-19
12-272-C1083	Stage 1 Services and Utilities Coordination Plan Sheet 4 of 6	A3 A5	21-09-18 24-07-19
12-272-C1084	Stage 1 Services and Utilities Coordination Plan Sheet 5 of 6	A3 A5	21-09-18 24-07-19
12-272-C1085	Stage 1 Services and Utilities Coordination Plan Sheet 6 of 6	A3 A5	21-09-18 24-07-19
12-272-C1086	Existing Transgrid Overhead Electrical Cables Plan	A5	24-07-19
12-272-C1087	Existing Transgrid Overhead Electrical Cables and Longitudinal Sections	A5	24-07-19
12-272-C1088	Existing Transgrid Overhead Electrical Cables Typical Sections Sheet 1 of 2	A5	24-07-19
12-272-C1089	Existing Transgrid Overhead Electrical Cables Typical Sections Sheet 2 of 2	A5	24-07-19
12-272-C1090	Erosion and Sediment Control Plan Sheet 1 of 7	A3 A5	21-09-18 24-07-19
12-272-C1091	Erosion and Sediment Control Plan Sheet 2 of 7	A3 A5	21-09-18 24-07-19
12-272-C1092	Erosion and Sediment Control Plan Sheet 3 of 7	A3 A5	21-09-18 24-07-19
12-272-C1093	Erosion and Sediment Control Plan Sheet 4 of 7	A3 A5	21-09-18 24-07-19
12-272-C1094	Erosion and Sediment Control Plan Sheet 5 of 7	A3 A5	21-09-18 24-07-19
12-272-C1095	Erosion and Sediment Control Plan Sheet 6 of 7	A3 A5	21-09-18 24-07-19
12-272-C1096	Erosion and Sediment Control Plan Sheet 7 of 7	A3 A5	21-09-18 24-07-19
12-272-C1097	Erosion and Sediment Control Details	A1 A4	21-09-18 24-07-19
15-272-C2003	General Arrangement Plan	A3	21-09-18
15-272-C2010	Siteworks and Stormwater Drainage Plan Sheet 1 of 15	A3	21-09-18
15-272-C2011	Siteworks and Stormwater Drainage Plan Sheet 2 of 15	A3	21-09-18
15-272-C2012	Siteworks and Stormwater Drainage Plan Sheet 3 of 15	A3	21-09-18
15-272-C2013	Siteworks and Stormwater Drainage Plan Sheet 4 of 15	A3	21-09-18
15-272-C2014	Siteworks and Stormwater Drainage Plan Sheet 5 of 15	A3	21-09-18

15-272-C2015	Siteworks and Stormwater Drainage Plan Sheet 6 of 15	A3	21-09-18
15-272-C2016	Siteworks and Stormwater Drainage Plan Sheet 7 of 15	A3	21-09-18
15-272-C2017	Siteworks and Stormwater Drainage Plan Sheet 8 of 15	A3	21-09-18
15-272-C2018	Siteworks and Stormwater Drainage Plan Sheet 9 of 15	A3	21-09-18
15-272-C2019	Siteworks and Stormwater Drainage Plan Sheet 10 of 15	A3	21-09-18
15-272-C2020	Siteworks and Stormwater Drainage Plan Sheet 11 of 15	A3	21-09-18
15-272-C2021	Siteworks and Stormwater Drainage Plan Sheet 12 of 15	A3	21-09-18
15-272-C2022	Siteworks and Stormwater Drainage Plan Sheet 13 of 15	A3	21-09-18
15-272-C2023	Siteworks and Stormwater Drainage Plan Sheet 14 of 15	A3	21-09-18
15-272-C2024	Siteworks and Stormwater Drainage Plan Sheet 15 of 15	A3	21-09-18
15-272-C2030	Pavement Plan	A3	21-09-18
15-272-C3003	General Arrangement Plan	A3	21-09-18
15-272-C3010	Typical Road Sections	A3	21-09-18
15-272-C3020	Roadworks Plan and Longitudinal Section Sheet 1 of 5	A3	21-09-18
15-272-C3021	Roadworks Plan and Longitudinal Section Sheet 2 of 5	A3	21-09-18
15-272-C3022	Roadworks Plan and Longitudinal Section Sheet 3 of 5	A3	21-09-18
15-272-C3023	Roadworks Plan and Longitudinal Section Sheet 4 of 5	A3	21-09-18
15-272-C3024	Roadworks Plan and Longitudinal Section Sheet 5 of 5	A3	21-09-18
15-272-C3030	Road Longitudinal Sections	A3	21-09-18
15-272-C3040	Bridge Elevation and Typical Section	A4	04-10-18
15-272-C3050	Stormwater Drainage Plan Sheet 1 of 5	A3	21-09-18
15-272-C3051	Stormwater Drainage Plan Sheet 2 of 5	A3	21-09-18
15-272-C3052	Stormwater Drainage Plan Sheet 3 of 5	A3	21-09-18
15-272-C3053	Stormwater Drainage Plan Sheet 4 of 5	A3	21-09-18
15-272-C3054	Stormwater Drainage Plan Sheet 5 of 5	A3	21-09-18
15-272-C3058	Stormwater Drainage Catchment Plan (Post-Developed)	A2	21-09-18
15-272-C3060	Bio-Retention Basin NO. 1 Detail Plan	A3	21-09-18
15-272-C3070	Pavement Plan Sheet 1 of 5	A3	21-09-18
15-272-C3071	Pavement Plan Sheet 2 of 5	A3	21-09-18
15-272-C3072	Pavement Plan Sheet 3 of 5	A3	21-09-18
15-272-C3073	Pavement Plan Sheet 4 of 5	A3	21-09-18
15-272-C3074	Pavement Plan Sheet 5 of 5	A2	21-09-18
15-272-C3080	Retaining Wall Plan and Elevation	A1	21-09-18
15-272-C3081	Retaining Wall Sections Sheet 1 of 4	A1	21-09-18
15-272-C3082	Retaining Wall Sections Sheet 2 of 4	A1	21-09-18
15-272-C3083	Retaining Wall Sections Sheet 3 of 4	A1	21-09-18
15-272-C3084	Retaining Wall Sections Sheet 4 of 4	A1	21-09-18

Civil Plans prepared by AT&L			
Drawing	Title	Issue	Date
15-272-C5006	Typical Road Sections Sheet 1	3	31-01-20
15-272-C5018	Bulk Earthworks Cut/Fill Plan Sheet 1	2	31-01-20
15-272-C5021	Roadworks Plan Sheet 1	4	06-02-20
15-272-C5022	Roadworks Plan Sheet 2	4	31-01-20
15-272-C5033	Carpark Adjustment Siteworks Plans	4	31-01-20
15-272-C5057	Stormwater Drainage Plan Sheet 1	2	31-01-20
15-272-C5063	Subsurface Drainage Plan Sheet 1	2	31-01-20
15-272-C5101	Pavement Plan Sheet 1	3	31-01-20
15-272-C5121	Services and Utilities Coordination Plan Sheet 1	3	06-02-20
15-272-C5122	Services and Utilities Coordination Plan Sheet 2	4	06-02-20
15-272-C5131	Road Furniture Plan Sheet 1	3	31-01-20

Landscape Plans prepared by Scape Design Landscape Architecture			
Drawing	Title	Issue	Date
L.CD.101	Western North South Link Road Landscape Plan Sheet 1	S	14/2/20

L.CD.301	Western North South Link Road Planting & Revegetation Schedule	Q	31/1/20
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Table 8A: Schedule of Approved Plans – Stage 1 Development

Architectural Plans prepared by SBA Architects			
Drawing	Title	Issue	Date
OAK-1A-DA-10	Proposed Industrial Facility – Building 1A Site Plan	F	23 June 2021
OAK-1A-DA-11	Proposed Industrial Facility – Building 1A Roof Plan	A	13 July 2020
OAK-1A-DA-12	Proposed Industrial Facility – Building 1A Office Ground Floor Plan	Q	23 June 2021
OAK-1A-DA-13	Proposed Industrial Facility – Building 1A Office First Floor Plan	Q	23 June 2021
OAK-1A-DA-13A	Proposed Industrial Facility – Building 1A Office Second Floor Plan	L	23 June 2021
OAK-1A-DA-14	Proposed Industrial Facility – Building 1A Office Elevations	R	1 February 2022
OAK-1A-DA-15	Proposed Industrial Facility – Building 1A Warehouse Elevations	S	1 February 2022
OAK-1A-DA-18	Proposed Industrial Facility – Building 1A Warehouse Plan	B	28 July 2020
OAK-1A-DA-18A	Proposed Industrial Facility – Building 1A Mezzanine Plan – 1	B	28 July 2020
OAK-1A-DA-18B	Proposed Industrial Facility – Building 1A Mezzanine Plan – 2	B	28 July 2020
OAK-1A-DA-18C	Proposed Industrial Facility – Building 1A Mezzanine Plan – 3	B	28 July 2020
OAK-1A-DA-18D	Proposed Industrial Facility – Building 1A Mezzanine Plan – 4	B	28 July 2020
OAK-1A-DA-18E	Proposed Industrial Facility – Building 1A Mezzanine Plan – 5	B	28 July 2020
OAK-1A-DA-18F	Proposed Industrial Facility – Building 1A Mezzanine Plan – 6	B	28 July 2020
OAK-1A-DA-19	Skybridge Sections & Elevations – Building 1A	M	1 February 2022
OAK-1A-DA-25	Proposed Industrial Facility – Building 1A Energy Complex – 1	A	13 July 2020
OAK-1A-DA-28	Proposed Industrial Facility – Building 1A Stage 2 – Site Plan	E	29 July 2020
OAK-1A-DA-29	Proposed Industrial Facility – Building 1A – Stage 2 - Elevations	M	1 February 2022
OAK-DA-DA00	Proposed Industrial Facility - Building 1B/1C - Cover page	C	9 June 2021
OAK-DA-DA01	Proposed Industrial Facility - Building 1B/1C – Perspectives – 1B1/1B2	C	9 June 2021
OAK-DA-DA02	Proposed Industrial Facility - Building 1B/1C – Perspectives – Office 1C	C	9 June 2021
OAK-DA-DA30	Proposed Industrial Facility - Building 1B/1C – Site Plan	F	9 June 2021
OAK-DA-DA31	Proposed Industrial Facility - Building 1B/1C – Roof Plan	F	9 June 2021
OAK-DA-DA32	Proposed Industrial Facility - Building 1B/1C – Office Plans 1B1	E	9 June 2021

OAK-DA-DA33	Proposed Industrial Facility - Building 1B/1C – Office Plans 1B2	F	9 June 2021
OAK-DA-DA33A	Proposed Industrial Facility - Building 1B/1C – Office Plans 1C	F	9 June 2021
OAK-DA-DA34	Proposed Industrial Facility - Building 1B/1C – Elevations – Office 1B	E	9 June 2021
OAK-DA-D34A	Proposed Industrial Facility - Building 1B/1C – Elevations – Office 1C	E	9 June 2021
OAK-DA-DA35	Proposed Industrial Facility - Building 1B/1C – Elevations – Warehouse 1B	E	9 June 2021
OAK-DA-DA36	Proposed Industrial Facility - Building 1B/1C – Elevations – Warehouse 1C	E	9 June 2021
OAK-DA-DA37	Proposed Industrial Facility - Building 1B/1C – Sections - Warehouse	E	9 June 2021
OAK 1B1C DA 40	Proposed Industrial Facility – Proposed 1B & 1C – Signage Plan	D	9 June 2021

Landscape Plans prepared by Scape Design Landscape Architecture			
Drawing	Title	Revision	Date
L.SK.00	Cover Sheet	S	17/7/20
L.SK.01	Landscape Master Plan	P	17/7/20
L.SK.02	Planting Plan	M	17/7/20
L.SK.03	Planting Schedule	M	8/7/20
L.SK.04	Character & Materials	N	8/7/20
L.SK.100	Landscape – Plan – Sheet 1	N	17/7/20
L.SK.101	Landscape – Plan – Sheet 2	N	17/7/20
L.SK.102	Landscape – Plan – Sheet 3	O	17/7/20
L.SK.103	Landscape – Plan – Sheet 4	O	17/7/20
L.SK.104	Landscape – Plan – Sheet 5	O	17/7/20
L.SK.105	Landscape – Detailed Plan – Sheet 1	M	17/7/20
L.SK.106	Landscape – Detailed Plan – Sheet 2	M	17/7/20
L.SK.200	Landscape – Sections – Sheet 1	K	8/7/20
L.SK.201	Landscape – Sections – Sheet 2	K	8/7/20
L.SK.202	Landscape – Sections – Sheet 3	K	17/7/20
L.SK.203	Landscape – Sections – Sheet 4	L	17/7/20
L.SK.204	Carpark Details	H	17/7/20

Civil Plans prepared by AT&L			
Drawing	Title	Revision	Date
15-272-C1000	Cover Sheet	A10	20-10-20
15-272-C1001	Drawing List	A10	20-10-20
15-272-C1002	General Notes	A10	20-10-20
15-272-C1003	Precinct General Arrangement Plan	A16	20-10-20
15-272-C1004	Typical Site Sections Sheet 1 of 6	A12	20-10-20
15-272-C1005	Typical Site Sections Sheet 2 of 6	A11	20-10-20
15-272-C1006	Typical Site Sections Sheet 3 of 6	A11	20-10-20
15-272-C1007	Typical Site Sections Sheet 4 of 6	A9	20-10-20
15-272-C1008	Typical Site Sections Sheet 5 of 6	A9	20-10-20
15-272-C1009	Typical Site Sections Sheet 6 of 6	A11	20-10-20
15-272-C1010	Typical Road Sections	A9	20-10-20
15-272-C1011	Contour Plan	A12	20-10-20
15-272-C1014	Bulk Earthworks Cut/Fill Plan	A13	20-10-20

15-272-C1015	Earthworks and Stormwater Drainage Plan Sheet 1 of 20	A10	20-10-20
15-272-C1016	Earthworks and Stormwater Drainage Plan Sheet 2 of 20	A10	20-10-20
15-272-C1017	Earthworks and Stormwater Drainage Plan Sheet 3 of 20	A10	20-10-20
15-272-C1018	Earthworks and Stormwater Drainage Plan Sheet 4 of 20	A10	20-10-20
15-272-C1019	Earthworks and Stormwater Drainage Plan Sheet 5 of 20	A10	20-10-20
15-272-C1020	Earthworks and Stormwater Drainage Plan Sheet 6 of 20	A10	20-10-20
15-272-C1021	Earthworks and Stormwater Drainage Plan Sheet 7 of 20	A10	20-10-20
15-272-C1022	Earthworks and Stormwater Drainage Plan Sheet 8 of 20	A10	20-10-20
15-272-C1023	Earthworks and Stormwater Drainage Plan Sheet 9 of 20	A12	20-10-20
15-272-C1024	Earthworks and Stormwater Drainage Plan Sheet 10 of 20	A12	20-10-20
15-272-C1025	Earthworks and Stormwater Drainage Plan Sheet 11 of 20	A10	20-10-20
15-272-C1026	Earthworks and Stormwater Drainage Plan Sheet 12 of 20	A10	20-10-20
15-272-C1027	Earthworks and Stormwater Drainage Plan Sheet 13 of 20	A10	20-10-20
15-272-C1028	Earthworks and Stormwater Drainage Plan Sheet 14 of 20	A10	20-10-20
15-272-C1029	Earthworks and Stormwater Drainage Plan Sheet 15 of 20	A12	20-10-20
15-272-C1030	Earthworks and Stormwater Drainage Plan Sheet 16 of 20	A12	20-10-20
15-272-C1031	Earthworks and Stormwater Drainage Plan Sheet 17 of 20	A10	20-10-20
15-272-C1032	Earthworks and Stormwater Drainage Plan Sheet 18 of 20	A10	20-10-20
15-272-C1033	Earthworks and Stormwater Drainage Plan Sheet 19 of 20	A10	20-10-20
15-272-C1034	Earthworks and Stormwater Drainage Plan Sheet 20 of 20	A10	20-10-20
15-272-C1040	Roadworks and Stormwater Drainage Plan Sheet 1 of 18	A11	20-10-20
15-272-C1041	Roadworks and Stormwater Drainage Plan Sheet 2 of 18	A12	20-10-20
15-272-C1042	Roadworks and Stormwater Drainage Plan Sheet 3 of 18	A11	20-10-20
15-272-C1043	Roadworks and Stormwater Drainage Plan Sheet 4 of 18	A10	20-10-20
15-272-C1044	Roadworks and Stormwater Drainage Plan Sheet 5 of 18	A10	20-10-20
15-272-C1045	Roadworks and Stormwater Drainage Plan Sheet 6 of 18	A10	20-10-20
15-272-C1046	Roadworks and Stormwater Drainage Plan Sheet 7 of 18	A10	20-10-20
15-272-C1047	Roadworks and Stormwater Drainage Plan Sheet 8 of 18	A10	20-10-20
15-272-C1048	Roadworks and Stormwater Drainage Plan Sheet 9 of 18	A9	20-10-20
15-272-C1049	Roadworks and Stormwater Drainage Plan Sheet 10 of 18	A4	20-10-20
15-272-C1050	Roadworks and Stormwater Drainage Plan Sheet 11 of 18	A4	20-10-20
15-272-C1051	Roadworks and Stormwater Drainage Plan Sheet 12 of 18	A4	20-10-20
15-272-C1052	Roadworks and Stormwater Drainage Plan Sheet 13 of 18	A4	20-10-20
15-272-C1053	Roadworks and Stormwater Drainage Plan Sheet 14 of 18	A4	20-10-20
15-272-C1054	Roadworks and Stormwater Drainage Plan Sheet 15 of 18	A4	20-10-20
15-272-C1055	Roadworks and Stormwater Drainage Plan Sheet 16 of 18	A4	20-10-20
15-272-C1056	Roadworks and Stormwater Drainage Plan Sheet 17 of 18	A1	20-10-20
15-272-C1057	Roadworks and Stormwater Drainage Plan Sheet 18 of 18	A1	20-10-20
15-272-C1060	Road Longitudinal Sections Sheet 1 of 7	A10	20-10-20
15-272-C1061	Road Longitudinal Sections Sheet 2 of 7	A10	20-10-20
15-272-C1062	Road Longitudinal Sections Sheet 3 of 7	A10	20-10-20
15-272-C1063	Road Longitudinal Sections Sheet 4 of 7	A10	20-10-20
15-272-C1064	Road Longitudinal Sections Sheet 5 of 7	A10	20-10-20
15-272-C1065	Road Longitudinal Sections Sheet 6 of 7	A4	20-10-20
15-272-C1066	Road Longitudinal Sections Sheet 7 of 7	A1	20-10-20
15-272-C1070	Western Boundary Layout and Sections	A11	20-10-20
15-272-C1071	Southern Boundary Layout and Sections	A9	20-10-20
15-272-C1080	Bio-Retention Basin 2 and 3 Detail Plan Sheet 1 of 2	A10	20-10-20
15-272-C1081	Bio-Retention Basin 2 and 3 Detail Plan Sheet 2 of 2	A9	20-10-20
15-272-C1082	Bio-Retention Basin 4 Detail Plan Sheet 1 of 2	A8	20-10-20
15-272-C1083	Bio-Retention Basin 4 Detail Plan Sheet 2 of 2	A10	20-10-20
15-272-C1084	Bio-Retention Basin 5 Detail Plan	A10	20-10-20
15-272-C1086	Stormwater Drainage Catchment Plan (Pre-developed)	A9	20-10-20
15-272-C1087	Stormwater Drainage Catchment Plan (Post-developed)	A9	20-10-20
15-272-C1090	Retaining Wall General Arrangement Plan	A13	20-10-20
15-272-C1091	Retaining Wall Profiles Sheet 1 of 9	A11	20-10-20
15-272-C1092	Retaining Wall Profiles Sheet 2 of 9	A10	20-10-20
15-272-C1093	Retaining Wall Profiles Sheet 3 of 9	A10	20-10-20

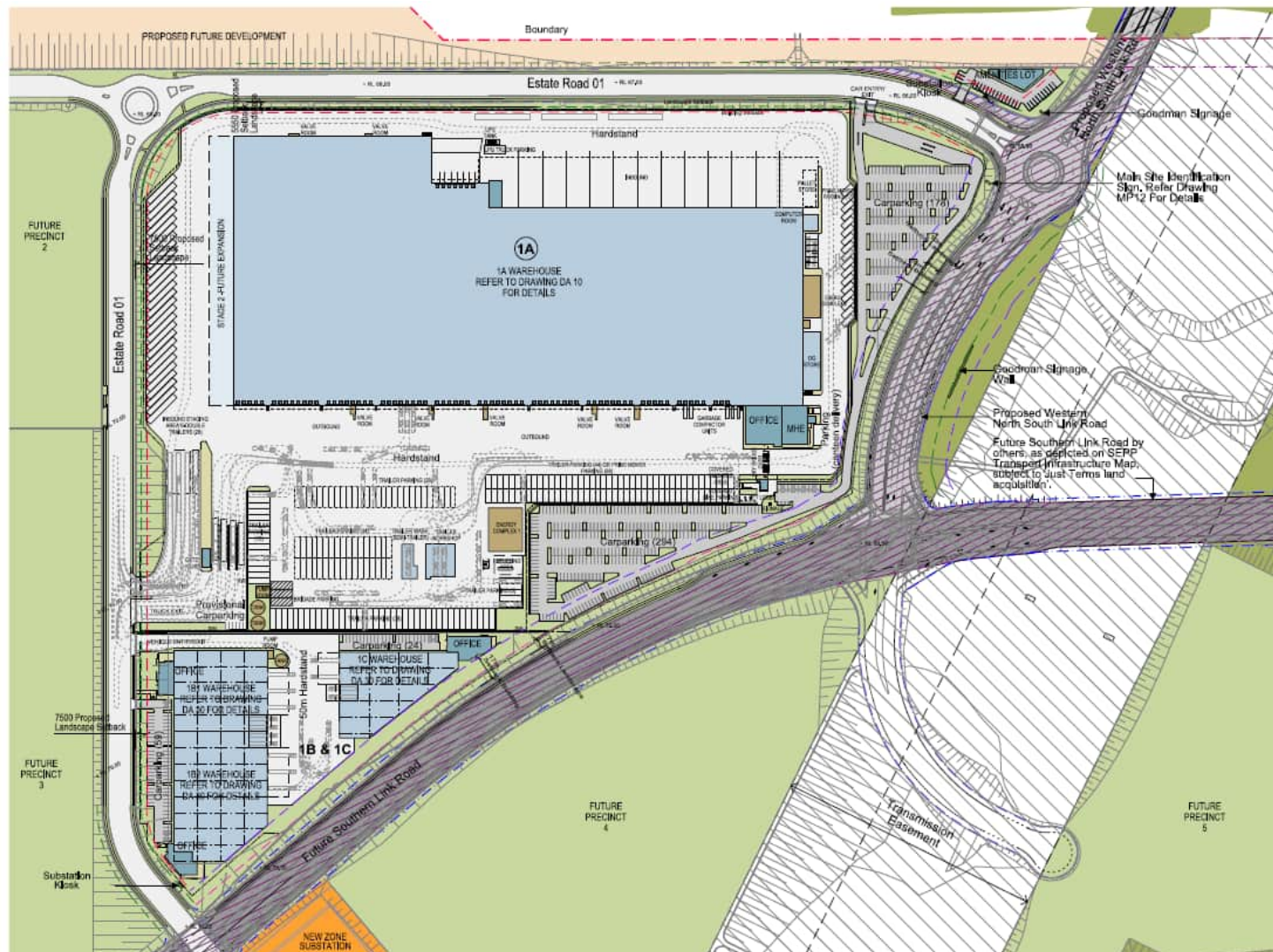
15-272-C1094	Retaining Wall Profiles Sheet 4 of 9	A10	20-10-20
15-272-C1095	Retaining Wall Profiles Sheet 5 of 9	A12	20-10-20
15-272-C1096	Retaining Wall Profiles Sheet 6 of 9	A11	20-10-20
15-272-C1097	Retaining Wall Profiles Sheet 7 of 9	A9	20-10-20
15-272-C1098	Retaining Wall Profiles Sheet 8 of 9	A9	20-10-20
15-272-C1099	Retaining Wall Profiles Sheet 9 of 9	A1	20-10-20
15-272-C1110	Stage 1 Services and Utilities Coordination Plan Sheet 1 of 6	A9	20-10-20
15-272-C1111	Stage 1 Services and Utilities Coordination Plan Sheet 2 of 6	A10	20-10-20
15-272-C1112	Stage 1 Services and Utilities Coordination Plan Sheet 3 of 6	A10	20-10-20
15-272-C1113	Stage 1 Services and Utilities Coordination Plan Sheet 4 of 6	A12	20-10-20
15-272-C1114	Stage 1 Services and Utilities Coordination Plan Sheet 5 of 6	A10	20-10-20
15-272-C1115	Stage 1 Services and Utilities Coordination Plan Sheet 6 of 6	A9	20-10-20
15-272-C1120	Existing Transgrid Overhead Electrical Cables Plan	A10	20-10-20
15-272-C1121	Existing Transgrid Overhead Electrical Cables and Longitudinal Sections	A9	20-10-20
15-272-C1122	Existing Transgrid Overhead Electrical Cables Typical Sections Sheet 1 of 2	A9	20-10-20
15-272-C1123	Existing Transgrid Overhead Electrical Cables Typical Sections Sheet 2 of 2	A9	20-10-20
15-272-C1130	Erosion and Sediment Control Plan Sheet 1 of 7	A10	20-10-20
15-272-C1131	Erosion and Sediment Control Plan Sheet 2 of 7	A10	20-10-20
15-272-C1132	Erosion and Sediment Control Plan Sheet 3 of 7	A10	20-10-20
15-272-C1133	Erosion and Sediment Control Plan Sheet 4 of 7	A11	20-10-20
15-272-C1134	Erosion and Sediment Control Plan Sheet 5 of 7	A10	20-10-20
15-272-C1135	Erosion and Sediment Control Plan Sheet 6 of 7	A9	20-10-20
15-272-C1136	Erosion and Sediment Control Plan Sheet 7 of 7	A9	20-10-20
15-272-C1137	Erosion and Sediment Control Details	A7	20-10-20
15-272-C2000	Cover Sheet	A9	20-07-20
15-272-C2001	Drawing List	A9	20-07-20
15-272-C2002	General Notes	A9	20-07-20
15-272-C2003	General Arrangement Plan	A14	05-01-21
15-272-C2010	Siteworks and Stormwater Drainage Plan Sheet 1 of 14	A10	20-07-20
15-272-C2011	Siteworks and Stormwater Drainage Plan Sheet 2 of 14	A10	20-07-20
15-272-C2012	Siteworks and Stormwater Drainage Plan Sheet 3 of 14	A11	20-07-20
15-272-C2013	Siteworks and Stormwater Drainage Plan Sheet 4 of 14	A11	20-07-20
15-272-C2014	Siteworks and Stormwater Drainage Plan Sheet 5 of 14	A10	20-07-20
15-272-C2015	Siteworks and Stormwater Drainage Plan Sheet 6 of 14	A10	20-07-20
15-272-C2016	Siteworks and Stormwater Drainage Plan Sheet 7 of 14	A11	20-07-20
15-272-C2017	Siteworks and Stormwater Drainage Plan Sheet 8 of 14	A11	20-07-20
15-272-C2018	Siteworks and Stormwater Drainage Plan Sheet 9 of 14	A11	20-07-20
15-272-C2019	Siteworks and Stormwater Drainage Plan Sheet 10 of 14	A11	20-07-20
15-272-C2020	Siteworks and Stormwater Drainage Plan Sheet 11 of 14	A12	20-07-20
15-272-C2021	Siteworks and Stormwater Drainage Plan Sheet 12 of 14	A13	05-01-21
15-272-C2022	Siteworks and Stormwater Drainage Plan Sheet 13 of 14	A13	05-01-21
15-272-C2023	Siteworks and Stormwater Drainage Plan Sheet 14 of 14	A12	04-11-20
15-272-C2030	Pavement Plan	A14	05-01-21

FOR INFORMATION



BRICKWORKS

Development Area Schedule	
Total Site Area	218,050 sqm
Total Warehouse	61,286 sqm
Total Office	4,151 sqm
Offices (incl. car)	4,054 sqm
Mezzanines (incl. car)	36,331 sqm
Total GFA	125,772 sqm
(incl. car)	
Total GLA	89,440 sqm
(incl. car)	
Carparking (total)	655
Lot 1A	
Site Area	187,010 sqm
Warehouse	58,160 sqm
(incl. car)	
Office (3 levels)	2,646 sqm
Offices	4,054 sqm
(incl. car)	
Mezzanines	36,331 sqm
(incl. car)	
Total GFA	111,141 sqm
(incl. car)	
Total GLA	74,810 sqm
(incl. car)	
Averaging	8,620 sqm
Site Cover (exc. paving)	50 %
Floor Space Ratio	0.59 :1
Hardstand Area	84,538 sqm
Light Duty Area	16,425 sqm
Prime Mover Parking	111
Trailer Parking	124
Carparking	472
Carparking (motorcycles)	8
Lot 1B & 1C	
Site Area	31,038 sqm
Warehouse 1B1	3,854 sqm
Warehouse 1B2	5,666 sqm
Warehouse 1C	3,566 sqm
Office 1B1 (2 levels)	500 sqm
Office 1B2 (2 levels)	500 sqm
Office 1C (1 level)	436 sqm
Total GFA	14,631 sqm
Averaging	1,463 sqm
Site Cover (exc. paving)	47 %
Floor Space Ratio	0.47 :1
Hardstand Area	8,445 sqm
Light Duty Area	2,365 sqm
Carparking	83



Oakdale West Estate MOD 5

Horsley Park

Precinct 1 Plan

1:1250 @ A1
1:2500 @ A3
30 July 2020

OAK MP 05 (F)
Job No 20172

Figure 3: Stage 1 DA Layout

APPENDIX 3 WNSLR PLANS

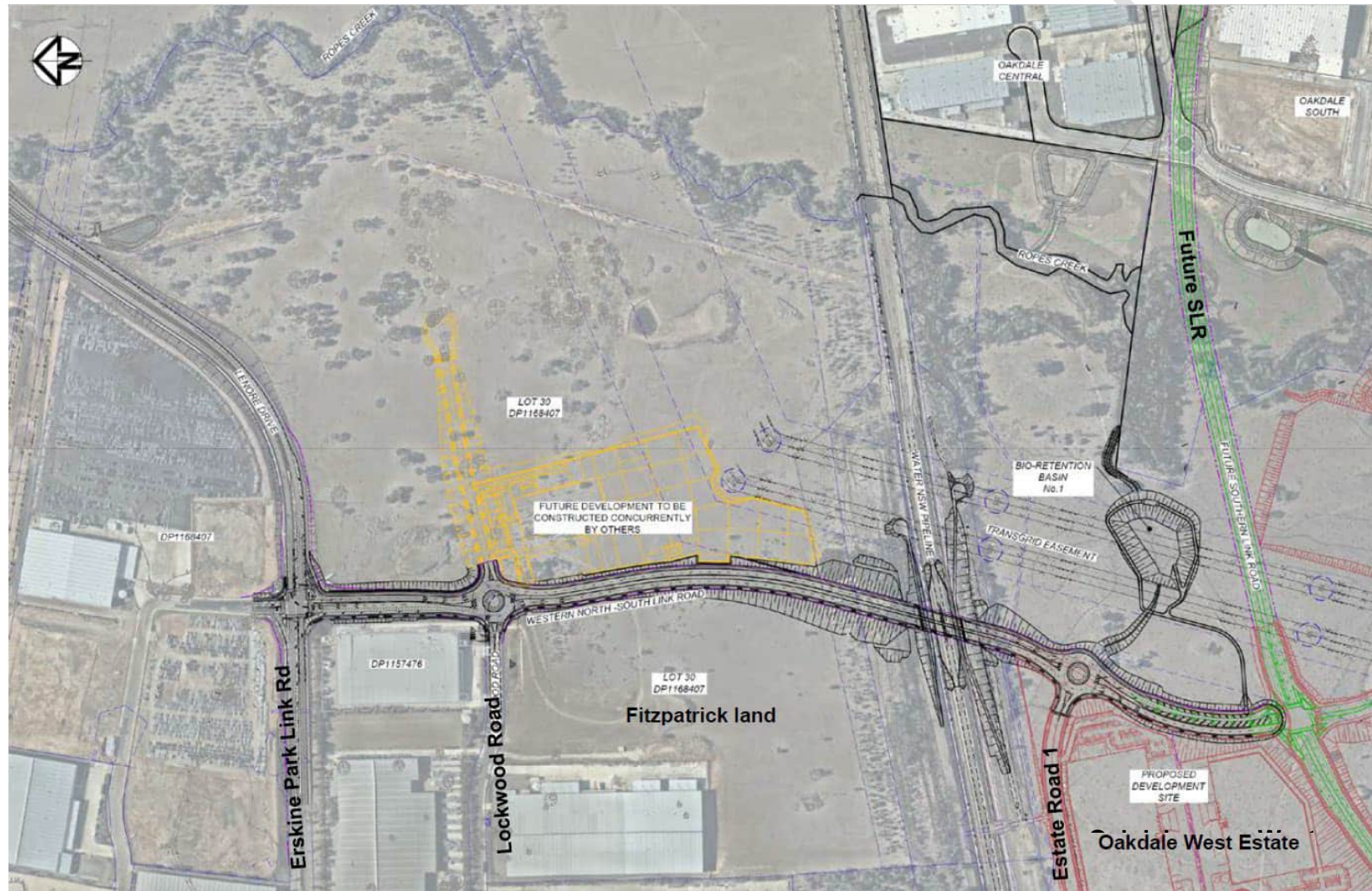


Figure 5: WNSLR

APPENDIX 4 PLANNING AGREEMENT

FOR INFORMATION

APPENDIX 5 NOISE RECEIVER LOCATIONS



Figure 6: Sensitive Noise Receivers and Noise Wall Locations

APPENDIX 6 BIODIVERSITY

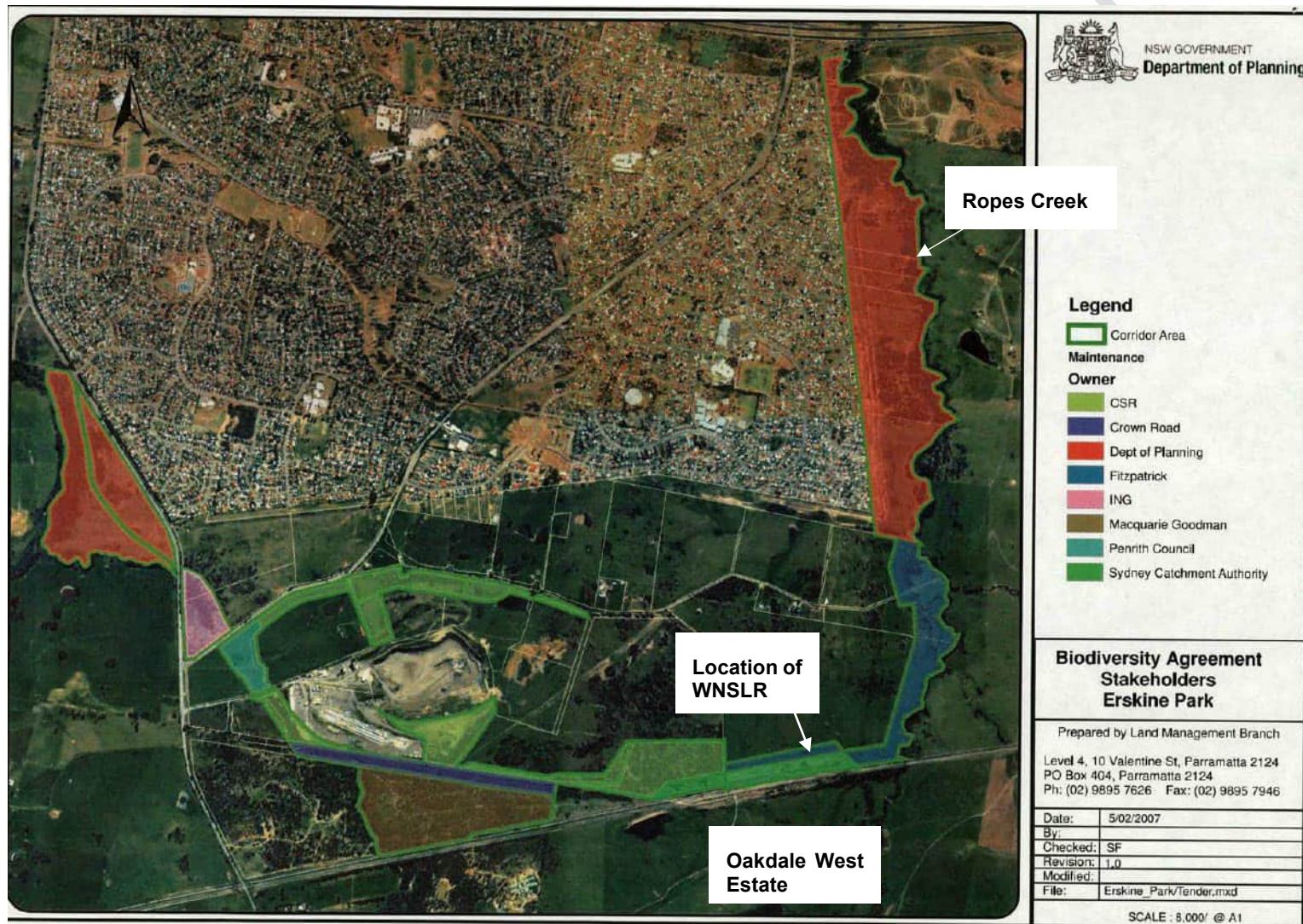


Figure 7: Erskine Park Biodiversity Corridor Land

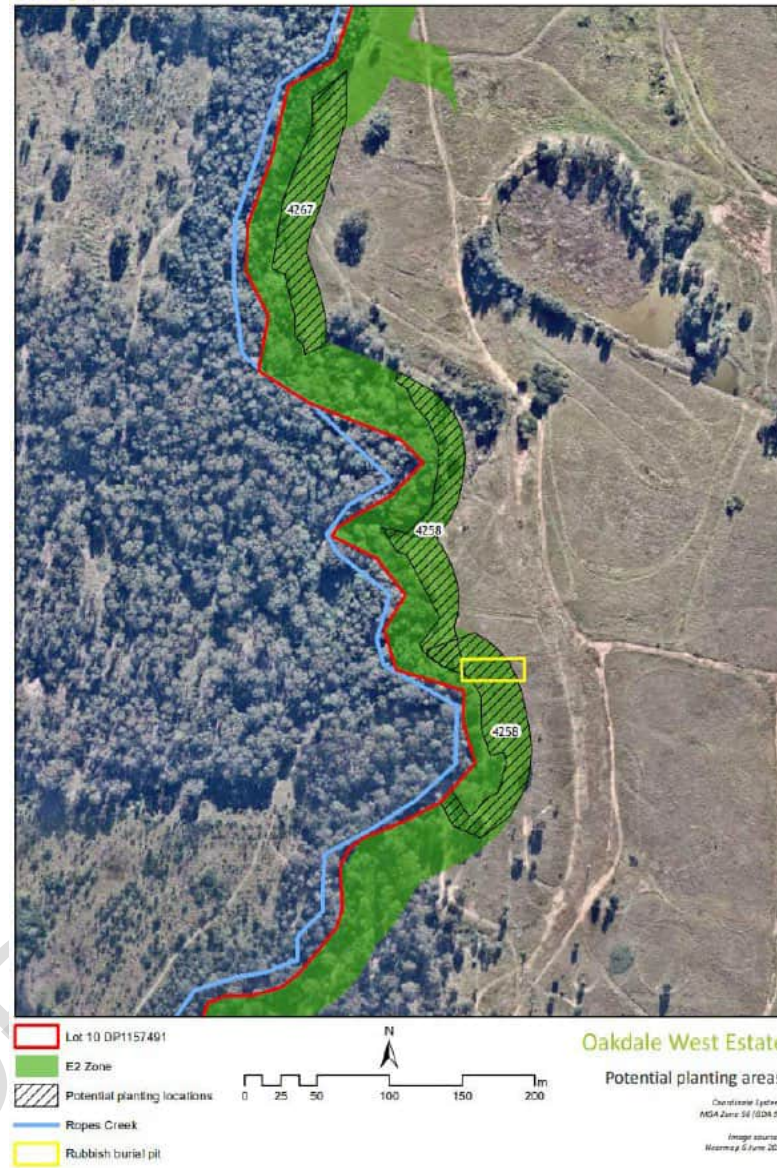


Figure 8: Offsets for WNSLR – Planting Area

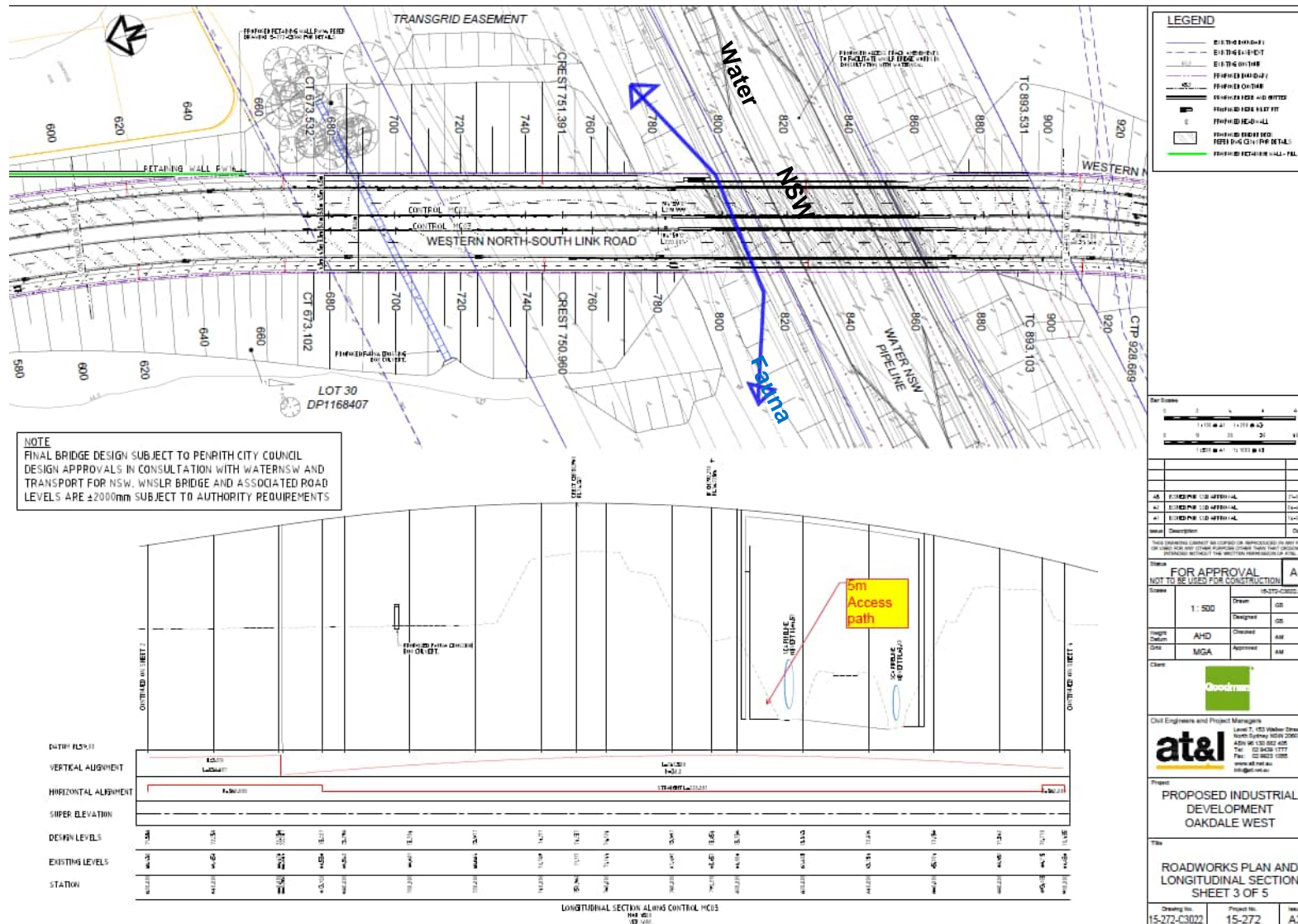


Figure 9: Fauna Passage under WNSLR



Figure 50: Offsets for Stage 1 - Biodiversity Offset Area (MOD 6)

SUMMARY OF MITIGATION MEASURES

The collective measures required to mitigate the impacts associated with the proposed works are detailed in the table below.

Table 6: Applicant's Mitigation Measures

Issue	SSDA Component	Mitigation and Management
Construction Management		
General Construction Management	Stage 1 Development	<ul style="list-style-type: none"> A CEMP to be prepared for the OWE Stage 1 Development capturing standard and specific management and mitigation measures as described in the SSDA, EIS and supporting technical documents.
Operational Management		
General Operational Management	Concept Proposal Stage 1 Precinct Development	<ul style="list-style-type: none"> An OEMP to be prepared for the OWE capturing standard and specific operational management and mitigation measures as described in the SSDA, EIS and supporting technical documents.
Transport		
Construction Traffic	Stage 1 Development	<ul style="list-style-type: none"> Preparation of a CTMP to form part of the CEMP addressing issues such as: <ul style="list-style-type: none"> Truck haul routes, delivery schedules and curfews; Protocols for the management of construction traffic moving onto and off the site.
Urban Design and Visual		
Site Layout and Design	Concept Proposal	<ul style="list-style-type: none"> Future development of the OWE to proceed in accordance with the approved Development Concept Proposal and DCP.
Development Controls	Concept Proposal	<ul style="list-style-type: none"> Design and development controls to be established for the OWE in the form of a DCP to guide future development on the site.
Visual Impact	Concept Proposal/Stage 1 Development	<ul style="list-style-type: none"> Design and development controls to be established for the OWE in the form of a DCP to guide future development on the site. Landscaping of key interfaces including the western boundary to minimise visual impact.
Soils and Water		
Water Usage	Stage 1 Development	<ul style="list-style-type: none"> Rainwater tanks to be provided for each development site with size determined in accordance with Penrith Council DCP requirements. Irrigation and toilet flushing for development to be plumbed to rainwater tanks. Consideration to be given to other possible rainwater reuse opportunities such as for truck washing. Measures and considerations for the minimisation of water use during construction and operation to be incorporated into CEMP and OEMP as relevant.

Issue	SSDA Component	Mitigation and Management
Soils	Stage 1 Development	<ul style="list-style-type: none"> • Mitigation measures inherent to the civil design of the proposal. • Sedimentation and erosion control measures are proposed as detailed in the Civil Design and Infrastructure Package and Traffic and Transport Impact Assessment.
Salinity	Stage 1 Development	<ul style="list-style-type: none"> • A Salinity Management Plan has been prepared for the proposed development. • Management measures described in the Salinity Management Plan to be adopted in the CEMP and OEMP as relevant.
Contamination	Stage 1 Development	<ul style="list-style-type: none"> • Identified areas of potential contamination to be subject to further investigation prior to the development of affected land.
Earthworks	Stage 1 Development	<ul style="list-style-type: none"> • Civil design achieves appropriate site levels with minimal impact upon hydrology. • Import of fill to be managed in accordance with CEMP. • Erosion and sediment controls included in the SSDA package.
Mineral Resources	Concept Proposal	<ul style="list-style-type: none"> • No mitigation required provided that mining activities under the existing mining lease applying to land to the east of the site (ref. ML1636) would not be constrained by the OWE development.
Surface Water	Stage 1 Development	<ul style="list-style-type: none"> • Stormwater issues addressed through design measures incorporated into proposed development. • Stormwater management system designed to meet the requirements of Penrith Council's Engineering Works and WSUD guidelines and relevant NOW guidelines. • Detailed on-lot stormwater for future stages of the OWE to be designed and assessed under future applications.
Groundwater	Stage 1 Development	<ul style="list-style-type: none"> • Methods and management of any required dewatering required during construction works to be detailed in the CEMP.
Flooding	Stage 1 Development	<ul style="list-style-type: none"> • OSD designed to ensure that development does not increase stormwater peak flows in downstream areas for events up to and including 1:100-year ARI. • OSD designed to mitigate post-development flows to pre-development flows for peak ARI events. • Finished floor levels to have minimum 500mm freeboard to 100-year overland flows. • Flood impacts on TransGrid easement would be mitigated through minor compensatory earthworks on the floodplain to convey locally diverted flows. These works are detailed in the civil drawings included in the SSDA package.
Water Quality	Stage 1 Development	<ul style="list-style-type: none"> • Erosion and sediment controls as detailed in SSDA package to be implemented through CEMP. • Stormwater to be treated to compliant levels prior to discharge. • Gross Pollutant Trap (GPT) to be installed within each development site on the final downstream stormwater pit prior to discharge.

Issue	SSDA Component	Mitigation and Management
		<ul style="list-style-type: none"> • WSUD measures adopted to achieve target reductions for the OWE: <ul style="list-style-type: none"> <input type="checkbox"/> 85% Total Suspended Solids <input type="checkbox"/> 60% Total Phosphorus <input type="checkbox"/> 45% Total Nitrogen <input type="checkbox"/> 90% Gross Pollutants
Infrastructure		
Capacity and Upgrades	Concept Proposal	<ul style="list-style-type: none"> • Management of issues in respect of infrastructure capacity and upgrades is in the form of design responses described in Section 4.0 of the EIS.
Delivery and Staging	Concept Proposal/Stage 1 Development	<ul style="list-style-type: none"> • Management of issues in respect of infrastructure capacity and upgrades is in the form of design responses described in Section 4.0 of the EIS. • Staging of development of the OWE would be aligned with infrastructure and services delivery.
TransGrid Easement	Concept Proposal/Stage 1 Development	<ul style="list-style-type: none"> • Further consultation would be undertaken with TransGrid in relation to potential impacts and required mitigation.
Other Environmental Issues		
Flora and Fauna	Concept Proposal Stage 1 Development	<ul style="list-style-type: none"> • Preparation of a Flora and Fauna Management Plan for the site to inform the CEMP and OEMP as relevant to manage potential impacts to biodiversity during construction and operation. • Retained areas of native vegetation, including the Ropes Creek riparian corridor, will be rehabilitated and/or restored in accordance with the Vegetation Management Plan. • Other areas of the site including road batters, embankments and bio-retention basins will be planted with native plant species and turf species as specified in the Landscape Planting Schedule. • Ongoing maintenance and management of these areas in accordance with the provisions of both the Vegetation Management Plan and Landscape Management Plan.
Waterways and Riparian Lands		<ul style="list-style-type: none"> • Restoration and ongoing management of Ropes riparian corridor to be in accordance with the Vegetation Biodiversity Management Action Plan

APPENDIX 8 INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be emailed to the Department at the following address: compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under Condition D135 or, having given such notification, subsequently forms the view that an incident has not occurred.
2. Written notification of an incident must:
 - a. identify the development and application number;
 - b. provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
 - c. identify how the incident was detected;
 - d. identify when the Applicant became aware of the incident;
 - e. identify any actual or potential non-compliance with conditions of consent;
 - f. describe what immediate steps were taken in relation to the incident;
 - g. identify further action(s) that will be taken in relation to the incident; and
 - h. identify a project contact for further communication regarding the incident.

INCIDENT REPORT REQUIREMENTS

3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.
4. The Incident Report must include:
 - a. a summary of the incident;
 - b. outcomes of an incident investigation, including identification of the cause of the incident;
 - c. details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
 - d. details of any communication with other stakeholders regarding the incident.

Appendix B:

Consultation

Lachlan O'Reilly

From: Phil Saverimuttu <Phil.Saverimuttu@penrith.city>
Sent: Thursday, 8 September 2022 10:05 AM
To: Lachlan O'Reilly
Cc: Joshua Hull; Luke Ridley; Alasdair Cameron
Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Hi Lachlan

I have no objection to the submitted Operational Traffic Management Plan, subject to, NHVR permit being obtained to use Compass Drive, Emporium Avenue and Sepia Road for servicing building 1A by 30m Super B-Doubles.

I hope this information helps.

Should you have any queries, please let me know.

Regards

Phil Saverimuttu
Senior Traffic Engineer

E Phil.Saverimuttu@penrith.city
T +61247327961 | F | M
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www.visitpenrith.com.au
www.penrithcity.nsw.gov.au

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From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Wednesday, September 7, 2022 5:43 PM
To: Phil Saverimuttu <Phil.Saverimuttu@penrith.city>
Cc: Joshua Hull <Joshua.Hull@penrith.city>; Luke Ridley <Luke.Ridley@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>
Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

EXTERNAL EMAIL: This email was received from outside the organisation. Use caution when clicking any links or opening attachments.

Hi Phil,

Thanks for the below and your time on the phone the other day.

In respect of your query raised below, we are not requesting for the approval of the NHVR to suit 30M Super B-Doubles, we are just seeking approval of the OTMP.

The OTMP notes that Building 1A is designed for 30 metre Super B-doubles (Section 4.2),. The report is not a request for approval of said vehicle on PCC assets.

The customer will be responsible for the NHVR permit should they wish to operate and seek use of Compass Drive for use of 30m Super B-Doubles, if and when required. We note this should occur as outlined with your point below.

As such, could you please confirm the OTMP for Building 1A as submitted is satisfactory ?

Regards,



Lachlan O'Reilly
Assistant Project Manager
Lachlan.OReilly@goodman.com

T. +61 2 9230 7284
M. +61 481 254 556

The Hayesbery
1-11 Hayes Road
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Goodman Limited ABN 69 000 123 071

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From: Phil Saverimuttu <Phil.Saverimuttu@penrith.city>

Sent: Monday, 5 September 2022 3:02 PM

To: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>

Cc: Joshua Hull <Joshua.Hull@penrith.city>

Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Hi Lachlan

I refer to the request from Goodman to service Warehouse 1A at Oakdale West Industrial estate by 30 metre Super B-Doubles.

Thanks for sending the Operational Traffic Management Plan for Warehouse 1A for assessment.

Prior to approval and gazettal of Compass Drive for use by 30m Super B-Doubles, Goodman should get a permit from National Heavy Vehicle Regulator (NHVR) to undertake a field trial to determine the feasibility of using the 30 metre Super B-Double for servicing Warehouse 1A.

Before organising the field trial, please contact Council's Asset Section as they need to be present at the field trial. This is to assess any impact on the road furniture associated with manoeuvring by 30 metre Super B-Doubles.

Council's Asset Section can be contacted on (02) 4732 7777.

I hope this information helps.

Should you have any queries, please let me know.

Regards

Phil Saverimuttu
Senior Traffic Engineer

E Phil.Saverimuttu@penrith.city
T [+61247327961](tel:+61247327961) | F | M
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www.penrithcity.nsw.gov.au

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From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>

Sent: Thursday, 1 September 2022 7:05 PM

To: Kathryn Saunders <kathryn.saunders@penrith.city>; Gavin Cherry <Gavin.Cherry@penrith.city>

Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>; Simone Muscat <simone.muscat@penrith.city>

Subject: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Importance: High

EXTERNAL EMAIL: This email was received from outside the organisation. Use caution when clicking any links or opening attachments.

Dear Kathryn & Gavin,

I hope all is well with you both.

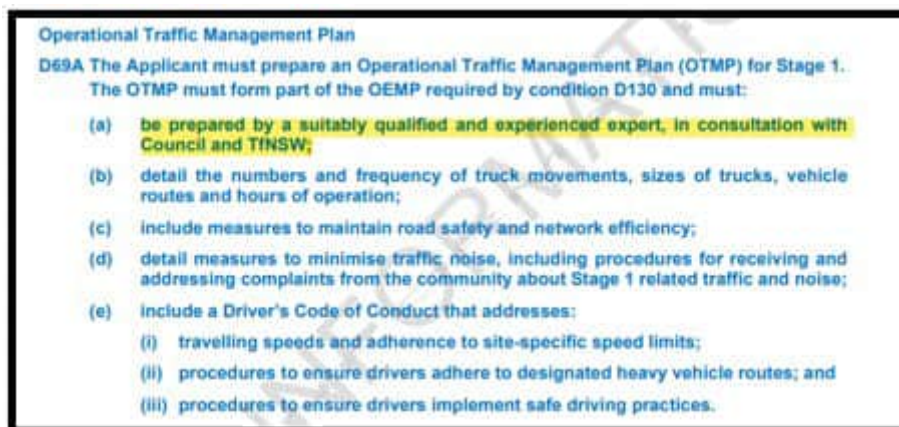
As you are aware, Goodman is currently constructing the Oakdale West Industrial Estate and we are hoping to shortly commence operation of our Lot 1A warehouse (see indicated in yellow in Fig.1) within the Estate.



Figure 1 - Oakdale West, including Lot 1A

In accordance with the Consent for the development (SSD 7348 as modified) , Goodman have prepared an OTMP specific for the facility, which is in line with the Estate's (also SSD 7348) approved overarching OTMP. We note the overarching OTMP is included as an annexure of the Lot 1A report given the strategy we have adopted.

Based on the Consent, it is a requirement of Condition D69A (a) (as below) that we demonstrate consultation with you before we can lodge this report with the Department for approval. We are unable to start Operation of the facility until the Department approves this report:



We'd therefore be grateful if you're able to please review the OTMP and provide us any comments you may have. A 'no comment' response would satisfy the consultation requirements if you have no feedback.

Please let me know if you have any questions, otherwise we appreciate your assistance in advance.

It would be grateful if you could please come back to us by 7 September 2022 to remain on programme.

Regards,



Lachlan O'Reilly
Assistant Project Manager
Lachlan.OReilly@goodman.com

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Lachlan O'Reilly

From: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Sent: Wednesday, 7 September 2022 5:13 PM
To: Lachlan O'Reilly
Cc: Stephanie Partridge; Ben Milner; Rob Moody; Alasdair Cameron; Malgy Coman; Laura Van putten; Simon Turner
Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Hi Lachlan

Transport has reviewed and has no comment to add.

Kind regards,

Raymond Tran

A/Network and Safety Services Manager
Planning and Programs
Greater Sydney
Transport for NSW

M 0409 744 683 **T** (02) 8843 3133 **E** raymond.tran@transport.nsw.gov.au

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**Transport
for NSW**

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Thursday, 1 September 2022 6:44 PM
To: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>; Malgy Coman <Malgy.COMAN@transport.nsw.gov.au>; Laura Van putten <Laura.VAN.PUTTEN@transport.nsw.gov.au>; Simon Turner <Simon.Turner2@transport.nsw.gov.au>
Subject: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation
Importance: High

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Dear Raymond,

Thankyou for your help recently in reviewing the Building 2A & 4E Operational Traffic Management Plan (OTMP) for the Oakdale West Industrial Estate developments.

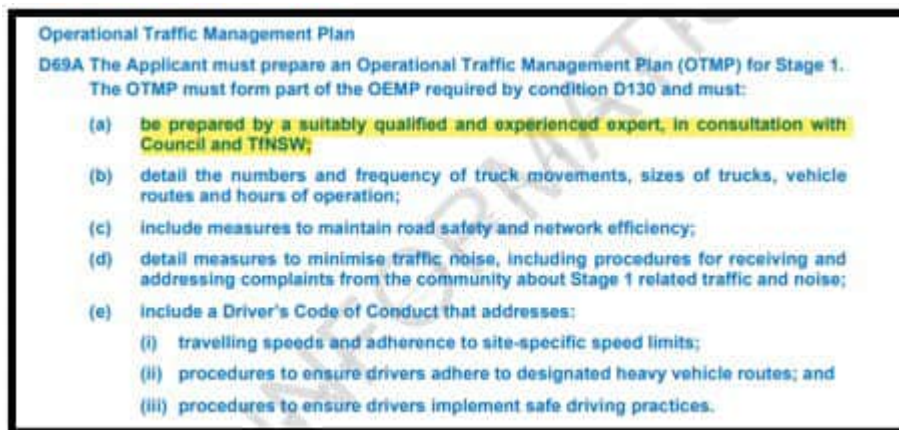
As per previous correspondence, Goodman are currently constructing the Oakdale West Industrial Estate and we are hoping to shortly commence operation of our Lot 1A warehouse (see indicated in yellow in Fig.1) within the Estate.



Figure 1 - Oakdale West, including Lot 1A

In accordance with the Consent for the development (SSD 7348 as modified) , Goodman have prepared an OTMP specific for the facility, which is in line with the Estate's (also SSD 7348) approved overarching OTMP. We note the overarching OTMP is included as an annexure of the Lot 1A report given the strategy we have adopted.

Based on the Consent, it is a requirement of Condition D69A (a) (as below) that we demonstrate consultation with you before we can lodge this report with the Department for approval. We are unable to start Operation of the facility until the Department approves this report:



We'd therefore be grateful if you're able to please review the OTMP and provide us any comments you may have. A 'no comment' response would satisfy the consultation requirements if you have no feedback.

Please let me know if you have any questions, otherwise we appreciate your assistance in advance.

It would be grateful if you could please come back to us by 7 September 2022 to remain on programme.

Regards,



Lachlan O'Reilly
Assistant Project Manager
Lachlan.OReilly@goodman.com

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Appendix C:

Event Notification Report

EVENT NOTIFICATION REPORT

Plant Vehicle Property	Non work Related Motor Vehicle Accidents	Service Strike	Environmental	Injury	Break-in Theft	Conduct
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Date & Time Event Occurred	Event Reported by	Notification Form Completed by	Date Completed
Project Team	Names	Project Name	WHS Site Representative
Project Manager			
Site Supervisor			
Engineers			
Leading Hand/s			

1. DETAILS					
Event Description (Describe event using key words)					
Event first reported to		Date reported		Time reported	
Event details (below) Details specific names, dates, times, equipment, organisation/s, etc.					
What activity was being undertaken? Who was involved, time & duration of activity in progress					
Location on site					
INSERT OR ATTACH MAP / SKETCH & PHOTOS TO NOTIFICATION (Show location in relations to site and key areas – intersections, plant, activity, services, pot hole locations, survey pegs, chainages)					

2. PERSONS INVOLVED / & or near VICINITY					
Names of Directly involved & Witnesses	Organisation	Position Title	Capacity of involvement (Direct / in-direct witness)	Contact No.	Statement Taken
					Y <input type="checkbox"/>
					Y <input type="checkbox"/>
					Y <input type="checkbox"/>
					Y <input type="checkbox"/>

3. IMMEDIATE ACTION TAKEN Tick items to signify the action taken immediately following the event occurring						
<input type="checkbox"/>	Secure area / isolate	<input type="checkbox"/>	Subcontractor Workers retained on site	<input type="checkbox"/>	Medical Centre Ambulance	Other:
<input type="checkbox"/>	Contacted Emergency services	<input type="checkbox"/>	Photos of scene / area	<input type="checkbox"/>	Spill control	
<input type="checkbox"/>	Notified asset owner	<input type="checkbox"/>	D & A testing	<input type="checkbox"/>	Statements	

6. EXTERNAL NOTIFICATIONS made at time of Event Occurrence					
Agency	Notified	Date / time notified	Agency	Notified	Date / time notified
SafeWork NSW (WHS Co-ord responsible)	<input type="checkbox"/>		Subcontractor PM responsible	<input type="checkbox"/>	
EPA / DPIE (ER responsible)	<input type="checkbox"/>		Police / Fire / Amb	<input type="checkbox"/>	
Asset Owner PM responsible	<input type="checkbox"/>		Police Event No. (if applicable)	<input type="checkbox"/>	
Client (Org) PM responsible	<input type="checkbox"/>		Other (Name)	<input type="checkbox"/>	

7. FACTORS CONTRIBUTING TO THE INCIDENT					
Environment			Equipment / materials		
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Surface gradient / conditions	<input type="checkbox"/>	Tampering of plant / equipment
<input type="checkbox"/>	Lighting	<input type="checkbox"/>	Dust / fume	<input type="checkbox"/>	Plant or equipment failure
<input type="checkbox"/>	Vibration	<input type="checkbox"/>	Slip / trip hazard	<input type="checkbox"/>	Inadequate maintenance
<input type="checkbox"/>	Weather	<input type="checkbox"/>	Time production pressures	<input type="checkbox"/>	Inadequate guarding
			<input type="checkbox"/> Other:		
Work systems			People		
<input type="checkbox"/>	Hazard no identified	<input type="checkbox"/>	No / inadequate risk assessment conducted	<input type="checkbox"/>	No / Not followed Procedure
<input type="checkbox"/>	Hazard not reported	<input type="checkbox"/>	No / inadequate controls implemented	<input type="checkbox"/>	Drugs / alcohol
<input type="checkbox"/>	No/inadequate safe work procedure	<input type="checkbox"/>	Inadequate training / supervision	<input type="checkbox"/>	Fatigue
<input type="checkbox"/>	Inadequate planning	<input type="checkbox"/>	Other:	<input type="checkbox"/>	Change of routine
			<input type="checkbox"/> Lack of communication		
Comment on selection					

8. CORRECTIVE ACTIONS				
Actions	Assigned to	Completion date	Date complete	Verified by

9. PM AND ER TO COMPLETE				
Matter has been reviewed, recorded, and correctly notified?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
PM Signature:		ER Signature:		
Date:		Date:		

Appendix D:

Community Communication Strategy



COMMUNITY COMMUNICATION STRATEGY OAKDALE WEST ESTATE - CONCEPT AND STAGE 1

Prepared for:

Goodman Property Services (Australia) Pty Ltd

PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Australia) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
660.20005.00000-R01-v7.0	22 April 2022	Chelsey Zuiderwyk	Adam Williams	Adam Williams
660.20005.00000-R01-v6.0	11 November 2019	Kate McKinnon	Samantha Hayes	Dan Thompson

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1 Introduction

1.1 Background

This Community Communication Strategy (CCS) has been prepared on behalf of Goodman Property Services (Australia) Pty Ltd (Goodman) for the Oakdale West Estate (OWE) Concept and Stage 1 development (State Significant Development [SSD] application 7348).

This CCS has been prepared in accordance with Condition C19 and supporting conditions within the Development Consent, identifying relevant stakeholders, key issues and the communication methods. Specifically, it details how Goodman and their contractors will engage with relevant stakeholders and the community. The CCS integrates with the Construction Environmental Management Plan (CEMP) and associated suite of documents to provide a comprehensive guide and benchmark for the construction process that aligns with the Development Consent conditions.

1.2 Purpose

The OWE project has been assessed and determined under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The CCS includes the following key aspects:

- Identification of stakeholders to be consulted with during the CCS implementation including adjacent landowners and residents, key stakeholders, relevant agencies and the wider community.
- The tools and actions to be undertaken throughout the construction program to disseminate information to the identified stakeholders, providing opportunities for comment.
- Enquiry and Complaint management protocols.
- Monitoring and feedback mechanisms.

The CCS will be updated as the project progresses to account for variations in the construction program and methodology, along with changes in stakeholder situation that impacts on stakeholder interests, with these articulated through the feedback mechanisms.

SSD 7348 contained the following conditions of relevance to this CCS used to benchmark the contents:

- | | |
|--|--|
| • C19 & C20 – Community Communication Strategy | • D118 - Management Plan Requirements |
| • D37 – Landscaping | • D127 & D128 – Environmental Representative |
| • D71 – Hours of Work | • D133 – Document Review |
| • D117 – Ongoing Community Engagement | • D143 – Access to Information |

The details of these conditions are identified within **Table 1** below, along with a cross reference to the relevant section of this CCS.

The approved development includes the construction of the Western North-South Link Road (WNSLR). This road is to be constructed to Roads and Maritime Service (RMS) specifications, to the satisfaction of Penrith City Council (as the Nominated Road Authority). Details of these specifications as they relate to community consultation and communication are identified within **Table 2**, including cross reference to the relevant section of this CCS.

Table 1 Relevant Conditions of Consent

Condition Number	Condition Detail	Report Reference
C19 – Community Communication Strategy	<p>No later than one month before the commencement of construction of any stage of the Development, a Community Communication Strategy (CCS) must be prepared and submitted to the Planning Secretary for approval. The CCS is to provide mechanisms to facilitate communication between the Applicant, Council and the community (including adjoining affected landowners, schools, businesses, and others directly impacted by Stage 1), during design, construction and operation. The CCS must:</p> <ul style="list-style-type: none"> a) assign a central contact person to keep the nearby sensitive receivers regularly informed throughout the Development; b) detail the mechanisms for regularly consulting with the local community throughout the Development, such as holding regular meetings to inform the community of the progress of the development and report on environmental monitoring results; c) detail a procedure for consulting with nearby sensitive receivers to schedule high noise generating works, vibration intensive activities or manage traffic disruptions; d) include contact details for key community groups, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders; and e) include a complaints procedure for recording, responding to and managing complaints, including: <ul style="list-style-type: none"> i. email, contact telephone number and postal addresses for receiving complaints; ii. advertising the contact details for complaints before and during operation, via the local newspaper and through onsite signage; iii. a complaint register to record the date, time and nature of the complaint, details of the complainant and any actions taken to address the complaint; and iv. procedures for the resolution of any disputes that may arise during the course of the Development. 	<p>This CCS Document</p> <ul style="list-style-type: none"> a) Section 4 b) Section 5 c) Sections 5 & 6 d) Section 2.2 e) Section 5.4
C20 – Community Communication Strategy	<p>The Applicant must:</p> <ul style="list-style-type: none"> a) not commence construction of the relevant stage of the Concept Proposal until the CCS required under Condition C19 has been approved by the Planning Secretary; and b) implement the CCS for each stage of the Concept Proposal and following the completion of operation of the Development. 	<ul style="list-style-type: none"> a) Section 1.2 b) Sections 5 & 6
D37 – Landscaping	<p>The Applicant must complete the landscape bund along the western boundary of the Site as shown on Figure 5 in Appendix 2 within six months of commencing any construction including bulk earthworks.</p>	<p>Section 2.2.1 Appendix A</p>

Condition Number	Condition Detail	Report Reference
D71 – Hours of Work	<p>Works outside of the hours identified in Condition D70 may be undertaken in the following circumstances:</p> <ul style="list-style-type: none"> a) works that are inaudible at the nearest sensitive receivers; b) works agreed to in writing by the Planning Secretary; c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm. 	Section 5.3.2
D117 – Ongoing Community Engagement	The Applicant must consult with the community regularly throughout Stage 1, including consultation with the nearby sensitive receivers identified in Appendix 5, relevant regulatory authorities, Registered Aboriginal Parties and other interested stakeholders. Community engagement shall be undertaken in accordance with the Community Communication Strategy approved in accordance with Condition C19.	Sections 5 & 6
D118 – Management Plan Requirements	<p>Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:</p> <ul style="list-style-type: none"> e) details of: <ul style="list-style-type: none"> i. the relevant statutory requirements (including any relevant approval, licence or lease conditions); ii. any relevant limits or performance measures and criteria; and iii. the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, Stage 1 or any management measures; f) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; g) a program to monitor and report on the: <ul style="list-style-type: none"> i. impacts and environmental performance of Stage 1; and ii. effectiveness of the management measures set out pursuant to paragraph (b) above; h) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; i) a program to investigate and implement ways to improve the environmental performance of Stage 1 over time; j) a protocol for managing and reporting any: <ul style="list-style-type: none"> i. incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria); ii. complaint; iii. failure to comply with statutory requirements; and k) a protocol for periodic review of the plan. <p>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</p>	<ul style="list-style-type: none"> a) Refer to Project CEMPs (SLR, 2019a & SLR 2019b) b) Sections 3.2, 5.3 and 5.4 c) Section 6 d) Section 5.4.4 e) Section 6 f) Section 5.4 g) Section 6

Condition Number	Condition Detail	Report Reference
D127 - Environmental Representative	<p>For the duration of construction of Stage 1, or as agreed with the Planning Secretary, the approved ER must:</p> <ul style="list-style-type: none"> (a) receive and respond to communication from the Planning Secretary in relation to the environmental performance of Stage 1; (b) consider and inform the Planning Secretary on matters specified in the terms of this consent; (c) consider and recommend to the Applicant any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community; (d) review the CEMP identified in Condition D119 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this consent, and if so: <ul style="list-style-type: none"> (i) make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or (ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary/Department for information or are not required to be submitted to the Planning Secretary/Department); (e) regularly monitor the implementation of the CEMP, and any other documents identified by the Planning Secretary, to ensure implementation is being carried out in accordance with the document and the terms of this consent; (f) as may be requested by the Planning Secretary, help plan, attend or undertake audits of Stage 1 commissioned by the Department including scoping audits, programming audits, briefings, and site visits; (g) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints; (h) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading "Environmental Representative Monthly Reports." The Environmental Representative Monthly Report must be submitted within seven calendar days following the end of each month for the duration of the ER's engagement, or as otherwise agreed with the Planning Secretary. 	Section 6.2
D128 - Environmental Representative	<p>The Applicant must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition D127 (including preparation of the ER monthly report), as well as:</p> <ul style="list-style-type: none"> (a) the complaints register; and (b) a copy of any assessment carried out by the Applicant of whether proposed work is consistent with the consent (which must be provided to the ER before the commencement of the subject work). 	Section 6.2

Condition Number	Condition Detail	Report Reference
D133 Revision of Strategies, Plans and Programs	<p>Within three months of:</p> <ul style="list-style-type: none"> (a) the submission of a Compliance Report under Condition D141; (b) the submission of an Environmental Representative Monthly Report under Condition D127; (c) the submission of an incident report under Condition D135; (d) the approval of any modification of the conditions of this consent; or (e) the issue of a direction of the Planning Secretary under Condition D2(b) which requires a review the strategies, plans and programs required under this consent must be reviewed. 	Section 6.2
D143 – Access to Information	<p>At least 48 hours before the commencement of construction until the completion of all works under this consent, the Applicant must:</p> <ul style="list-style-type: none"> a) make the following information and documents (as they are obtained or approved) publicly available on its website: <ul style="list-style-type: none"> i. the documents referred to in Condition D2 of this consent; ii. all current statutory approvals for the Development; iii. all approved strategies, plans and programs required under the conditions of this consent; iv. the proposed staging plans for the Development if the construction, operation or decommissioning of the Development is to be staged; v. regular reporting on the environmental performance of the Development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; vi. a comprehensive summary of the monitoring results of the Development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; vii. a summary of the current stage and progress of the Development; viii. contact details to enquire about the Development or to make a complaint; ix. a complaint register, updated monthly; x. the Compliance Report of the Development; xi. audit reports prepared as part of any monitoring or environmental audit of the Development and the Applicant's response to the recommendations in any audit report; xii. any other matter required by the Planning Secretary; and b) keep such information up to date, to the satisfaction of the Planning Secretary. 	Section 5.3.1

It is a requirement of the RMS that communications and community liaison are undertaken in accordance with the RMS QA Specification G36 – Environmental Protection. All relevant requirements within the specification are included in **Table 2** below.

Table 2 Relevant RMS Specifications

Specification Number	Relevant Specification Detail	Report Reference
3.3 - Resources, Responsibilities and Authority	<p>Communications and Community Liaison Representative</p> <p>Appoint a Communications and Community Liaison Representative (CCLR) to lead and manage the community involvement activities, including liaison with property owners and key stakeholders. This person is your representative for the requirements of RMS G36 Clause 3.7.</p> <p>The CCLR must have relevant qualifications with a minimum of 5 years' communications and community liaison experience, preferably in infrastructure development and delivery. The CCLR must be flexible and willing to work outside of normal working hours when required, such as nights and weekends. The CCLR is to be the primary daily contact to the public handling of enquiries/complaints management/interface issues.</p> <p>The CCLR must be available for contact by local residents and the community at all reasonable times to answer any questions and to address any concerns in relation to your construction activities. The CCLR must have up-to-date information on:</p> <ul style="list-style-type: none"> • emerging stakeholders; • planned construction activities; • planned traffic arrangements, including any temporary traffic switches; • current landowner discussions with members of your staff; • planned community and stakeholder consultations; • complaints or enquiries received; • duties and accountabilities of your staff; and, • commitments to stakeholders made by you or Goodman. <p>The CCLR is to handle document management administration and systems/contact database management and maintenance. The CCLR is to liaise with property owners to co-ordinate access and to deal with specific property related issues arising from the upgrade works. The CCLR is to lead in the development and delivery of communication and community engagement strategies and plans.</p> <p>The CCLR is to facilitate meetings, forums and arranging interviews to address concerns from community.</p> <p>The CCLR is to provide advice and participate with the project teams to improve and enhance the delivery of communication services to the community. The CCLR is to build, maintain collaborative and consultative working relationships with internal and external stakeholders.</p> <p>The CCLR is to possess excellent writing and digital media skills including writing and editing copy for printed and electronic material, internal and external materials such as letters, web brochures and public facing reports, and video and photography for promotional use, etc. The CCLR is to possess a current motor vehicle driver's licence.</p> <p>The CCLR must be available for contact by local residents, key stakeholders and community representatives to answer queries and provide more information or feedback.</p>	Section 4

Specification Number	Relevant Specification Detail	Report Reference
3.7 - Communications	<p>Describe in the CEMP the processes for external and internal communication in relation to the environmental aspects of the work under the Contract.</p> <p>Make all staff and subcontractors working on the Site aware of these external and internal communications procedures and ensure they are properly trained in their application.</p>	<p>Refer to Project CEMPs (SLR, 2019a & SLR 2019b)</p> <p>Section 5.3</p>
3.7.1 - Liaison with EPA and/ or other Government Agencies	<p>The CEMP must identify at least two persons (together with their contact telephone numbers) who will be available to be contacted by the EPA and/ or Other Government Agencies on a 24 hour basis and who have authority to take immediate action to shut down any activity, or to effect any pollution control measure, as directed by an authorised officer of the EPA and/ or Other Government Agencies.</p> <p>Immediately notify Goodman of any visit to the Site by the EPA and/ or Other Government Agencies. Prepare a report for each occasion when the Site is visited by the EPA and/ or Other Government Agencies, notifying Goodman of the purpose and outcome of the EPA and/ or Other Government Agencies visit, and of all actions taken by you in response to the EPA and/ or Other Government Agencies visit. Submit this report to Goodman within one working day of the EPA and/ or Other Government Agencies site visit.</p>	Section 4
<p>3.7.2 - Community Liaison and/or Notification</p> <p>3.7.2.1 New or Changed Construction Activities</p>	<p>Notify local residents and other stakeholders about any new or changed construction activities including changes to bus stop locations and / or timetables which will affect access to their properties/ premises at least five 5 working days before commencing work affecting residents.</p> <p>Such notification must state the nature of the work, why it is necessary, the expected duration, details of any changes to the traffic arrangements or property access and the name and 24 hour contact telephone number of your representative who can respond to any resident/stakeholder concerns.</p> <p>Address any concerns raised by residents in accordance with the complaints procedure as required under Clause 3.7.3 and in accordance with any licence or approval held by you.</p>	Section 5.3.2
3.7.2.2 - Extended Working Hours – No Environmental Protection Licence	<p>Following approval from Goodman on each instance to extend working hours, inform affected residents by letter of the location, nature, scope and duration of the proposed work outside normal working hours, not less than 1 week and not more than 2 weeks, before commencing such work.</p> <p>Include the name and contact telephone number of your representative so that residents can contact him over any concerns about extended working hours and any other information required by any licence or approval held by you.</p> <p>Refer to Practice Note vii of RMS publication “Environmental Noise Management Manual” when preparing the letter and notifying the affected residents.</p>	Section 5.3.2

Specification Number	Relevant Specification Detail	Report Reference
3.7.3 - Complaints and Enquiries Management	<p>As part of your CEMP, prepare and implement a Construction Complaints and Enquiries Management procedure prior to the commencement of construction. You must follow the Construction Complaints and Enquiries Management procedure for the duration of construction. You must ensure your Construction Complaints and Enquiries Management procedure is consistent with AS 4269 "Complaints Handling". This must include:</p> <ul style="list-style-type: none"> a) an advertised 24 hour contact telephone number listed with a telephone company and include a contact name; b) a postal address to which written complaints and enquiries can be sent; c) an email address to which electronic complaints and enquiries can be sent; d) a procedure to receive, record, track and respond to complaints and enquiries within a specified timeframe. When a complaint or enquiry cannot be responded to immediately, a follow-up verbal response on what action is proposed must be provided to the complainant/enquirer within two hours during night-time works and 24 hours at other times; e) a process for the provision of a written response to the complainant/enquirer within ten (10) days, if the complaint or enquiry cannot be resolved by the initial or follow-up verbal response; f) a mediation system for complaints unresolved through the above system. <p>Within one working day of receiving a complaint about any environmental or other issue which has the capacity to damage Goodman's reputation, including any pollution incidents, arising from the Work Under the Contract, submit a written report to Goodman detailing the complaint and the action taken to remedy the problem. A final report together with your proposed measures to prevent the recurrence of such incidents must be submitted to Goodman within 5 working days.</p> <p>Keep a register of all complaints or enquiries, which must include the following details:</p> <ul style="list-style-type: none"> (a) date and time of complaint or enquiry; (b) method by which the complaint or enquiry was made (telephone, letter, meeting, etc); (c) name, address, contact telephone number of complainant (if no such details were provided, a note to that effect); (d) nature of complaint or enquiry; (e) action taken in response including follow up contact with the complainant.; (f) any monitoring to confirm that the complaint or enquiry has been satisfactorily resolved; (g) if no action was taken, the reasons why no action was taken by you. 	Section 5.4

Specification Number	Relevant Specification Detail	Report Reference																				
3.7.4 - Notification to communities and stakeholders	Notify Goodman in advance of the following construction activities:	Sections 5.3.2																				
	<table><tr><th>Activity</th><th>Notification required</th></tr><tr><td>Work at night (any time between 6pm and 7am)</td><td>2 weeks where possible, a minimum of 1 week</td></tr><tr><td>Work on weekends (including public holidays)</td><td>2 weeks where possible, a minimum of 1 week</td></tr><tr><td>Major changes to configuration of road traffic</td><td>At least 4 weeks</td></tr><tr><td>Impacts on pedestrians and/or bicyclists</td><td>At least 4 weeks</td></tr><tr><td>Commencement, rescheduling or completion of key construction activities</td><td>At least 4 weeks for commencement and completion, 24 hours’ notice for rescheduling</td></tr><tr><td>Commencement or rescheduling of property adjustment work</td><td>At least 2 weeks (4 weeks for businesses)</td></tr><tr><td>Alteration to property access arrangements</td><td>At least 4 weeks</td></tr><tr><td>Other activities not identified above which may impact on the community stakeholders</td><td>At least 24 hours</td></tr><tr><td>Any form of community protest on site</td><td>Immediately</td></tr></table>		Activity	Notification required	Work at night (any time between 6pm and 7am)	2 weeks where possible, a minimum of 1 week	Work on weekends (including public holidays)	2 weeks where possible, a minimum of 1 week	Major changes to configuration of road traffic	At least 4 weeks	Impacts on pedestrians and/or bicyclists	At least 4 weeks	Commencement, rescheduling or completion of key construction activities	At least 4 weeks for commencement and completion, 24 hours’ notice for rescheduling	Commencement or rescheduling of property adjustment work	At least 2 weeks (4 weeks for businesses)	Alteration to property access arrangements	At least 4 weeks	Other activities not identified above which may impact on the community stakeholders	At least 24 hours	Any form of community protest on site	Immediately
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	Any form of community protest on site		Immediately																			
	In your communications with the community, you must comply with the requirements of the Privacy and Personal Information Protection Act 1998 (NSW).																					
You must not make any undertakings on behalf of Goodman without the prior written approval of Goodman. Comply with the distribution for various notification types as follow:																						
<table><tr><th>Notification Type</th><th>Submission to Goodman</th><th>Distribution</th></tr><tr><td>Out of Hours Works / Night Works (refer to clause 3.7.2.3)</td><td>Draft a notification letter at least 24 hours prior to the works being carried out</td><td>2 weeks where possible, a minimum of 1 week prior to the works being carried out</td></tr><tr><td>Traffic Conditions</td><td>Draft letter at least 4 weeks prior to the traffic conditions changing</td><td>At least 5 business days prior to the traffic conditions changing if deemed necessary by Goodman</td></tr><tr><td>Individual private properties regarding property adjustments or</td><td>Draft letter at least 4 weeks prior to</td><td>At least 2 weeks prior to the works being</td></tr></table>	Notification Type	Submission to Goodman	Distribution	Out of Hours Works / Night Works (refer to clause 3.7.2.3)	Draft a notification letter at least 24 hours prior to the works being carried out	2 weeks where possible, a minimum of 1 week prior to the works being carried out	Traffic Conditions	Draft letter at least 4 weeks prior to the traffic conditions changing	At least 5 business days prior to the traffic conditions changing if deemed necessary by Goodman	Individual private properties regarding property adjustments or	Draft letter at least 4 weeks prior to	At least 2 weeks prior to the works being										
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Individual private properties regarding property adjustments or	Draft letter at least 4 weeks prior to	At least 2 weeks prior to the works being																				

Specification Number	Relevant Specification Detail			Report Reference
	changes to access (refer to clause 3.7.2.1)	the works being carried out	carried out of access changes	
	Access for bridgeworks over the Water NSW pipelines	Final draft of notification at least 4 weeks prior to be works being carried out	At least 4 weeks prior to the works being carried out	
	Individual businesses regarding property adjustments or changes to access (refer to clause 3.7.2.1)	Draft letter at least 4 weeks prior to the works being carried out	At least 4 weeks prior to the works being carried out of access changes	

1.3 Community Communications Strategy Scope

The CCS applies to works undertaken by Goodman and their engaged contractors.

Stage 1 comprises two components with separate contractors engaged for each:

- Bulk earthworks across the site, civil infrastructure and landscaping; and construction of warehousing within Precinct 1 (Stage 1).
- Construction of the WNSLR including a signalised intersection with Lenore Drive, roundabout with Lockwood Road and roundabout with the new internal Estate Road No. 1, earthworks, civil works, utility works, property adjustments and landscaping. A haul road will be constructed through Oakdale West (referred to as the Construction Access Road) as part of the WNSLR construction to provide access to the WNSLR corridor.

Stages 2 to 8 will continue to engage contractors for the construction of each building (see **Figure 4**).

The CCS applies to all stages of development and separate CEMPs have been prepared to address each component of Stage 1, and separate CEMPs will continue to be prepared for the construction of each building in Stages 2 to 8. All CEMPs reference this CCS and will be serviced by the same project website and phone number to provide a simplified and consistent communications process across the project.

For the operation of these developments, an estate-wide OEMP has been prepared, as well as individual OEMPs for each building. All OEMPs reference the CCS and also include additional information within the OEMP to ensure Condition C19(e) of SSD 7348 is clearly addressed for operation.

1.4 Project Description

1.4.1 State Significant Development Approvals

SSD 7348 was approved on 13 September 2019, granting approval for the Stage 1 Development and Concept Approval for the Oakdale West Industrial Estate at Kemps Creek. The development, as approved under SSD 7348 and approved modifications are included in **Table 3** below.

Table 3 Approved Development and Modifications

Application Number	Development Description
SSD 7348	<p>A Concept Proposal including:</p> <ul style="list-style-type: none"> • concept layout of 22 warehouse buildings inclusive of dock offices and ancillary offices providing 476,000 square metres of gross lettable area, built over five development stages; • concept layout of development lots, internal roads, drainage, landscaping, noise walls, basins and biodiversity offsets; and • development controls <p>A Stage 1 Development including:</p> <ul style="list-style-type: none"> • bulk earthworks across all five stages including retaining walls and noise walls; • lead in services including but not limited to drainage, power, sewer, water and telecommunications; • service infrastructure to Precinct 1, including drainage, power, sewer, water and telecommunications; • construction and operation of three warehouse buildings inclusive of dock offices and ancillary offices in Precinct 1 (1A, 1B and 1C) providing 118,000 square metres of gross lettable area; • Western North-South Link Road and associated subdivision, basins and drainage; • estate roads 1, 2 and 6 and eastern part of road 7; • landscaping of Stage 1, the western boundary, Western North-South Link Road, estate roads 1, 2 and 6 and the eastern part of road 7, detention basins and the amenity lot • subdivision of Stage 1 lots and road • infrastructure including the services (substation) lot; • stormwater drainage infrastructure for Lots 2A and 2B and all basins; • temporary works to facilitate construction • including but not limited to swales, haul road (construction access), landscaping and basins; and • works including construction of traffic signals at Lenore Drive/Grady Crescent/WNSLR intersection.
SSD 7348 MOD 1	Minor amendments to pad levels, stormwater changes and refinement of the infrastructure design of OWE has resulted in the need for minor amendments to the approved masterplan layout and necessitates minor modifications to SSD 7348.
SSD 7348 MOD 2	Modifications to the Oakdale West Estate approved concept plan and Stage 1 development, including master plan layout, increase in gross floor area and expansion of Building 1A (Warehouse building 1A including high-bay (39m) and low-bay (28m) components), changes to internal roads, civil design and building pad levels.
SSD 7348 MOD 3	<p>Amendments to the Concept Proposal:</p> <ul style="list-style-type: none"> • the OWE layout and staging • precinct boundaries • reconfigure estate road layout • basic design and infrastructure (including building height, basins, noise wall, pad levels and GLA) • civil strategy and servicing strategy • development standards applicable to the site including a height increase for Building 2B from 15 m to 28m and applicable noise limits for the development. <p>Amendment to the Stage 1 Development:</p>

Application Number	Development Description
	<ul style="list-style-type: none"> construction of estate road 03, roundabout, retaining wall, noise wall, basins and infrastructure subdivision of estate roads extension to noise wall change to pad levels, bulk earthworks and landscaping and construction hours.
SSD 7348 MOD 4	Inclusion of an additional lot (Lot 9 DP 1157476) in the subject site and carrying out works in the additional lot to facilitate development of the WNSLR
SSD 7348 MOD 5	<p>Concept Approval</p> <ul style="list-style-type: none"> Update Condition B10 to reflect the 17m building setback to the Southern Link Road Update Masterplan Landscape Plan reference to reflect the widened road reserve for the Southern Link Road. <p>Stage 1 Approval</p> <ul style="list-style-type: none"> Update Architectural, Civil, and Landscaping plans to reflect the proposed design changes on Lot 1. Change incorrect figure reference in Condition D75A from Figure 7 to Figure 6. Change in correct figure reference in Condition D75C from Figure 7B to Figure 7 and update this condition D75 C to reflect the revised noise barrier completion date. Update Condition D93 to reflect revised location for biodiversity planting
SSD 7348 MOD 6	Amendments to the approved Concept Plan and Stage 1 development including changes in Precincts 2A, 2C, 2D, 2E layouts, increase in building height control for Precinct 2A, and inclusion of construction Estate Road 8 as part of Stage 1 development.
SSD 7348 MOD 7	Changes to Precincts 3 and 4 including earthworks, retaining walls, building layouts in Precinct 4 and estate road 7.
SSD 7348 MOD 8	Amendments to architectural plans for Stage 1 Buildings 1A, 1B and 1C.
SSD 7348 MOD 9	Amendments to the layout of Buildings 2A, 2C and 2D and increased height of Building 2C

Further project details are located in the Environmental Impact Statement, Oakdale West Estate, State Significant Development Application (EIS) (Urbis, 2017) and Response to Submissions (RTS) and SSD 7348 Modification Reports, available on the Major Projects Portal.

Table 4 below identifies the site layout, which is a 'Master Plan' to guide the staged development of Oakdale West and core development controls that will form the basis for design and assessment of future development applications for the site. **Figure 2** shows further detail of the WNSLR plans for the estate.

1.4.2 Site works

The site works for the estate will be undertaken by two contractors, with specific areas of responsibility. Areas of responsibility comprise the bulk earth works, civil infrastructure and services, along with the Stage 1 built form development. A second contractor is engaged for the WNSLR connection north to Lenore Drive and haul road civil works through to the south west corner of the site:

The project involves construction activities including:

- Site establishment.
- Clearing and stripping.
- Site construction access.
- Demolition of existing buildings.
- Sediment erosion control works.
- Bulk earthworks and haulage of materials.
- Signage and fencing.
- Construction of civil infrastructure including access roads, bridge, drainage, retaining walls and utilities.
- Building construction and landscaping within Stage 1.

Contractors will continue to be engaged separately for the construction of each building for Stages 2 to 8 (see **Figure 3**).

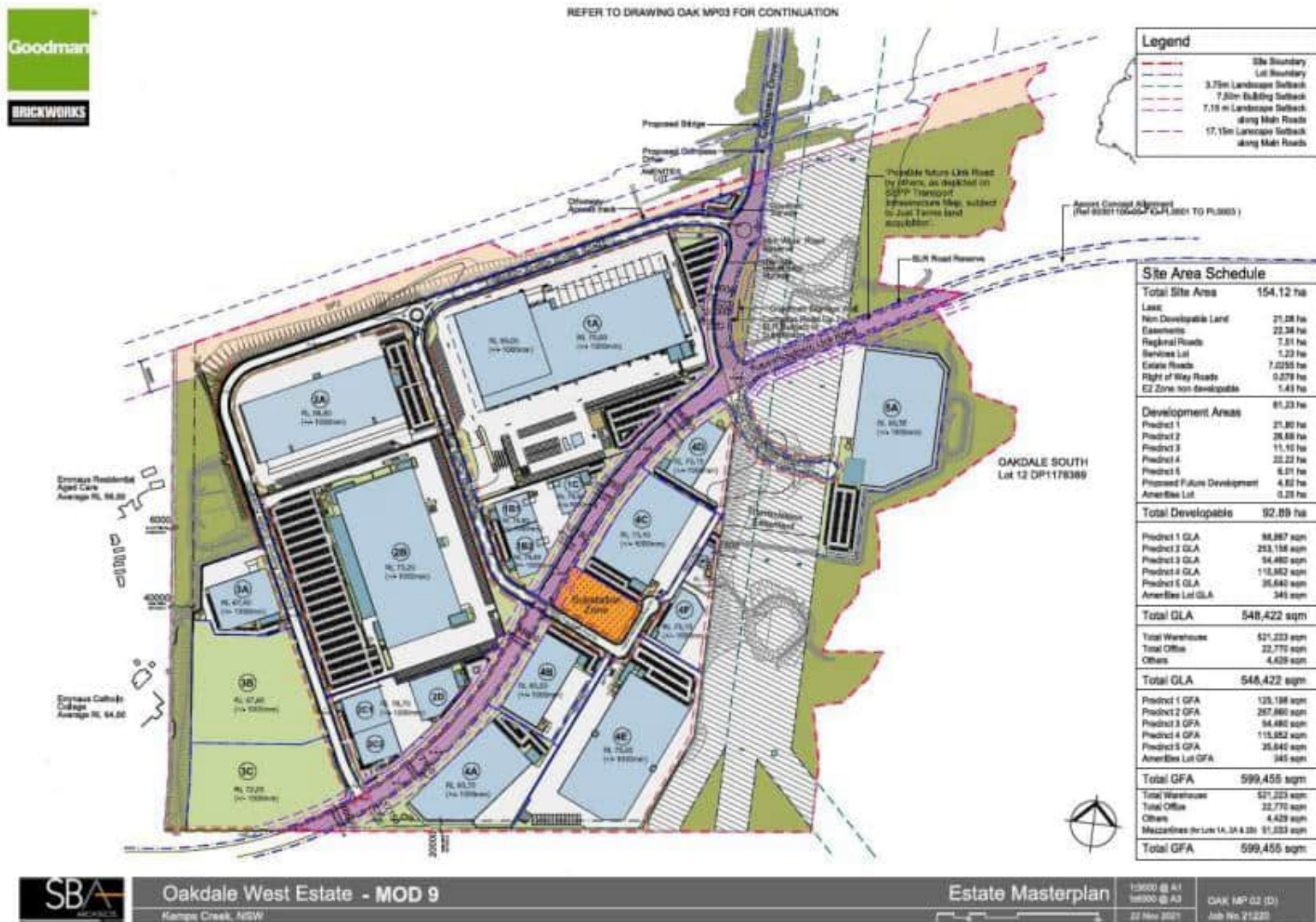


Figure 1 Oakdale West Site Layout



Figure 2 WNSLR Plans

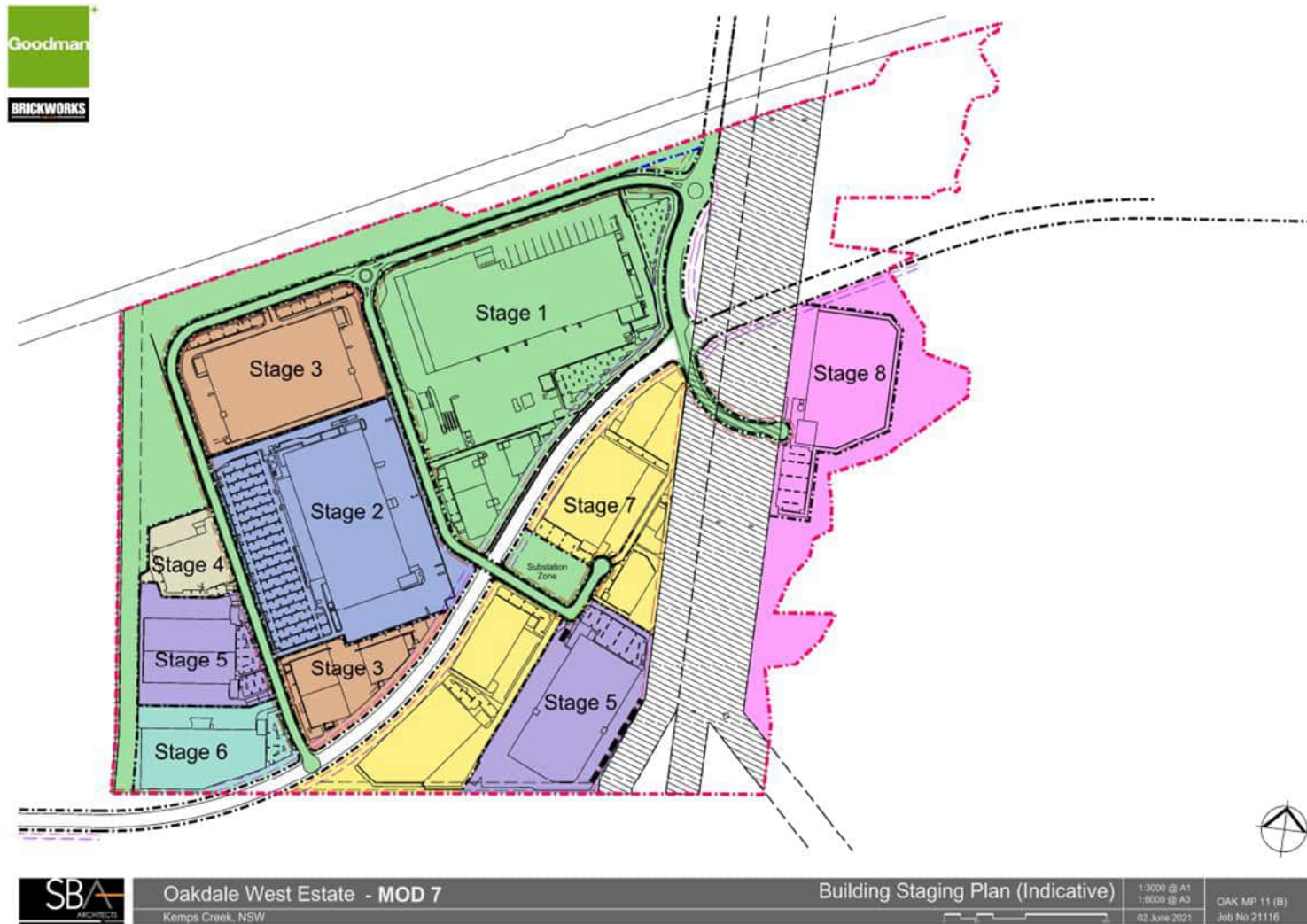


Figure 3 Oakdale West Staging Plan

2 Stakeholder Identification

2.1 Community Overview

The site comprises historic agricultural land identified within the Western Sydney Employment Area (WSEA). The site is located across two Australian Bureau of Statistics (ABS) geographical boundaries, with Erskine Park to the north and Kemps Creek to the south. The ABS data below has been used to inform the communications methodology, with appropriate media and language used to reflect the statistical data.

2.1.1 Erskine Park

Erskine Park has a population of 6,436 accommodated in 2,016 dwellings. The median age is 34 compared to a State median of 38. The top ancestry response is Australian, followed by English, Irish, Scottish then Filipino, with languages other than English spoken at home comprising Arabic (2.6%), Tagalog (2.4%), Filipino (1.4%), then Hindi (1.2%).

17.7% of the Erskine Park population completed Year 12 compared to 15.3% for the State, with 66% of the population employed full time compared to a State average of 59.2%. Management comprised the highest percentage of employment, equating to 19.5%, with a median weekly income of \$781, compared to \$664 for the State.

2.1.2 Kemps Creek

Kemps Creek has a population of 2,268 accommodated in 700 dwellings. The median age is 41 compared to a State median of 38. The top ancestry response is Italian, followed by Australian, English, Lebanese then Maltese, with languages other than English spoken at home comprising Italian (10.1%), Arabic (6.4%), Cantonese (4.3%), then Assyrian Neo-Aramaic (3%).

14.2% of the Kemps Creek population completed Year 12 compared to 15.3% for the State, with 58.4% of the population employed full time compared to a State average of 59.2%. Clerical and Administrative Workers comprised the highest percentage of employment, equating to 20%, with a median weekly income of \$588, compared to \$664 for the State.

2.2 Key Stakeholders

The site is located in close proximity to sensitive receivers to the west comprising a Catholic School, Anglican School and Age Care facility, along with a number of dwellings to the south. The northern and eastern boundaries comprise environmental corridors and infrastructure. Goodman and their representatives carried out extensive consultation with the community and stakeholders during the development of the EIS (Urbis, 2017). Previously identified stakeholders are categorised in **Table 4** below.

Table 4 Key Stakeholders

Stakeholder Agency/Authority	Interests/Issues
Directly affected stakeholders	<p>Adjacent and directly affected properties, businesses and schools including:</p> <ul style="list-style-type: none"> • Residential property – 20 Aldington Road • Emmaus Catholic College • Trinity Catholic Primary School • Emmaus Retirement Village • Mamre Anglican School • Catholic Healthcare Emmaus Village • Little Smarties Early Learning Centre
Local Councils	<ul style="list-style-type: none"> • Penrith City Council
State Government Departments and Offices	<ul style="list-style-type: none"> • NSW EPA • NSW Heritage Office • NSW Biodiversity and Conservation Division, Department of Planning Industry and Environment • NSW Department of Industry • Roads and Maritime Service • Transport for NSW • NSW Rural Fire Service • WaterNSW • National Resources Asset Regulator
Utility and Service Providers	<ul style="list-style-type: none"> • TransGrid • Endeavour Energy • WaterNSW • Sydney Water • Jemena • NBN • Telstra
Other Interested Parties	<ul style="list-style-type: none"> • Registered Aboriginal Parties

Contact details for the key stakeholders listed in **Table 4** above are included in **Appendix B & C**.

2.2.1 Properties receiving adjustments or architectural treatment and mitigating works

It is proposed to provide window glazing treatments to assist in acoustic attenuation to dwellings located at 20 Aldington Road, Kemps Creek.

A landscape bund is to be formed along the Western boundary of the development site to create an acoustic barrier to properties to the West. The location of the landscape bund is shown at **Appendix A**. The landscape bund shall be completed within 6 months of the commencement of any construction work, including bulk earthworks.

3 Key Issues Affecting Stakeholders

3.1 Previous Consultation

Goodman and their representatives have previously undertaken consultation with the community and stakeholders during the development of the project. Details of this consultation were included in the EIS (Urbis, 2017).

A total of 15 submissions were received, including one submission from a Local Council, three submissions from utilities providers, nine submissions from government authorities and two submissions from nearby properties and businesses. In response to the issues raised, Goodman revised several plans and consultant reports, which informed a Response to Submissions Report (Urbis, 2018a).

A further 10 submissions following these revisions were received and further modification to proposed plans and consultant reports were made, with a Supplementary Response to Submissions Report (Supplementary RTS) (Urbis, 2018b) prepared to the satisfaction of the determining authority.

For more information, refer to the Department of Planning and Environment's Major Project Assessments webpage at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7348v

3.2 Potential Issues and Strategies

Goodman are committed to ongoing proactive consultation with the community and stakeholders while understanding the importance of addressing potential issues and minimising construction related impacts. **Table 5** outlines project issues that are likely or known to be of interest or concern to the community and stakeholders. The table also details communications related measures and strategies that Goodman will undertake to manage and mitigate impacts. The CEMP identifies management and mitigation measures to address those matters extending beyond consultation.

Table 5 Issue Identification and Mitigation

Potential Issue	Potential Key Impacts	Mitigation Strategy
Noise, Vibration and Dust	Truck, machinery and light vehicle movements within, to and from the site, along with civil works have potential to result in negative impacts associated with noise, vibration and dust.	<p>Sensitive receivers and affected stakeholders will be consulted prior to actions likely to generate high levels of noise or vibration in accordance with Section 5.4.2 of this strategy.</p> <p>Up to date information on current and proposed works will be accessible to stakeholders and the wider public on the project web page.</p> <p>Additionally, should any works be likely to generate impacts beyond those identified within the approval's documentation consultation would be undertaken with the applicable managing agency.</p> <p>The CEMP, along with the supporting Dust, Noise and Vibration management plans contain specific measures to manage these impacts. These management plans have been informed by commitments contained within the SSD approvals package, EPA standards and guidelines.</p>
Stormwater, Sediment Control, Erosion, Water Quality	<p>High rainfall events could result in localised flooding.</p> <p>Construction could result in impacts to local water quality, associated with sediment laden runoff.</p>	<p>Surrounding sensitive receivers will be consulted with in relation to adjacent works regarding flooding and water quality issues, with these items discussed at regular meetings, or as they arise via the construction hotline, in accordance with Section 5.4.2 of this Strategy.</p> <p>The CEMP, along with the supporting Soil and Water Management Plan and Water Quality Monitoring Program identify specific mechanisms to manage and mitigate these impacts in accordance with the relevant Penrith City Council standards and commitments within the SSD approvals package.</p>
Construction Traffic	A temporary increase in traffic movements may be experienced associated with the import of fill material, the movement of construction machinery to and from the site and the movement of workers light vehicles.	<p>Sensitive receivers will be notified prior to actions likely to cause traffic disruption in accordance with Section 5.4.2 of this strategy.</p> <p>The CEMP and supporting Construction Traffic Management Plan and Fill Importation Plan identify specific mechanisms to manage and mitigate these impacts.</p>

Potential Issue	Potential Key Impacts	Mitigation Strategy
Local Infrastructure, Utilities and Services	Temporary interruption to existing services including surrounding roads may be required to allow for road connections and the extension of services to the site.	Affected receivers would be notified of possible service disruption via letter box drop and regular meetings, with these disruptions minimised where possible through implementation of the designs identified within the SSD approvals package, measures identified within the CEMP and subsequent engagement with utility providers.
Visual Amenity and Privacy	Visual impacts of earthwork and construction activities, along with potential impacts on the privacy of adjacent sensitive receivers.	Potentially affected receivers would be advised of works with the potential for impact via letter box drop and with these items discussed at regular meetings, or as they arise via the construction hotline, in accordance with Section 5.4.2 of this Strategy. The CEMP identifies specific mechanisms to manage and mitigate these impacts.
Removal of Flora and Fauna	The project approval requires the removal of native and exotic flora and fauna to facilitate the development, with the associated potential for impacts on safety of immediately adjacent receivers, along with biodiversity and visual amenity.	Potentially affected receivers are likely to comprise those receivers immediately adjacent, who are to be advised of works with the potential for impact via letter box drop and regular meetings, or as they arise via the construction hotline, in accordance with Section 5.4.2 of this Strategy. The CEMP, along with the supporting Flora and Fauna Management Plan identify specific mechanisms to manage and mitigate these impacts.
Out of Hours Work	The identified impacts could be magnified due to the works being carried out while surrounding receivers are more likely to be home in the early morning/evening, or asleep, with correspondingly lower background noise levels.	Out of hours works to only be undertaken where necessary and subject to endorsement from the applicable managing agency. Should out of hours work with the potential for impact be proposed the potentially affected receivers would be advised via letter box drop and/ or regular meetings in accordance with Section 5.4.2 of this Strategy.
Aboriginal Heritage	There is the potential for encountering items of Aboriginal Heritage during excavation.	Monitoring of works by appropriately qualified personnel, along with the implementation of an unexpected finds protocol in consultation with Aboriginal Stakeholders and Heritage Division of the Department of Planning, Industry and Environment would be put in place, as discussed within Section 5.4.2 of this document. The CEMP, along with the supporting Unexpected Finds Protocol (Heritage) identify specific mechanisms to manage and mitigate these impacts. .

Potential Issue	Potential Key Impacts	Mitigation Strategy
Misinformation and Misunderstanding	<p>Lack of project awareness within the wider community may result in complaints being raised by those unaware of the extent of the approval, with these complaints not directed through the appropriate project hotline.</p> <p>Unauthorised release of project information by the project team to the media, stakeholders or the community has potential to impact on project perception in the community.</p>	<p>The CCS includes measures at Section 5.4.2 to provide regular updates in plain language, supported by imagery to stakeholders and the wider community through public and private media.</p> <p>Contact details including the hotline details will be provided on site, the project web page and in all information issued.</p>
Emergency Event	<p>Unforeseen emergency with the potential to impact on the community either directly, or indirectly through out of hours activities that may generate additional traffic or noise.</p>	<p>The CCS includes measures at Section 5.4.2 to provide updates in emergency events, with the CEMP and Emergency Management Plan identifying specific mechanisms to manage and mitigate these impacts.</p>

4 Communications and Community Liaison Representative

Goodman have appointed a Communications and Community Liaison Representative (CCLR) who will provide the community and stakeholders with a single point of contact for both components of the project, responsible for receiving and disseminating information requests and complaints, along with addressing any interface issues. The CCLR will also facilitate property access should it be required.

The CCLR will be available for contact by local residents and the community at all reasonable times to answer any questions and address any concerns relating to the project. The CCLR will have up-to-date information on:

- Emerging stakeholders.
- Planned construction activities.
- Planned traffic arrangements, including any temporary traffic switches.
- Current landowner discussions with members of staff.
- Planned community and stakeholder consultation.
- Complaints or enquiries received.
- Duties and accountabilities of staff.
- Commitments to stakeholders made by Goodman.

The CCLR will be supported by a community consultation team with the following responsibilities:

- Development and delivery of communications strategies, including meeting/workshop facilitation.
- Maintenance of the community and stakeholder consultation register.
- Property owner liaison to address property specific issues.
- Preparation of material and facilitating group and public meetings, workshops and forums for the works.
- Liaison with the construction team to identify items of potential community interest within the upcoming construction program.
- Identifying opportunities for improvement, monitoring community feedback and reporting back to the community via updates to the project web page and at regular community meetings.

The CCLR details are:

- Kiera Plumridge – Senior Consultant
kplumridge@slrconsulting.com; 1300 002 887
- Kate McKinnon – Associate – SLR
kmckinnon@slrconsulting.com; 1300 002 887

5 Community and Stakeholder Engagement

5.1 Objectives

The key objectives of the strategy are to meet the requirements of condition C19 of SSD7348 and:

- Keep the local community and key stakeholders informed of the commencement and progress of works relating to the OWE project.
- Ensure that enquires and complaints received from the community or key stakeholders are addressed and responded to in a timely and effective manner.
- Inform nearby sensitive receivers in advance of potential disturbances and events likely to cause impact.
- Be good neighbours and members of the local community throughout the duration of the project's lifespan.
- Providing an open two communications channel to allow ongoing, iterative engagement.
- Seek opportunities for improvement throughout the project.

5.2 Approach

Goodman are committed to delivering Community and Stakeholder Engagement outcomes utilising the following principles at the core of their approach:

- **Clarity** – Communication and engagement will be delivered in a clear and easy to understand manner to ensure the project and all associated works are fully understood by the community and stakeholders.
- **Proactivity** – Consultation and notice shall be given prior to the commencement of works or the undertaking of potentially impactful activities.
- **Transparency** – Communication and engagement will be undertaken in an open and transparent fashion, with information shared between the community and the project team.
- **Accessibility** – Information relating to the project will be accessible via a broad range of mediums and will be made readily available to the community and stakeholders. Several avenues of contact shall be provided for the purposes of enquiry or complaint.

In their communications and consultation with the community and key stakeholders, Goodman and their representatives will comply at all times with the requirements of the *Privacy and Personal Information Protection Act 1998 (NSW)* and the *Privacy Act 1988 (Cth)*.

5.3 Communication, Management and Mitigation Tools

A range of tools and techniques will be used to inform and engage with the community and stakeholders regarding the project. **Table 6** below provides an overview of the mechanisms to be utilised to regularly inform and consult with the local community and key stakeholders and measures to mitigate potential issues throughout the development.

Table 6 Communication Management and Mitigation Tools

Tool/ Technique	Description	Person Responsible	Audience	Frequency/timing	Specifications
Community Consultation Meetings	Informal meetings, providing a project update and opportunity for the community and stakeholders to discuss recent experiences and upcoming construction activities.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Meetings would initially be held quarterly, with the frequency then subject to the level of interest and the construction program.	Project updated including a review of any complaints received and remedial actions, followed by informal discussion with stakeholders and the community.
Community Workshops/Forums	An initial community workshop/forum to be held to identify the overarching construction program and communications protocols, with the event advertised via local newspaper and letter box drop.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Prior to commencement of construction.	The first portion of the workshop is formal, identifying the project program, key personnel and the communications protocol. The second portion is informal with time for stakeholders and the community to ask questions and discuss any concerns.
Consultation Register	Recording community and stakeholder interactions, along with associated remedial actions as required.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Project duration.	The consultation register satisfies the requirements of Condition C19 of SSD7348, and Specification 3.7.3 of the RMS G36 Specifications requiring a Complaints Register. The register will be continually updated to record community engagement, including information provided by Goodman, feedback received, and remedial action undertaken where required.

Tool/ Technique	Description	Person Responsible	Audience	Frequency/timing	Specifications
Environmental Review Group Meeting	Meeting of key environmental stakeholders	Environmental Representative	All environmental stakeholders	As required for the project duration	The Environmental Review Group will be briefed on upcoming project tasks with key environmental implications, along with complaints and enquiries received
Individual Community Meetings	Meetings with stakeholders as required to discuss a specific item.	CCLR and Community Consultation Team	The wider community and key stakeholders.	As required.	Details and format subject to the meetings context, with a record of the discussion included in the consultation register and actioned as required.
Newspaper Advertisement	Newspaper Advertisement(s) to be published in The Western Weekender and Mt Druitt – St Marys Standard identifying the project hotline number and web page address.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Prior to the commencement of the initial construction activities on the site and throughout the project prior to known key intrusive events.	An advertisement will be published advising of the commencement date of construction, a brief overview of the project and key contact details for enquires and complaints including the hotline, webpage and email address. Further advertisements will be published where intrusive events are scheduled advising of the nature and date(s) and time(s) of the event and key contact details for enquiries and complaints.
Notification Letterbox Drop	Letters would be provided to specific receivers identified as being potentially affected by construction. This could be undertaken in tandem with door knocking.	CCLR and Community Consultation Team	Residents of the immediate area.	As required for the project duration.	Letter box drop details to be recorded in the consultation register. Timing of construction activity to be identified along with relevant contact details.
On Site Signage	Project information details.	CCLR and Community Consultation Team	Visitors to the site and residents of the immediate area.	Project duration.	Contain key project contact details including the hotline and web page, along with relevant project and safety information.

Tool/ Technique	Description	Person Responsible	Audience	Frequency/timing	Specifications
Online Feedback Forms	Simple form allowing rapid ad hoc feedback.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Project duration.	Form available on the Oakdale project web page, with feedback provided to be incorporated into the consultation register and actioned as required.
Project Information and Complaints Number	Project hotline available for 24 hours recording of project feedback.	CCLR and Community Consultation Team	The wider community and key stakeholders.	Project duration.	Hotline number located on site signage, the web page and all project information material. Feedback provided to be incorporated into the consultation register and actioned as required.
Staff and Visitor Induction and Training	Project information details.	Site Forman and Management Staff	Staff and visitors to the site.	Project duration.	Key project safety information, contact details, emergency procedures and site information.
Toolbox and Prestart Meetings for WNSLR and Stage 1 Infrastructure Works	Project information details.	Site Forman and Management Staff	Staff and visitors to the site.	Project duration.	Task specific safety information, emergency procedures and relevant project updates. All staff and subcontractors to be made aware of external and internal communications procedures
Text Message and Email Alerts	Text messages providing prompt updates	CCLR and Community Consultation Team	Residents of the immediate area.	As required for the project duration.	Text Messages and email alerts will provide important information at short notice to potentially affected receivers. Text message and email details to be recorded in the consultation register.

Tool/ Technique	Description	Person Responsible	Audience	Frequency/timing	Specifications
Website	A web page is established at: oakdaleopportunities.com	CCLR and Community Consultation Team	The wider community and key stakeholders.	Project duration.	Website address and phone number located on site signage and all project information material. Web page to provide contact details including hotline, email address and enquiry form, as well as project updates, along with environmental performance monitoring. Refer to Section 5.3.1 below for further details.

5.3.1 Project Website

Goodman has established a website for the project (oakdaleopportunities.com). The website was established prior to the commencement of works and will be maintained during the delivery of the project until the completion of all works.

The following information will be updated monthly or more frequently when necessary and made available on the website as required by SSD 7348 Condition D143:

- A copy of the documents listed in Condition D2 of the SSD Consent (SSD 7348).
- All current statutory approvals for the Development.
- All approved strategies, plans and programs required under conditions of the SSD Consent (SSD 7348).
- The proposed staging plans for the Development if the construction, operation or decommissioning of the Development is to be staged.
- A comprehensive summary of the monitoring results of the Development, reported in accordance with the specifications in any conditions of the SSD Consent (SSD 7348), or any approved plans and programs.
- A summary of the current stage and progress of the Development.
- Contact details (including email address, phone number and postal address) to enquire about the Development or to make a complaint.
- A complaints register, updated monthly and details of the complaints handling protocol for the project.
- The Compliance Report of the Development.
- Audit reports prepared as part of any monitoring or environmental audit of the Development and the Applicant's response to the recommendations in any audit report.
- Any other matter required by the Planning Secretary.

5.3.2 WNSLR Works Liaison and Notification Requirements

Where works relate to the construction of the WNSLR, the RMS QA Specification G36 – Environmental Protection sets out a number of specifications and measures addressing notification to the community and affected stakeholders. In order to comply with these requirements, Goodman shall undertake the following activities:

- Goodman shall notify local residents and other stakeholders about any new or changed construction activities including changes to bus stop locations and / or timetables, which will affect access to their properties/ premises at least five 5 working days before commencing work affecting residents.
- Such notification will state the nature of the work, why it is necessary, the expected duration, details of any changes to the traffic arrangements or property access and the name and 24-hour contact telephone number of the CCLR who can respond to any resident/stakeholder concerns.
- Any complaints shall be addressed in accordance with the complaint's procedure outlined in Section 5.4 of this strategy.
- Where extended working hours are proposed, the contractor shall inform Goodman who will subsequently inform residents of the proposed work outside normal working hours in accordance with the requirements outlined in this strategy. Written approval from the Planning Secretary will be sought for out of hours work.

- Within one working day of receiving a complaint about any environmental or other issue which has the capacity to damage Goodman's reputation, including any pollution incidents, arising from the Work Under the Contract, a written report to Goodman shall be submitted detailing the complaint and the action taken to remedy the problem. A final report together with proposed measures to prevent the recurrence of such incidents shall be submitted to the Goodman within 5 working days.

The contractor shall adhere to set timeframes for notification of Goodman and distribution of notice to the community and stakeholders for activities related to the WNSLR. This commitment is outlined in **Table 7** and **Table 8** below:

Table 7 Notification Requirements for Goodman prior to Construction Activities

Activity	Notification required
Work at night (any time between 6pm and 7am)	2 weeks where possible, a minimum of 1 week
Work on weekends (including public holidays)	2 weeks where possible, a minimum of 1 week
Major changes to configuration of road traffic	At least 4 weeks
Impacts on pedestrians and/or bicyclists	At least 4 weeks
Commencement, rescheduling or completion of key construction activities	At least 4 weeks for commencement and completion, 24 hours' notice for rescheduling
Commencement or rescheduling of property adjustment work	At least 2 weeks (four weeks for businesses)
Alteration to property access arrangements	At least 4 weeks
Other activities not identified above which may impact on the community stakeholders	At least 24 hours
Any form of community protest on site	Immediately

Table 8 Notification Requirements for works

Notification Type	Submission to Goodman	Distribution to Community and Stakeholders
Out of Hours Works / Night Works	Draft a notification letter at least 24 hours prior to the works being carried out	2 weeks where possible, a minimum of 1 week prior to the works being carried out
Traffic Conditions	Draft letter at least 4 weeks prior to the traffic conditions changing	At least 5 business days prior to the traffic conditions changing if deemed necessary by Goodman
Individual private properties regarding property adjustments or changes to access	Draft letter at least 4 weeks prior to the works being carried out	At least 2 weeks prior to the works being carried out of access changes
Access for bridgeworks over the Water NSW pipelines	Final draft of notification at least 4 weeks prior to be works being carried out	At least 4 weeks prior to the works being carried out
Individual businesses regarding property adjustments or changes to access	Draft letter at least 4 weeks prior to the works being carried out	At least 4 weeks prior to the works being carried out of access changes

5.3.3 Communication with Sensitive Receivers' Procedure

During the course of works the CCLR will consult with nearby sensitive receivers listed below when necessary to advise of and/or schedule events and activities with the potential to cause impact such as high noise generating works, vibration intensive activities or traffic management disruptions.

The CCLR shall also consult with sensitive receivers to arrange respite period offerings where high-noise works are predicted to exceed 75dBA for residential receivers and 65dBA for schools and the retirement village. Respite offers will also be considered for high vibration works where the works are undertaken within the human comfort minimum working distances for all sensitive receivers.

Sensitive receivers are considered to include adjacent and directly affected properties, businesses and schools including:

- Residential properties located along Aldington Road (As shown in **Appendix A**).
- Emmaus Catholic Primary School and High School and Retirement Village on Bakers Lane.

Where development works have the potential to impact on sensitive receivers or respite offerings are proposed the CCLR will implement the sensitive receiver procedure outlined in **Table 9** below:

Table 9 Sensitive Receiver Procedure

Potential Impact or Issue	Method of Contact/Consultation	Timeframe
High noise generating work	Email, Text Message or Letterbox drop – notifying of expected commencement, duration and affected hours	No less than 24 hours prior to the activity
Vibration intensive activity	Email, Text Message or Letterbox drop – notifying of expected commencement, duration and affected hours	No less than 24 hours prior to the activity
Traffic management disruption	Email, Text Message or Letterbox drop – notifying of expected commencement, duration and affected hours Variable Message Signs	No less than 24 hours prior to the activity
Respite offerings	Email or phone calls will be undertaken to determine whether respite is required and appropriate scheduling and duration for respite periods	No less than 24 hours prior to the activity

5.4 Complaints Procedure

Goodman are committed to the timely and effective management of enquiries and complaints relating to construction activities for the OWE. To this end, the following complaints procedure shown in **Figure 4** will be adhered to, enabling the receipt and recording of enquiries and complaints, along with the methods of response and resolution of issues raised.

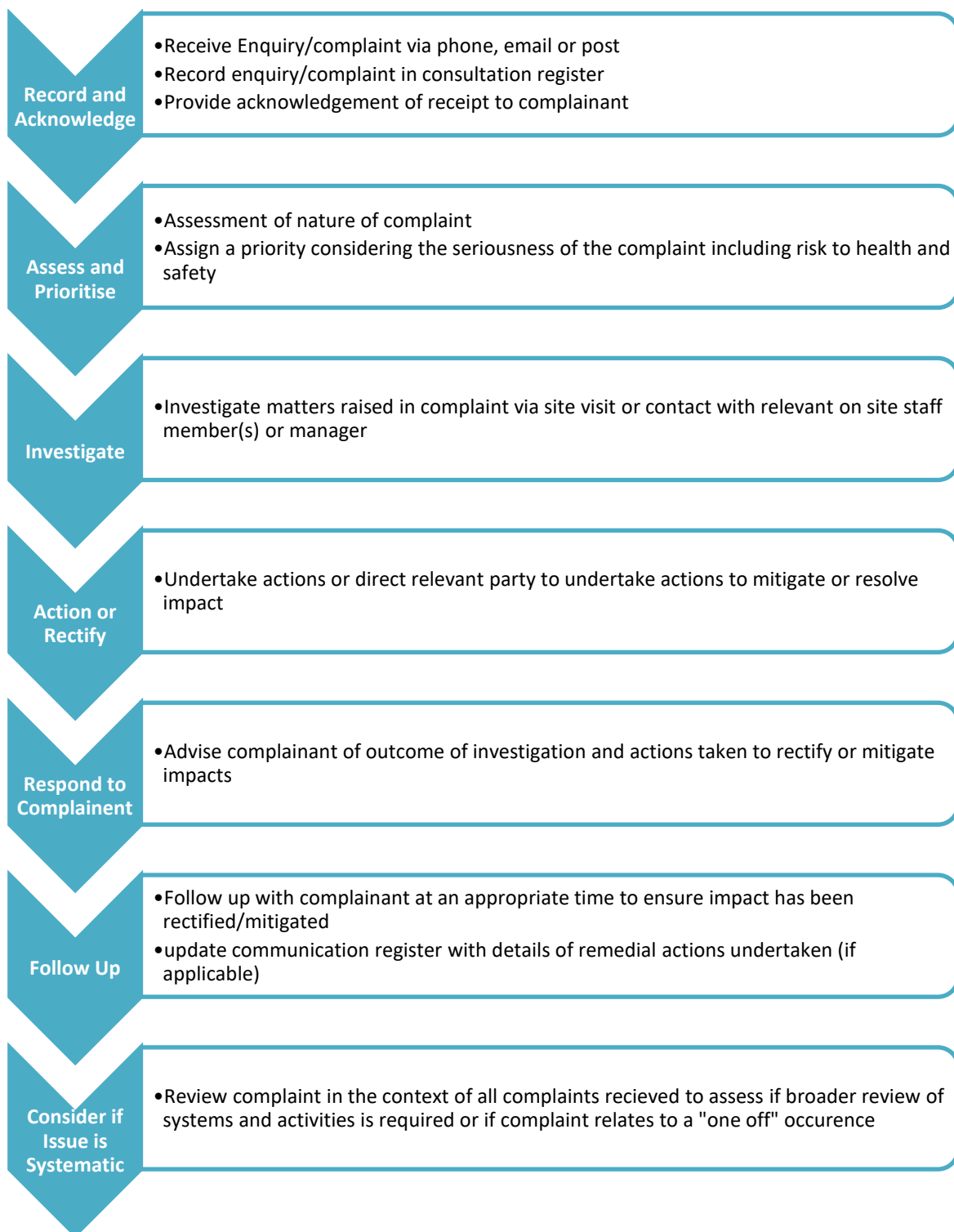


Figure 4 Complaints Handling Procedure

5.4.1 Protocol for Receiving and Recording Enquiries and Complaints

Goodman have established a project email and postal address for the receipt of enquiries and complaints relating to the development. The email and postal accounts will be regularly monitored to receive and respond to customer feedback and enquiries. The community information line (1300002887) is to be established from the commencement of works. The CCLR and community consultation team will manage the information line from the commencement of the project until the completion of works. Where calls are received during hours of construction work (including out of hours works) all calls will be answered by the CCLR. Where calls are received outside of hours of construction works the caller will be invited to leave a message. All approaches from the community and stakeholders will be registered in the project's consultation register. The facilities established for receiving enquiries and complaints about the project during construction are shown in **Table 10**.

Table 10 Enquires and Complaints Facilities

Facility	Purpose	Detail
Community Information Line	A contact phone number and associated contact name for questions/enquiries and the lodgement of complaints relating to the development.	1300 002 887
Email Address	An email address accessible via email and online enquiry form for questions/enquiries and the lodgement of complaints relating to the development.	community.oakdalewest@goodman.com
Postal Address	A postal address for the receipt of questions/enquiries and the lodgement of complaints relating to the development.	Level 17, 60 Castlereagh Street, Sydney, NSW 2000
In person verbal	Verbal enquiries and complaints can be made formally during community meetings or may be made informally where staff interact with members of the public in informal settings.	Verbal in person comments and submissions

Goodman have established a consultation register to record all complaints and enquiries received by the above means. The consultation register will be maintained on a regular basis and used to inform discussion at monthly community consultation and project team meetings. The consultation register shall include the following details for all complaints or enquiries received:

- Date and time of complaint or enquiry.
- Method by which the complaint or enquiry was made.
- Name, address, contact telephone number of complainant (if no such details were provided, a note to that effect).
- Nature of complaint or enquiry.
- Action taken in response including follow up contact with the complainant.
- Any monitoring to confirm that the complaint or enquiry has been satisfactorily resolved.
- If no action was taken, the reasons why no action was taken by you.

An excerpt of the consultation register is included at **Appendix B**.

5.4.2 Protocol for Responding to and Resolving Enquiries and Complaints

Where a complaint or enquiry is received the CCLR will attempt to provide an immediate response if possible, via phone or email. Where a complaint or enquiry cannot be responded to immediately the CCLR will assess and prioritise the submission and provide the complainant or enquirer with a follow up verbal response on what action is proposed within two hours during construction works (including night and weekend works) and 24 hours at other times. Where a complaint or enquiry cannot be resolved by the initial or follow-up verbal response, a written response will be provided to the complainant or enquirer within ten days.

In the event of a complaint, the CCLR will assess whether the complaint is founded or unfounded and if necessary, delegate the remediation of the issue to the project manager for action or to the relevant project engineer. The CCLR will oversee the rectification of the issue and respond to the complainant once the issue has been resolved.

In the event of an enquiry, the CCLR will endeavour to provide an immediate response where they are in possession of the relevant information. Where more specific or detailed information is required, the CCLR will liaise with the project manager or relevant project engineer to obtain the information required to respond to the enquiry and provide this information to the enquiring party once in hand.

Where the above protocol is unsuccessful in resolving complaints, mediation may be undertaken at the discretion of Goodman to facilitate negotiation between affected parties. This shall be performed by an independent person (mediator) appointed by Goodman.

5.4.3 Unreasonable Complainant Conduct

The NSW Ombudsman provides guidelines which define unreasonable complaint conduct as:

“...any behaviour by a current or former complainant which, because of its nature or frequency, raises substantial health, safety, resource or equity issues for the parties to a complaint.”

Whilst it is not envisioned that the project will attract complainants that exhibit this behaviour, where a complainant is seen to potentially have a negative impact on the CCLR or support team’s health, safety, resourcing or equity of service, Goodman shall adhere to the procedures and practices outlined within the NSW Ombudsman’s *“Managing Unreasonable Complainant Conduct Practice Manual 2nd Edition”*.

5.4.4 Contingency Management Plan

In accordance with Condition D118(d) of the SSD 7348 consent, a contingency management plan has been developed to outline the management of unpredicted impacts and their consequences. Details of these events, their severity and response are detailed in **Table 11** below:

Table 11 Contingency Management Plan

Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
Submission	Trigger	General feedback/comment (no complaint or query).	Enquiry made by formal or informal channels.	Complaint made by formal or informal channels.
	Response	Acknowledge receipt and record in consultation register. No further response required.	Acknowledge receipt and record in consultation register. Direct enquiry to relevant person for actioning and response within 5 days.	Acknowledge receipt and record in consultation register. Respond to complaint immediately if possible, if not direct enquiry to relevant person for actioning and provide complainant with a follow up verbal response on what action is proposed within two hours during construction works (including night and weekend works) and 24 hours at other times.
Media	Trigger	Positive story in print, online, radio or television.	Neutral or advisory story in print, online, radio or television.	Negative story in print, online, radio or television.
	Response	Record in consultation register and advise Goodman media/marketing team. No further response required.	Record in consultation register and advise Goodman media/marketing team. No further response required.	Record in consultation register and advise Goodman Project Team for further action and response. Contact relevant person for actioning and response within 48 hours
Unscheduled Event	Trigger	Event occurring outside of plan or schedule without impact or potential impact.	Event occurring outside of plan or schedule with minor impact or potential impact.	Event occurring outside of plan or schedule with major impact or potential impact.

Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
	Response	No response required. Identify opportunities for improvement to manage potential future events.	Contact relevant person for actioning and response within 48 hours. Acknowledge in consultation register. Identify opportunities for improvement to manage potential future events.	Contact relevant person for actioning and response immediately. Acknowledge in consultation register. Identify opportunities for improvement to manage potential future events.
Political Interest	Trigger	General or non-specific enquiry by Local, State or Federal political representative.	Enquiry or complaint relating to minor issue by Local, State or Federal political representative.	Enquiry or complaint relating to major issue by Local, State or Federal political representative.
	Response	Community consultation team in conjunction with Goodman Project Team to prepare and provide response or assign response task to relevant staff member for comment. Record in consultation register.	Community consultation team in conjunction with Goodman Project Team to prepare and provide response within 48 hours. Record in consultation register.	Community consultation team in conjunction with Goodman Project Team to prepare and provide response within 24 hours. Record in consultation register.

6 Monitoring, Reporting and Evaluation

Monitoring, Reporting and Evaluation will be undertaken to measure the effectiveness of community consultation, stakeholder engagement and responses to complaints and enquiries. Opportunities for improvement will be sought on a continuous basis, with an annual review of the CCS undertaken to formalise these incremental improvements.

6.1 Monitoring

The performance of this strategy will be monitored monthly based upon an assessment of the following data:

- Total number of monthly complaints.
- Review of number of monthly complaints relating to lack of consultation/misinformation/confusion.
- Review of number of monthly enquiries relating to information previously disseminated to the community through other channels.
- Monthly review of enquiries or complaints of a similar nature or theme indicative of underlying systematic issues with the project or communication strategy.
- Response timeframes, including initial acknowledgement and the response to enquiries or remediation of issue(s).

The parameters of monitoring and performance criteria are outlined in **Table 12** below.

Table 12 Summary of Monitoring Data

Monitoring Parameter	Rationale	Performance Criteria	Monitoring Frequency
Total number of complaints	The number of complaints received in total is indicative of the community's satisfaction with the project.	A reduction in number of complaints, baseline determined by number of complaints received in preceding months.	Monthly
Number of complaints relating to lack of consultation/misinformation/confusion	Number of complaints relating to lack of consultation/ misinformation/ confusion is indicative of the effectiveness and clarity of communication tools utilized.	A reduction in number of complaints, baseline determined by number of complaints received in preceding month.	Monthly
Number of enquiries relating to information previously disseminated	Number of enquiries relating to information previously disseminated is indicative to the effectiveness of the delivery of information.	A reduction in number of enquiries, baseline determined by number of enquiries received in preceding month.	Monthly
Number of complaints/enquiries within defined categories based on theme or subject	A large number of complaints or enquiries relating to a single issue may be indicative of a systematic issue to be addressed as a priority.	A reduction in number of complaints, baseline determined by number of complaints received in preceding month.	Monthly

Monitoring Parameter	Rationale	Performance Criteria	Monitoring Frequency
Response timeframes	Response to enquiries and complaints should be timely to ensure effective responsiveness and rectification of issues and to encourage trust within the community.	Enquiries and complaints acknowledged within 48 hours. Urgent enquiries and complaints responded to within 48 hours of receipt, non-urgent enquiries and complaints responded to within 5 days.	Monthly

6.2 Reporting

Reporting shall be undertaken annually, with a monthly summary of results provided to the approved Environmental Representative (ER) in accordance with Conditions D127(e) and D128 of SSD77348 and the broader project team during monthly project team meetings. The monthly community consultation summary will be made publicly available on the project web page and shall include:

- A summary of community consultation activities undertaken within the preceding month.
- A summary of community consultation activities proposed within the following month.
- A summary of all enquiries and complaints received within the preceding month, including details of response and/or remediation activities.

Within three months of the submission of documentation identified by Condition D133 this CCS would be reviewed for compatibility.

6.3 Evaluation

Where performance criteria are not being satisfied, review of this strategy and its implementation will be undertaken by the Community Consultation Team and changes to the strategy may be made to rectify the short fall. Where systematic issues are identified associated with construction activities, the project manager will be advised and immediate rectification of the issue will be requested.

7 References

- NSW Ombudsman (2012) *Managing Unreasonable Complainant Conduct Practice Manual 2nd Edition*
- SLR Consulting Australia (2019) *Construction Environmental Management Plan*
- Urbis (2017) *Environmental Impact Statement – Oakdale West Estate (State Significant Development Application Ref 7348)*
- Urbis (2018) *Response to Submissions (A)*
- Urbis (2018) *Response to Submissions (B)*

APPENDIX A

Sensitive Receiver Map



APPENDIX B

Key Stakeholder Contact Details

Contact Name/Organisation	Contact Details
The Residents – 20 Aldington Road	
Emmaus Catholic College	Harvey Anchique - Business Manager P: (02) 9670 8300 F: (02) 9834 3403 M: 0428 063 119 E: hanchique@parra.catholic.edu.au
Trinity Catholic Primary School	Catherine Hey - Principal, chey@parra.catholic.edu.au, 02 8856 6200
Mamre Anglican School	Cathie Graydon – Principal (02)98341881, cathie.graydon@mamre.nsw.edu.au Marijana Motrivic, Business Manager 02, 8073 6908 marijana.mitrovic@mamre.nsw.edu.au,
Catholic Healthcare Emmaus Village	James Byrne Building Services Manager, M. 0434604370, jbyrne@chcs.com.au Kate Todd, Emmaus Village, ktodd@chcs.com.au, Home, 02 8804 0200
Little Smarties Learning Centre	61 2 9834 2155 kempscreek@littlesmarties.com.au
Penrith City Council	61 2 4732 7777 council@penrith.city
NSW EPA	131 555 info@epa.nsw.gov.au
NSW Biodiversity and Conservation Division, Department of Planning Industry and Environment	61 2 9995 5000 info@environment.nsw.gov.au
NSW Department of Industry	61 2 9338 6600
Roads and Maritime Service	13 22 13
Transport for NSW	61 2 8202 2200
NSW Rural Fire Service	61 2 8741 5555 webmaster@rfs.nsw.gov.au
WaterNSW	1300 662 077 Customer.Helpdesk@waternsw.com.au
National Resources Asset Regulator	61 2 9338 6600
TransGrid	61 2 9284 3000
Endeavour Energy	131 081
Sydney water	13 20 92
Jemena	1300 536 362
NBN	1300 687 626
Telstra	13 22 00
Registered Aboriginal Parties	See Appendix C

APPENDIX C

Registered Aboriginal Parties

Name	Organisation	Address	Suburb	State	Postcode	Email	Phone	Notes
Caroline Hickey	A1 Indigenous Services					cazadirect@live.com	Mobile: 0411 650 057	
Andrew Williams	Aboriginal Archaeology Service Inc.	PO Box 6283	Rouse Hill	NSW	2155	AAS.info@bigpond.com	Mobile: 0490 126 040	
Amanda Hickey	Amanda Hickey Cultural Services	41 Dempsey St	Emu Heights	NSW	2750	amandahickey@live.com.au	Mobile: 0434 480 588	
Karia Lea Bond	Badu	11 Jeffery Pl	Morya	NSW	2537	baduacts@gmail.com	Mobile: 0476 381 207	
Seli Storer	Biamanga					biamangacts@gmail.com		
Richard Andy	Bidawal CHTS					bidawalchts@gmail.com		
Simalene Carriage	Bilinga					bilingacts@gmail.com		OR Wandai Kirkbright??? Website: http://www.butucarbin.org.au/ , postal address: PO Box E18 Emerton NSW 2770
Jennifer Beale	Butucarbin Aboriginal Corporation	28 - 30 Pringle Road	Hebersham	NSW	2770	koori@ozemail.com.au	Office: (02) 9832 7167, Mobile: 0409 924 409	
Marylin Carroll-Johnson	Corroboree Aboriginal Corporation	PO Box 3340	Rouse Hill	NSW	2155	corroboreecorp@bigpond.com.au	Mobile: 0415 911 159	Contact details for Steve Johnson
Corey Smith	Cullendulla					cullendullaacts@gmail.com		
Gordon Morton	Darug Aboriginal Cultural Heritage						Office: (02) 9410 3665, Mobile: 0422 865 831	
Des Dyer	Assessments	Unit 9, 6 Chapman Ave	Chatswood	NSW	2067		Mobile: 0408 360 814	Site officer: 0402 942 572
	Darug Aboriginal Landcare	18A Perigee Close	Doonside	NSW	2767	desmond4552@hotmail.com		
Justine Coplin	Darug Custodian Aboriginal Corporation	PO Box 81	WINDSOR	NSW	2756	justinecoplin@optusnet.com.au	(02) 4577 5181 Office: (02) 4577 5181, Mobile: 0415 770 163 Mobile: 0420 591 138	
Leanne Watson	Darug Custodian Aboriginal Corporation	PO Box 81	Windsor	NSW	2758	mulgokivi@bigpond.com	Mobile: 0415 663 763	Deceased
Jamie Workman	Darug Land Observations PTY LTD	PO Box 571	Plumpton	NSW	2761	daruglandobservations@gmail.com	Office: (02) 9622 4081	
Gordon Workman	Darug Land Observations PTY LTD	PO Box 571	Plumpton	NSW	2761	gordow51@bigpond.net.au		
John Reilly	Darug Tribal Aboriginal Corporation	PO Box 441	Blacktown	NSW	2148	jmreilly228@gmail.com		
Steve Randall	Deerubbin Local Aboriginal Land							
Andrew Bond	Council	2/9 Tindale St	Penrith	NSW	2750	SRandall@deerubbin.org.au	Office: (02) 4724 5600	
	Dharug CHTS					dhurugchts@gmail.com		
Ricky Fields	Dhinawan-Dhigaraa Culture and Heritage PTY LTD	19 Moomi St	Lalor Park	NSW	2147	Dhinawan2@yahoo.com.au	Mobile: 0402 942 572	
Athol Smith	Dhinawan-Dhigaraa Culture and Heritage PTY LTD	16 Yantara Place	Woodcroft	NSW	2767	Dhinawan2@yahoo.com.au	Mobile: 0499 665 715	
Lilly Carroll	Didge Ngunawal					didgengunawalclan@yahoo.com.au	Mobile: 0450 616 404	
Paul Boyd	Didge Ngunawal					didgengunawalclan@yahoo.com.au	Mobile: 0426 823 944	
Keith Nye	Djiringanj CHTS					diiringanichts@gmail.com		
Lenard Nye	Elouera CHTS					elouerachts@gmail.com		
Kahu Brennan	Eora					eorachts@gmail.com		
Kim Carriage	Gangangarra					gangangarra@gmail.com		
Basil Smith	Goobah Developments	66 Grantham Rd	Batehaven	NSW	2536	goobahchts@gmail.com	Mobile: 0405 995 725	
Wendy Smith	Gulaga					gulagachts@gmail.com		
Christopher Payne	Gundungurra Tribal Technical Services	9/15/22 Burns Rd	Leumeah	NSW	2560	chrispayne776@gmail.com	Mobile: 0466 975 437	
David Bell	Gundungurra Tribal Technical Services	67 Dickens Rd	Ambarvale	NSW	2560	gundungurratectribseives@gmail.com	Mobile: 0450 124 891	
Larry Hoskins	Gundungurra Tribal Technical Services	2/3 Colville Pl	Rosemeadow	NSW	2560	gundungurratectribseives@gmail.com	Mobile: 0478 009 879	
Pimmy Johnson Bell	Gundungurra Tribal Technical Services	67 Dickens Rd	Ambarvale	NSW	2560	gundungurratectribseives@gmail.com	Mobile: 0425 066 100	
Sam Wickman	Gundungurra Tribal Technical Services					gundungurratectribseives@gmail.com		
Teangi Mereki Foster	Gundungurra Tribal Technical Services	1/6 Central Ave	Oak Flats	NSW	2529	gundungurratectribseives@gmail.com	Mobile: 0420 978 969	
Cherie Carroll Turrise	Gunjeewong Cultural Heritage							
	Aboriginal Corporation	1 Bellvue Place	Portland	NSW	2847	julieschroder5@live.com.au	Office: (02) 6355 4110	
Lisa Green	Gunninderra Aboriginal Corporation	PO Box 3340	Rouse Hill	NSW	2155	ginninderra.corp@gmail.com	Mobile: 0404 297 224	Contact: Krystle Carroll
Darlene Hoskins-McKenzie	Gunyu CHTS					gunyuchts@gmail.com		
Patricia Hampton	HSB Consultants	62 Ropes Crossing Boulevard	Ropes Crossing	NSW	2760	hsb_heritageconsultants@mail.com	Mobile: 0424 142 216	

Joanne Anne Stewart	Jerringong				jerringong@gmail.com	Mobile: 0422 800 184	
Phil Kahn	Kamilaroi-Yankuntjatjara Working Group	78 Forbes St	Emu Plains	NSW	2750 philipkhan.acn@live.com.au	Mobile: 0434 545 982	
Vicki Slater	Kawul Cultural Services	89 Pyramid St	Emu Plains	NSW	2750 vicki.slater@hotmail.com		
	Kuringgai CHTS				kuringgaichts@gmail.com		
Shaun Carroll	Merrigarn Indigenous Corporation	GPO Box 158	Canberra City	ACT	2601 merrigarn@yahoo.com.au	Mobile: 0435 040 842	
Aaron Broad	Minnamunnung	1 Waratah Ave	Albion Park	NSW	2527 nundagurri@gmail.com	Mobile: 0402 526 888	
Kaya Dawn Bell	Munyunga				munyungachts@gmail.com		
Roxanne Smith	Murramarang				murramarangchts@gmail.com		
Darleen Johnson	Murri Bidgee Mullangari Aboriginal Corporation	PO Box 246	Seven Hills	NSW	2147 murribidgeemullangari@yahoo.com.au	Mobile: 0490 051 102	
	Murrin CHTS				murrinchts@gmail.com		
Levi McKenzie-Kirkbright	Murrumbul				murrumbul@gmail.com		Or Levi McKenzie-Kirkbright?????
Newton Bond	Ngarigo CHTS				ngarigochts@gmail.com		
Edward Stewart	Ngunawal				ngunawalchts@gmail.com		
Newton Carriage	Nundagurri				nundagurri@gmail.com		
Pemulwuy Johnson	Pemulwuy CHTS	14 Top Place	Mount Annan	NSW	2567 pemulwuyd@gmail.com	Mobile: 0425 066 100	
Tony Williams	Rane Consulting	1 Pyrenees Way	Beaumont Hills	NSW	2155 ajw1901@biqpond.com	Office: (02) 8824 6991	
	Thaiaira CHTS				thauairachts@gmail.com		
John Carriage	Tharawal CHTS				tharawalchts@gmail.com		Changed Violet to John as he was elected chairman in May 2018
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APPENDIX D

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Appendix E:

Operational Traffic Management Plan



Operational Traffic Management Plan

Lot 1A – Oakdale West Industrial Estate

12/09/2022

0950r04v2

Document Control

Project No	0950
Project	Lot 1A – Operational Traffic Management Plan
Client	Goodman Property Services (Aust) Pty Ltd
File Reference	P0950r04v2 OTMP_Lot 1A, Oakdale West Industrial Estate

Revision History

Revision No.	Date	Details	Author	Approved by
-	11/08/2022	Draft	M. Dizon Jr.	J. Laidler
Issue I	01/09/2022	Issue I	M. Dizon Jr.	J. Laidler
Issue II	12/09/2022	Issue II	M. Dizon Jr.	J. Laidler

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APPENDICES

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Appendix B. Drivers Code of Conduct

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Appendix D. OWE Framework OTMP

Glossary

Acronym	Description
AGRD	Austrroads Guide to Road Design
AGTM	Austrroads Guide to Traffic Management
CC	Construction Certificate
Compass Drive	Previously known as the Western North South Link Road (WNSLR)
Council	Penrith Council
CTMP	Construction Traffic Management Plan
DA	Development Application
DCP	Development Control Plan
DoS	Degree of Saturation
DP&E	Department of Planning and Environment
FSR	Floor space ratio
GFA	Gross Floor Area
HRV	Heavy Rigid Vehicle (as defined by AS2890.2:2018)
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
MOD	Section 4.55 Modification (also referred as a S4.55)
MRV	Medium Rigid Vehicle (as defined by AS2890.2:2018)
NHVR	National Heavy Vehicle Regulator
OC	Occupation Certificate
RMS Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
S4.55	Section 4.55 Modification (also referenced as MOD)
S96	Section 96 Modification (former process terminology for an S4.55)
SRV	Small Rigid Vehicle (as defined by AS2890.2:2018)
TCP	Traffic Control Plan
TDT 2013/04a	TfNSW Technical Direction, Guide to Traffic Generating Developments – Updated traffic surveys, August 2013
TfNSW	Transport for New South Wales
TIA	Transport Impact Assessment
TIS	Transport Impact Statement
veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)
WNSLR	Western North South Link Road (Refer also Compass Drive)

1 Introduction

1.1 Overview

Ason Group has been engaged by Goodman Property Services (Aust) Pty. Limited (Goodman) to prepare an Operation Traffic Management Plan (OTMP) relating to Lot 1A within the Oakdale West Industrial Estate (OWE) at Kemps Creek (the Site). A site plan and an overview of the proposed surroundings are provided in **Figure 1**. It is noted that SSD 7348-Mod-2¹ was approved on the 21 April 2020. Subsequently, SSD 7348-Mod-5² was approved on 5 November 2020. Following this, SSD 7348-Mod-10 has received approval on 17 August 2022³. As such the OTMP has been prepared accordingly. Warehouse 1A details are summarised in Table 1.

TABLE 1 DEVELOPMENT YIELD

Component	Warehouse 1A
Warehouse GFA (m ²)	104,491 ²
Office GFA (m ²)	2,646
Miscellaneous GFA (m ²)	4,004
Total GFA (m ²)	111,141
Car Parking Provision	472 spaces ¹
Motorcycle Parking Provision	6 spaces

Note: 1) This provision includes 8 accessible spaces.

2) This includes the future stage 2 expansion

The proposed parking provision of Warehouse 1A as outlined above readily satisfies the minimum parking requirements (401 spaces) outlined in Condition B13 of the approval.

¹ <https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-mod-2>

² <https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-mod-5>

³ <https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-mod-10-signage-changes>

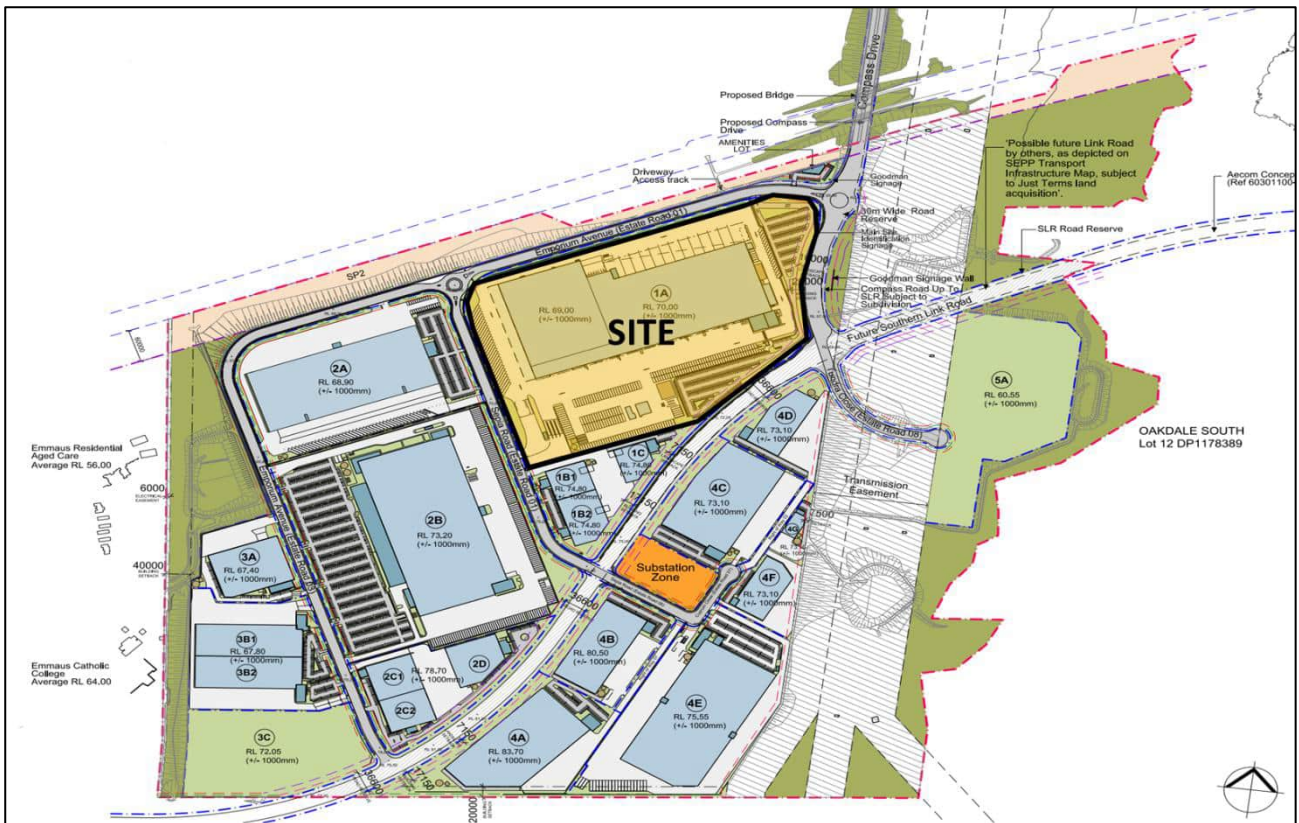


Figure 1: OWE Context Showing Warehouse 1A (MOD 10)

This OTMP is in response to Condition D69A of the Oakdale West Estate Development (SSD-7348-Mod-10), dated 17 August 2022. **Table 2** outlines these conditions.

TABLE 2 CONDITIONS OF CONSENT (SSD 7348-MOD10)

Condition		Response
D69A	The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:	
(a)	be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW;	<p>Consultants from Ason Group are suitably qualified Traffic Engineers.</p> <p>Council and TfNSW shall be consulted following preparation of this plan, with relevant updates (if required) made following that consultation.</p>
(b)	detail the numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation;	<p>Hours of operation – refer Section 2.3. Warehouse 1A will operate 24/7.</p> <p>Section 2.3 outlines the maximum permissible vehicle size, truck routes. For approved B-double truck routes refer to the Framework OTMP of Oakdale West Industrial Estate. The Site has been designed for access by 26m B-doubles. Access to the commercial hardstand area associated with all</p>

		<p>warehouses has been tested for B - Doubles. Recessed docks have been designed for use by up to 19m Articulated Vehicles.</p> <p>Larger vehicles shall be subject to separate permit approvals via the National Heavy Vehicle Regulator; a process that requires separate endorsement by Council outside the scope of this OTMP.</p>
(c)	include measures to maintain road safety and network efficiency;	Refer to Section 6.2 for measures to maintain road safety and network efficiency.
(d)	detail measures to minimise noise from development related traffic, including, procedures for receiving and addressing complaints from the community about development related traffic and noise;	<p>Requirements within the Drivers Code of Conduct (Appendix B) mandate that drivers are to be cognisant of the noise and emissions requirements.</p> <p>Additionally, Section 6.2 includes requirements that each tenant shall manage their own business to minimise additional traffic and noise.</p>
(e)	<p>include a Driver's Code of Conduct that addresses:</p> <ul style="list-style-type: none"> (i) designated routes, ensuring no use of Bakers Lane or Aldington Road for operational access; (ii) travelling speeds and adherence to site-specific speed limits; (iii) procedures to ensure drivers adhere to designated heavy vehicle routes; and (iv) procedures to ensure drivers implement safe driving practices. 	<p>A Drivers Code of Conduct can be found in Section 4.8.</p> <p>The drivers code of conduct addresses ways to minimise the impacts on the road network, with other road users, ensure truck routes are utilised and to manage pedestrian movements which all stem from following the NSW road rules.</p>
D69B	The Applicant must:	
(a)	not commence operation of Stage 1 until the OTMP required by condition D69A is approved by the Planning Secretary; and	Noted. Applicable to Stage 1.
(b)	implement the most recent version of the OTMP approved by the Planning Secretary for the duration of operation.	<p>Noted - the most up to date version of the approved OTMP shall be implemented at all times, once operational.</p> <p>Any updates to this OTMP shall be communicated to relevant stakeholders, including Council, TfNSW, DP&E and building tenants.</p>

1.2 Background

An Estate-wide (or Framework) OTMP has been prepared which outlines the general access restrictions and other traffic and parking management requirements applicable to ALL developments within the Estate. That Framework OTMP also identifies the approved traffic generation threshold applicable to the wider Estate which is informed by this and other site-specific OTMPs.

This OTMP has been prepared specifically for Warehouse 1A and relates to the operation of this warehouse within the Oakdale West Estate which was granted approval on 5 November 2020.

Further background can be found online, either via the Major Projects website or Goodman's Oakdale West Planning⁴ page.

1.3 Purpose of this Report

The purpose of this OTMP is in response to condition D69A of SSD-7348-Mod-10 as outlined above. It provides guidance in relation to the parking and traffic management arrangements for the Estate with an overall objective to ensure safe and efficient movement of vehicles and personnel. This plan details the following:

- Thresholds for the type, frequency, and number of trucks within the Estate (and to Site),
- Detail the access and parking arrangements to ensure no queuing on the public road network,
- Appropriate internal traffic controls and signage,
- Driver Code of Conduct,
- Proposed crossings and signage for safe movement of pedestrians between designated carpark to the office areas,
- Details in relation to governance and administration of the plan.

1.4 Exclusions

This OTMP does not cover the following:

- Traffic and pedestrian management associated with construction activities. Reference should be made to relevant Construction Traffic Management Plans (CTMP) or Traffic Guidance Schemes (TGS's) specific to those works, as required.
- Traffic and parking management within the broader Estate area. For overarching Estate OTMP controls, refer to the Framework OTMP prepared separately.
- Transport of Dangerous Goods is not covered by this OTMP. A Transport Emergency Response Plan (TERP) is required prior to transport of any Dangerous Goods. It is expected that such plans will be prepared by the Tenant involved in the transport of Dangerous Goods to/from the individual businesses within the Estate.

⁴ <https://au.goodman.com/oakdale-industrial-estate/oakdale-west-planning>

1.5 References

In preparing this Plan, reference is made to the following:

- Ason Group, Operational Traffic Management Plan, Oakdale West Industrial Estate – Framework Traffic Management Plan, dated 22 April 2022 (Framework OTMP Report – AG ref: P1507r02v6)
- Ason Group, Operational Traffic Management Plan, Oakdale West Industrial Estate – Framework Traffic Management Plan, dated 02 August 2022 (Framework OTMP Report – AG ref: P1507r02v7)
- Ason Group, Transport Assessment Report – Oakdale West Industrial Estate Modification 2, dated 11 November 2019. (AG ref: P0950r01)
- Department of Planning & Environment, Development Consent (SSD 7348 Mod-10), 17 August 2022.
- National Transport Commission, Australian Code for the Transport of Dangerous Goods by Road & Rail, Edition 7.5, dated 2017.
- RMS Technical Direction TDT 2013/04a, Guide to Traffic Generating Developments – Updated traffic surveys (RMS Guide TDT 04a)
- Roads and Maritime Services (RMS), Guide to Traffic Generating Developments (RMS Guide)

2 Estate Details

2.1 Estate Overview

OWE is a warehouse and industrial development precinct situated in Kemps Creek. The Precinct lies within a series of strategic growth corridors including the Western Sydney Growth Centre and Broader Western Sydney Employment Areas and is intended to be serviced by Compass Drive (previously known as the Western North South Link Road, WNSLR).

A total development floor area of 599,455m² is to be provided by the industrial buildings within the Estate, as outlined by the Concept Plan (SSD 7348 MOD 10) which has received approval on 17 August 2022.

Figure 2 below provides location of the Site in the context of the Estate with regard to existing road systems.

All access to the Estate is provided via Compass Drive as access to the Site cannot be achieved via Bakers Lane. Vehicles will travel along Old Wallgrove Road from the M4 or Lenore Drive, before heading south on Compass Drive and onto the internal estate roads.

An existing proposal with regards to the construction of the Southern Link Road (SLR) will form a connection with Mamre Road to the west and Wallgrove Road to the east.

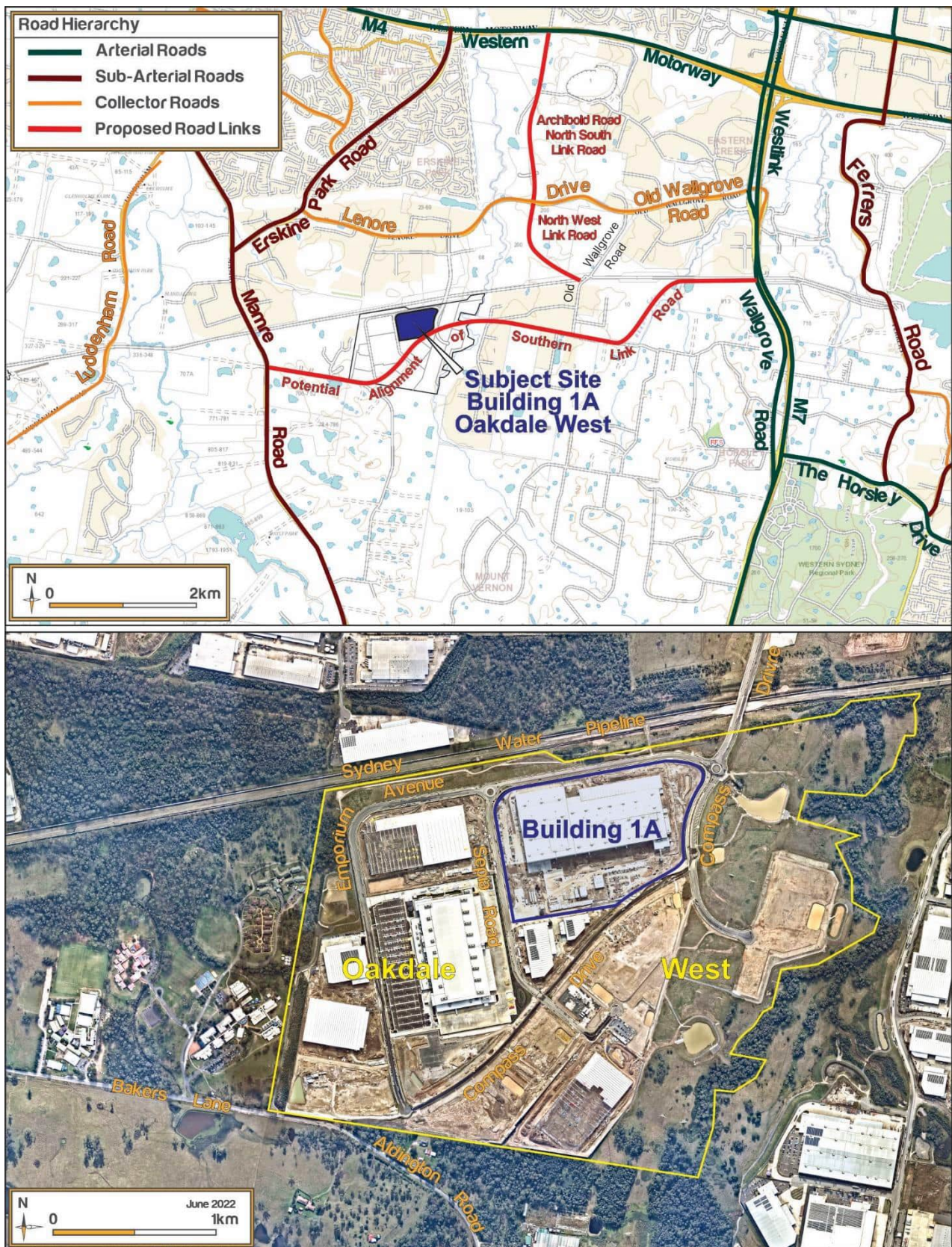


Figure 2: Site Appreciation and Road Hierarchy

2.2 Site Overview

Warehouse 1A is a specialised distribution facility. **Figure 3** below presents a plan illustrating the proposed development showing the general layout of the warehouse and associated traffic circulation, loading, and parking areas.

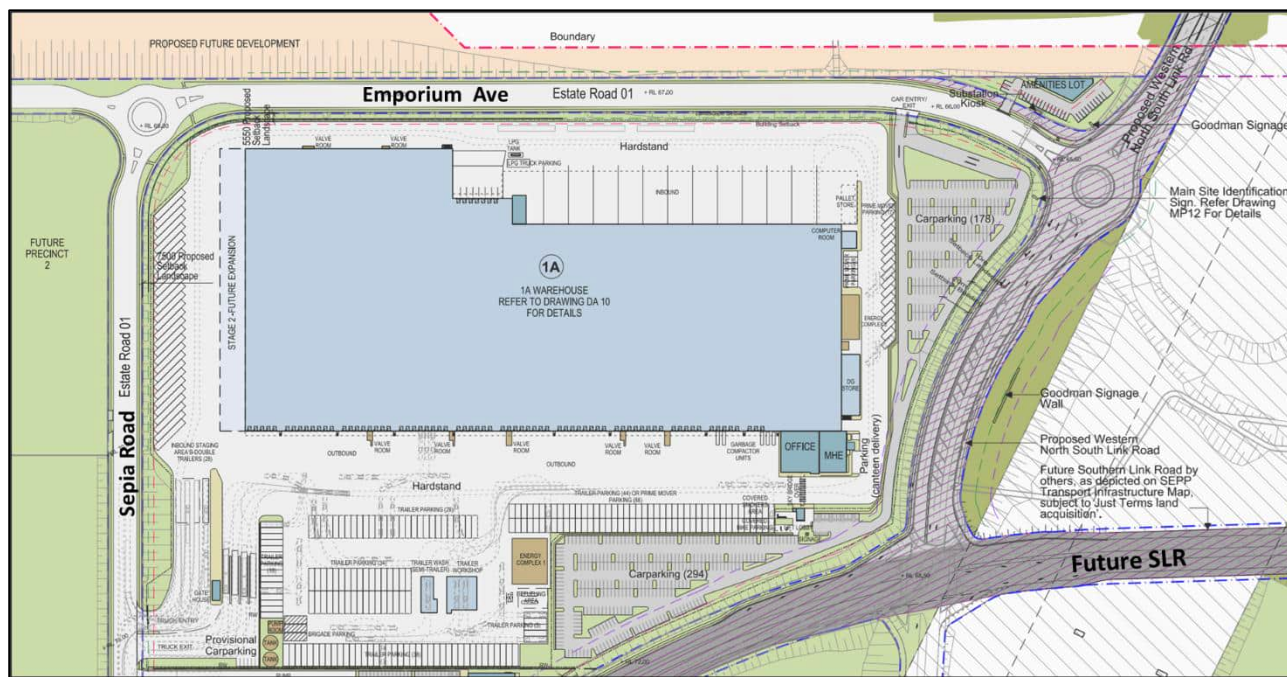


Figure 3: Warehouse 1A Site Plan

2.3 Hours of Operation

The broader Estate will be operational 24 hours a day, 7 days a week. In this respect, Warehouse 1A is also intended to operate 24 hours a day, 7 days a week.

2.4 Estate-wide Facilities

Refer to the Framework OTMP (AG ref: 1507r02v7 Framework OTMP Oakdale West Estate) for details regarding the on-street pedestrian, cyclist, road, and public transport infrastructure. The Framework OTMP is reproduced in **Appendix DAppendix C**.

2.5 Approved Estate Vehicle Movements

The approved volumes for Warehouse 1A have been outlined below, and underpin the transport and traffic projections of the Site:

- AM Peak: 79 veh/hr
- PM Peak: 79 veh/hr
- Daily: 2,222 veh/day

For clarity, 1 veh/hr (or veh/day) relates to the number of vehicle movements rather than simply the number of vehicles. As such, 1 vehicle in & out equates to 2 vehicle movements.

2.6 Site Access Arrangements

Warehouse 1A light vehicle movements will be facilitated via an access on Emporium Avenue to northern boundary of the OWE precinct, and truck entry is provided from Sepia Road on the western boundary of the Site.

A copy of the Warehouse Plan and access crossovers have been provided in **Figure 4**.

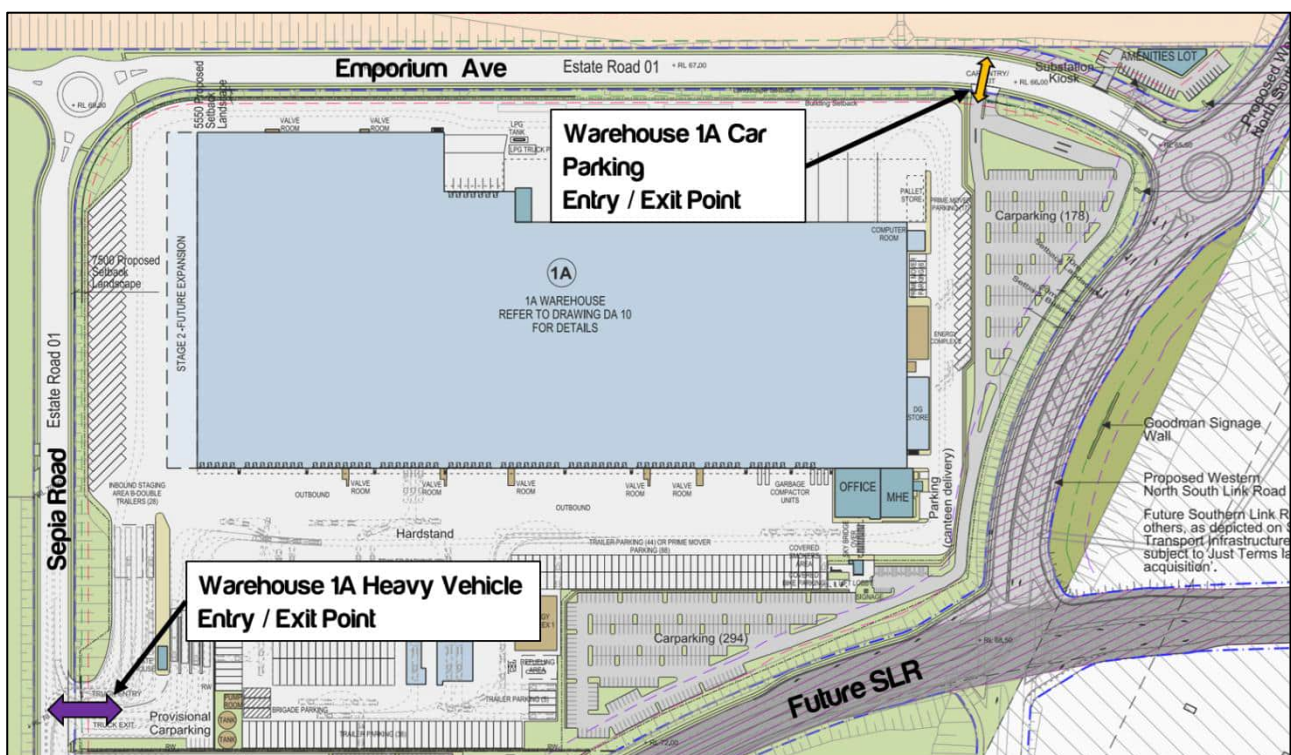


Figure 4: Warehouse 1A Plans & Access

3 Statutory Requirements

A summary of the relevant conditions of approval – relating to operational traffic and parking management – for Oakdale West (Concept Plan, Stage 1, and Stage 2 works) are summarised below.

TABLE 3 SSD 7348 APPROVAL - COMPLIANCE TABLE	
Requirement	Reference
ENVIRONMENTAL PERFORMANCE CONDITIONS	
The Applicant must ensure all traffic associated with operation of the development accesses the site from the Western North-South Link Road, and the future Southern Link Road, and does not use Bakers Lane or Aldington Road	B9g (SSD 7348-Mod-10)
<p>The Applicant shall ensure the Concept Proposal provides car parking in accordance with the following rates;</p> <ul style="list-style-type: none"> a) 1 space per 300m² of warehouse GFA. b) 1 space per 40m² of Office GFA, and. i) 2 spaces for disability parking for every 100 car parking spaces 	B13 (SSD 7348-Mod-10)
The Applicant shall provide bicycle racks, and amenity and change room facilities for cyclists in accordance with <i>Planning Guidelines for Walking and Cycling</i> (December 2004, NSW Department of Infrastructure, Planning and Natural Resources and the Roads and Traffic Authority).	B14 (SSD 7348-Mod-10)
<p>The Applicant must prepare an Operational Traffic Management Plan (OTMP) for the development. The OTMP must form part of the OEMP required by condition D130 and must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW. b) detail the number and frequency of trucks, sizes of trucks, vehicle routes and hours of operation. c) include measures to maintain road safety and network efficiency. d) detail measures to minimise noise from development related traffic, including, procedures for receiving and addressing complaints from the community about development related traffic and noise; e) include a Driver's Code of Conduct that addresses: <ul style="list-style-type: none"> (i) designated routes, ensuring no use of Bakers Lane or Aldington Road for operational access; (ii) travelling speeds and adherence to site-specific speed limits; (iii) procedures to ensure drivers adhere to designated heavy vehicle routes; and (iv) procedures to ensure drivers implement safe driving practices. 	D69A (SSD 7348-Mod-10)
<p>The Applicant must ensure:</p> <ul style="list-style-type: none"> (a) all access points, internal driveways, turning areas and parking are designed and constructed in accordance with the latest version of AS 2890.1:2004 Parking facilities off-street car parking (Standards Australia, 2004) and AS 2890.2:2002 Parking facilities Off-street commercial vehicle facilities (Standards Australia, 2002); (b) parking for Stage 1 is provided in accordance with the EIS and RtS for MOD 5; (c) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant Austroads guidelines; 	D69 (SSD7348-Mod-10)

(d) Stage 1 does not result in any vehicles queuing on the public road network; (e) heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site; (f) all vehicles are wholly contained on site before being required to stop; (g) all loading and unloading of materials are carried out on site; (h) All trucks entering or leaving the Site with loads have their loads covered and do not track dirt onto the public road network; and (i) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times.													
The Applicant must comply with the hours detailed in Table 5, unless otherwise agreed in writing by the Planning Secretary.		D70 (SSD 7348-Mod-10)											
<table border="1"> <thead> <tr> <th>Activity</th><th>Day</th><th>Time</th></tr> </thead> <tbody> <tr> <td rowspan="2">Construction</td><td>Monday – Sunday</td><td>7 am to 6 pm</td></tr> <tr> <td>Saturday</td><td>8 am to 1 pm</td></tr> <tr> <td>Operation</td><td>Monday – Sunday (including public holidays)</td><td>24 hours</td></tr> </tbody> </table>		Activity	Day	Time	Construction	Monday – Sunday	7 am to 6 pm	Saturday	8 am to 1 pm	Operation	Monday – Sunday (including public holidays)	24 hours	
Activity	Day	Time											
Construction	Monday – Sunday	7 am to 6 pm											
	Saturday	8 am to 1 pm											
Operation	Monday – Sunday (including public holidays)	24 hours											
Works outside of the hours identified in condition D70 may be undertaken in the following circumstances: (a) works that are inaudible at the nearest sensitive receivers; (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or (c) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.		D71 (SSD 7348-Mod-10)											
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING													
The Applicant must prepare an Operational Environmental Management Plan (OEMP) in accordance with the requirements of condition D118 and to the satisfaction of the Planning Secretary.		D130 (SSD 7348-Mod-10)											
As part of the OEMP required under Condition D130 of this consent, the Applicant must include the following: (a) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development; (b) describe the procedures that would be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development; (ii) receive, handle, respond to, and record complaints; (iii) resolve any disputes that may arise; (iv) respond to any non-compliance; (v) respond to emergencies.		D131 (SSD 7348-Mod-10)											
The Applicant must: (a) not commence operation until the OEMP is approved by the Planning Secretary; and (b) operate the development in accordance with the OEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time		D132 (SSD 7348-Mod-10)											
The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes		D135 (SSD 7348-Mod-10)											

aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 8.	
The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance.	D136 (SSD 7348-Mod-10)
A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	D137 (SSD 7348-Mod-10)
A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	D138 (SSD 7348-Mod-10)
No later than 6 weeks before the date notified for the commencement of operation, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department 2018) must be submitted to the Planning Secretary	D139 (SSD 7348-Mod-10)
Compliance Reports of the development must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department 2018).	D140 (SSD 7348-Mod-10)
The Applicant must make each Compliance Report publicly available no later than 60 days after submitting it to the Planning Secretary and notify the Planning Secretary in writing at least 7 days before this is done	D141 (SSD 7348-Mod-10)

Refer to the Department of Planning & Environment's Major Project Assessments [website](#) for a full list of all conditions of approval.

3.1 Consultation with Council and TfNSW

Consultation with Council and TfNSW has been undertaken on 05 September 2022 and 07 September 2022 respectively, with both authorities providing no further comments on the subject OTMP. Evidence of consultation has been provided within **Appendix C**.

4 Traffic Management Plan

4.1 Pedestrian Management

Pedestrian access to the hardstand areas used by heavy vehicles shall be restricted, as far as practicable, for safety purposes. Pedestrian exclusion areas should be clearly signposted with appropriate signage (example below).



In the event that pedestrian access is required within truck manoeuvring areas, high visibility vests and other personal protective clothing shall be worn at all times. Where possible, temporary work areas within commercial vehicle manoeuvring areas should be clearly delineated by way of traffic cones and/or temporary barriers.

It should be noted that pedestrians have right-of-way when crossing driveways, therefore all vehicles turning into a development will be required to give-way to pedestrians when entering or exiting individual Lots.

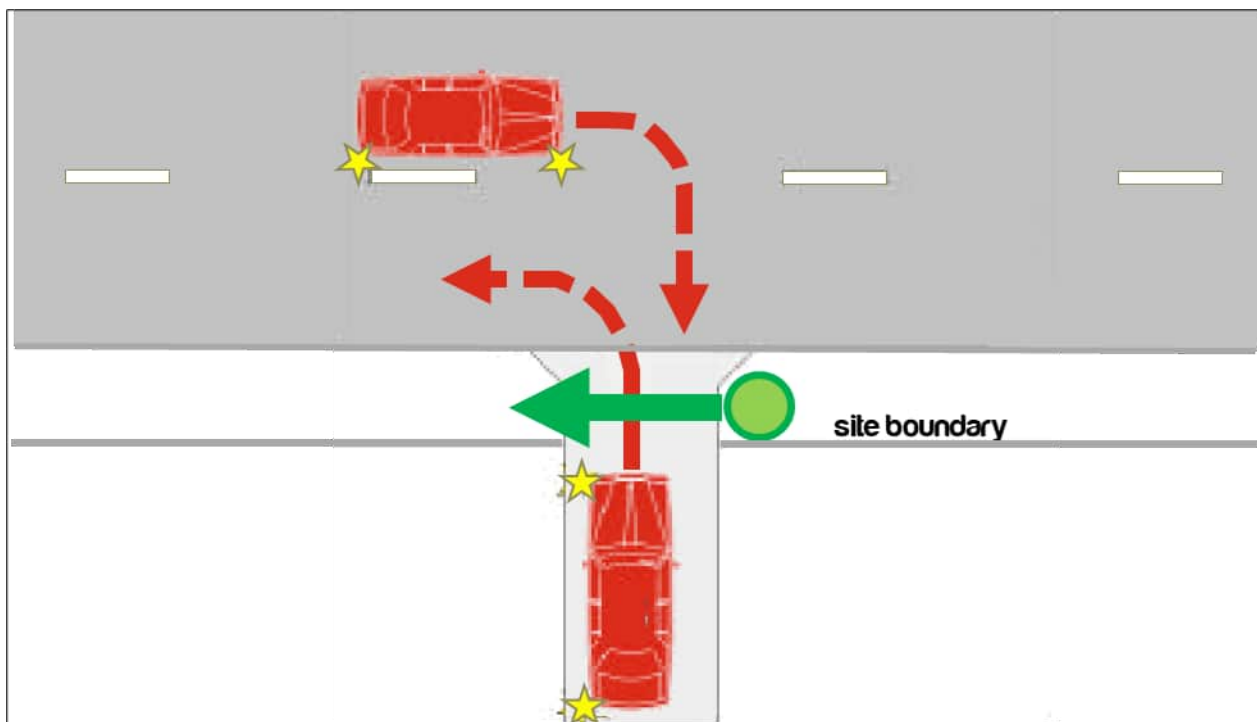


Figure 5: Pedestrian/Cyclist Priority of Movement at Site Access

4.2 Vehicle Management

All drivers are to operate vehicles in a manner consistent with the requirements of applicable Work Health and Safety (WHS) legislation and other business specific policies.

All commercial vehicle drivers are to be familiar with the Driver Code of Conduct – outlined in **Appendix B** - before attending the Estate, noting that the Drivers Code of Conduct has been approved as part of the CTMP.

The Site access driveways and hardstand area has been designed for use by vehicles up to and including 30 metre Super B-doubles, as demonstrated in the swept path analysis attached as **Appendix A**.

All vehicles on-site (including car park and loading areas) shall be subject to maximum speed limit of 20km/hr at all times. Lower limits (i.e., 10km/hr) may be imposed, at the discretion of tenants.

It is also important to note that any posted speed signage within the site (private roads) should not replicate the design and appearance of the regulatory speed limit signage (a number within the red circle).

4.2.1 Maximum Vehicle Size

As indicated in above, maximum vehicle size expected to access Warehouse 1A is a 30 metre Super B-doubles. In the event a larger vehicle — including oversize vehicle configurations — wishes to access the Site, a separate application shall be submitted to the NHVR and approved prior to any vehicle arriving to Site.

4.2.2 Truck Access Routes

All drivers shall access the Site from Sepia Road, which has been outlined within **Figure 6**. From that point, heavy vehicles are to use the Classified Road network wherever possible, with the use of local Council roads only as necessary.

At all times, drivers are to adhere to the applicable Road Rules and the Drivers Code of Conduct outlined in Appendix B.

All drivers accessing the Site (and Estate in general) shall adhere to the following access management measures:

- Vehicles turning right into driveways or side roads shall do so from as close to the centreline of the carriageway.

Note - if turning from a two-lane road - the RMS Heavy Vehicle Driver Handbook states that vehicles 7.5 metres or longer with a DO NOT OVERTAKE TURNING VEHICLE sign displayed on the back can turn right from the lane on the immediate left of the far-right lane.

- Heavy vehicles (in excess of 4.5 Tonne GVM) or long vehicles (over 7.5 metres in length) must not stop on a length of road outside a built-up area, except on the shoulder of the road.

In a built-up area where parking is permitted (for vehicles lighter than 4.5 Tonne GVM and under 7.5 metres in length), they must not stop for longer than one hour (buses excepted). For more information on where vehicles can stand or park, refer to the Road Users' Handbook.

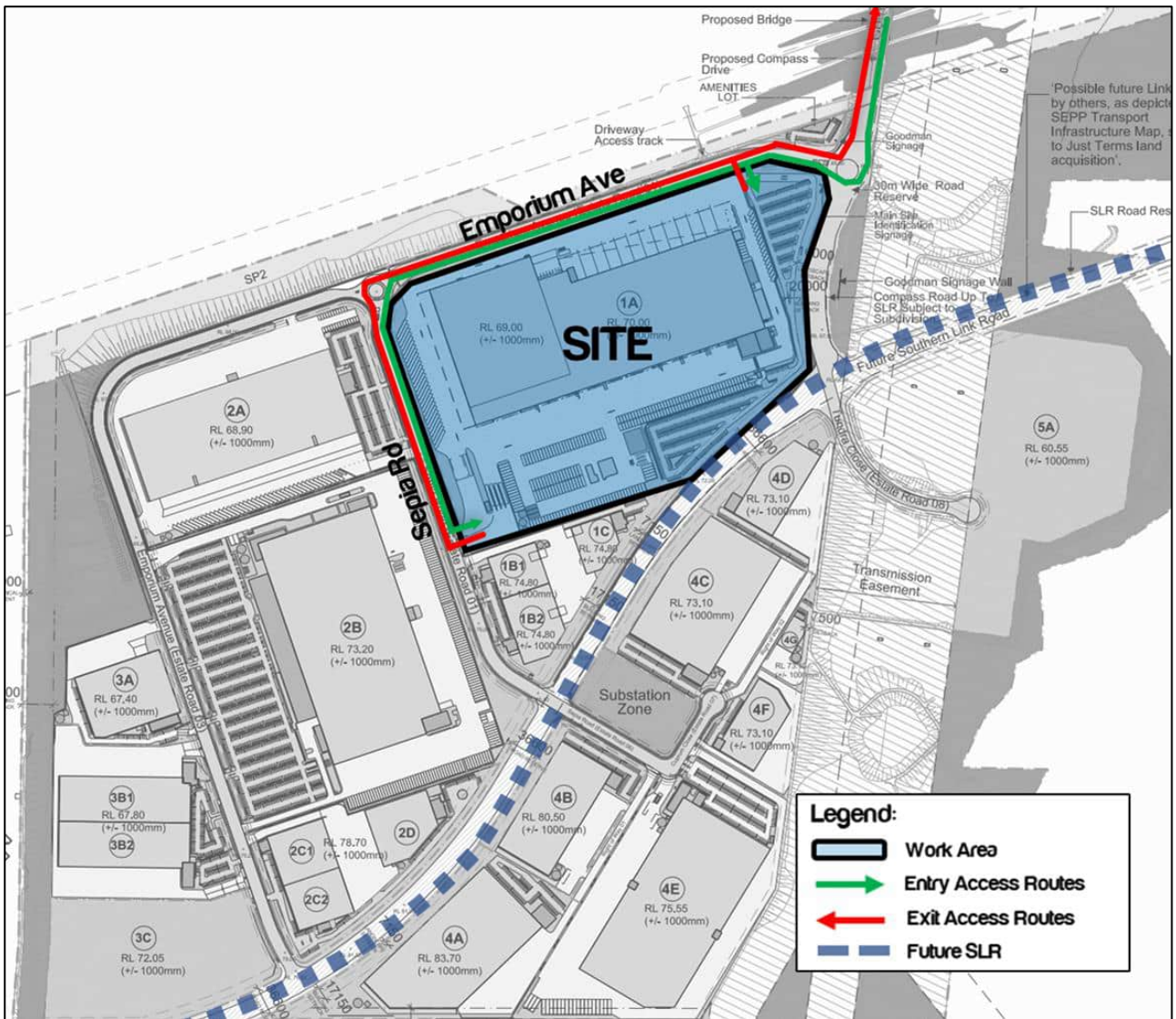


Figure 6: Warehouse 1A Access Routes.

Further to the above, the on-site circulation within Warehouse 1A shall provide access for Fire trucks, Side loading and dedicated unhitching areas as outlined below in **Figure 7**.

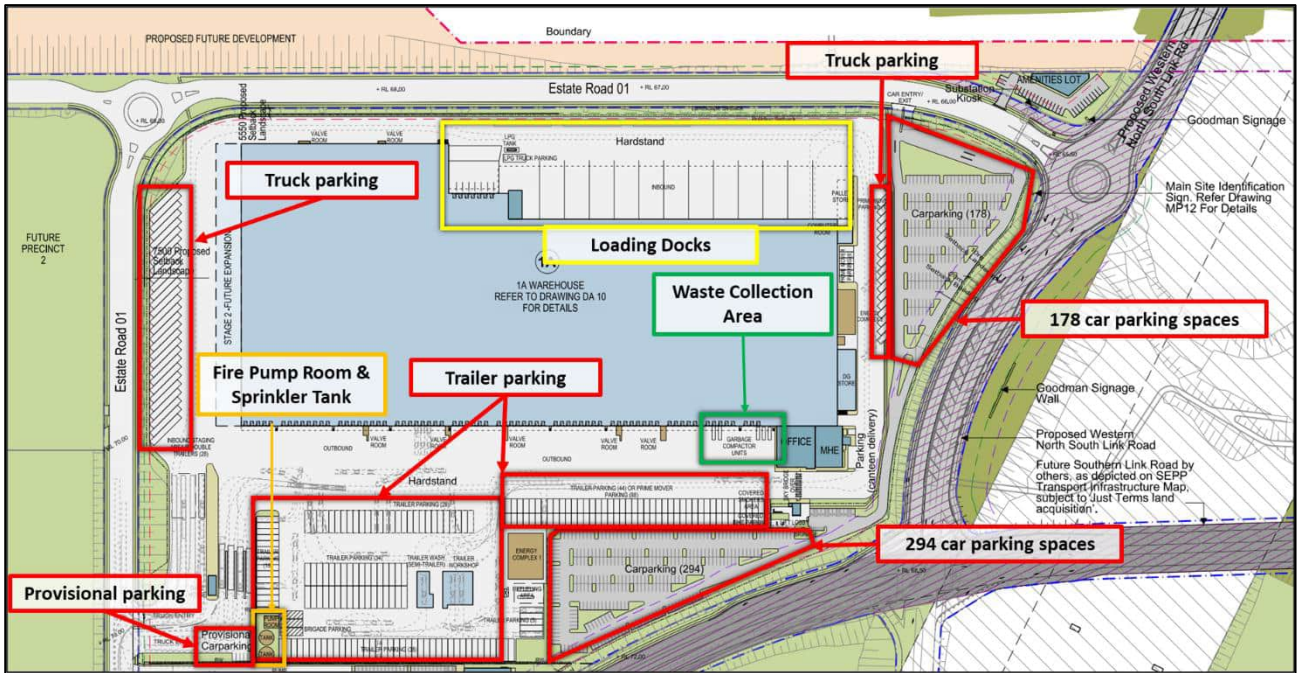


Figure 7: Light and Heavy Vehicle Parking and Loading Areas

4.3 Vehicle Queuing

As outlined in Section 2.5, the development has a threshold of 2,222 commercial vehicle movements per day, and AM and PM peak hour traffic generation of 79 and 79 vehicles per hour, respectively.

The access driveway from on Emporium Avenue and Sepia Road, provides sufficient capacity to readily accommodate these vehicle arrivals without any on-street queueing. In addition, a schedule for deliveries of materials and goods will be established prior to that day. Therefore, at no stage shall queueing occur on the public road network.

AT NO STAGE ARE VEHICLES TO QUEUE ON-STREET.

4.4 Loading and Unloading of Materials

Sufficient area shall be set aside on-site for the loading and unloading of goods without obstructing general vehicle access or circulation. Trucks SHALL ONLY be parked on-site when they are undertaking unloading/loading activities within their designated loading docks.

Swept path analysis demonstrating required manoeuvring areas for on-site loading bays are provided in **Appendix A**, which confirms movements for the nominated truck sizes.

Furthermore, the vehicle queuing guidelines outlined within Section 4.3 mandate that at no stage will loading or unloading materials occur off-site. All trucks entering or leaving the site with loads have their loads covered to ensure that no vehicle will track dirt, debris, or other fallen materials onto the public road network.

4.5 Service Vehicle Access Routes

Waste service vehicles and the associated bins are not to be parked on local roads or footpaths and must remain within the Site at all times.

4.6 Temporary or Unplanned Works

Construction works, and associated traffic management measures are not covered by this plan. Notwithstanding, any traffic and pedestrian control in relation to temporary or unplanned works shall be designed in accordance with AS1742 and/or the TfNSW Traffic Control at Work Sites manual, as appropriate.

Where practicable, work areas and temporary pedestrian paths (if applicable) should be physically separated from vehicle movements by way of traffic cones, bollards and/or temporary pedestrian fencing.

4.7 Dangerous Goods

A Transport Emergency Response Plan (TERP) is required prior to transport of any Dangerous Goods. It is expected that such plans will be prepared by the Tenant involved in the transport of Dangerous Goods to/from the individual businesses within the Estate. Accordingly, transport of Dangerous Goods is not covered by this OTMP.

It is expected that any TERP would, as a minimum, be in accordance with the 2012 Emergency Response Guidebook or HB76: 2010 Dangerous Goods – Initial Emergency Response Guide.

4.8 Driver Code of Conduct

Reference should be made to the Drivers Code of conduct has been provided within Appendix B.

5 Parking Management

5.1 On-site Car Parking

In accordance with the condition B13 of SSD 7348, "The Applicant shall ensure the Concept Proposal provides car parking in accordance with the following rates". Therefore, parking rates for the wider Estate have been provided in accordance with the MOD 10 approval. The rates are as follows:

- 1 space per 300 m² for Warehouse;
- 1 space per 40 m² for Office; and
- 2 spaces for disability parking for every 100 car parking spaces

Application of the approved SSDA rates to the floor areas has been summarised below:

TABLE 4 WAREHOUSE 1A PARKING REQUIREMENTS				
Land Use	GFA (m ²)	Requirement	Total Requirement	Total Provision
Warehouse	100,562	335	401	472
Office	2,646	66		

The provision of parking provided exceeds the nominal parking requirement, and therefore, complies with the approved parking rates.

5.2 On-street Parking

On-street parking is generally restricted; and shall adhere to all signposted parking controls at all times.

Vehicles are NOT to be parked on-street.

Drivers will ensure that trailers are parked within their designated areas and will not park trailers within circulation roadways and access roads (incl. emergency vehicle access roads). Management of respective Lots shall remain the responsibility of the respective property's owner to ensure that no vehicles associated with Warehouse 1A are parked on-street.

6 Plan Administration

6.1 Plan Maintenance

This Plan shall be subject to ongoing review and will be updated as necessary in response to monitoring activities, changing requirements or in response to any documented WHS issues. In particular, a review of this Plan may be required where a new business occupies a tenancy and has different operational requirements to that envisaged under this Plan (refer to Section 2.3). Where a change of businesses does not alter the underlying characteristics of the operation, no change to this plan would be required.

As a minimum, ongoing review of the OTMP shall occur annually. All and any reviews undertaken should be documented, however key considerations regarding the review of the OTMP shall be:

- Annual surveys of the Sites access points to review traffic generation.
- Quarterly condition review in relation to dirt on public roadways for the first 2 years of operation. Following that, review can occur annually as part of the ongoing review cycle.
- Regular checks undertaken to ensure all loads are entering and leaving site covered.

6.2 Monitoring Requirements

To ensure the effectiveness of this OTMP, various monitoring requirements have been established and expected to form part of the monitoring plan required to be included as part of the overarching OEMP.

A comprehensive contingency plan shall be established and included in the overarching OEMP. In relation to transport and parking, the following measures are to be included in that overarching plan. In addition to the Framework OTMP monitoring requirements, the following site-specific ones shall apply.

TABLE 5 CONTINGENCY PLAN

Risk		Condition Green	Condition Amber	Condition Red
Operational Movements	Trigger	Visual monitoring of all traffic movements within the Site does not detect unsafe movement of traffic and risk to persons and property	Monitoring of all traffic movements within the Site detects unsafe movement of traffic and risk to persons and property	Monitoring of all traffic movements within the Site identifies several unsafe movements of traffic and risk to persons and property
	Response	Visual monitoring to continue daily as part of an ongoing process.	<ul style="list-style-type: none"> Review needed to address persistent unsafe movements. Modification of traffic controls to self-enforce appropriate vehicle manoeuvres within the site. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Direct cessation of unsafe movements. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
	Trigger	Following periods of adverse weather conditions (e.g., a significant heavy rain event), internal roads/aisles have been inspected prior to vehicle traffic use and no issues found	Internal roads / aisles have been inspected following adverse weather conditions and minor issues found (small potholes, dirt / debris, or pooling water)	Internal roads / aisles have been inspected following adverse weather conditions and major issues found (failed road integrity, large diameter potholes, fallen light poles or trees)
	Response	No further action required until next adverse weather event.	<ul style="list-style-type: none"> Any impediments to access roads will be cleared. Maintenance teams to repair any potholes and remove excess water when expected traffic volumes are lowest. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Install a detour around any unsafe obstacle to ensure safety for all motorists and/or pedestrians.
	Trigger	Parking occupancy less than provided on-site capacity	Parking bay requirements are within 90% of the provided spaces	Parking requirements exceed parking spaces provided.
	Response	No response required. Continue monitoring program	Review and investigate parking rates and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> Undertake additional parking reviews to determine cause of higher limit parking space issues in more detail. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Temporary halting of activities and resuming when conditions have improved. Provide incentives for carpooling and utilising active transport measures.

			<ul style="list-style-type: none"> Review OTMP and update where necessary. Provide additional training to tenants to provide information on lowering parking demands. 	
Trigger	No unsafe pedestrian movements identified.		Pedestrian behaviour identified to be risky and unsafe.	Site design/operations identified to place pedestrians in unsafe situations and multiple near miss events
Response	No response required. Continue monitoring program		<ul style="list-style-type: none"> Review needed to address persistent unsafe movements. Modification of traffic controls to self-enforce appropriate vehicle manoeuvres within the site. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Direct cessation of unsafe movements by amending design of Site. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
Trigger	Operational traffic volume is in accordance with permissible and programmed volume constraints		Operational traffic volumes are within 90% of the permissible volume constraints	Operational traffic volumes exceed permissible volume constraints
Response	This operational traffic volume review shall be completed monthly for the first 6 months of operation and bi-annually thereafter.		Review and investigate operational activities, and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> Undertake review of the Site's traffic generation in more detail. Review OTMP and update where necessary. Provide additional training to tenants.	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Temporary halting of activities and resuming when conditions have improved. Surveys of accesses shall be required to allow enforcement of site-specific thresholds. Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
Trigger	Loading / service bays are within operational constraints		Loading / service bays are within 90% of capacity	Loading / service bays exceed capacity.
Response	No response required. Continue monitoring program		Review and investigate operational activities, and where appropriate,	Condition Amber responses, plus the following additional responses;

			<p>implement additional remediation measures such as:</p> <ul style="list-style-type: none"> • Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. • Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created. 	<ul style="list-style-type: none"> • Approved traffic thresholds to be enforced for the peak periods • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
	Trigger	Service bays are not restricted and being utilised as intended.	Vehicles other than service vehicles are stopped within the service area	Vehicles other than service vehicles are consistently parked within the service area
	Response	<p>No response required.</p> <p>Continue monitoring program</p>	<p>Review and investigate operational activities, and where appropriate, implement additional remediation measures such as:</p> <ul style="list-style-type: none"> • Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. • Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
	Trigger	No vehicles parked adjacent to TransGrid access	Vehicle stopped adjacent to TransGrid access	Vehicle parked adjacent to, and blocking, TransGrid access
	Response	<p>No response required.</p> <p>Continue monitoring program</p>	<ul style="list-style-type: none"> • Vehicle and driver to be moved from blocking the access. • Provision of additional training to the tenants should be provided to ensure TransGrid easement is not to be restricted. • Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. 	<p>Condition Amber responses, plus the following additional responses;</p> <ul style="list-style-type: none"> • Review OTMP and update where necessary. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.

Queueing	Trigger	No queuing identified at the Site access	Queueing identified at the Site access	Queueing identified on the public road as a direct result from activities within the Site.
	Response	No response required. Continue monitoring program	Review the delivery schedules prepared by the tenant. <ul style="list-style-type: none">• Drivers be provided with additional training and an extra copy of the Driver Code of Conduct.• Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created.	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none">• Approved traffic thresholds to be enforced for each sub-tenancy.• Review OTMP and update where necessary.• Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
Incidents	Trigger	No incidents observed or reported	Near miss or minor incident occurred within the carriageway of OWE which did not require medical attention (such as tripping on raised footpath)	Major incident occurred within the carriageway of OWE which did not require medical attention (such as being hit by a truck while exiting a Site)
	Response	No action required at this stage, however continual reinforcement to all tenants to report all incidents shall continue.	Near miss to be reported to the appropriate Incident to be reported to Site Manager and Estate Coordinator, for immediate remedy.	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none">• Temporary halting of activities and resuming when incident has been remedied.• Incident to be reported to Site Manager and Estate Coordinator.• Review OTMP and update where necessary.• Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
Noise	Trigger	Operational noise volume is in accordance with permissible and programmed volume constraints	Operational noise volumes are within 90% of the permissible volume constraints	Operational traffic volumes exceed permissible volume constraints
	Response	No action. Continue ongoing monitoring activities.	Review and investigate noisy operational activities, and where appropriate, implement additional remediation measures such as:	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none">• Undertake additional noise surveys to review cause in more detail.

			<ul style="list-style-type: none"> • Undertake additional noise reviews to determine cause of higher limit noise issues in more detail. • Review OTMP (and other sub-plans) and update where necessary. • Provide additional training to tenants to provide information on lowering noise emissions. 	<ul style="list-style-type: none"> • Surveys of each tenancy shall be required to allow enforcement of site-specific thresholds. • Review OTMP and update where necessary. • Provide additional training to tenants to provide information on lowering noise emissions. • Notify the planning secretary within 7 business days of becoming aware of a non-compliance.
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6.3 Key Responsibilities

Management of Warehouse 1A shall ensure:

- All staff are provided with sufficient training to undertake the required tasks. This includes responsibility for measures to ensure that all staff and visitors are familiar with the Estate wide OTMP and will comply with the site specific OTMP.
- That all vehicles will not, in any manner, be knowingly overloaded.
- Operational noise levels remain nominal. In the event that noise is exceeded, then the tenant should undertake all feasible and reasonable mitigation and management measures to ensure noise levels are within acceptable levels. If noise levels cannot be kept below applicable limits, then a different operation method or equipment must be utilised.
- 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.
- Vehicles must be wholly within site before being required to stop, as well as loading and unloading materials.
- Loading areas and turning areas within site will be kept clear at all times.
- All vehicles must enter and exit the Site in a forward direction.
- The Applicant must not, by their actions or requirements, force or coerce employees or drivers to break the law.
- The Applicant shall notify the Planning Secretary in writing of any non-compliance. This notification must:
 - identify the development and the application number for it,
 - set out the condition of consent that the development is non-compliant with,
 - the way in which it does not comply and
 - the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.
- The Applicant shall prepare a Compliance Monitoring and Report Program and submit to the Planning Secretary no later than 6 weeks before the commencement of operation of the Site.

Appendix A. Swept Path Analysis

Appendix B. Drivers Code of Conduct

Drivers operating within Warehouse 1A shall adhere to safe driving policies as outlined below in the Driver Code of Conduct (the Code).

Objectives of the Code

- To minimise the impact of the development on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise during night-time hours;
- Ensure truck drivers use specified routes; and
- Manage/control pedestrian movements.

Code of Conduct

The code of conduct requires that all drivers must:

- Demonstrate safe driving and road safety activities.
- Comply with all traffic and road legislation.
- Adhere to site signage and instructions.
- Only enter and exit the site via the allocated entry and exit points.

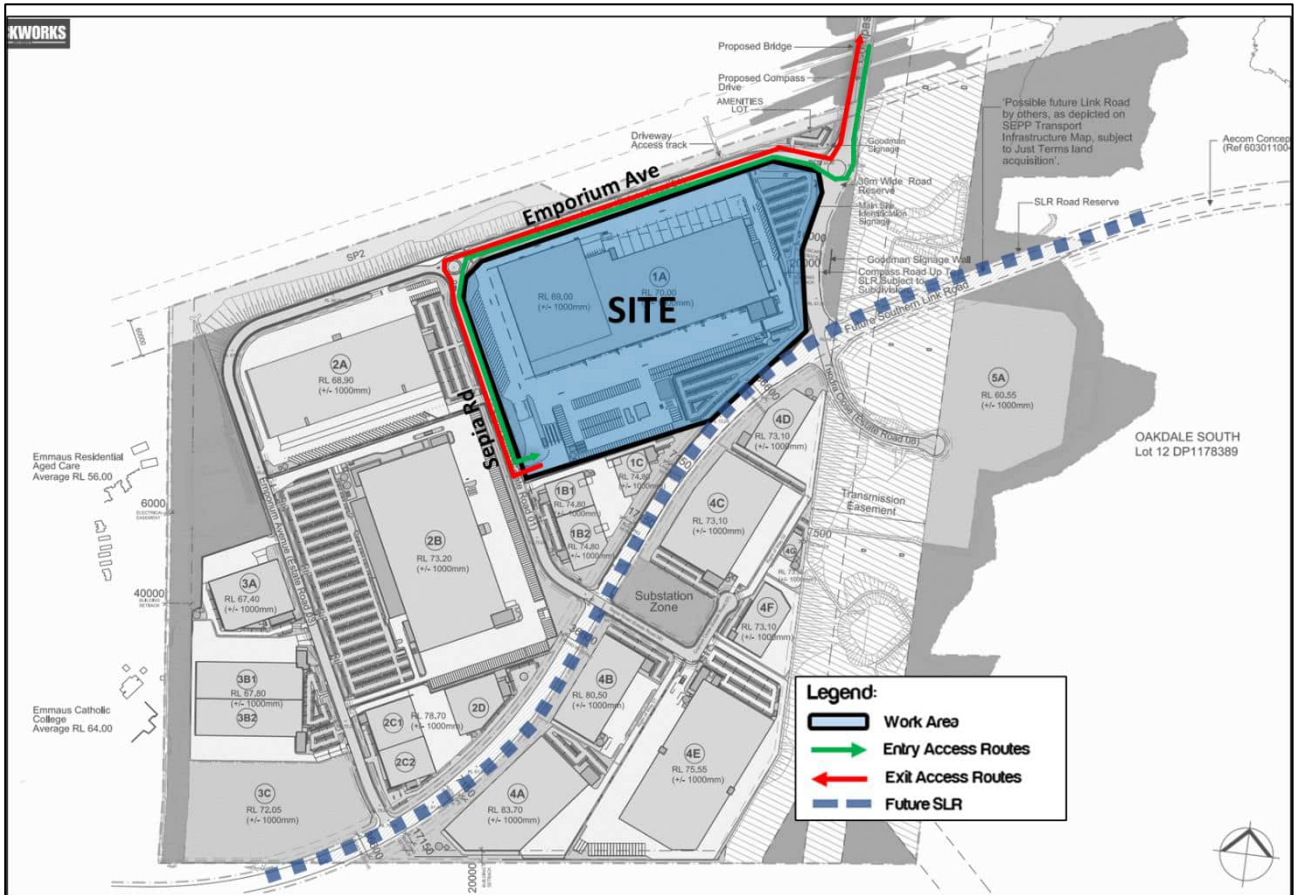
Drivers undertaking any of the following will be in a breach of conduct, result in administrative action and potential removal from Lot 1A and the broader Oakdale West Estate:

- Reckless or dangerous driving causing injury or death.
- Driving whilst disqualified or not correctly licensed.
- Drinking or being under the influence of drugs while driving
- Failing to stop after an incident.
- Loss of demerit points leading to suspension of licence.
- Any actions that warrant the suspension of a licence
- Exceeding the speed limit in place on any permanent or temporary roads

The above activities shall be enforced by licence checks, random drug and alcohol testing, and review of any community / enforcement feedback.

Driver Routes

All drivers must abide with the following route to and from the Site. As such at no time shall a vehicle access the Site via Bakers Lane or Aldington Road for operational use.



Management Team Responsibilities

Management (operator / manager / scheduler) is responsible to take all steps necessary to ensure drivers are as safe as possible and will not require staff to drive under conditions that are unsafe.

Management is to achieve this by undertaking the following:

- Ensure that all drivers adhere to the designated heavy vehicle routes as required by the route designated above, and in accordance with Condition D69A (e). If a driver accesses the Site contrary to the approved routes, then approval to drive to and from the Site will be revoked by Management.
- Ensure that the Management is responsible for ensuring no breaches of road transport laws, and to make sure that any actions or inactions taken by Management do not contribute to or encourage breaches of the NHVR.
- Ensuring all work-related vehicles are well maintained, and that the equipment enhances driver, operator, and passenger safety by way of:
 - Daily prestart inspections for all vehicles and associated equipment.
 - All vehicles must be fitted with reverse alarms.

- Ensure all operators on-site have a current verification of competency (VOC) for their current driver's licence of the appropriate class.
- Ensure maintenance requirements are met.
- Identify driver training needs and arranging appropriate training or re-training. This may include operator assessment as part of all inductions.
- Encouraging Safe Driving behaviour by:
 - Ensure rosters and schedules do not require drivers to exceed driving hours regulations or speed limits;
 - Keep records of drivers' activities, including work and rest times;
 - Ensure Drivers do not work while impaired by fatigue or drive in breach of their work or rest options;
 - Ensuring any Tenant is informed if their staff become unlicensed.
 - Not covering or re-imbursing staff speeding or other infringement notices.
 - Ensuring Legal use of mobile phones in vehicles while driving only and that illegal use is not undertaken.
- Encouraging better fuel efficiency by:
 - Use of other transport modes or remote conferencing, whenever practical.
 - Providing training on, and circulating information about, travel planning and efficient driving habits.

Driver Responsibilities

All drivers accessing Warehouses 1A must:

- Be responsible and accountable for their actions when operating a company vehicle or driving for the purposes of work.
- Be cognisant of the noise and emissions requirements imposed within the OEMP, and in a broader sense, the NSW/ Australian Road Rules.
- Display the highest level of professional conduct when driving a vehicle at work.
- Ensure they have a current Australian State or Territory issued driver licence for the class of vehicle they are driving, and this licence is to be carried.
- Immediately notify their supervisor or manager if their drivers' licence has been suspended, cancelled, or has had limitations applied.
- Comply with all traffic and road legislation at all times.
- Assess hazards while driving and demonstrate appropriate care.
- Regularly check the oil, tyre pressures, radiator, and battery levels of vehicles they regularly used.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Not drive outside of the approved heavy vehicle routes. All drivers must obey weight, length and height restrictions imposed by the National Heavy Vehicle Regulator, and other Government agencies. Heavy Vehicles shall adhere to the routes outlined in Section 4.2.2.
- Be aware that at no time may a tracked vehicle be permitted or required on a paved road.
- Never drive under the influence of alcohol or drugs, including prescription and over the counter medication if they cause drowsiness –to do so will merit disciplinary measures.
- Wear a safety seat belt at all times when in the vehicle.

- Avoid distraction when driving –the driver will adjust car stereos/mirrors etc. before setting off or pull over safely to do so.
- Report any near-hits, crashes, and scrapes to their manager, including those that do not result in injury.
- Report infringements to a manager at the earliest opportunity.
- Report vehicle defects to a manager prior to the next vehicle use.
- Adhere to the authorised site access and egress routes.
- Follow speed limits as imposed within the estate.
- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Ensure all loads are safely covered and / or restrained, as necessary.
- Ensure no dirt or debris from the vehicles is tracked on to the public road network.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which the driver knows, or thinks, may present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have a valid Container Wright Declaration if they are to move freight containers.

Crash or incident Procedure

In the event of a crash or other incident whilst driving:

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
 - Details of the other vehicles and registration numbers
 - Names and addresses of the other vehicle drivers.
 - Names and addresses of witnesses.
 - Insurers details
- Give the following information to the involved parties:
 - Name, address, and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
 - If there is a disagreement over the cause of the crash.
 - If there are injuries.
 - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.

Appendix C. Evidence of Consultation

Lachlan O'Reilly

From: Phil Saverimuttu <Phil.Saverimuttu@penrith.city>
Sent: Thursday, 8 September 2022 10:05 AM
To: Lachlan O'Reilly
Cc: Joshua Hull; Luke Ridley; Alasdair Cameron
Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Hi Lachlan

I have no objection to the submitted Operational Traffic Management Plan, subject to, NHVR permit being obtained to use Compass Drive, Emporium Avenue and Sepia Road for servicing building 1A by 30m Super B-Doubles.

I hope this information helps.

Should you have any queries, please let me know.

Regards

Phil Saverimuttu
Senior Traffic Engineer

E Phil.Saverimuttu@penrith.city
T [+61247327961](tel:+61247327961) | F | M
PO Box 60, PENRITH NSW 2751
www.visitpenrith.com.au
www.penrithcity.nsw.gov.au

PENRITH
CITY COUNCIL



Thanks for the below and your time on the phone the other day.

In respect of your query raised below, we are not requesting for the approval of the NHVR to suit 30M Super B-Doubles, we are just seeking approval of the OTMP.

The OTMP notes that Building 1A is designed for 30 metre Super B-doubles (Section 4.2),. The report is not a request for approval of said vehicle on PCC assets.

The customer will be responsible for the NHVR permit should they wish to operate and seek use of Compass Drive for use of 30m Super B-Doubles, if and when required. We note this should occur as outlined with your point below.

As such, could you please confirm the OTMP for Building 1A as submitted is satisfactory ?

Regards,



I hope this information helps.

Should you have any queries, please let me know.

Regards

Phil Saverimuttu
Senior Traffic Engineer

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T [+61247327961](tel:+61247327961) | F | M
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PENRITH
CITY COUNCIL





Figure 1 - Oakdale West, including Lot 1A

In accordance with the Consent for the development (SSD 7348 as modified) , Goodman have prepared an OTMP specific for the facility, which is in line with the Estate's (also SSD 7348) approved overarching OTMP. We note the overarching OTMP is included as an annexure of the Lot 1A report given the strategy we have adopted.

Based on the Consent, it is a requirement of Condition D69A (a) (as below) that we demonstrate consultation with you before we can lodge this report with the Department for approval. We are unable to start Operation of the facility until the Department approves this report:

Operational Traffic Management Plan

D69A The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:

- (a) be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW;
- (b) detail the numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation;
- (c) include measures to maintain road safety and network efficiency;
- (d) detail measures to minimise traffic noise, including procedures for receiving and addressing complaints from the community about Stage 1 related traffic and noise;
- (e) include a Driver's Code of Conduct that addresses:
 - (i) travelling speeds and adherence to site-specific speed limits;
 - (ii) procedures to ensure drivers adhere to designated heavy vehicle routes; and
 - (iii) procedures to ensure drivers implement safe driving practices.

We'd therefore be grateful if you're able to please review the OTMP and provide us any comments you may have. A 'no comment' response would satisfy the consultation requirements if you have no feedback.

Please let me know if you have any questions, otherwise we appreciate your assistance in advance.

It would be grateful if you could please come back to us by 7 September 2022 to remain on programme.

Regards,



Lachlan O'Reilly

From: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Sent: Wednesday, 7 September 2022 5:13 PM
To: Lachlan O'Reilly
Cc: Stephanie Partridge; Ben Milner; Rob Moody; Alasdair Cameron; Malgy Coman; Laura Van putten; Simon Turner
Subject: RE: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation

Hi Lachlan

Transport has reviewed and has no comment to add.

Kind regards,

Raymond Tran

A/Network and Safety Services Manager
Planning and Programs
Greater Sydney
Transport for NSW

M 0409 744 683 **T** (02) 8843 3133 **E** raymond.tran@transport.nsw.gov.au

transport.nsw.gov.au

27 Argyle Street
Parramatta NSW 2150



**Transport
for NSW**

From: Lachlan O'Reilly <Lachlan.OReilly@goodman.com>
Sent: Thursday, 1 September 2022 6:44 PM
To: Raymond Tran <Raymond.TRAN@transport.nsw.gov.au>
Cc: Stephanie Partridge <Stephanie.Partridge@goodman.com>; Ben Milner <Ben.Milner@goodman.com>; Rob Moody <Rob.Moody@goodman.com>; Alasdair Cameron <Alasdair.Cameron@goodman.com>; Malgy Coman <Malgy.COMAN@transport.nsw.gov.au>; Laura Van putten <Laura.VAN.PUTTEN@transport.nsw.gov.au>; Simon Turner <Simon.Turner2@transport.nsw.gov.au>
Subject: Oakdale West Estate - Building 1A | Operational Traffic Management Plan Consultation
Importance: High

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Dear Raymond,

Thankyou for your help recently in reviewing the Building 2A & 4E Operational Traffic Management Plan (OTMP) for the Oakdale West Industrial Estate developments.

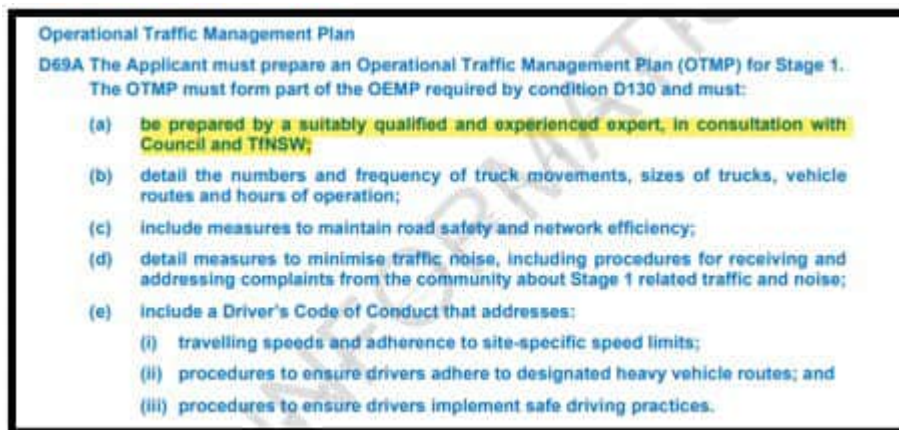
As per previous correspondence, Goodman are currently constructing the Oakdale West Industrial Estate and we are hoping to shortly commence operation of our Lot 1A warehouse (see indicated in yellow in Fig.1) within the Estate.



Figure 1 - Oakdale West, including Lot 1A

In accordance with the Consent for the development (SSD 7348 as modified) , Goodman have prepared an OTMP specific for the facility, which is in line with the Estate's (also SSD 7348) approved overarching OTMP. We note the overarching OTMP is included as an annexure of the Lot 1A report given the strategy we have adopted.

Based on the Consent, it is a requirement of Condition D69A (a) (as below) that we demonstrate consultation with you before we can lodge this report with the Department for approval. We are unable to start Operation of the facility until the Department approves this report:



We'd therefore be grateful if you're able to please review the OTMP and provide us any comments you may have. A 'no comment' response would satisfy the consultation requirements if you have no feedback.

Please let me know if you have any questions, otherwise we appreciate your assistance in advance.

It would be grateful if you could please come back to us by 7 September 2022 to remain on programme.

Regards,



Appendix D. OWE Framework OTMP



Operational Traffic Management Plan

Oakdale West Estate – Framework Traffic Management Plan

Oakdale West Precinct

1/09/2022

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Glossary

Acronym	Description
AGRD	Austroads Guide to Road Design
AGTM	Austroads Guide to Traffic Management
CC	Construction Certificate
Compass Drive	Previously known as the Western North South Link Road (WNSLR)
Council	Penrith Council
DA	Development Application
DCP	Development Control Plan
DoS	Degree of Saturation
DPIE	Department of Planning, Industry and Environment
FSR	Floor space ratio
GFA	Gross Floor Area
HRV	Heavy Rigid Vehicle (as defined by AS2890.2:2018)
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
MOD	Section 4.55 Modification (also referred as a S4.55)
MRV	Medium Rigid Vehicle (as defined by AS2890.2:2018)
NHVR	National Heavy Vehicle Regulator
OC	Occupation Certificate
RMS Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
S4.55	Section 4.55 Modification (also referenced as MOD)
S96	Section 96 Modification (former process terminology for an S4.55)
SRV	Small Rigid Vehicle (as defined by AS2890.2:2018)
TDT 2013/04a	TfNSW Technical Direction, Guide to Traffic Generating Developments – Updated traffic surveys, August 2013
TfNSW	Transport for New South Wales
TIA	Transport Impact Assessment
TIS	Transport Impact Statement
veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)
WNSLR	Western North South Link Road (Refer also Compass Drive)

1 Introduction

1.1 Overview

Ason Group has been engaged by Goodman Property Services (Aust) Pty Ltd to prepare an Operational Traffic Management Plan (OTMP) in relation to Oakdale West Estate (OWE, or the Estate). This overarching Framework OTMP relates to the broader OWE precinct, with supplementary OTMPs for individual lots, as required, by relevant conditions of consent.

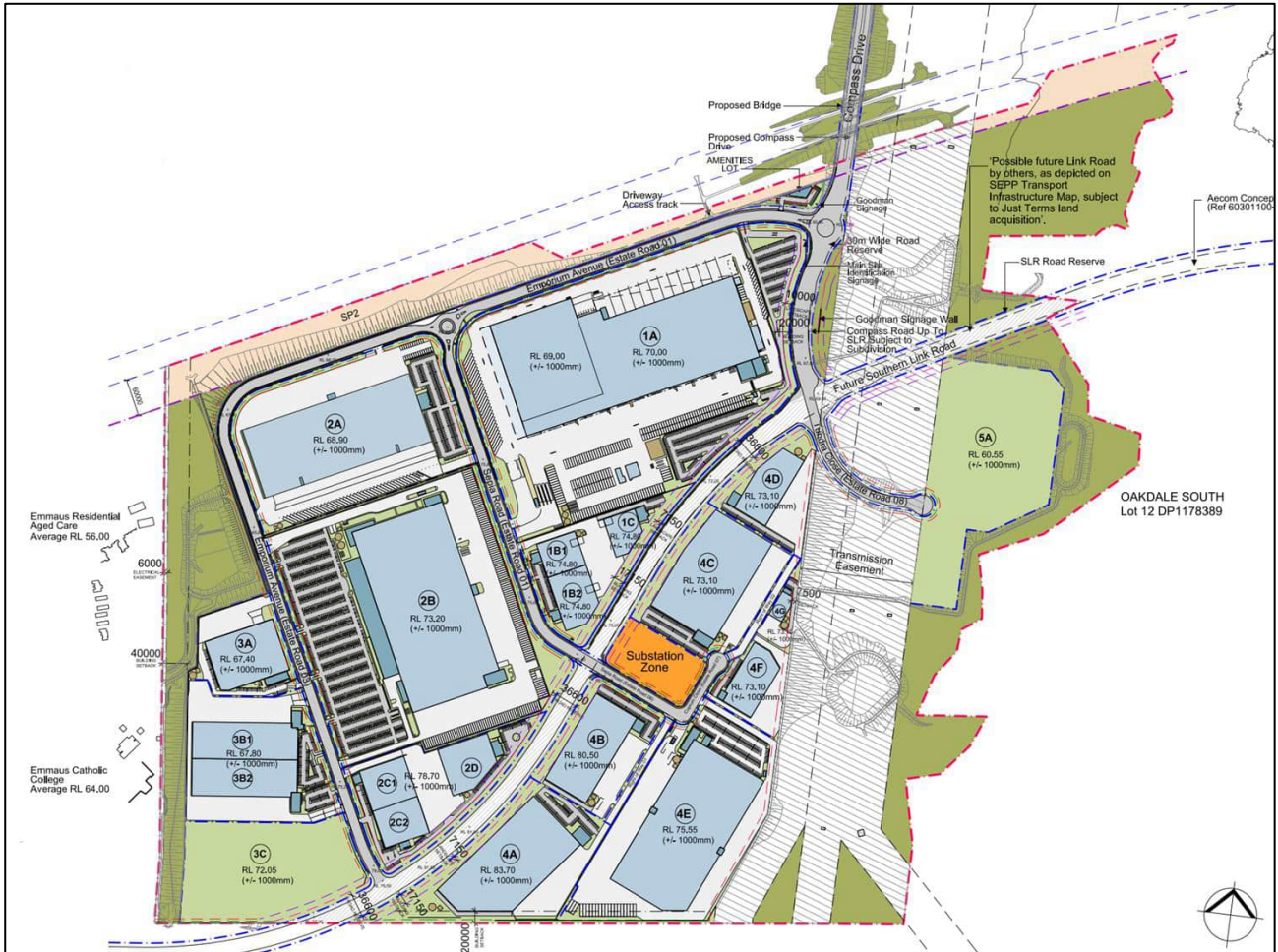


Figure 1: Oakdale West Estate (MOD 10)

This OTMP is in response to Condition D69A (and in response to D130) of the Concept Plan for the State Significant Development (SSD 7348), dated 10 March 2021, and subsequently the OEMP Stage 1 plan, dated 10 September 2021. Following this, SSD 7348-Mod-10 has received approval on 17 August 2022.

Table 1 outlines these conditions.

TABLE 1 CONDITION OF CONSENT D69A RESPONSE LOCATIONS

Condition		Response
D69A	The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:	
(a)	be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW	Consultants from Ason Group are suitably qualified Traffic Engineers. Council and TfNSW shall be consulted following preparation of this plan, with relevant updates (if required) made following that consultation.
(b)	detail the numbers and frequency of truck movements, sizes of trucks, vehicle routes and hours of operation;	Section 2.2 of this report outlines the approved hours of operation. The Estate will operate 24/7 with further site-specific hours for individual facilities to be subject to separate management plan(s). Section 4.2.3 outlines the maximum permissible vehicle size, truck routes and all approved B-double truck routes. The Estate has been designed for access by 26m B-doubles. Larger vehicles, if desired by individual tenants, shall be subject to separate permit approvals via the National Heavy Vehicle Regulator; a process that requires separate endorsement by Council outside the scope of this OTMP.
(c)	include measures to maintain road safety and network efficiency;	Refer to Section 7.2 for measures to maintain road safety and network efficiency.
(d)	detail measures to minimise traffic noise, including procedures for receiving and addressing complaints from the community about Stage 1 related traffic and noise	Comments within the Driver Code of Conduct (Section 5) requires that drivers are to be cognisant of the noise and emissions requirements. Additionally, Section 7.3 includes requirements that each tenant shall manage their own business to minimise additional traffic and noise.
(e)	include a Driver's Code of Conduct that addresses: (i) travelling speeds and adherence to site-specific speed limits; (ii) procedures to ensure drivers adhere to designated heavy vehicle routes; and (iii) procedures to ensure drivers implement safe driving practices	A driver Code of Conduct can be found in Section 5. The drivers code of conduct addresses ways to minimise the impacts on the road network, with other road users, ensure truck routes are utilised and to manage pedestrian movements which all stem from following the NSW road rules.
D69B	The Applicant must:	
(a)	not commence operation of Stage 1 until the OTMP required by condition D69A is approved by the Planning Secretary; and	Noted.
(b)	implement the most recent version of the OTMP approved by the Planning Secretary for the duration of operation.	Noted - the most up to date version of the OTMP shall be implemented during the operation of the Site. Any updates to this OTMP shall be communicated to relevant stakeholders, including Council, TfNSW, DPIE and building tenants.

1.2 Background

A Concept Plan for the Estate was original approved by the Department of Planning & Environment on 13 September 2019. Subsequently, a number of amendments to the Estate master plan and individual development sub-precincts have occurred, resulting in the form now approved. A summary of the relevant changes to building areas under previous consents is provided in **Table 2** below.

TABLE 2 CONCEPT PLAN MODIFICATIONS

Land Use	Total Warehouse	Total Office	Total
Concept Plan	452,493	22,776	475,269
MOD1	No Change in GFA		
MOD2	455,854	25,138	480,992
MOD3	529,589	66,177	595,765
MOD4	No Change in GFA		
MOD5	No Change in GFA		
MOD6	529,625	69,830	599,455
MOD7	529,772	69,683	599,455
MOD8	No Change in GFA		
MOD9	522,173	77,282	599,455
MOD10	521,320	78,135	599,455

Further background can be found online, either via the Major Projects website (link to MOD 10 below¹) or Goodman's *Oakdale West Planning*³ page.

1.3 Purpose of this Report

The purpose of this OTMP is in response to condition D69A (as outlined above) and other requirements. It provides guidance in relation to the parking and traffic management arrangements for the Estate with an overall objective to ensure safe and efficient movement of vehicles and personnel. This plan details the following:

- Thresholds for the type, frequency, and number of trucks within the Estate,
- Detail the access and parking arrangements to ensure no queuing on the public road network,
- Appropriate internal traffic controls and signage,
- Driver Code of Conduct,
- Proposed crossings and signage for safe movement of pedestrians within the Estate, and
- Details in relation to governance and administration of the plan.

¹ <https://www.planningportal.nsw.gov.au/major-projects/projects/oakdale-west-estate-mod-10-signage-changes>

³ <https://au.goodman.com/oakdale-industrial-estate/oakdale-west-planning>

1.4 Exclusions

This OTMP does not cover the following:

- Traffic and pedestrian management associated with construction activities. Reference should be made to relevant Construction Traffic Management Plans (CTMP) or Traffic Control Plans (TCPs) specific to those works, as required.
- On-site traffic and parking management for individual Lots. Reference should therefore be made to the site-specific OTMPs for relevant details.
- Transport of Dangerous Goods is not covered by this OTMP. A Transport Emergency Response Plan (TERP) is required prior to transport of any Dangerous Goods. It is expected that such plans will be prepared by the Tenant involved in the transport of Dangerous Goods to/from the individual businesses within the Estate.

1.5 References

In preparing this Plan, reference is made to the following:

- Ason Group, Traffic Impact Assessment Report – Oakdale West Industrial Estate, Western Sydney Employment Area Concept Plan Modification Application 4, dated 12 May 2017 (MOD 4 Traffic Report)
- Ason Group, Transport Statement – Oakdale West Industrial Estate (SSD 7348) Modification 6, dated 09 November 2020 (MOD 6 Traffic Report)
- Ason Group, Transport Statement – Oakdale West Industrial Estate (SSD 7348) Modification 7, dated 31 May 2021 (MOD 7 Traffic Report)
- Department of Planning & Environment, Assessment Report – Oakdale West Industrial Estate (SSD 6917) Concept Proposal and Stage 1 DA Layout, October 2016
- Department of Planning & Environment, Assessment Report – Oakdale West Industrial Estate (SSD 6917 MOD 1) Concept Proposal and Stage 1 DA Layout, April 2017
- Department of Planning & Environment, Development Consent (SSD 7348 Mod-10), 17 August 2022.
- National Transport Commission, Australian Code for the Transport of Dangerous Goods by Road & Rail, Edition 7.5, dated 2017.
- RMS Technical Direction TDT 2013/04a, Guide to Traffic Generating Developments – Updated traffic surveys (RMS Guide TDT 04a)
- Roads and Maritime Services (RMS), Guide to Traffic Generating Developments (RMS Guide)
- TransGrid, TransGrid Easement Guidelines – Third Party Development

2 Estate Details

2.1 Estate Overview

OWE is a warehouse and industrial development precinct situated in Kemps Creek. The Precinct lies within a series of strategic growth corridors including the Western Sydney Growth Centre and Broader Western Sydney Employment Areas and is intended to be serviced by Compass Drive (previously known as the Western North South Link Road, WNSLR).

A total development floor area of 599,455m² is to be provided by the industrial buildings within the Estate, as outlined by the Concept Plan (SSD 7348 MOD 10) which has received approval on 17 August 2022.

Figure 2 below provides the context of the Estate with regard to existing road systems.

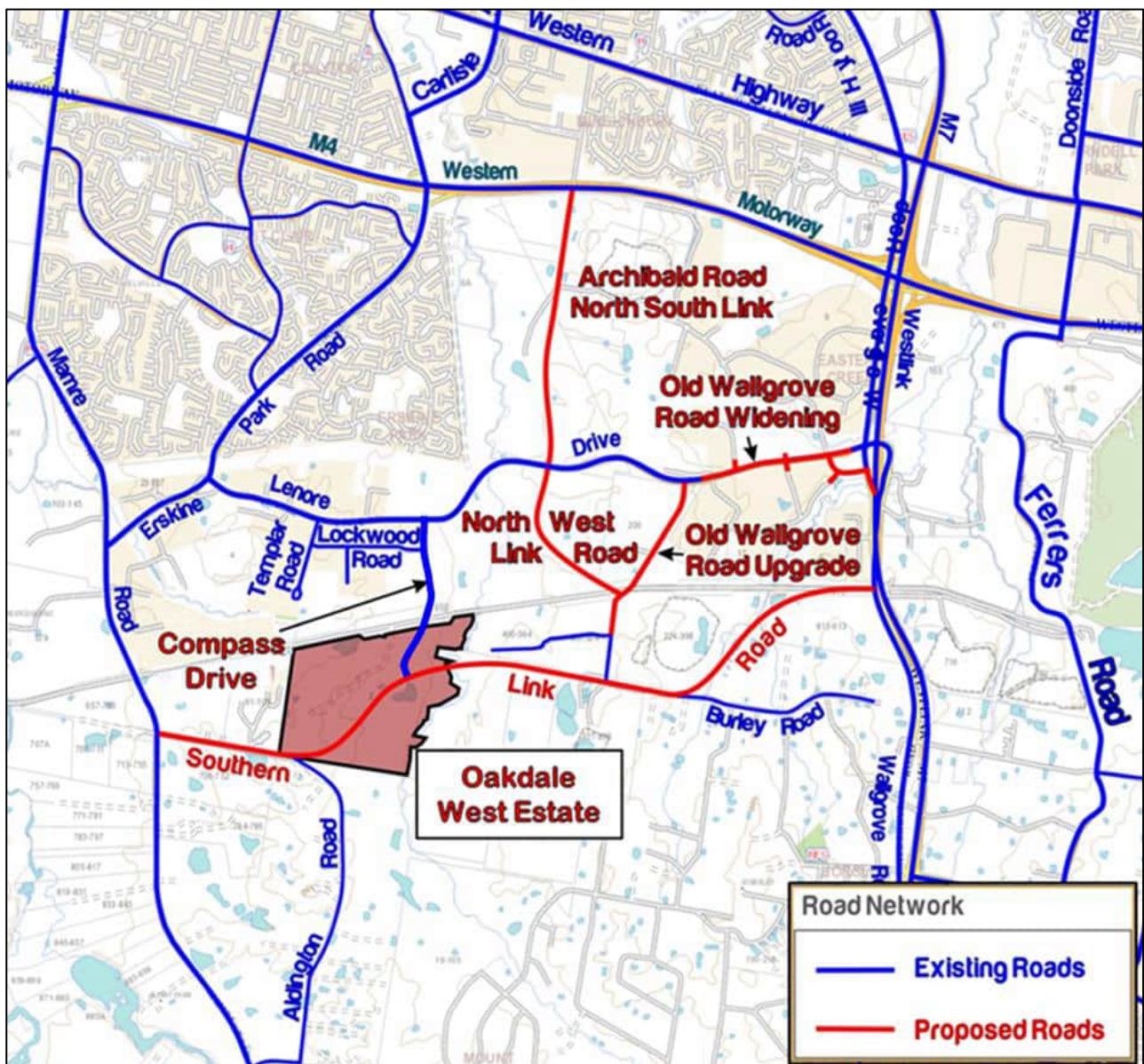


Figure 2: Site Appreciation and Road Hierarchy

The Estate comprises a number of industrial Lots as shown in **Figure 3** below.

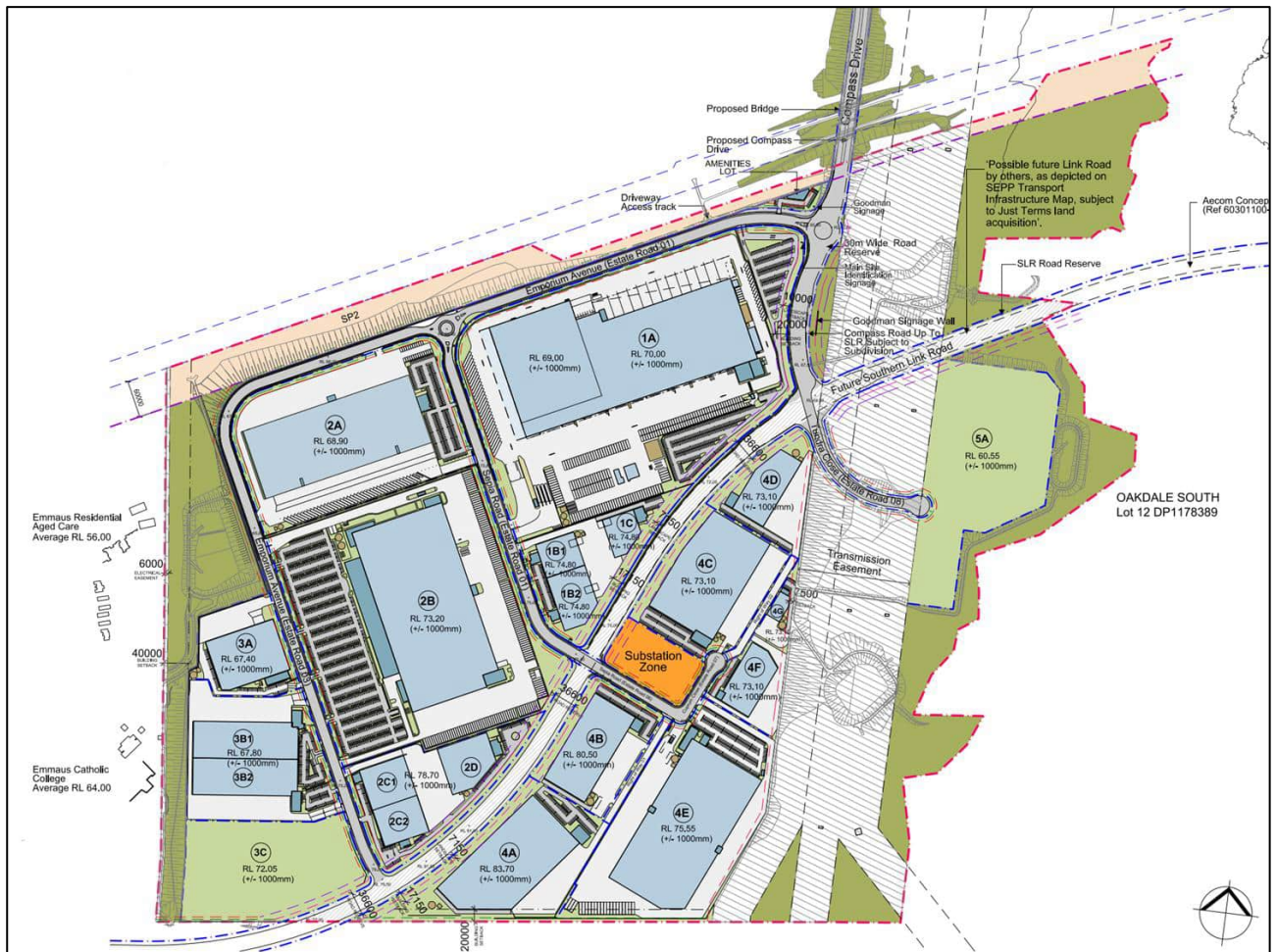


Figure 3: Estate Site Plan (MOD 10)

With reference to Figure 3, the key details relating to the Estate are as follows;

- An estate total Gross Floor Area (GFA) of 599,455m².
- 5 development sub-precincts with up to 20 buildings (separate tenancies) used for warehouse and distribution uses; and

All access to the Estate is provided via Compass Drive. Vehicles are expected to travel along Old Wallgrove Road from the M4 or Lenore Drive, before heading south on Compass Drive and onto the internal estate roads.

An existing proposal with regards to the construction of the Southern Link Road (SLR) will form a connection with Mamre Road to the west and Wallgrove Road to the east.



Figure 4: Access Road

2.2 Hours of Operation

Operation of each Site will be subject to site specific OTMP's. Notwithstanding, Oakdale West has publicly dedicated roads that will be accessible at all times, therefore the Estate will effectively be operational 24 hours a day, 7 days a week.

2.3 Approved Estate Vehicle Movements

Transport and traffic projections underpinning the surrounding road infrastructure is based upon the MOD 10 GFAs. The traffic projections during the AM and PM peak below are determined to be similar to the approved MOD 9 traffic volumes;

- AM peak 1,263 veh/hr
- PM peak 1,006 veh/hr
- Daily 11,946 veh/day

For reference, 1 veh/hr (or veh/day) relates to the number of vehicle movements rather than simply the number of vehicles. As such, 1 vehicle in & out equates to 2 vehicle movements. A breakdown of the relative contribution of individual Precincts assumed is provided in **Table 3** below.

TABLE 3 OAKDALE WEST TRIP GENERATION

Precinct	Key Details	Traffic Generation (Vehicle movements)		
	GFA ³ (m ²)	AM	PM	Daily
1	125,198	108	83	2,562
2	267,860	859	608	5,630
3	53,170	87	87	1,006
4	120,557	157	176	2,136
5	32,325	53	53	612
- ¹	345	-	-	-
TOTAL²	599,455	1,263	1,006	11,946

Note: 1) Amenities Lot is not expected to generate vehicle movements and has been excluded from the calculations

2) Total traffic generation rates are higher than the sum of Precinct traffic generation rates due to rounding.

3) GFAs of each precinct reproduced from the MOD 10 Estate Masterplan dated 08 July 2022.

It is acknowledged that these sub-precinct traffic generation figures are based on average trip generation rates and, as such, you would expect some variability for sites. However, at the precinct level this will balance out. It is for this reason that the relevant thresholds for traffic are established under this Framework OTMP as opposed to each sub-precinct plan. Notwithstanding, review of sub-precinct generation shall form a key trigger as an ongoing monitoring requirement.

2.4 Transport Infrastructure

2.4.1 Public Transport

Public transport services operating in the vicinity of the Estate are presented in **Figure 55**. Bus routes include:

- Route 779 bus route; connecting St. Marys to Erskine Park Industrial Estate (shown in Figure 55),

Other notable bus services in the vicinity of the Site but outside the 1200m walking radius of the Site are:

- Route 738 bus route; connecting Mt. Druitt Railway Station to Eastern Creek and Horsley Park,
- Route 813 bus route; connecting Bonnyrigg and Western Sydney Parklands to Fairfield,
- Route 835 bus route; connecting St. Mary's Railway Station to the Prairiewood T-Way Station (shown in Figure 55).

These services operate every 30 minutes during weekday (Monday to Friday) morning and evening periods.

2.4.2 Pedestrian & Cyclist Connectivity

Pedestrian footpaths are provided on both sides of all roads within the Estate. A Shared Path (pedestrians and cyclists) is provided along the southern side of Lenore Drive and on Compass Avenue connecting with the Oakdale West Estate. Cyclists are to use this path, where practicable, and shall slow to pass pedestrians in a safe manner.

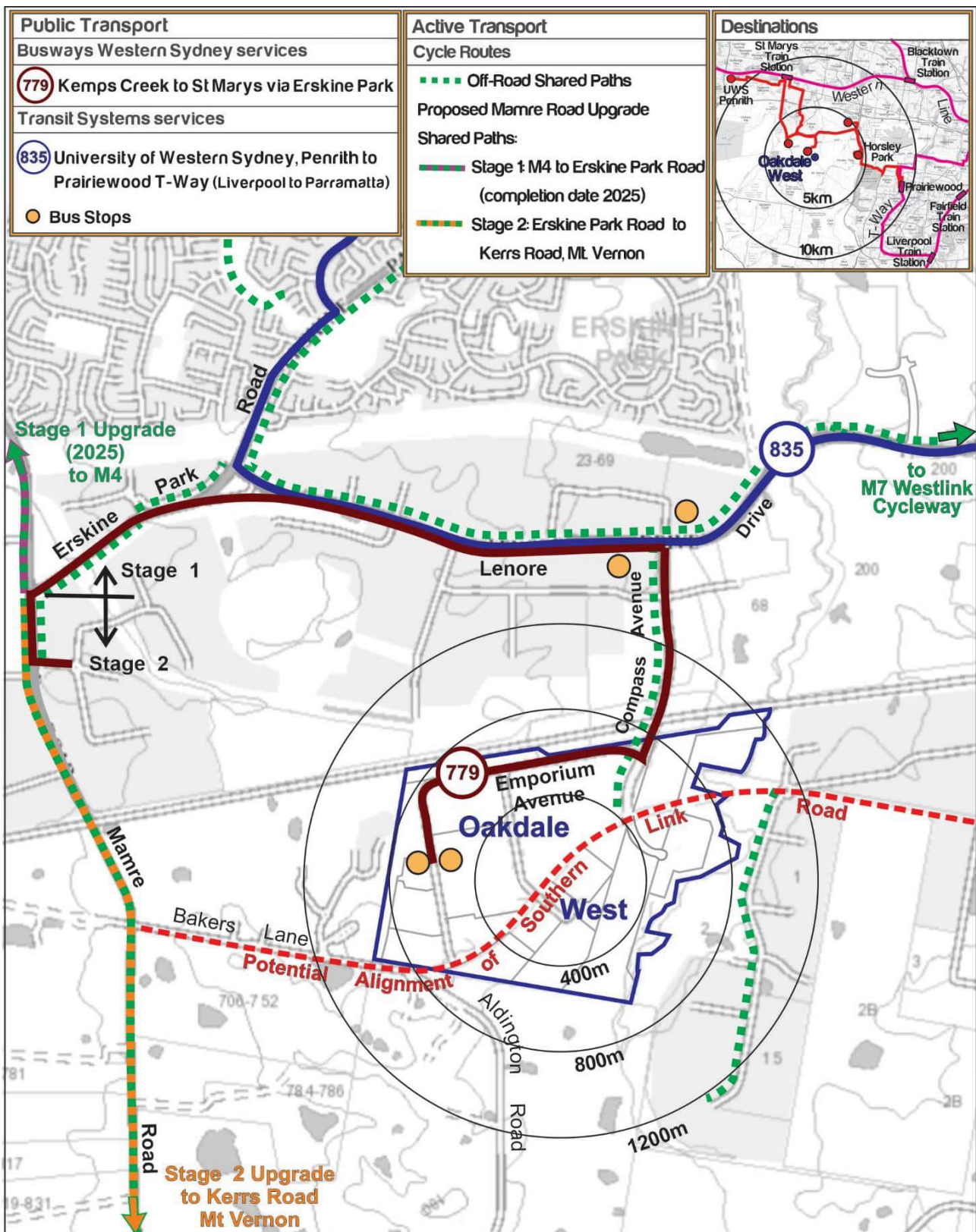


Figure 5: Public Transport Services

2.4.3 Roads

The key roads providing access for the OWE are provide below and illustrated within **Figure 6**.

Road	Category	No. of Lanes	Speed Limit (km/hr)	Parking Restrictions	Footpaths / Cycleway
M7 Motorway	Motorway	4	100	No Stopping	No
Wallgrove Road	Arterial	4	70	No Stopping	No
Lenore Drive	Sub-arterial	4	80	No Stopping	Yes
Old Wallgrove Road	Collector	4	80	No Stopping	Yes
Mamre Road	Collector	2	80	No Stopping	No
Compass Drive	Collector	4	60	No Stopping	Yes
Estate Road 01	Local	2	50	Yes	Yes
Estate Road 03	Local	2	50	Yes	Yes

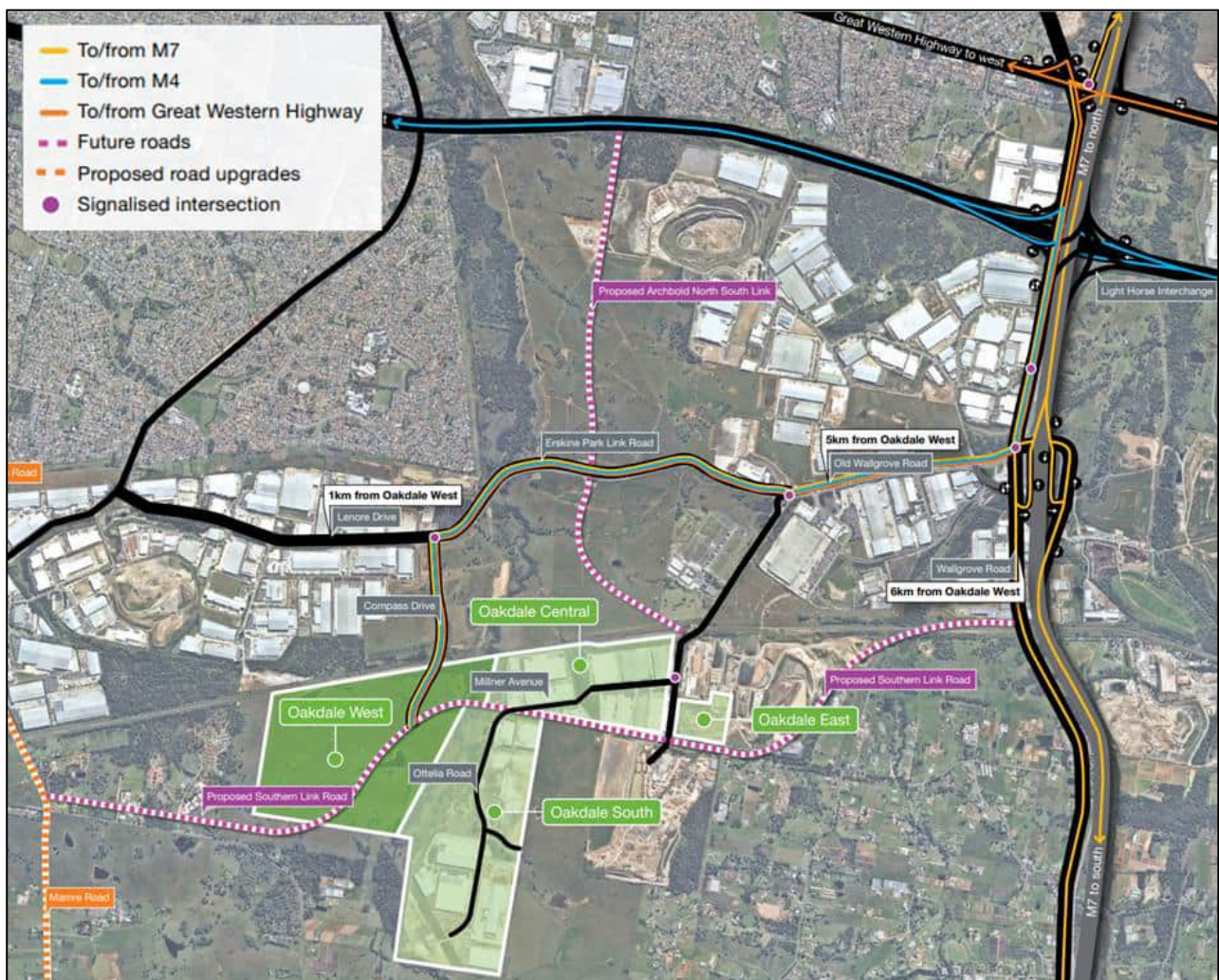


Figure 6: Road Layout

3 Statutory Requirements

A summary of the relevant conditions of approval – relating to operational traffic and parking management – for Oakdale West (Concept Plan, Stage 1 and Stage 2 works) are summarised below.

TABLE 5 MOD 10 APPROVAL - COMPLIANCE TABLE											
Requirement	Reference										
CONDITIONS FOR CONSENT FOR CONCEPT PROPOSAL											
In accordance with section 4.22 of the EP&A Act, each stage of the Concept Proposal (excluding Stage 1) is to be subject to future development applications (DAs). Future DAs are to be consistent with this development consent.	B1 (SSD-7348-Mod-10)										
To avoid any doubt, this Concept Proposal consent does not permit the construction or operation of any Development, except for the Stage 1 DA covered by Schedule D.	B2 (SSD-7348-Mod-10)										
<p>The following limits apply to the Concept Proposal for the Development:</p> <ul style="list-style-type: none"> a) the maximum GLA for the land uses in the Development shall not exceed the limits in Table 1. b) a minimum 60 metre (m) wide corridor along the northern Site boundary shall not be developed and shall be maintained and preserved for the future WSFL corridor, in accordance with the requirements of TfNSW. e) forklifts are not to operate during the night-time period on Lots 2C, 2D, 2E, 3B, 3C, 3D, 3E, 4A and 5A; and g) all traffic associate with operation of the Development shall use the West North South Link Road, and the future SLR, to access the site and shall not use Bakers Lane or Aldington Road <table border="1"> <thead> <tr> <th>Land Use</th><th>Maximum GLA (m²)</th></tr> </thead> <tbody> <tr> <td>Total Warehousing</td><td>529,625</td></tr> <tr> <td>Total Office</td><td>22,770</td></tr> <tr> <td>Other</td><td>4,429</td></tr> <tr> <td>Total GLA</td><td>556,824</td></tr> </tbody> </table>	Land Use	Maximum GLA (m ²)	Total Warehousing	529,625	Total Office	22,770	Other	4,429	Total GLA	556,824	B9 (SSD-7348-Mod-10)
Land Use	Maximum GLA (m ²)										
Total Warehousing	529,625										
Total Office	22,770										
Other	4,429										
Total GLA	556,824										
<p>The Applicant shall ensure the Concept Proposal provides car parking in accordance with the following rates:</p> <ul style="list-style-type: none"> a) 1 space per 300 m² of warehouse GFA. b) 1 space per 40 m² of office GFA; and c) 2 spaces for disability parking for every 100 car parking spaces. 	B13 (SSD-7348-Mod-10) B20 (SSD 10397-Mod-1)										
The Applicant shall provide bicycle racks, and amenity and change room facilities for cyclists in accordance with Planning Guidelines for Walking and Cycling (December 2004), NSW Department of Infrastructure, Planning and Natural Resources; Roads and Traffic Authority.	B14 (SSD-7348-Mod-10)										

CONDITIONS TO BE MET IN FUTURE DEVELOPMENT APPLICATIONS	
<p>Future DAs shall be accompanied by a transport, access, and parking assessment. The assessment must:</p> <ul style="list-style-type: none"> a) assess the impacts on the safety and capacity of the surrounding road network and access points during construction and operation of the relevant Stage. b) demonstrate internal roads and car parking complies with relevant Australian Standards and the car parking rates in Condition B13. c) detail the scope and timing of any required road upgrades to service the relevant Stage; and d) detail measures to promote non-car travel modes, including a Sustainable Travel Plan identifying pedestrian and cyclist facilities to service the relevant Stage of the Development. 	C9 (SSD-7348-Mod-10)
CONDITIONS FOR CONSENT FOR THE STAGE 1 DA	
<p>The Applicant must:</p> <ul style="list-style-type: none"> a) provide safe and unobstructed access for TransGrid plant and personnel to access the transmission towers, lines and easement on the Site, 24 hours a day, 7 days a week. b) comply with the requirements of TransGrid for any works in the TransGrid easement on the Site; and c) advise TransGrid of any proposed amended or modified encroachment into the easement. 	D30 (SSD-7348-Mod-10)
<p>The Applicant must ensure:</p> <ul style="list-style-type: none"> a) internal roads, driveways, and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) are constructed and maintained in accordance with the latest version of AS 2890.1:2004 Parking facilities Off-street car parking (Standards Australia, 2004) and AS 2890.2:2002 Parking facilities Off-street commercial vehicle facilities (Standards Australia, 2002). b) parking for Stage 1 is provided in accordance with the EIS and RtS for MOD 5; c) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant Austroads guidelines. d) Stage 1 does not result in any vehicles queuing on the public road network. e) heavy vehicles with Stage 1 are not parked on local roads or footpaths in the vicinity of the Site. f) all vehicles are wholly contained on site before being required to stop. g) all loading and unloading of materials are carried out on Site. h) all trucks entering or leaving the Site with loads have their loads covered and do not track dirt onto the public road network; and i) the proposed turning areas in the car parks are kept clear of any obstacles, including parked cars, always. 	D69 (SSD-7348-Mod-10)
<p>The Applicant must prepare an Operational Traffic Management Plan (OTMP) for Stage 1. The OTMP must form part of the OEMP required by condition D130 and must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced expert, in consultation with Council and TfNSW. b) detail the number and frequency of trucks, sizes of trucks, vehicle routes and hours of operation. c) include measures to maintain road safety and network efficiency. 	<p>D69A (SSD-7348-Mod-10)</p> <p>B17 (SSD 10397 – Mod-1)</p>

<div><div>d) detail measures to minimise traffic noise, including procedures for receiving and addressing complaints from the community about Stage 1 related traffic and noise.</div><div>e) include a Driver’s Code of Conduct that addresses:<div><div>(i) travelling speeds and adherence to site-specific speed limits.</div><div>(ii) procedures to ensure drivers adhere to designated heavy vehicle routes; and</div><div>(iii) procedures to ensure drivers implement safe driving practices.</div></div></div></div>										
<div><div>a) not commence operation of Stage 1 until the OTMP required by condition D69A is approved by the Planning Secretary; and</div><div>b) implement the most recent OTMP approved by the Planning Secretary for the duration of operation</div></div>	<div>D69B (SSD-7348-Mod-10)</div> <div>B18 (SSD 10397-Mod-1)</div>									
<div>The Applicant must comply with the hours detailed in Table 5, unless otherwise agreed in writing by the Planning Secretary.</div> <table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td>Construction</td><td>Monday – Friday Saturday</td><td>7am to 6 pm 8 am to 1 pm</td></tr><tr><td>Operation</td><td>Monday – Sunday (including public holidays)</td><td>24 hours</td></tr></table>	Activity	Day	Time	Construction	Monday – Friday Saturday	7am to 6 pm 8 am to 1 pm	Operation	Monday – Sunday (including public holidays)	24 hours	<div>D70 (SSD-7348-Mod-9)</div> <div>B21 (SSD 10397-Mod-1)</div>
Activity	Day	Time								
Construction	Monday – Friday Saturday	7am to 6 pm 8 am to 1 pm								
Operation	Monday – Sunday (including public holidays)	24 hours								
<div>Works outside of the hours identified in Condition D70 may be undertaken in the following circumstances:<div><div>a) works that are inaudible at the nearest sensitive receivers.</div><div>b) works agreed to in writing by the Planning Secretary.</div><div>c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or</div><div>d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm</div></div></div>	<div>D71 (SSD-7348-Mod-10)</div> <div>B22 (SSD 10397-Mod-1)</div>									

Refer to the Department of Planning & Environment's Major Project Assessments [website](#) for a full list of all conditions of approval.

4 Traffic Management Plan

4.1 Pedestrian Management

4.1.1 On-site Pedestrian Management

Refer to site-specific OTMPs for further detail with regard to on-site pedestrian management.

As a general rule, pedestrian access to on-site hardstand areas used by heavy vehicles should be restricted as far as practicable for safety purposes.

It should be noted that pedestrians have right-of-way when crossing driveways, therefore Drivers of Goodman Tenanted facilities will be required to give-way to pedestrians when entering or exiting individual Lots.

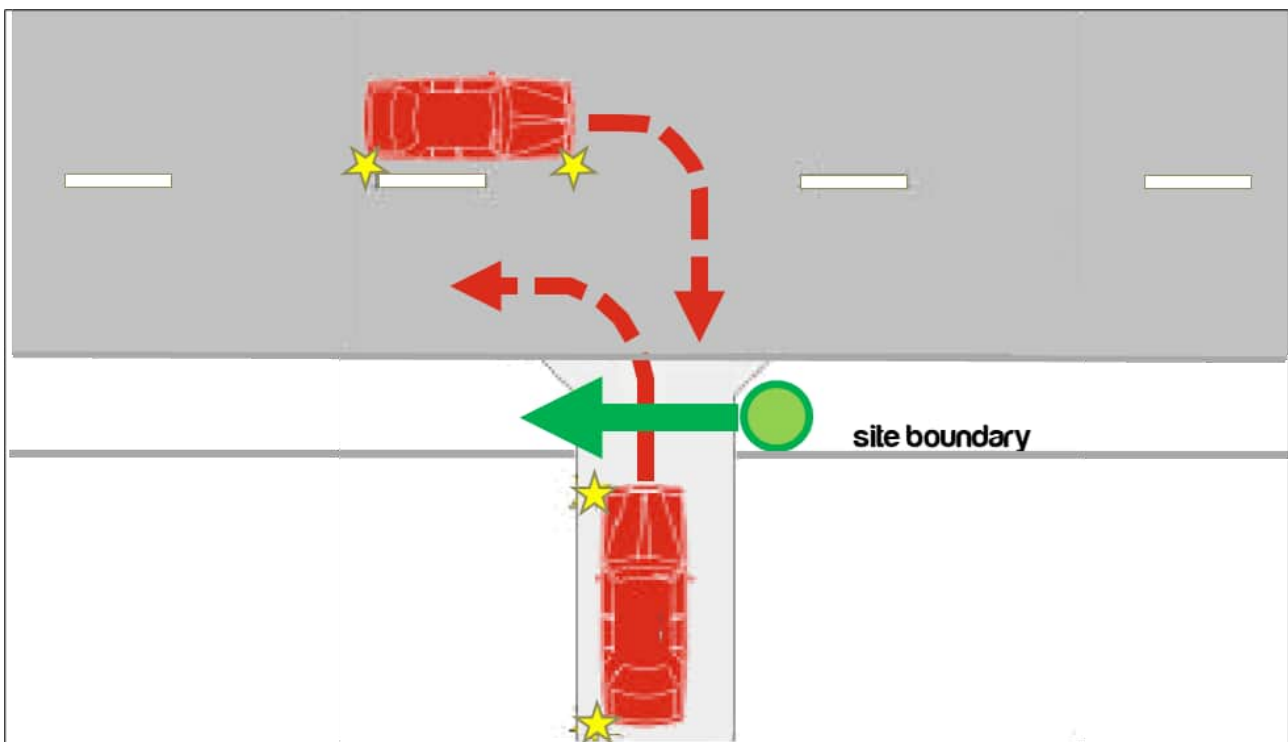


Figure 7: Pedestrian/cyclist Priority of Movement at Site Access

4.1.2 On-street Pedestrian Management

Pedestrians are to use footpaths and the Shared Path, as provided, wherever practicable. Pedestrian refuge islands are included on the splitter islands to the roundabouts along Estate Road 01 and Estate Road 03 and should be used wherever possible.

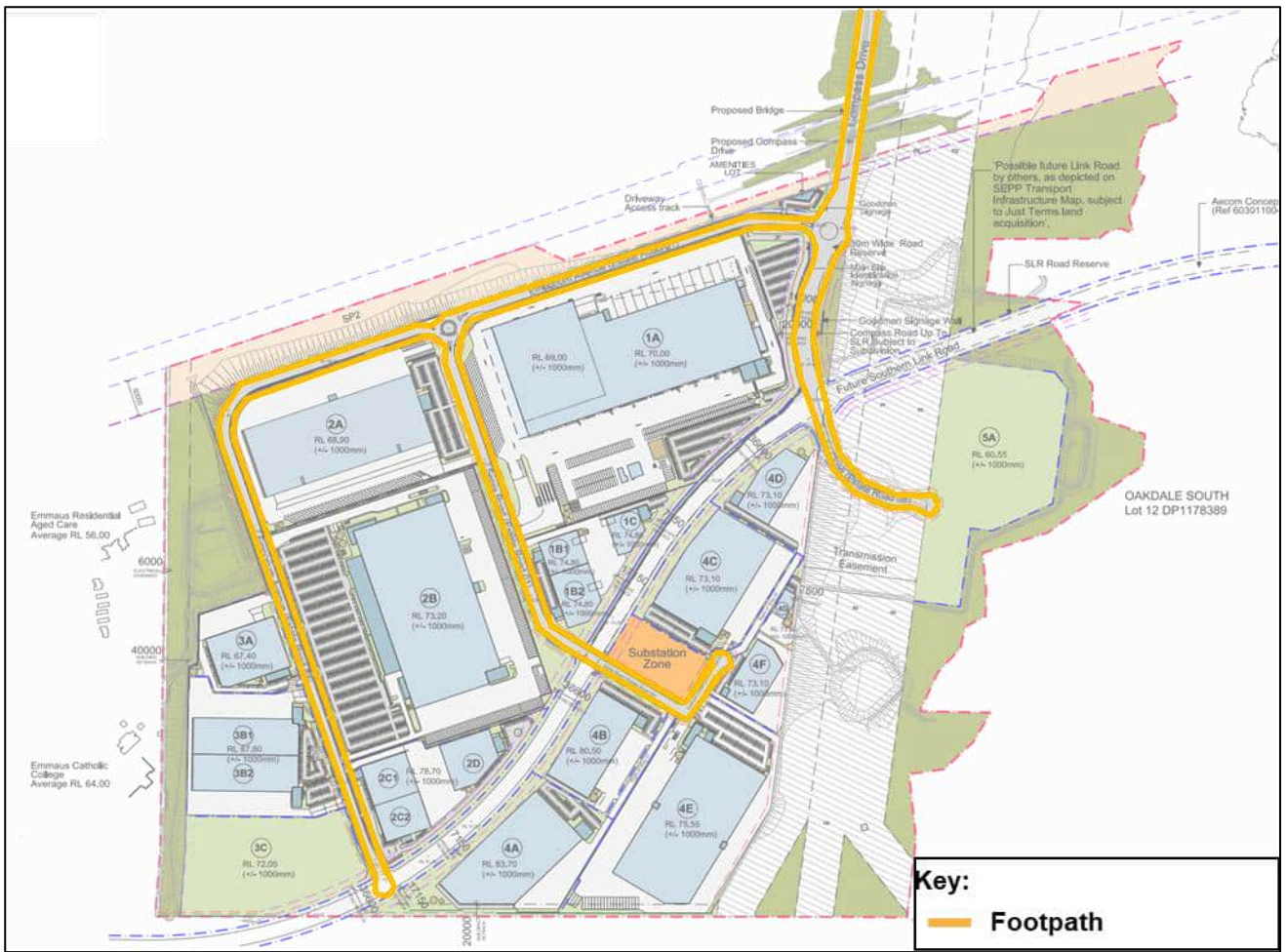


Figure 8: Footpaths within Oakdale West Estate

4.2 Vehicle Management

All Drivers of Goodman Tenanted facilities are to operate vehicles in a manner consistent with the requirements of applicable Work Health and Safety (WHS) legislation and other business specific policies. All commercial vehicles drivers of Goodman Tenanted facilities are to be familiar with the Driver Code of Conduct – outlined in Section 6- before attending the Estate.

It is important to note that any posted speed signage within any of the Estate (private roads) should not replicate the design and appearance of the regulatory speed limit signage (a number within the red circle).

4.2.1 Maximum Vehicle Size

As indicated in Section 3.3, maximum vehicle size expected to access the Estate by Drivers of Goodman Tenanted facilities is a 26.0 metre B-double. Larger vehicles — including oversize vehicle configurations — shall also access the Estate, under relevant permit approvals.

Refer to site-specific OTMPs for further detail regarding further restrictions that may apply to individual Precincts or buildings.

4.2.2 Truck Access Routes

All commercial vehicles drivers of Goodman Tenanted facilities will access the Estate from Compass Drive and Lenore Drive. From that point, these heavy vehicles are expected to use the Classified Road network wherever possible, with the use of local Council roads only as necessary.

At all times drivers of Goodman Tenanted facilities are to adhere to the applicable Road Rules and the Drivers Code of Conduct outlined in Section 6. Drivers of Goodman Tenanted facilities accessing the Estate shall adhere to the following access management measures:

- Drivers of Goodman Tenanted facilities turning right into driveways or side roads shall do so from as close to the centreline of the carriageway.

Note - if turning from a two-lane road - the RMS Heavy Vehicle Driver Handbook states that vehicles 7.5 metres or longer with a DO NOT OVERTAKE TURNING VEHICLE sign displayed on the back can turn right from the lane on the immediate left of the far-right lane.

- Heavy vehicles (in excess of 4.5 Tonne GVM) or long vehicles (over 7.5 metres in length) must not stop on a length of road outside a built-up area, except on the shoulder of the road.

In a built-up area where parking is permitted (for vehicles lighter than 4.5 Tonne GVM and under 7.5 metres in length), they must not stop for longer than one hour (buses excepted). For more information on where vehicles can stand or park, refer to the Road Users' Handbook.

4.2.3 Approved B-double Routes

At the time of preparing this plan, the approved B-double routes in the vicinity of the Estate are presented in **Figure 9**.

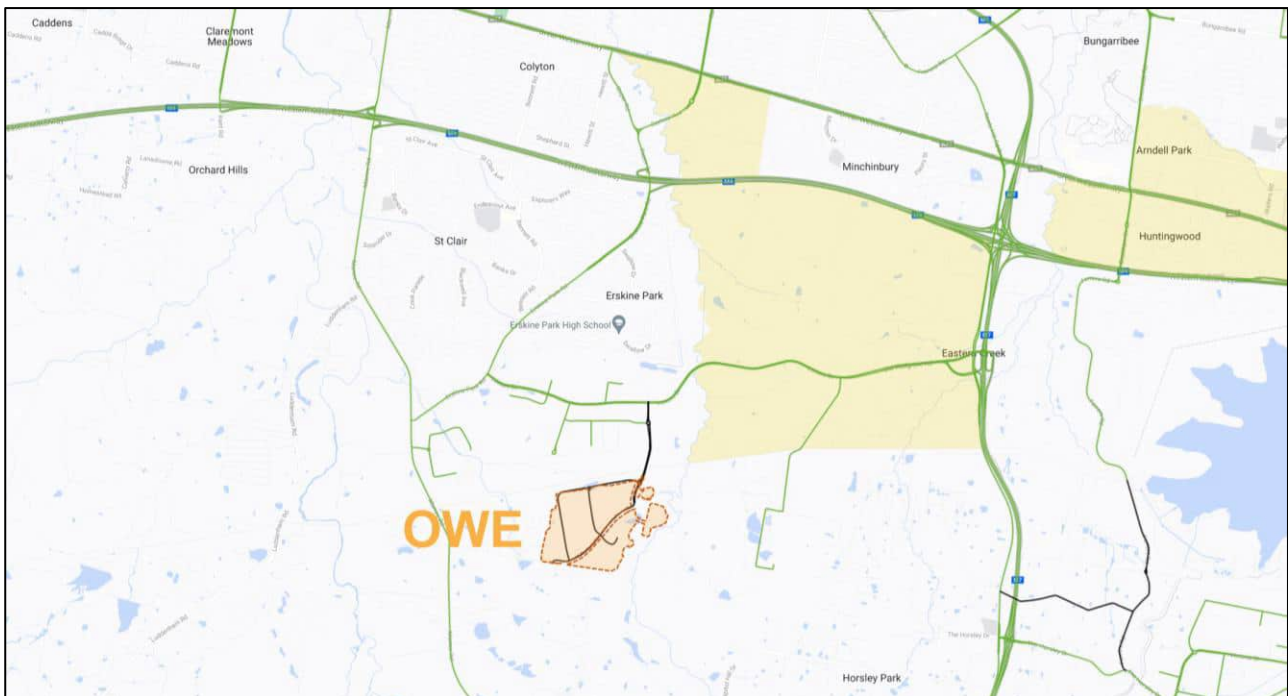


Figure 9: Approved B-double Routes

Up-to-date details regarding approved B-double routes can be obtained from the TfNSW web portal (<https://roads-waterways.transport.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html>).

4.3 Site Access

Details regarding access to individual Lots are provided within the site-specific OTMPs, prepared separately.

4.4 TransGrid Easement

The TransGrid easement shall remain clear at all times, unless otherwise agreed by TransGrid. In this regard, any access driveway crossing the easement shall be subject to No Stopping restrictions along the length of the TransGrid easement.

This requirement shall be emphasised in the sub-precinct OTMP requirements in relation to Stage 5 where most relevant.

4.5 Temporary or Unplanned Works

Construction works, and associated traffic management measures are not covered by this plan.

Notwithstanding, any traffic and pedestrian control in relation to temporary or unplanned works shall be designed in accordance with AS1742 and/or the TfNSW Traffic Control at Work Sites manual (ver. 6), as appropriate.

Where practicable, work areas and temporary pedestrian paths (if applicable) should be physically separated from vehicle movements by way of traffic cones, bollards and/or temporary pedestrian fencing.

4.6 Dangerous Goods

A Transport Emergency Response Plan (TERP) is required prior to transport of any Dangerous Goods. It is expected that such plans will be prepared by the Tenant involved in the transport of Dangerous Goods to/from the individual businesses within the Estate. Accordingly, transport of Dangerous Goods is not covered by this OTMP.

It is expected that any TERP would, as a minimum, be in accordance with the 2012 Emergency Response Guidebook or HB76: 2010 Dangerous Goods – Initial Emergency Response Guide.

5 Driver Code of Conduct

Parties in the supply chain under the Heavy Vehicle National Law (HVNL) are responsible to ensure breaches of road transport laws do not occur. Duty holders need to make sure that their actions or inactions do not contribute to or encourage breaches of the HVNL.

Drivers of Goodman Tenanted facilities operating on Estate Roads shall adhere to safe driving policies and adhere to the following Driver Code of Conduct (the Code).

5.1 Objectives of the Code

- To minimise the impact of the development on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise during night-time hours;
- Ensure truck drivers use specified routes; and
- Manage/control pedestrian movements.

5.2 Code of Conduct

The code of conduct requires that all drivers of Goodman Tenanted facilities must:

- Demonstrate safe driving and road safety activities.
- Comply with all traffic and road legislation.
- Adhere to site signage and instructions.
- Only enter and exit the site via the allocated entry and exit points.

Drivers of Goodman Tenanted facilities undertaking any of the following will be in a breach of conduct, result in administrative action and potential removal from Estate:

- Reckless or dangerous driving causing injury or death.
- Driving whilst disqualified or not correctly licensed.
- Drinking or being under the influence of drugs while driving
- Failing to stop after an incident.
- Loss of demerit points leading to suspension of licence.
- Any actions that warrant the suspension of a licence
- Exceeding the speed limit in place on any permanent or temporary roads

The above activities shall be enforced by licence checks, random drug and alcohol testing by each tenant's management team, and review of any community / enforcement feedback.

5.3 Management Team Responsibilities

Management (operator / manager / scheduler) is responsible to take all steps necessary to ensure drivers of Goodman Tenanted facilities are as safe as possible and will not require staff to drive under conditions that are unsafe.

Management is to achieve this by undertaking the following:

- Ensuring all work related vehicles are well maintained and that the equipment enhances driver, operator and passenger safety by way of:
 - Daily prestart inspections for all vehicles and associated equipment.
 - All vehicles must be fitted with reverse alarms.
 - Ensure all operators on-site have a current verification of competency (VOC) for their current driver's licence of the appropriate class.
 - Ensure maintenance requirements are met.
- Identify driver training needs and arranging appropriate training or re-training. This may include operator assessment as part of all inductions.
- Encouraging Safe Driving behaviour by:
 - Ensure rosters and schedules do not require drivers to exceed driving hours regulations or speed limits;
 - Keep records of drivers' activities, including work and rest times;
 - Ensure Drivers do not work while impaired by fatigue or drive in breach of their work or rest options;
 - Ensuring any Tenant is informed if their staff become unlicensed.
 - Not covering or re-imbursing staff speeding or other infringement notices.
 - Ensuring Legal use of mobile phones in vehicles while driving only and that illegal use is not undertaken.
- Encouraging better fuel efficiency by:
 - Use of other transport modes or remote conferencing, whenever practical.
 - Providing training on, and circulating information about, travel planning and efficient driving habits.

5.4 Driver Responsibilities

All drivers of Goodman Tenanted facilities accessing the site must:

- Be responsible and accountable for their actions when operating a company vehicle or driving for the purposes of work.
- Be cognisant of the noise and emissions requirements imposed within the OEMP, and in a broader sense, the NSW/ Australian Road Rules.
- Display the highest level of professional conduct when driving a vehicle at work.
- Ensure they have a current Australian State or Territory issued driver licence for the class of vehicle they are driving, and this licence is to be carried.
- Immediately notify their supervisor or manager if their drivers' licence has been suspended, cancelled, or has had limitations applied.
- Comply with all traffic and road legislation at all times.
- Assess hazards while driving and demonstrate appropriate care.

- Regularly check the oil, tyre pressures, radiator and battery levels of company vehicles they regularly used.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Not drive outside of the approved heavy vehicle routes. All drivers must obey weight, length and height restrictions imposed by the National Heavy Vehicle Regulator, and other Government agencies. Heavy Vehicles shall adhere to the routes outlined in Section 5.2.2.
- Be aware that at no time may a tracked vehicle be permitted or required on a paved road.
- Never drive under the influence of alcohol or drugs, including prescription and over the counter medication if they cause drowsiness –to do so will merit disciplinary measures.
- Wear a safety seat belt at all times when in the vehicle.
- Avoid distraction when driving –the driver will adjust car stereos/mirrors etc. before setting off or pull over safely to do so.
- Report any near-hits, crashes and scrapes to their manager, including those that do not result in injury.
- Report infringements to a manager at the earliest opportunity.
- Report vehicle defects to a manager prior to the next vehicle use.
- Adhere to the authorised site access and egress routes.
- Follow speed limits as imposed within the estate.
- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Ensure all loads are safely covered and / or restrained, as necessary.
- Ensure no dirt or debris from the vehicles is tracked on to the public road network.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which the driver knows, or thinks, may present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have a valid Container Wright Declaration if they are to move freight containers.

5.5 Crash or incident Procedure

In the event of a crash or other incident whilst driving:

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
 - Details of the other vehicles and registration numbers
 - Names and addresses of the other vehicle drivers.
 - Names and addresses of witnesses.
 - Insurers details
- Give the following information to the involved parties:

- Name, address and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
 - If there is a disagreement over the cause of the crash.
 - If there are injuries.
 - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.

6 Parking Management

6.1 On-site Car Parking

In accordance with the condition B13, individual sites shall provide on-site car parking in accordance with the following rates (unless specific approval for reduced rates is provided by a subsequent development consent).

TABLE 6 CONCEPT PLAN CAR PARKING RATES

Land Use	Minimum Car Parking Rate
Warehouse / Distribution	1 space per 300m ²
Office	1 space per 40m ²
Accessible	2 spaces per 100 spaces provided

On-site parking provisions is a matter for individual site-specific OTMPs.

6.2 On-street Parking

There are various parking restrictions within the Estate for on-street parking.

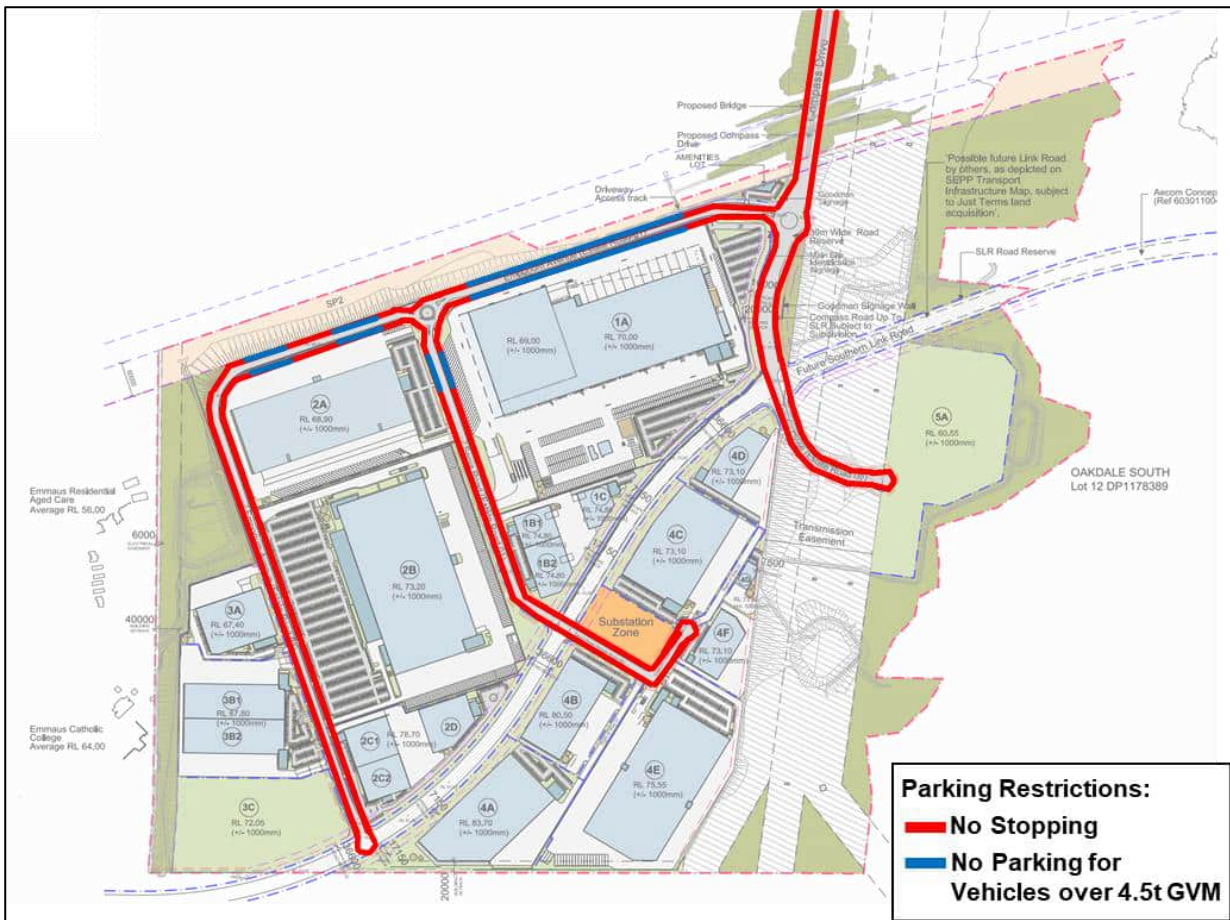


Figure 10: Parking Restrictions Within OWE

Drivers will ensure that trailers are parked within their designated areas and will not park trailers within circulation roadways and access roads (incl. emergency vehicle access roads). Management of respective lots shall remain the responsibility of the respective property's owner to ensure that no vehicles associated with business operations are parked on-street.

Management of respective lots will remain the responsibility of the respective property's owner to ensure that no vehicle associated with business operations are parked on street.

7 Plan Administration

7.1 Plan Maintenance

This Plan shall be subject to ongoing review and will be updated as necessary in response to monitoring activities, changing requirements or in response to any documented WHS issues. In particular, a review of this Plan may be required where a new business occupies a tenancy and has different operational requirements to that envisaged under this Plan (refer to Section 2.3). Where a change of businesses does not alter the underlying characteristics of the operation, no change to this plan would be required.

As a minimum, ongoing review of the OTMP shall occur annually. All and any reviews undertaken should be documented, however key considerations regarding the review of the OTMP shall be:

- Annual surveys of the Estate access points to review traffic generation.
- Quarterly condition review in relation to dirt on public roadways for the first 2 years of operation. Following that, review can occur annually as part of the ongoing review cycle.
- Regular checks undertaken to ensure all loads are entering and leaving site covered.
- A dilapidation report is expected to be undertaken periodically to assess the condition of the road and note whether there has been any reduction in quality of the road. This report shall be forwarded to Council for appropriate action, where deemed necessary.

7.2 Monitoring Requirements

To ensure the effectiveness of this OTMP, various monitoring requirements have been established and expected to form part of the monitoring plan required to be included as part of the overarching OEMP.

A comprehensive contingency plan shall be established and included in the overarching OEMP. In relation to transport and parking, the following measures are to be included in that overarching plan.

TABLE 7 CONTINGENCY PLAN

Risk		Condition Green	Condition Amber	Condition Red
Operational Movements	Trigger	Visual monitoring of all traffic movements within OWE does not detect unsafe movement of traffic and risk to persons and property	Monitoring of all traffic movements within OWE detects unsafe movement of traffic and risk to persons and property	Monitoring of all traffic movements within OWE identifies several unsafe movements of traffic and risk to persons and property
	Response	Visual monitoring to continue daily as part of an ongoing process.	<ul style="list-style-type: none"> Review needed to address persistent unsafe movements. Modification of traffic controls to self-enforce appropriate vehicle manoeuvres within the site. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Direct cessation of unsafe movements.
	Trigger	Access roads within OWE have been inspected and noted that roads are clear, and conditions support a safe environment for all road users	Roads within OWE have been inspected and noted that vehicles are parked in unsafe areas, or other road / intersection congestion has been identified during peak periods	Roads within OWE have been inspected and noted that road and intersection congestion has been identified during most periods of the day
	Response	No action required.	<ul style="list-style-type: none"> Clear any impediments to access roads. Review OTMP and update where necessary. Provide additional training. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Report unsafe road conditions to Council for attention.
	Trigger	Following periods of adverse weather conditions (e.g., a significant heavy rain event), roads have been inspected prior to heavy vehicle traffic use and no issues found	Roads have been inspected following adverse weather conditions and minor issues found (small pot holes, dirt / debris, or pooling water)	Roads have been inspected following adverse weather conditions and major issues found (failed road integrity, large diameter pot holes, fallen light poles or trees)
	Response	No further action required until next adverse weather event.	<ul style="list-style-type: none"> Any impediments to access roads will be cleared. Road maintenance teams shall repair any pot holes and remove excess water when expected traffic volumes are lowest. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Install a detour around any unsafe obstacle to ensure safety for all motorists and/or pedestrians.

	Trigger	Observation of traffic control measures reveal no clear issues.	Observation of traffic control measures reveal minor issues regarding incorrect placement of signage, damaged or missing signage.	Observed traffic control measure are ineffective and creative major safety issues.
	Response	This traffic control inspection shall be completed every week for the first 2 months of operations and fortnightly thereafter for the first 6 months. Review shall continue monthly thereafter.	<ul style="list-style-type: none"> Rectify/ adjust traffic control measures to improve visibility or effectiveness. Review needed for additional or modified traffic control measures. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Install a detour around any unsafe obstacle to ensure safety for all motorists and/or pedestrians.
	Trigger	Operational traffic volume is in accordance with permissible and programmed volume constraints	Operational traffic volumes are within 90% of the permissible volume constraints	Operational traffic volumes exceed permissible volume constraints
	Response	This operational traffic volume review shall be completed monthly for the first 6 months of operation and bi-annually thereafter.	Review and investigate operational activities, and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> Undertake additional surveys of the Estate to review generation in more detail. Review OTMP and update where necessary. Provide additional training to tenants. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Temporary halting of activities and resuming when conditions have improved. Surveys of each tenancy shall be required to allow enforcement of site-specific thresholds.
Queueing	Trigger	No queuing identified	Queueing identified within the Estate	Queueing identified on the public road
	Response	No response required. Continue monitoring program	Review the delivery schedules prepared by the tenant. <ul style="list-style-type: none"> Drivers be provided with additional training and an extra copy of the Driver Code of Conduct. Provision of additional training to the tenants should be provided to ensure the most appropriate schedule can be created. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> Approved traffic thresholds to be enforced for each sub-tenancy. Review OTMP and update where necessary.

Incidents	Trigger	No incidents observed or reported	Near miss or minor incident occurred within the carriageway of OWE which did not require medical attention (such as tripping on raised footpath)	Major incident occurred within the carriageway of OWE which did not require medical attention (such as being hit by a truck while exiting a Site)
	Response	No action required at this stage, however continual reinforcement to all tenants to report all incidents shall continue.	Near miss to be reported to the appropriate Incident to be reported to Site Manager and Estate Coordinator, for immediate remedy.	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> • Temporary halting of activities and resuming when incident has been remedied. • Incident to be reported to Site Manager and Estate Coordinator. • Review OTMP and update where necessary.
Noise	Trigger	Operational noise volume is in accordance with permissible and programmed volume constraints	Operational noise volumes are within 90% of the permissible volume constraints	Operational traffic volumes exceed permissible volume constraints
	Response	No action. Continue ongoing monitoring activities.	Review and investigate noisy operational activities, and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> • Undertake additional noise surveys to review cause in more detail. • Review OTMP (and other sub-plans) and update where necessary. • Provide additional training to tenants to provide information on lowering noise emissions. 	Condition Amber responses, plus the following additional responses; <ul style="list-style-type: none"> • Surveys of each tenancy shall be required to allow enforcement of site-specific thresholds. • Review OTMP and update where necessary. • Provide additional training to tenants to provide information on lowering noise emissions.

7.3 Key Responsibilities

7.3.1 Management

Management of each respective business unit on-site shall ensure:

- All staff are provided with sufficient training to undertake the required tasks. This includes responsibility for measures to ensure that all staff and visitors are familiar with the Estate wide OTMP and will comply with their own site specific OTMP's.
- That all drivers of Goodman Tenanted facilities will not, in any manner, be knowingly overloaded.
- Operational noise levels remain nominal. In the event that noise is exceeded, then the tenant should undertake all feasible and reasonable mitigation and management measures to ensure noise levels are within acceptable levels. If noise levels cannot be kept below applicable limits, then a different operation method or equipment must be utilised.
- Drivers of Goodman Tenanted facilities 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.
- Drivers of Goodman Tenanted facilities must be wholly within site before being required to stop, as well as loading and unloading materials.
- Loading areas and turning areas within site are expected to be kept clear at all times.
- All vehicles must enter and exit the Site in a forward direction.
- Management must not, by their actions or requirements, force or coerce employees or drivers to break the law.

7.3.2 Council

Council shall commence proceedings for the approval and gazettal of Compass Drive for inclusion within the NHVR approved heavy vehicle network. The commencement of this process shall be underway prior to opening of the Estate.

Following the dedication of Estate roads to Council, it shall be the responsibility of Council to ensure the road environment is maintained to an acceptable standard. This includes (but not limited to) the maintenance of pot holes, lighting, and signage and line marking.

Appendix F:

Salinity Management Plan



Our Ref: PSM1541-125L

18 November 2015

Goodman Property Services (Aust) Pty Ltd
Level 17, 60 Castlereagh Street
SYDNEY NSW 2000

ATTENTION: KYM DRACOPOULOS
kym.dracopoulos@goodman.com

Dear Kym

RE: OAKDALE WEST PRECINCT – SALINITY MANAGEMENT PLAN

1 INTRODUCTION

This letter presents a Salinity Management Plan (SMP) prepared by Pells Sullivan Meynink (PSM) for Oakdale West Precinct. This was prepared to accompany our salinity investigation in accordance with our proposal (ref. PSM1541-116L Rev1 dated 9 October 2015).

The aim of the SMP is to provide controls for the potential impacts of the proposed development on site salinity and has been prepared in accordance with WSROC Salinity Code of Practice (2004) salinity management guidelines.

2 DOCUMENTS RELIED UPON

In preparing the SMP, we have taken into consideration:

1. The results of the salinity assessment completed by PSM and presented in our letter (Ref. PSM 1541-125L).
2. Details of the proposed developments as presented in the “*Oakdale West Optimised Masterplan Cut/Fill Plan*” by AT&L (ref. SKC051 15-272 issue P1 dated 2 June 2015).
3. WSROC Salinity Code of Practice (2004) salinity management guidelines.

3 OBJECTIVE OF SMP

The objective of this SMP 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.

4 SALINITY ASSESSMENT

The PSM salinity assessment noted that:

1. The soils present on site are sodic to highly sodic.
2. The soils present on site are non-saline to slightly saline.

5 RECOMMENDATIONS

5.1 Development components

This SMP addresses the components of the proposed development at both the construction stage and for the permanent works. Recommendations regarding the following development components are provided in the following sections:

1. Earthworks
2. Gardens and landscaped areas
3. Roads, footpaths and hardstand areas
4. Surface water, stormwater and drainage
5. Detention basins
6. Durability of concrete structures in contact with the ground
7. Masonry structures
8. Groundwater management.

5.2 Earthworks

We understand that the development will be sympathetic to the site topography and the environment and thus aim to minimise the cut and fill. The design and construction of the earthworks should consider the following recommendations:

1. Vegetation cover should be established and maintained on permanent batters as soon as practical upon completion to control erosion.
2. The final surface of all areas of the development should be graded to prevent the ponding of surface water.
3. Subsoil drainage should be considered for areas where the designer considers accumulation of groundwater may occur. We do not consider that any significant such areas are likely at this site.
4. Erosion control of temporary batters, stockpiles and disturbed areas should be planned prior to undertaking the earthworks and implemented during the earthworks. Consideration should be given to:
 - a. Grading and sealing partially completed surfaces.
 - b. Installation of clearly visible fencing and traffic control measures to prevent unnecessary trafficking of areas and ensuing site disturbance.
 - c. Establishing set vehicular access points and roads.
 - d. Protecting stockpiles (temporary vegetation or mulching) where these are to be left in place for long durations.
5. Sediment control shall be implemented by means of sediment traps and silt fencing where considered necessary.
6. Where for landscaping purposes or erosion control the designer requires gypsum or lime stabilisation, these should be planned to be undertaken as part of the initial earthworks.

5.3 Gardens and landscaped areas

The proposed development will result in the majority of the site comprising roads, footpaths, and hardstand areas. Garden and landscaped areas are likely to be of limited extent. The design and construction of the gardens and landscaped areas should consider the following recommendations:

1. Where possible areas of established vegetation, particularly large trees, should be retained.
2. Selection of plant species should consider the soil conditions, including moderate salinity, relatively poor fertility and clayey low permeability soil profiles. Promotion of successful revegetation is likely to require use of nutrient rich topsoil. Saline topsoils should not be imported to site.

3. Recharge of groundwater and potential for water logging should be minimised by:
 - a. Adopting plant species with minimal watering requirements.
 - b. Adopting 'waterwise' gardening principles.
 - c. Minimising use of potable water in landscaped areas.
 - d. Properly designed and implemented irrigation systems.
 - e. Establishment of perennial species and deep rooted trees.

5.4 Roads, footpaths and hardstand areas

As stated, the proposed development will result in the majority of the site comprising roads, footpaths, and hardstand areas. The design and construction of roads, footpaths and hardstand areas should consider the following recommendations:

1. 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 (e.g. pavement joints).
2. Connections between the 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.
3. Services that are to be located below the roads, footpath and hardstand surfaces should be installed, where practical, at the time of construction.

5.5 Surface water, stormwater and drainage

Surface water, stormwater and drainage design should aim at restricting infiltration into the ground resulting in groundwater recharge. The design and construction of surface water, stormwater and drainage measures should thus consider the following recommendations:

1. Disturbance of natural drainage patterns should be reduced. Where these are disturbed or altered appropriate artificial drainage should be installed.
2. Stormwater and surface water should be managed to restrict infiltration.
3. Temporary water retaining structures used during construction should be managed to restrict infiltration.
4. Stormwater and surface water infrastructure should be designed and constructed to minimise the likelihood of leakage.
5. Guttering and down pipes should be connected and maintained.
6. Surface water runoff should be directed around all exposed surfaces, temporary stockpiles and landscaped areas.

5.6 Detention basins

Detention basins should be designed such that recharge into the groundwater system is controlled. On this basis, the design of temporary and permanent on site detention will need to consider the requirement to line the basin with an impermeable liner (clay layer or synthetic liner) or simply vegetate the exposed base.

In assessing the above requirement the design will need to consider the proposed basin location, the subsurface conditions at the basin, the proximity of the basin to other structures, the proposed storage volume and storage depth and the likely duration of water storage.

In saline environments reducing the water infiltration into the soil and groundwater recharge is considered desirable. On this site, the majority of the site is to be developed with roads and paved areas thus significantly reducing surface water infiltration. The amount of infiltration that can be tolerated at the detention basins will need to be assessed in terms of the overall water balance on site.

Where ponds intended to be permanently full are proposed, such as recreational or aesthetic ponds or fountains, it is recommended that the base of the permanent pond be lined with an impermeable liner. The liner to be adopted (clay or synthetic) shall be a matter of design.

5.7 Durability of concrete structures in contact with the ground

In designing structural concrete elements in contact with the ground the design should consider the results of the salinity, sulphate, chloride and pH testing on the soil and groundwater and the durability requirements in AS2159:2009 and AS3600:2009.

Both these standards provide guidance on minimum concrete grade/strength and minimum cover requirements.

Based on the results of the salinity assessments it is recommended that:

1. The design of structural concrete members in contact with the ground (excluding piles) adopt an A2 exposure classification as defined in AS3600:2009.
2. The design of concrete cast in situ piles adopt a mild classification as defined in AS2159:2009.

5.8 Masonry structures

Having given consideration to the very low to moderate soil salinity on site, the relatively deep water table, and the low permeability soils present on site it is considered that the design and construction of masonry structures including damp proof courses, moisture barriers and selection of brick and construction materials should be undertaken in accordance with the relevant building industry standard. We do not expect special attention to salinity will be required.

5.9 Groundwater management

The intention of groundwater maintenance at this site is to reduce the likelihood of recharge of the groundwater resulting in rising of the groundwater table to near the ground surface.

The very low to moderate soil salinity on site, the relatively deep water table, and the low permeability soils combine to reduce the likelihood of a rising groundwater table. Further, the development involves a very significant reduction in infiltration over the site.

Furthermore, the recommendations in Section 5.3 to 5.6 regarding gardens and landscaped areas, roads, footpaths and hardstand areas, surface water, stormwater and drainage and detention basins are aimed at reducing the potential for groundwater recharge.

In addition to these recommendations, use of infiltration pits to disperse surface water should be avoided.

5.10 Importation of soil

It may be required to import topsoil or other soil onto site. Materials to be imported to site should be assessed for suitability for the intended use. Saline or contaminated soils should not be imported to site.

6 SIGN OFF

We recommend the following:

The designer and contractor responsible for construction of the various development components be required to sign-off their design and the as built, certifying that:

“The works have been designed/constructed having given appropriate consideration to the recommendations in the SMP (Ref. PSM1541-125L dated xxx)”.

The designer and contractors should contact PSM during the works if they have any queries with regards to the requirements in the SMP or if conditions significantly differ from those described in this SMP.

Please do not hesitate to contact the undersigned if you have any queries.

For and on behalf of
PELLS SULLIVAN MEYNINK



CHRISTOPHER FERNANDEZ
Geotechnical Engineer



GARRY MOSTYN
Chief Engineer

Appendix G:

Waste Management Plan

OAKDALE WEST ESTATE

Waste Management Plan
Lot 1A

Prepared for:

Goodman Property Services (Aust) Pty Ltd
The Hayesbery
1-11 Hayes Road
Rosebery NSW 2018

SLR Ref: 610.15612-R02
Version No: -v7.0
September 2022



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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Aust) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.15612-R02-v7.0	26 September 2022	Celine El-Khoury	Andrew Quinn	Andrew Quinn
610.15612-R02-v6.1	26 September 2022	Celine El-Khoury	Andrew Quinn	Andrew Quinn
610.15612-R02-v6.0	7 September 2022	Celine El-Khoury	Andrew Quinn	Andrew Quinn
610.15612-R02-v5.1	5 September 2022	Celine El-Khoury	Andrew Quinn	Andrew Quinn

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APPENDICES

Appendix A Architectural Drawings

1 Introduction

1.1 Background

SLR Consulting Australia Pty Ltd (SLR Consulting) was commissioned by Goodman Property Services (Aust) Pty Ltd (the Client) to prepare a waste management plan (WMP) for the construction and operation of Lot 1A, a warehouse and distribution facility, at the Oakdale West Estate, Horsley Park (the Development).

The Development was approved under a previous development application (DA) submission in accordance with the Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD 15_7348) application. This waste management plan supports a modification (MOD) application to the NSW Department of Planning and Environment (DPE).

SLR previously prepared the waste management plan for the DA submission (610.15612-R02-v5.0, June 2020). This plan is updated for inclusion in the Operational Environment Management Plan (OEMP).

Further details on the Development are provided in Section 2. The following WMP has been prepared based on architectural drawings provided by the Client (Refer Appendix A).

The relevant conditions of the SEARs for SSD 7348 MOD 10 are addressed in this report as shown in Table 1.

Table 1 SSD 7348 MOD 10 Conditions for Waste Management

SSD 7348 MOD 10 Conditions	Relevant Sections in this WMP
An updated description of the quantities and classification of waste streams to be generated during construction and operation.	Sections 5.2, 5.3 Sections 6.3, 6.4
Details of proposed waste storage, handling, transport and disposal.	Sections 5.6, 5.8 Section 6.5
Details of the measures that would be implemented to ensure the modification is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.	Section 3 Section 5 Section 6

1.2 Scope

This WMP applies to the construction and operational phases of the Development.

- See Section 5 for the Construction WMP.
- See Section 6 for the Operational WMP.

1.3 Objective

The principal objective of this WMP is to identify all potential wastes likely to be generated at the development site during construction and operational phases of the Development, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with the SEARs and guided by Penrith City Council's (Council) requirements.

The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste production and maximisation of resource recovery.

- To ensure the appropriate management of contaminated and hazardous waste.
- To identify procedures and chain of custody records for waste management.
- To assist in ensuring that any environmental impacts during the operational life of the Development comply with Council's development consent conditions and other relevant regulatory authorities.

1.4 Review of WMP

This WMP should be reviewed and updated:

- to remain consistent with waste and/or landfill regulations and guidelines
- should changes be made to site waste and recycling management, or
- to take advantage of new technologies, innovations and methodologies for waste or recycling management.

Changes made to the WMP, as well as the reasons for the changes made, should be documented by the site operator as part of the review process. Copies of the WMP should be retained by the site operator.

2 Project Description

The Client is developing Lot 1A in Oakdale West Estate at Erskine Park for the purposes of a warehouse and distribution facility. The site is Lot 11 in DP 1178389. The Oakdale West site is a precinct in the wider Oakdale Estate development and forms part of a progressive development designed to make Oakdale a regional distribution park of warehouses, distribution centres and freight logistics facilities.

2.1 Overview of Proposed Development

A WMP was developed for this Development in 2016 and updated in June 2020. This WMP is an updated version of the 2020 plan for the OEMP.

The Oakdale West site is a 154 ha site located in the Oakdale Estate, a 421 ha area of land in the Western Sydney Employment Area. The size of the site remains unchanged since the previous WMP was prepared. Oakdale West Estate is the third of four stages of the broader Oakdale Estate under the management of Goodman Limited.

Oakdale West remains a greenfield site previously used for stock grazing. The surrounding areas are primarily rural in nature, but, the area to the north is becoming more industrial. Land uses in the surrounding area include:

- Rural, including grazing and market gardens, and rural residential to the south-east, south and west.
- Sydney Water Pipeline and industrial land to the north, including industrial zones at Eastern Creek to the north and Erskine Park to the north-west.
- To the west, land uses include a number of sensitive uses such as an aged care facility (Catholic Health Care) and three schools named Mamre Anglican School, Emmanuel Catholic College and Trinity Primary School. Other land uses include recreational and sporting facilities.

2.1.1 Overview of proposed construction work

The development of Lot 1A is anticipated to include the following tasks:

- Staged bulk earthworks

- Stage trunk infrastructure
- Landscaping and public domain works and
- Construction of a warehouse and distribution facilities.

2.1.2 Overview of proposed operations

Lot 1A contains one warehouse with adjoining offices. Information on Lot 1A is based on drawings in the Consolidated Consent. Lot 1A is expected to consist of the following:

- A high bay warehouse and low bay warehouse
- An adjoining office and dock office
- A gatehouse and weighbridges
- Hardstands areas
- Trailer workshop
- Energy facility and
- Small vehicle and bicycle parking areas.

The final plan for Lot 1A is shown in Figure 1.

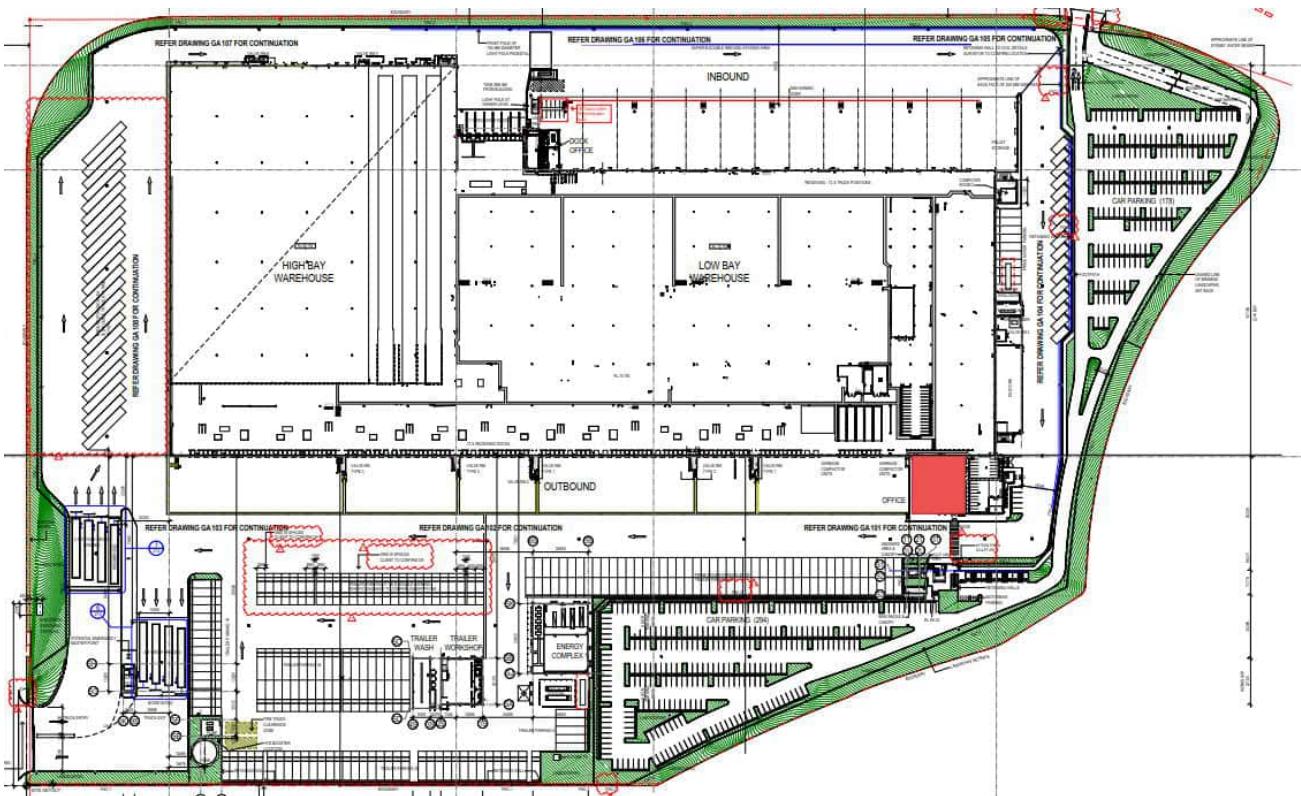


Figure 1 Warehouse Lot 1A

The areas for Lot 1A are shown in Table 2. The building areas are based on areas shown in the Consolidated Consent.

Table 2 Building Areas for Lot 1A

Lot 1A	Area (m ²)
Warehouse	68,160
Office	2,646
Mezzanine	36,331
Outbuildings	4,004
Hardstand Area	84,509
Carparking	16,425
Total	212,075

3 Better Practice Waste Management and Recycling

3.1 Waste Management Hierarchy

This WMP has been prepared in line with the waste management hierarchy (Figure 2), which summarises the objectives of the Waste Avoidance and Resource Recovery Act 2001.

The waste management hierarchy comprises the following principles, from most to least preferable:

- Waste avoidance, prevention or reduction of waste generation. Achievable through better design and purchasing choices.
- Waste reuse, reuse without substantially changing the form of the waste.
- Waste recycling, treatment of waste that is no longer usable in its current form to produce new products.
- Energy recovery, processing of residual waste materials to recover energy.
- Waste treatment, reduce potential environmental, health and safety risks.
- Waste disposal, in a manner that causes the least harm to the natural environment.



Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

Figure 2 Waste management hierarchy

3.2 Benefits of Adopting Better Practice

Adopting better practice principles in waste minimisation offers significant benefits for organisations, stakeholders and the wider community. Benefits from better practice waste minimisation include:

- Improved reputation of an organisation due to social and environmental responsibility.
- Lowered consumption of non-renewable resources.
- Reduced environmental impact, for example, pollution, from materials manufacturing and waste treatment.
- Reduced expenses from lower waste disposal.
- Providing opportunities for additional revenue streams through beneficial reuse.

4 Waste Legislation and Guidance

The legislation and guidance outlined in Table 3 below should be referred to during the demolition, construction and operational phases of the Development.

Table 3 Legislation and guidance

Legislation and Guidance	Objectives
Council legislation and guidelines	
Secretary Environmental Assessment Requirements (SEARs)	SEARs provide the additional requirements that must be completed when a critical state significant infrastructure project is submitted in a DA in NSW. The objective of SEARs submissions is to achieve better environmental outcomes by focusing on environmentally sensitive areas and areas of the greatest community concern. The provisions of the SEARs must be met for DA approval including the provision of a construction and operational waste management plan. This Development was previously approved under the SEARs for SSD 15_7348.
Penrith Local Environmental Plan (LEP) 2010 ¹	The Penrith LEP came into force for the entire Penrith local government area on 25 February 2015 and provides the legal framework of the Penrith Development Control Plan, including land use and development permitted in a set zone. The LEP also contains provisions to conserve local heritage and protect sensitive land.
Penrith Development Control Plan (Penrith DCP) 2014 ²	The Penrith DCP came into effect on 17 April 2015 and supports provision of the LEP planning controls by providing detailed planning and design guidelines. The DCP has been prepared in accordance with the Waste Avoidance and Resource Recovery Act 2001. One of the objectives of the DCP is to assist in reducing Penrith's ecological footprint by encouraging the diversion of waste from landfill. This WMP specifically addresses Part C5 – Waste Management of the DCP.

¹ <https://legislation.nsw.gov.au/#/view/EPI/2010/540>

² <https://www.penrithcity.nsw.gov.au/building-development/planning-zoning/planning-controls/development-control-plans>

Legislation and Guidance	Objectives
Waste Strategy 2017-2026, Penrith City Council	<p>Council's waste strategy sets out the waste management targets for the Penrith local government area including working towards reduced waste generation and increased landfill diversion.</p> <p>The strategy was prepared in consultation with the community and informed by waste audit results. The strategy defines the actions required to reach the targets, including actions for waste diversion from landfill, resource recovery, technology innovation, community education and resource recovery facilities.</p>
State and National legislation and guidelines	
Building Code of Australia (BCA) and relevant Australian Standards	The BCA has the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Council of Australian Governments National Construction Code 2016	The National Construction Code 2016 sets the minimum requirements for the design, construction and performance of buildings throughout Australia.
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	These better practice guidelines present information on waste minimisation and resource recovery as well as information on commonly used waste management provisions. The guidelines also provide benchmarks for assessing waste production rates in Australia.
NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027	Replacing the NSW Waste Avoidance and Resource Recovery Strategy (2014-21), the NSW Waste and Sustainable Materials Strategy 2041 focuses on the transition of NSW to a circular economy. The strategy focuses on minimising what is thrown away, and to use and reuse resources more efficiently, making them as productive as possible. The strategy identifies the need to identify infrastructure needs, the mandating of separation of some organic waste streams, and incentivising biogas generation from waste materials.
NSW EPA Resource Recovery Orders and Resource Recovery Exemptions	<p>The NSW EPA has issued a number of resource recovery orders and resource recovery exemptions under the POEO (Waste) Regulation 2014 for a range of wastes that may be recovered for beneficial re-use. These wastes typically include those from demolition and construction works, as well as operational wastes such as food waste.</p> <ul style="list-style-type: none"> • Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use. • Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.
NSW EPA's Waste Classification Guidelines 2014	The NSW EPA Waste Classification Guidelines assists waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act 1997 and is associated regulations.
Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority (NSW EPA) to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of wastes generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.

Legislation and Guidance	Objectives
Waste Avoidance and Resource Recovery Act 2001	<p>The Waste Avoidance and Resource Recovery Act 2001 aims to promote waste avoidance and resource recovery and repeals the Waste Minimisation and Management Act 1995. Specific objectives of the Waste Avoidance and Resource Recovery Act 2001 include:</p> <ul style="list-style-type: none"> • encouraging efficient use of resources • minimising the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste • ensuring industry and the community share responsibility in reducing/dealing with waste, and • efficiently funding of waste/resource management planning, programs and service delivery. <p>As of 2016, the addition to the Act of Part 5 defines the legislative framework for the "Return and Earn Container Deposit Scheme" whereby selected beverage containers can be returned to State Government authorities for a monetary refund.</p>

5 Construction Waste Management

Construction stages of developments have the greatest potential for waste minimisation.

Key construction activities will include construction of warehouse buildings, offices and other associated buildings and infrastructure as specified in Section 2.1.2.

5.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPE (2021) indicates that construction and demolition waste recovery rates in 2018-2019 were 77%.

To comply with Penrith Council's commitments to waste management, the construction and excavation procedures should endeavour reduce the volume of demolition, construction and fit out waste, including excavation, going to landfill by 76%.

It is anticipated that the waste minimisation measures in the following sections will assist the Project to meet these targets. Waste reporting and audits can be used to determine the actual percentage of wastes that are being, or have been, recycled during the demolition and site preparation stage of the Project.

5.2 Waste Streams and Classifications

The Development is likely to generate the following broad waste streams:

- excavation material
- construction wastes
- plant maintenance waste
- packaging waste
- green waste from site clearing activities and
- work compound waste from on-site employees.

A summary of likely waste types generated from site preparation and construction activities, along with their waste classifications and proposed management methods, is provided in Table 4.

For further information on how to classify a waste type refer to the NSW EPA (2014) Waste Classification Guidelines³. Further information on managing site preparation and construction wastes is available from the NSW EPA website⁴.

Table 4 Potential waste types, classifications and management methods

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Construction		
Sediment fencing, geotextile materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal to landfill
Concrete	General solid waste (non-putrescible)	Off-site recycling for filling, levelling or road base
Bricks and pavers	General solid waste (non-putrescible)	Off-site recycling Cleaned for reuse, rendered over or crushed for landscaping or driveway use
Gyprock or plasterboard	General solid waste (non-putrescible)	Off-site recycling or returned to supplier
Sand or soil	General solid waste (non-putrescible)	Off-site recycling
Metals such as fittings, appliances and bulk electrical cabling	General solid waste (non-putrescible)	Off-site recycling
Conduits and pipes	General solid waste (non-putrescible)	Off-site recycling
Timber	General solid waste (non-putrescible)	Off-site recycling Treated: reused for formwork, bridging, blocking, propping or second hand supplier Untreated: reused for floorboards, fencing, furniture, mulched second hand supplier
Doors, Windows, Fittings	General solid waste (non-putrescible)	Off-site recycling at second hand supplier
Insulation material	General solid waste (non-putrescible)	Off-site disposal
Glass	General solid waste (non-putrescible)	Off-site recycling glazing or aggregate for concrete production
Asbestos	Hazardous waste	Off-site disposal
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal contact FluoroCycle for more information ⁵
Paint	Hazardous waste	Off-site recycling, Paintback collection ⁶ or disposal
Synthetic Rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling reprocessed and used in safety devices and speed humps
Carpet	General solid waste (non-putrescible)	Off-site recycling or disposal reused for landscaping, insulation or equestrian uses
Plant Maintenance		

³ Available online at <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

⁴ <http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition>

⁵ <http://www.fluorocycle.org.au/> or <http://www.environment.gov.au/settlements/waste/lamp-mercury.html>

⁶ <https://www.paintback.com.au/>

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups	Hazardous waste: Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid waste (non-putrescible): Containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal
Oil filters	Hazardous waste	Off-site recycling
Batteries	Hazardous waste	Off-site recycling Contact the Australian Battery Recycling Initiative ⁷ for more information
Packaging		
Packaging materials, including wood, plastic, including stretch wrap or LLPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling. Contact Business Recycling for more information ⁸
Work Compound and Associated Offices		
Food Waste	General solid (putrescible) waste	Compost on site. Alternatively dispose to landfill with general garbage
Recyclable beverage containers, including glass and plastic bottles, aluminium cans and steel cans	General solid waste (non-putrescible)	Co-mingled recycling at off-site licensed facility or at a local NSW container deposit scheme 'Return and Earn' off-site licensed facility ⁹
Clean paper and cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at off-site licensed facility
General domestic waste generated by workers including soiled paper and cardboard, food stuffs and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill

5.3 Waste Generation Rates

In the absence of readily available construction waste generation rates from Council, SLR has adopted the 'Factory' and 'Office' waste generation rates from Appendix A of The Hills Development Control Plan 2012 for estimating the type and quantities of waste generated from construction of the Development.

We have also referred to Light Duty Asphalt Pavements - Design, Specification and Construction 2002 published by the Australian Asphalt Pavement Association in calculating car park construction waste quantities.

⁷ <http://www.batteryrecycling.org.au/home>

⁸ <http://businessrecycling.com.au/search/>

⁹ <http://returnandearn.org.au/>

Table 5 Waste generation rates applied to the Development's construction

Use	Floor Area (m ²)	Waste types and quantities (m ³)								
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other	Asphalt	Granular Base
Factory	1,000	0.25	2.10	1.65	0.45	4.80	0.60	0.50		
Office	1,000	5.1	18.8	8.5	8.6	8.8	2.75	5		
Carpark	1,000		0.225						0.3	1.25
Hardstand	1,000		2.1			4.8	0.6	0.5		

These waste generation rates are used to estimate the waste generated from the construction of the Development. These estimates are provided in Table 6.

5.4 Waste Quantities

Using the estimated areas of the offices, warehouses and other infrastructure mentioned in Section 2.1.2 and the construction waste generation rates shown in Table 5, SLR has calculated the estimated waste quantities for the Development components. These are shown below in Table 6.

Table 6 Estimated quantities of construction waste

Development Component	GFA (m ²)	Waste types and quantities (m ³)								
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other	Asphalt	Granular Base
Warehouse	68,160	17	143	112	31	327	41	34	-	-
Mezzanine	2,646	13	50	22	23	23	7.3	13	-	-
Office	36,331	9.1	76	60	16	174	22	18	-	-
Outbuildings	4,004	20	75	34	34	35	11	20	-	-
Hardstand	84,509	-	177	-	-	406	51	42	-	-
Light Duty	16,425	-	3.7	-	-	-	-	-	4.9	21
Totals	212,075	60	526	229	104	966	132	128	5	21

Excavated spoil, if any, is to be classified by an appropriately experienced environmental consultant and separated into contaminated materials, if any, uncontaminated fill or ENM. Refer to Section 5.8 for management of stockpiles. Uncontaminated fill or ENM should be retained on site and managed appropriately for beneficial re-use for filling earthworks. As a last resort, remaining uncontaminated fill of ENM can be sent off-site to a facility lawfully able to accept it.

For contaminated material management, refer Section 5.8.4 of this WMP.

SLR recommends that a demolition quantities survey be conducted by a qualified professional on the existing site should further information on types and quantities of demolition waste be required.

5.5 Waste Avoidance Measures

In accordance with the Penrith DCP and better practice waste management, the Building Designer should:

- Select materials with low embodied energy properties that suit the Project, such as:
 - prefabricated components and recycled materials, such as recycled steel and glass-wool insulation

- concrete with slag and fly ash content and
- fittings and furnishings that incorporate recycled materials and have been certified as sustainable or environmentally friendly by a recognised third-party certification scheme.
- Reduce the use of PVC.
- Choose construction materials with a longer lifespan and/or high potential for re-use.
- Use low formaldehyde wood products, post-consumer reused timber, Forest Stewardship Council-certified timber, wood plastic composite or recycled plastic timber substitute.
- Select pre-finished materials and prefabricated frames, trusses and cladding.
- Design for the use of modular components and standard material sizes.
- Integrate existing trees and shrubs in the landscape plan and design for the new Development.
- Design for deconstruction, rather than demolition.

The Building Contractor should:

- Estimate required quantities of materials to reduce over-purchasing and excess materials.
- Include approximate quantities of materials in a purchasing policy to ensure correct quantities are purchased.
- Arrange delivery of materials 'as needed' to mitigate material degradation by weathering or moisture damage.
- Arrange to return excess materials to suppliers where possible and practicable.
- Reduce packaging waste by:
 - returning packaging to suppliers where possible and practicable
 - purchasing in bulk
 - requesting cardboard or metal drums rather than plastics
 - requesting metal straps rather than shrink wrap and
 - using returnable packaging such as pallets and reels.
- Reduce unnecessary excavation and site disturbance.
- Ensure subcontractors are informed of and implement site waste management procedures.

5.6 Re-use, Recycling and Disposal

The Building Contractor should:

- Sort and segregate demolition and site preparation wastes to ensure efficient recycling of wastes.
- Store wastes on site appropriately to prevent cross-contamination and/or mixing of different waste types.
- Re-use formwork where appropriate.
- Recycle or dispose of waste oil in an appropriate manner.
- Retain roofing material cut-offs for re-use.
- Retain used crates for storage purposes unless damaged.

- Recycle cardboard, glass and metal wastes.
- Return packaging to suppliers where possible and practicable.
- Recycle or dispose of solid waste timber, brick, concrete, asphalt and rock, where such waste cannot be re-used on site, to an appropriately licenced construction and demolition waste recycling facility or an appropriately licenced landfill.
- Dispose of all asbestos and/or hazardous wastes in accordance with SafeWork NSW and NSW EPA requirements.
- Deliver batteries and florescent lights to drop off-site recycling facility.

5.7 Site Specific Procedures

The Construction Site Manager will also consider implementation of the following procedures:

- all used crates will be stored for reuse unless damaged
- all cardboard waste is to be recycled via on-site recycling compactors which shall be collected by an appropriate recycling contractor
- all glass and metals that can be economically recycled will be
- colour bond roof material off cuts to be stockpiled on site for reuse or recycling
- waste concrete will be disposed of at a crushing or recycling plant where practicable
- waste bricks will be crushed and utilised on site. All half or damaged bricks will be stored on site to be removed for offsite crushing and recycling
- excavation material will be reused on-site where possible with all excess reused on other projects or sold
- All other solid waste including bitumen paving, tile, timber, rock and soil will be taken to an appropriate materials recycling facility and/or landfill site and processed in an approved manner and
- All garbage will be disposed of using a Council-approved system.

5.8 Waste Storage and Servicing

5.8.1 Waste Separation

Waste materials produced from site preparation activities are to be separated and stored separately on site, with clear signage identifying the purpose of different storage areas. It is anticipated that the site will have available space provided by the Building Contractor for separate storage in separate skip bins and/or appropriately managed stockpiles, of the following waste types:

- Bricks, concrete and scrap metal
- Metal and steel, if any, in a condition suitable for recycling at metal recycling facilities
- Timber
- Glass
- Hardstand rubble
- Excavation spoil, uncontaminated, if present

- Contaminated excavation spoil, if present
- Hazardous waste, if present
- Paper and cardboard
- Recyclable general waste and
- Non-recyclable general waste.

If there is insufficient space onsite for full segregation of waste types, the Building Contractor is to consult with waste or recycling collection facilities to confirm which waste types may be comingled before removal from the site.

Areas designated for waste storage should:

- allow unimpeded access by site personnel and waste disposal contractors
- not be located on footpaths, public reserves and street gutters without Council approval
- employ adequate environmental management controls, for example, consideration of slope, drainage and proximity relative to waterways, stormwater outlets and vegetation, to prevent off-site migration of waste materials and/or contamination from the waste and
- not present hazards to human health or the environment.

In accordance with the Penrith DCP, the WMP should identify the areas that will be used on site for the storage of materials, including areas designated for the separation of recyclables and disposal. It is recommended that the drawings for the Project are revised to indicate stockpiling and waste storage areas, with consideration of the recommendations noted above. This WMP should be revised to reflect these drawing updates.

5.8.2 Servicing and Record Keeping

The frequency of the waste removal will, in most cases, be dictated by the volume of material being deposited into each of the dedicated skips. Skips and bins are to be checked on a daily basis by the Site Manager to ensure that no overflow occurs. If skips and bins are reaching capacity, removal and replacement should be organised within 24 hours. All skips and bins leaving the site will be covered with a suitable tarpaulin to ensure that the spillage of wastes from the skips whilst in transit is eliminated.

The Building Contractor should:

- arrange for suitable waste collection contractors to remove the site preparation waste from site
- ensure waste bins are not filled beyond recommended filling levels
- ensure that all bins and loads of waste materials leaving site are covered
- maintain waste disposal documentation detailing, at a minimum:
 - Descriptions and estimated amounts of all waste materials removed from site.
 - Details of the waste and recycling collection contractor(s) and facilities receiving the waste or recyclables.
 - Records of waste and recycling collection vehicle movements, for example date and time of loads removed, licence plate of collection vehicles, disposal dockets from receiving facility.
 - Waste classification documentation for materials disposed to off-site recycling or landfill facilities.

- ensure lawful waste disposal records are available for inspection by regulatory authorities such as Council, SafeWork NSW or NSW EPA if required and
- remove waste during hours approved by Council.

In accordance with the Penrith DCP Section C5, Part 5.3.1, Council officers may ask to be presented with weighbridge dockets and invoices for waste disposal and recycling services for the Project. Weighbridge dockets and invoices are to be kept on site at all times.

5.8.3 Space and Amenity

Waste storage areas will be accessible, present at all times and allow sufficient space for storage and servicing requirements. The storage areas will also be flexible in order to cater for change of use throughout the Project.

Where space is restricted, dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting. The positions of the designated waste holding areas on site will change according to building works and the progression of the Development, but must consider visual amenity, OH&S and accessibility in their selection.

All waste placed in stockpile areas and/or skips for disposal or recycling shall be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Appropriate siting of waste stockpile locations will take into account slope and drainage factors to avoid contamination of stormwater drains during rain events and allow manoeuvring space to facilitate ease of collection and safety.

Waste containers are to be kept clean and in a good state of repair.

5.8.4 Contaminated or Hazardous Waste Management

During the site preparation and construction phases, SLR recommends that a qualified and certified contractor is engaged to remove all contaminated or hazardous materials, for example, asbestos, and dispose of all contaminated or hazardous waste at a site lawfully able to accept it. All asbestos and other hazardous waste must be handled lawfully.

The Penrith DCP specifies that hazardous waste management at the site may require a licence from the EPA and approval from Council. If hazardous waste is identified for removal, Council and NSW EPA are to be consulted before undertaking any hazardous waste removal.

5.9 Signage

Standard signage is to be posted in all waste storage and collection areas. All waste containers should be labelled correctly and clearly to identify stored materials.

Signs approved by the NSW EPA for labelling of waste materials are available online¹⁰ and should be used where applicable. A selection of signs prepared by NSW EPA is provided in Figure 3.

¹⁰ NSW EPA approved waste materials signage <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>



Figure 3 Examples of NSW EPA labels for waste skips and bins

5.10 Training and Awareness

All staff, including sub-contractors and labourers, employed during the demolition and construction phases of the Development must undergo induction training regarding waste management for the Development.

Induction training is to cover, as a minimum, an outline of the WMP including:

- legal obligations
- emergency response procedures on site
- waste storage locations and separation of waste
- litter management in transit and on site
- the implications of poor waste management practices
- correct use of general purpose spill kit and
- responsibility and reporting, including identification of personnel responsible for waste management and individual responsibilities.

It is the responsibility of the Contractor or site operator to notify Council of the appointment of waste removal, transport or disposal contractors.

5.11 Monitoring and Reporting

The following measures are to be undertaken to improve demolition and construction waste management and to provide reliable waste generation figures:

1. Conduct waste audits of current projects where feasible.
2. Note waste generated and disposal methods.
3. Look at past waste disposal receipts.
4. Record this information to track waste avoidance, reuse and recycling performance and to help in waste estimations for future waste management plans.

Records of quantities of waste re-used, recycled or disposed to landfill are to be maintained by the Building Contractor. The Penrith DCP Section C5, Part 5.3.1 states that evidence, such as weighbridge dockets or receipts, verifying recycling and/or disposal must be available for presentation to Council if requested.

Daily visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the Site Manager on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.

Waste audits are to be carried out by the Building Contractor to gauge the effectiveness and efficiency of waste segregation procedures and recycling and reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken and signage re-examined.

5.12 Roles and Responsibilities

All personnel have a responsibility for their own environmental performance and compliance with all legislation. It will be the responsibility of the Building Contractor to implement the WMP, and an employee and subcontractor responsibility to ensure that they comply with the WMP at all times.

Where possible, an Environmental Management Representative should be appointed for the Development. Suggested roles and responsibilities are provided in Table 7.

Table 7 Construction waste management responsibility allocation

Responsible Person	General Tasks
Construction Site Manager	Ensuring plant and equipment are well maintained.
	Ordering only the required amounts of materials.
	Keeping materials segregated to maximise reuse and recycling.
	Ultimately responsible for routinely checking waste sorting and storage areas for cleanliness, hygiene and safety issues, contaminated waste materials, and also ensuring that all monitoring and audit results are well documented and carried out as specified in the WMP.
Environmental Management Representative or equivalent role	Approaching and establishing the local commercial reuse of materials where reuse on-site is not practical.
	Establishing separate skips and recycling bins for effective waste segregation and recycling purposes.
	Ensuring staff and contractors are aware of site requirements.
	Provision of training of the requirements of the WMP and specific waste management strategies adopted for the Development.
	Contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements.
	Approval of off-site waste disposal locations and checking licensing requirements.
	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes.
	Monitoring, inspection and reporting requirements.

Daily visual inspections of waste storage areas may be delegated to other on-site staff. All subcontractors will be responsible for ensuring that their work complies with the WMP through the project induction and contract engagement process.

6 Operational waste management

6.1 Introduction

Ineffective waste management for commercial premises can lead to environmental pollution, offensive odours, litter, attraction of vermin and occupational safety and hygiene problems.

Effective waste management reduces costs through the reuse of resources and minimisation of fees associated with removal, transportation and disposal of waste, and improves environmental outcomes locally, regionally and globally and is achieved through the implementation of a WMP for the operational life of the Development.

6.2 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPE (2021) indicates that the commercial and industrial waste recovery rate in 2019 was 53%.

It is anticipated that the waste minimisation measures in the following sections will assist the Development to meet the state's targets. Waste reporting and audits can be used to determine the actual percentage of waste that are being, or have been, recycled during operation.

6.3 Waste Streams and Classifications

The operation of the Project will generate the following broad waste streams:

- domestic wastes generated by employees, including food wastes
- bulk packaging wastes, including polystyrene, plastic wrapping and cardboard boxes
- office waste
- garden organic waste from landscaped areas
- bulky waste items such as furniture and e-waste and
- stores, plant and general maintenance wastes.

From the site inception meeting, SLR understands the Development's waste will primarily be general wastes, paper and cardboard and plastic wrapping.

Potential operational waste types, their associated waste classifications, and management methods are provided in Table 8. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines.¹¹ Suggestions for recycling drop off locations and contacts can be found on <https://businessrecycling.com.au/> for each waste type.

¹¹ Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

Table 8 Potential operational waste types, classifications and management methods

Waste Types	NSW EPA Classification	Proposed Management Method
General Operations		
Clean paper	General solid (non-putrescible) waste	Paper recycling at off-site licensed facility
Cardboard and bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at off-site licensed facility
Recyclable containers including glass and plastic bottles, aluminium cans and steel cans	General solid (non-putrescible) waste	Recycling at off-site licensed facility Some containers that attract a deposit under the NSW Government's Return and Earn Scheme, may be separated by staff or contactors for redemption.
Food waste	General solid (putrescible) waste	Donate, if suitable alternatively compost on or off-site or dispose to landfill with general garbage
Batteries	Hazardous waste	Off-site recycling. Contact the Australian Battery Recycling Initiative for more information
Mobile Phones	Hazardous waste	Off-site recycling. Contact Mobile Muster for more information
Clothes	General solid (non-putrescible) waste	Off-site reuse or recycling such as donations to St Vincent's De Paul
Bulky polystyrene	General solid (non-putrescible) waste	Off-site recycling or disposal at landfill
Furniture	General solid (non-putrescible) waste	Off-site reuse or disposal to landfill
E-waste	Hazardous waste	Off-site recycling
Printer toners and ink cartridges	Hazardous waste	Storage on-site, off-site recycling free disposal box or bags and pickup service exists for printer toners and ink cartridges
General garbage, including non-recyclable plastics	General solid (putrescible and non-putrescible) waste	Disposal at landfill
Maintenance		
Glass other than containers	General solid (non-putrescible) waste	Off-site recycling
Light bulbs and fluorescent tubes	Hazardous waste	Storage on-site off-site recycling or disposal. Contact FluoroCycle ¹² or Lamp Recyclers ¹³ for more information
Empty oil, paint drums and chemical containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Storage on-site or transported to off-site recycling or disposal at licensed facility. Transport to comply with the transport of Dangerous Goods Code.
Garden organics including lawn mowing, tree branches, hedge cuttings, leaves	General solid (non-putrescible) waste	Reuse on-site or contractor removal for recycling at licenced facility

¹² <https://www.fluorocycle.org.au/>

¹³ <https://www.lamprecyclers.com.au/>

6.4 Waste Generation Rates

SLR has used the 'Offices' and 'Warehouse' waste generation rates from Penrith Council's Industrial, Commercial and Mixed-Use Waste Management Guidelines for estimating the type and quantities of waste generated from the operational activities of the Development. The operational waste generation rates used are shown below in Table 9.

Table 9 Guideline Waste Generation Rates

Use	General Waste Generation (L/100 m ² /day)	Recycling Generation (L/100 m ² /day)
Warehouse	10	10
Offices	10	10

Using the waste generation rates in Table 9 above, the approximate weekly waste quantities for the Development have been calculated. The operational waste quantities were additionally calculated based on the assumptions below:

- The floor areas on the drawings in the Consolidated Consent and
- A week comprising seven days of operation.

The approximate weekly waste quantities have been calculated and are shown in Table 10.

Table 10 Estimated Ongoing Waste and Recycling Quantities

Use	GFA (m ²)	General Waste (L/week)	Recycling (L/week)
Warehouse	68,160	47,740	47,740
Office	2,646	1,855	1,855
Mezzanine	36,331	25,445	25,445
Total	107,137	75,040	75,040

Quantities of pallets and plastic and cardboard packaging waste are likely to be included in the recycling stream will include. To minimise packaging waste generated in the recyclables stream, packing waste should be returned to the suppliers where possible. Standard pallets should be returned to their owners and non-standard and broken pallets are to be stockpiled and collected as required by a waste contractor.

If additional collection services are required, such as secure document destruction, these can be organised with a waste contractor which can provide additional bins and take collected waste to an off-site licenced facility.

The Development is anticipated to produce minimal quantities of garden organics. This material will be taken by a landscaping contractor who will dispose of it at a site lawfully able to accept it.

The major waste streams of the heavy vehicle workshop are anticipated to include tyres, air and oil filters, rags, brake pads, metals, engines, batteries and pads. These are not considered to be regularly generated waste streams and include damaged heavy vehicle parts that become unsuitable for reuse by the site's heavy vehicles.

Tyres that cannot be reused are to be stockpiled off-site. The tyres are to be collected from the heavy vehicle workshop by a private waste contractor who will transport them to a licenced recycling facility where they will be stored until they are recycled.

6.5 Waste Storage and Servicing Requirements

6.5.1 Waste and Recycling Procedure and Location

The waste produced by this precinct will be stored in waste compactors. Estimates have been made assuming compactors will have 25 m³ capacity and compact to 3:1. The compactors will be stored externally. Waste is to be taken directly to the compactors. As such, no designated waste storage area will be required.

The Development may choose to have garbage and recycling bins positioned in easily accessible areas throughout the building. Waste and recyclables from each of these will be transferred to the compactors.

The waste and recycling compaction location should also incorporate measures to ensure best practice waste management and compliance with Council requirements, including:

- Screening from public view for visual amenity, noise control and odour control
- Positioning away from public view, where possible
- Flexibility in design to allow future uses, operational changes and tenancy changes
- Positioning and design with the consideration for both the potential traffic hazards caused by the waste collection and the ease of access for tenants and contractors
- Food scraps are to be placed in specialised containment bins
- The construction of additional garbage areas, rooms and equipment are to comply with Building Code of Australia (BCA) requirements and Australian Standards
- All waste areas are to be kept clean and odour and vermin free. It is the responsibility of the Operations Manager or equivalent personnel to check each area for cleanliness, hygiene and health and safety issues.

Sufficient space will be provided for the separation and storage of hazardous wastes on site. These wastes include fluorescent tubes, smoke detectors, e-wastes and other recyclable resources. Sufficient space will also be provided for reuse items such as crates and pallets for occupational safety purposes.

6.5.2 Compactor Operations and Collection

Two compactors will be provided to service the Development's primary waste streams. One compactor will store garbage and one will store cardboard.

The compactors are to be positioned in locations accessible to waste collection vehicles and be serviced directly. When servicing the Development, all vehicles are to service the site in a clockwise circulation.

The locations are shown Figure 4 below.

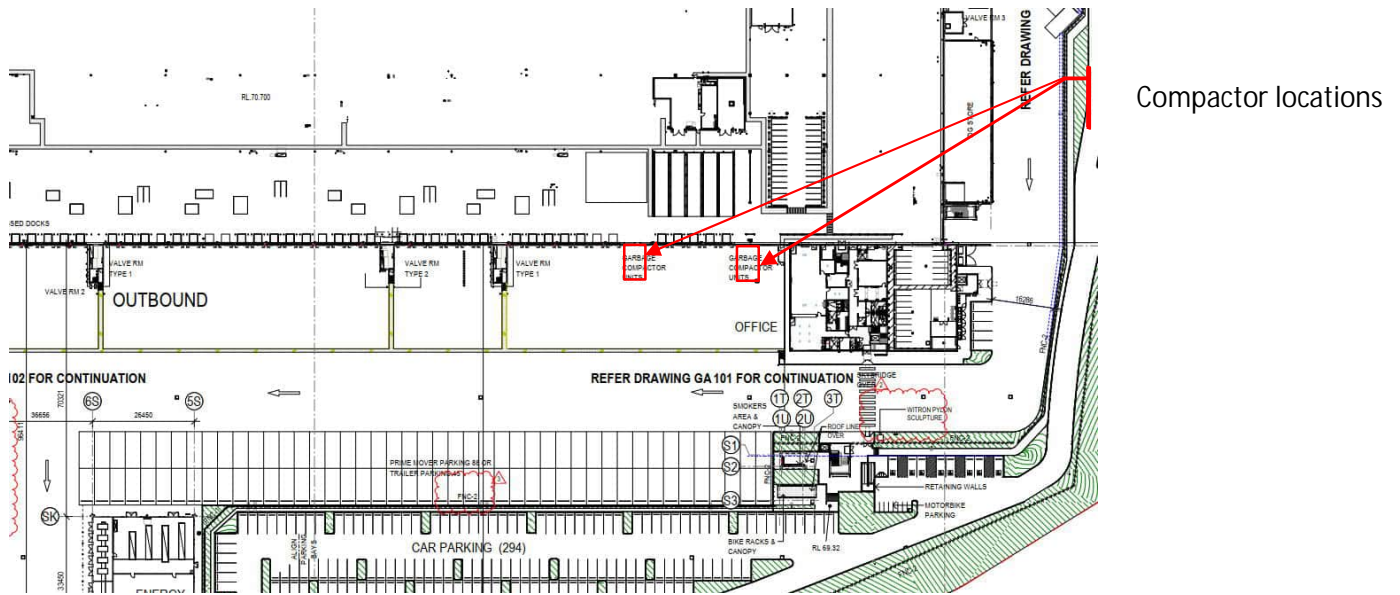


Figure 4 Waste compactor locations

6.5.3 Bulky and Hazardous Waste Management

Sufficient space will be provided in the Development for the storage of large and bulky items. This includes broken pallets, broken storage units, e-waste and other materials that cannot be disposed of in the general or recyclable waste stream.

Space will also be allocated to store reusable items such as crates so that storage in a public place is avoided.

6.6 Waste Avoidance, Reuse and Recycling Measures

Some examples of how the reduction, re-use and recycling of waste can be achieved are listed below.

6.6.1 Waste Avoidance

Waste avoidance measures that could be used at the Development include:

- Participating in take-back services to suppliers to reduce waste further along the supply chain
- Avoiding printing where possible
- Review of packaging design to reduce waste but maintain 'fit for purpose'
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items
- Purchasing consumables in bulk to avoid unnecessary packaging
- Presenting all waste reduction initiatives to staff as part of their induction program and
- Investigating leased office equipment and machinery rather than purchase and disposal.

6.6.2 Reuse

Possible re-use opportunities that could be used at the Development include establishing systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

6.6.3 Recycling

Possible recycling opportunities that could be used at the Development include:

- Collecting and recycling e-waste
- Flatten or bale cardboard to reduce number of bins required
- Paper recycling trays provided in office areas for scrap paper collection and recycling
- Collecting printer toners and ink cartridges in allocated bins for appropriate contractor recycling and
- Development of 'buy recycled' purchasing policy.

6.7 Signage

Signs which clearly identify waste management procedures and provisions to staff and visitors should be distributed around the Development. Key signage considerations are:

- Clear and correct labelling on all waste and recycling bins, indicating the correct type or types of waste that can be placed into a given bin, as shown in Figure 5
- Signposts and directions to location of waste storage areas
- Clear signage in all waste storage areas to instruct users how to correctly separate waste and recycling
- Maintaining a consistent style colour scheme and system for signs throughout the Development and
- Emergency contact information for reporting issues associated with waste or recycling management.

Colour-coded and labelled bin lids are necessary for identifying bins. All signage should conform to the relevant Australian Standard and use labels approved by the NSW EPA¹⁴. The design and use of safety signs for waste rooms and enclosures should comply with Australian Standard AS 1319 Safety Signs for the Occupational Environment and clearly describes the types of materials designated for each bin.



Figure 5 Example of bin labels for operational waste

6.8 Communication strategies

Waste management initiatives and management measures should be clearly communicated to building managers, owners, employees, customers and cleaners. Benefits of providing this communication include:

¹⁴ NSW EPA waste signage and label designs <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>

- improved satisfaction with services
- increased ability and willingness to participate in recycling
- improved amenity and safety
- improved knowledge and awareness through standardisation of services
- increased awareness or achievement of environmental goals and targets
- reduced contamination of recyclables stream
- increased recovery of recyclables and organics material, if implemented and
- greater contribution to targets for waste reduction and resource recovery, the environment and heritage conservation.

To realise the above benefits, the following communication strategies should be considered:

- Use consistent signage and colour coding throughout the Development. Examples of signage are provided in Section 6.7
- Ensure all staff are trained in correct waste separation and management procedures
- Provide directional signage to show location of and routes to waste storage areas
- General waste and co-mingled recycling bins should be clearly labelled and colour-coded to ensure no cross contamination, where applicable
- Employees and cleaners should adhere to the WMP for compliance, in consultation with Management and
- Repair signs and labels promptly to avoid breakdown of communications.

6.9 Monitoring and Reporting

Audit and visual assessment of bins before collection should be undertaken by Management in the first few months of being operational to ensure the waste management system is sufficient for the Development's needs, and also on a half-yearly basis to ensure WMP provisions are being maintained.

Where audits show that recycling is not carried out effectively, additional staff training should be undertaken by Management and signage re-examined.

6.10 Roles and Responsibilities

All contractors that are made with cleaners, tenants and building managers are to clearly explain the Development's waste management system and identify roles and responsibilities.

It should be the responsibility of Management to implement the WMP and a responsibility of the employees and cleaners to ensure that they comply with the WMP at all times. Management should routinely check waste sorting and storage areas for cleanliness, hygiene and safety, and also ensure all monitoring and audit results are well documented and carried out as specified in the WMP. An outline of waste management responsibilities is shown in Table 11.

Table 11 Operational waste management responsibility allocation

Responsible Person	General Tasks
Management	Ensure the WMP is implemented throughout the life of the operation.
	Regularly update the WMP, for example, yearly, to ensure the Plan remains applicable.
	Undertake liaison and management of contracted waste collections.
	Organise internal waste audits on a regular basis.
	Manage any complaints and non-compliances reported through waste audits
	Perform inspections of all waste storage areas and waste management equipment on a regular basis.
	Organise cleaning and maintenance requirements for waste management equipment.
	Monitor bins to ensure no overfilling occurs.
	Ensure effective signage, communication and education is provided to alert visitors, employees and cleaners about the provisions of this WMP and waste management equipment use requirements.
	Monitor and maintain signage to ensure it remains clean, clear and applicable.
	Ensure waste and recycling storage rooms are kept tidy.
	Ensure that regular cleaning and daily transfer of bins is being undertaken by the cleaners
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
Cleaners and Staff	Removal of general waste, recyclables, cardboard waste and hazardous waste from floor areas for transfer to centralised waste and recycling collection rooms on a daily basis or as required.
	Cleaning of all bins and waste and recycling rooms on a weekly basis or as required.
	Compliance with the provisions of this WMP.
Gardening Contractor, as applicable	Removal of all garden organics waste generated during gardening maintenance activities for recycling at an off-site location or reuse as organic mulch on landscaped areas.

APPENDIX A

Architectural Drawings

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Appendix H:

Flora and Fauna Management Plan



Oakdale West Estate Building 1A

Flora and Fauna Management Plan

Prepared for

Goodman Property Services (Aust.) Pty Ltd

Oakdale West Estate Building 1A - Flora and Fauna Management Plan

prepared for

Goodman Property Services (Aust.) Pty Ltd.

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Document control

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Revision	Date	Description	Issued to
0	29/08/2022	DRAFT Flora and Fauna Management Plan	Goodman
1	02/09/2022	Final Flora and Fauna Management Plan	Goodman

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1 Introduction

1.1 Background

Goodman Property Services (Aust) Pty Ltd (Goodman) obtained Development Consent SSD 7348 on 13 September 2019 from the Department of Planning and Environment (DPE) for the Oakdale West 'Concept Proposal' and 'Stage 1 Development'.

The Concept Proposal essentially comprises a 'Master Plan' to guide the staged development of Oakdale West Estate (the Estate) and core development controls that form the basis for design and assessment of future development applications for the site.

Stage 1 Development of the Estate included:

- Estate Works: site preparation, bulk earthworks and retaining walls, catchment level stormwater infrastructure, trunk services connections and utility infrastructure, roads and access infrastructure associated with Stage 1 and subdivision in Stage 1 development works;
- Precinct Development: construction, fit out and use of warehouse buildings within Precinct 1, detailed earthworks, on lot stormwater, services and utility infrastructure;
- Construction of a new regional road known as Compass Drive (formerly the Western North South Link Road connecting to Lenore Drive to provide the primary access to the site; and
- Western boundary landscaping.

The development consent has subsequently been modified ten (10) times, with the most recent approval received on the 17 August 2022. A summary of consent conditions are provided in Appendix A.

Building 1A approval was received under SSD 7348. The development involves the construction of a warehouse, a three-storey ancillary office, external carparking, gatehouse, refuelling area, energy complex, trailer workshop, and on-site truck/trailer parking.

1.2 Objectives

An Estate wide Flora and Fauna Management Plan (FFMP) was prepared and approved by the NSW Minister of Environment's Secretary for the 'Concept Proposal' and Stage 1 works. The Estate wide FFMP has been updated as further stages and modifications to the SSD 7348 have been approved.

The most recent updated FFMP (v.7, écologique, 11/03/2020) addressed the following Estate wide requirements:

- Vegetation and habitat clearing;
- Protection of retained native vegetation;
- Creation of fauna and snake habitat areas;
- Installation of snake deterrent fencing; and
- Dam decommissioning.

This FFMP has been prepared:

- As a sub-plan to the Construction Environmental Management Plan (CEMP) that is specific to the construction of Building 1A (see Figure 1-1); and
- In accordance with the overarching SSD 7348 - Administrative Conditions that require: an obligation to minimise harm to the environment; and compliance with biodiversity management and mitigation measures.

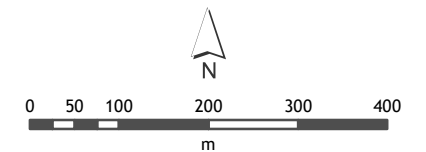


Oakdale West Estate Building 1A

Fig. 1-1. Site Context

Legend

- Oakdale West boundary
- Precincts
- Lot 1A
- BMA areas



2 Existing Environment

2.1 Subject area

Within the context of the estate, Building 1A is located at the northern end of Precinct 1, which is bounded by Compass Drive to the east, Emporium Avenue to the north, Sepia Avenue to the west and Buildings 1B and 1C to the south.

Substantial cut and fill earthworks have been undertaken across the wider estate area in compliance with the wider estate's FFMP v7 (écologique, 2020).

Retained native vegetation within the Estate are located outside of the developable precinct areas. The majority of retained native vegetation is protected in Biodiversity Management Areas (BMAs) with additional patches of native vegetation located in easements that will not be developed.

No native vegetation or fauna habitat features have been retained within the Lot 1A (the subject area).

As shown in Figure 2-1 the subject area is not located proximal to any retained vegetation or BMAs.

2.2 Native vegetation

Four native plant community types (PCTs) occur within the wider Estate, each of which are listed as Threatened Ecological Communities (TECs) under both the NSW *Biodiversity Conservation Act 2016* (BC Act) and Federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

These include:

- PCT 835 Cumberland River-flat Forest
- PCT 849 Cumberland Shale Plains Woodland
- PCT 850 Cumberland Shale Hills Woodland
- PCT 1800 Cumberland Swamp Oak Floodplain Forest

All approved clearing of native vegetation under SSD 7348 has been completed. No further clearing of any native vegetation is permitted without first seeking additional approval.

2.3 Wildlife

The former agricultural land use of the Estate and surrounding environs has enabled a range of native fauna to coexist with previous land use practices. The most commonly observed terrestrial fauna species within the Estate are *Macropus giganteus* (the eastern grey kangaroo), a range of reptile species (mainly snakes with lizards less conspicuous) and a range of bird species (including large raptor species).

Aquatic fauna common to the Estate prior to the removal of four farm dams included *Chelodina longicollis* (the eastern long-necked turtle) and both *Anguilla australis* and *Anguilla reinhardtii* (short and long finned eels respectively).

2.3.1 Eastern grey kangaroo

The installation of non-rural fencing and replacement of open pasture with hard stand has resulted in the removal of habitat for a resident population of the eastern grey kangaroo (kangaroo). The provision of the BMA along with peripheral easement areas continue to provide habitat for the kangaroo species albeit substantially reduced in comparison to the pre-development environment.

Development has also considerably altered their accustomed movement patterns. It is likely to take some time before the resident kangaroo population adapt their movement patterns to the changed environment. While kangaroos are more commonly seen around the periphery of the Estate's developed areas, they may still be observed nearer developed and road areas, particularly at dusk at dawn.

2.3.2 Snakes

The most commonly observed snakes across Oakdale West are:

- *Pseudechis porphyriacus* (red-bellied black snake); and
- *Pseudonaja textilis* (eastern brown snake).

A tiger snake (*Notechis scutatus*) was reportedly seen on a stockpile during construction but was not accurately identified and potentially a banded form of the eastern brown snake.

The BMA to the west of the subject area contains snake refuge habitat, which was installed in response to concerns raised by the adjacent Emmaus Catholic College (due to a high level of snake sightings in and around the college).

In accordance with the Oakdale West FFMP v7 (écologique, 2020) snake refuge habitat (rock piles and large woody debris) and snake deterrent fencing were installed along the Estate's western boundary.

In addition to the above snake deterrent measures and relevant to Building 2C and 2D is the requirement to install vermin control within each building.

Vermin, such as *Rattus rattus* (the black rat) and *Mus musculus* (house mouse) are common snake prey and minimising the occurrence of these introduced species is anticipated to minimise snake populations.

2.3.3 Aquatic fauna

Four farm dams were decommissioned during the earthworks for the Oakdale West development. Native aquatic fauna were rescued and relocated to various pre-determined locations within Ropes Creek to the east of the Estate.

The majority of relocated fauna comprised long-finned eels, with smaller numbers of short-finned eels and long-necked turtles.

Both eel species are highly territorial and migratory and may attempt to return to the locations of the decommissioned dams. Although the pre-development overland drainage has been modified such that it is highly unlikely to encounter either of these species within the subject area.

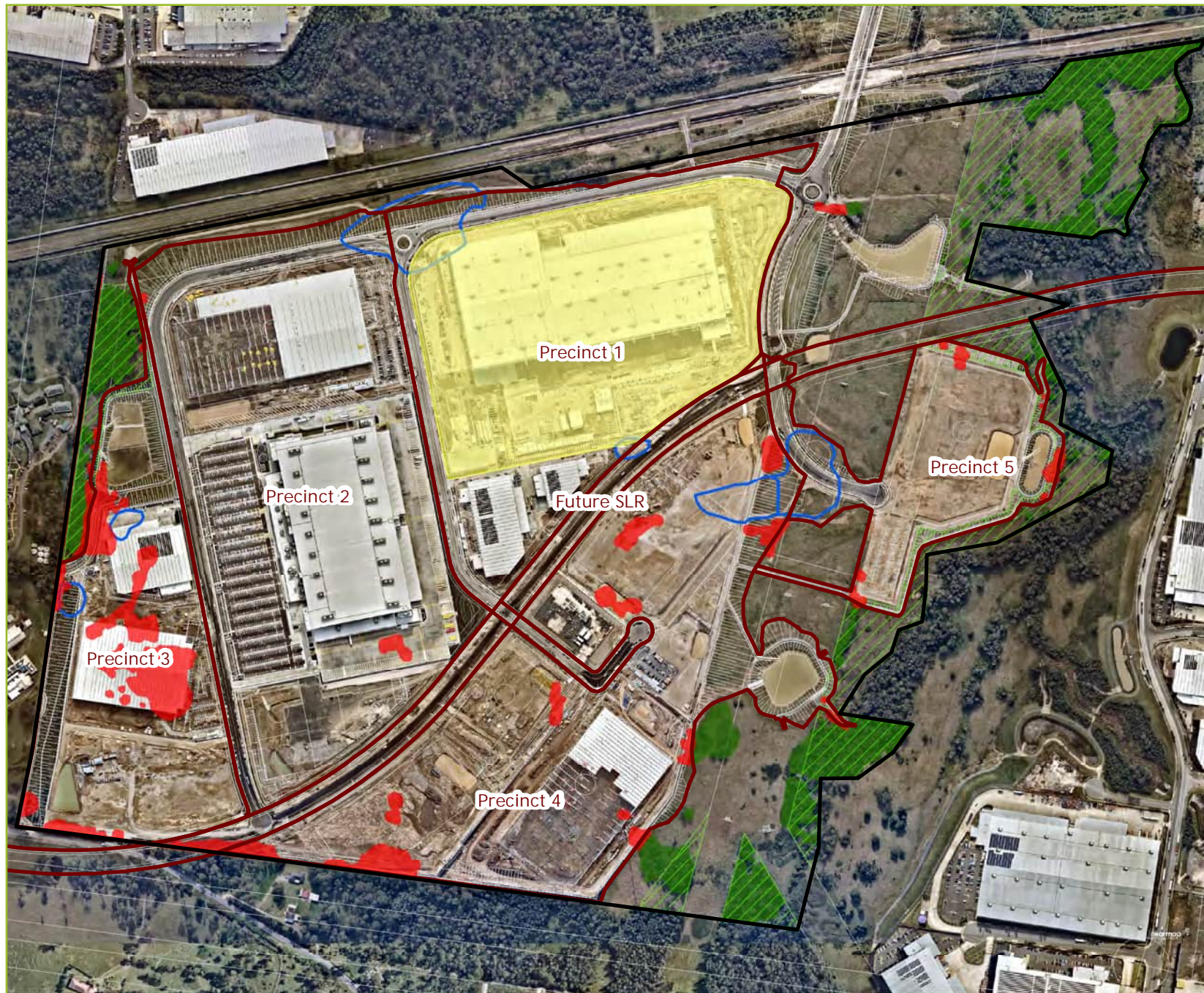
Turtles are also capable of overland dispersal and may attempt to return to the location where dams were decommissioned. This is more realistic as one turtle has already been captured and relocated from the developable and under construction area of the Estate.

Until all construction detention basins are decommissioned and Estate wide detention basins are retrofitted to become bioretention basins, there is a potential for migratory aquatic fauna to be encountered within the Estate.

Figure 2-1 shows the areas of previous farm dams and existing fauna habitat with respect to Lot 1A.

Oakdale West Estate Building 1A

Fig. 2-1. FFMP Context



- Legend
- Oakdale West Estate
 - Precincts
 - Lot 1A
 - Approved vegetation cleared
 - Decommissioned dam
 - BMA areas
 - Vegetation retained

3 Mitigation Measures

While Precinct 1 and the wider Estate have been substantially modified the potential to encounter wildlife must still be considered in accordance with the overarching SSD 7348 - Administrative Conditions that require:

- An obligation to minimise harm to the environment; and
- Compliance with biodiversity management and mitigation measures.

3.1 Potential impacts

3.1.1 Potential direct impacts

Potential direct impacts on native fauna include:

- Vehicle / mobile plant strike resulting in injury or death of terrestrial fauna; and
- Injury or death of fauna that inadvertently become stranded within the construction area.

3.1.2 Potential indirect impacts

Indirect impacts occur when activities relating to the construction or operation of a development affect native vegetation, fauna and fauna habitat beyond the subject site.

Potential indirect impacts relevant to the Buildings 1A works may include the following:

- Transport of weeds into the site and spread into the Estate's landscape areas and BMAs;
- Transport of pathogens/disease into the site and spread into the BMAs;
- Pollution of downstream waterways and aquatic habitat, through accidental spills and leaks;
- Introduction or increase in pest animal populations (such as vermin); and
- Rubbish / litter from the site entering the wider Estate area, through either accident drift or deliberate dumping.

3.2 Mitigation measures

Table 3-1 details mitigation measures that will need to be implemented to ensure consent compliance during construction of Building 1A.

Table 3-1: Flora and fauna management and mitigation measures

ID	Measure/Requirement	Responsibility	Timing
[WILDLIFE PROTECTION]			
FF1	All personnel including contractors are to be made aware of the possibility of encountering fauna, through the site works induction process.	Management / Contractors	Pre-construction
FF2	<p>Vehicle and mobile plant operators shall remain vigilant when entering and exiting the works area, particularly at dusk and dawn. Specifically:</p> <ul style="list-style-type: none"> Should kangaroos be observed transiting across the entrance/exit to the works area, vehicle/mobile plant is to stop until animals have moved to a safe distance to ensure vehicle/mobile plant strike is prevented. All on site personnel shall alert vehicle/mobile plant entering or existing the works area if kangaroo movement is observed (via UHF radio or mobile phone as applicable) All personnel including contractors are to report any injured or near miss incidents with wildlife. 	Management / Contractors	Ongoing throughout construction
FF3	Should unexpected fauna be encountered within the works site, the stop works procedure provided in Section 4 must be followed.	Management / Contractors	Ongoing throughout construction
[AQUATIC ECOSYSTEM PROTECTION]			
FF4	Offsite discharge shall be managed in strict accordance with Erosion & Sediment Control Plans prepared for Lot 2C AND 2D; and	Management / Contractors	Ongoing throughout construction
FF5	<ul style="list-style-type: none"> All vehicles, plant and machinery are to be kept in good condition and regularly maintained to avoid chemical leaks and/or spills. 	Management / Contractors	Ongoing throughout construction
FF6	<ul style="list-style-type: none"> A spill kit should be provided in an easily accessible location in the event that fuel or other contaminant spills occur. 	Management / Contractors	Ongoing throughout construction

ID	Measure/Requirement	Responsibility	Timing
[WEED, PEST SPECIES AND PATHOGEN MANAGEMENT]			
FF7	<p>The following hygiene procedures are to be implemented to avoid the introduction and/or spread of soil borne pathogens and weeds:</p> <ul style="list-style-type: none"> Minimise work during wet/rainy periods; Vehicles, plant and machinery are to be clean and free of soil on arrival to the works area; Truck wash down, rumble grids to be installed and operated to ensure mud, weeds or pathogens are not transported around the region or onto roads; Mud spilt on roads to be immediately removed by a road sweeper. 	Management / Contractors	Ongoing throughout construction
FF8	Future tenants are to install rodent (electronic or sonar) repellents to minimise prey for snakes	Management / Tenants	Post construction
[WASTE MANAGEMENT]			
FF9	<p>Waste management shall ensure the following:</p> <ul style="list-style-type: none"> All waste placed in skips or bins for disposal or recycling will be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site; Lids on skips or bins are to be kept closed at all times; and Employ adequate environmental management controls to prevent off-site migration of waste materials and contamination from the waste. <p>For example, consideration of slope, drainage, proximity relative to waterways, stormwater outlets and vegetation</p>	Management / Contractors / Future tenants	Ongoing throughout construction and operation

4 Stop Works Procedure

All personnel working on the Project will need to be inducted on the potential to encounter wildlife within the wider Estate area but also within the works area. The stop work procedure in the event any fauna unexpectedly occurs is shown in the following flow diagram.

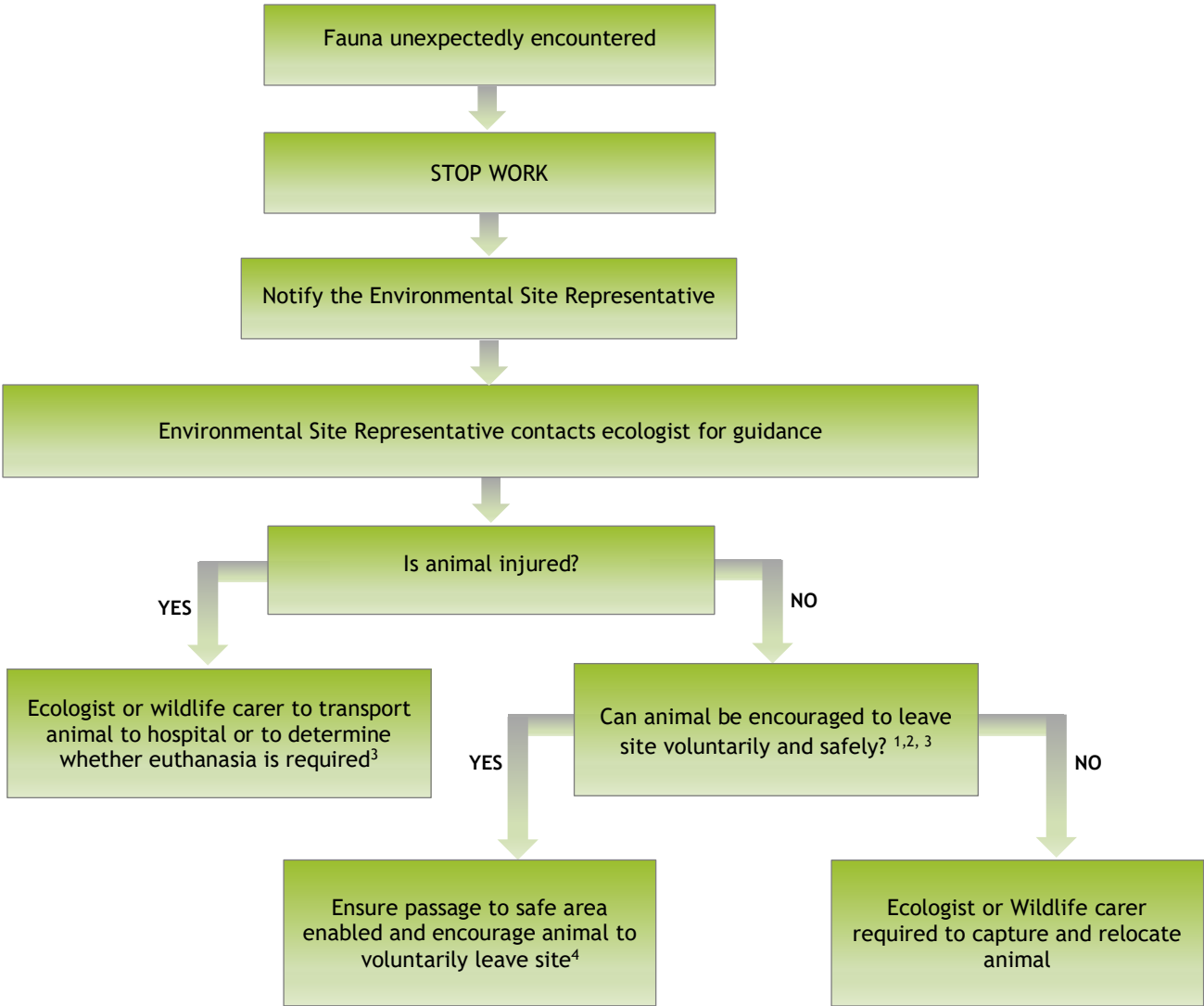


Figure 4-1. Stop work procedure

FOOTNOTES

- ¹ Snakes are to be left alone and not disturbed. A specialist reptile handler should be engaged for capture and relocation if the snake is located within an area that prevents work from continuing.
- ² Nocturnal species (e.g., any small marsupials such as possums) should be left alone until the Project ecologist or wildlife carer is able to capture and relocate animal at dusk.
- ³ Nocturnal and injured animals shall be protected from disturbance (through temporary flagging tape or signage and communication to all personnel that the area is a temporary no go zone). If animal is stranded in direct sunlight some form of shading is to be erected to protect the animal until the Project ecologist or wildlife carer arrives at the site.
- ⁴ Should safe passage be obstructed by fencing or other immovable impedances; Footnote 3 should be implemented.

Appendix A. Consent Conditions

The background of the page features several abstract, wavy lines in shades of green and grey. These lines originate from the left side and curve upwards and to the right, creating a dynamic, organic feel. The lines vary in thickness and color, with some being a vibrant green and others a muted grey.

SSD reference	Consent condition	Status
SSD 7348	D88. The Applicant must prepare a Flora and Fauna Management Plan (FFMP) for Stage 1, to the satisfaction of the Planning Secretary.	Completed compliantly
SSD 7348	D89. Bulk earthworks are not to commence until the FFMP is approved by the Planning Secretary and the most recent approved version of the FFMP is to be implemented for the duration of bulk earthworks and construction.	
SSD 7348	D90. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must retire 172 ecosystem credits to offset the removal of 4.41 hectares of native vegetation on the Site.	Amended in MOD 1
MOD 1	D90. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must retire 173 ecosystem credits to offset the removal of 4.38 hectares of native vegetation on the Site.	Completed compliantly
SSD 7348	D91. The Applicant shall establish a Biodiversity Offset Area on the Site, consistent with the area described in the RTS, in accordance with a Biodiversity Stewardship Agreement with the Biodiversity Conservation Trust. D92. The Applicant must maintain the Biodiversity Offset Area on the Site in accordance with a Biodiversity Management Action Plan approved by the Biodiversity Conservation Trust (BCT).	Deleted in MOD 1
MOD 1	SSD 7348 Conditions D91 and D92 deleted and new Condition D91 inserted as follows: D91. Within 12 months of the date of the approval of MOD 1, or as otherwise agreed with the Planning Secretary, the Applicant must prepare and implement a VMP for the restoration and rehabilitation of 4.2 ha of Riparian Corridor adjacent to Ropes Creek to meet the objectives of the <i>Water Management Act 2000</i> .	Amended in MOD 6
MOD 6	Approval granted to amend the VMP extent as follows: <ul style="list-style-type: none"> Remove locations adjacent to the future SLR (due to future disturbance from its construction) Increase the extent from 4.2 to 4.45 ha Provide a wider riparian zone, which connects to isolated patches of retained vegetation 	Completed compliantly
SSD 7348	D93. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must:	Amended in MOD 5

SSD reference	Consent condition	Status
	Offset 0.42ha of vegetation lost in the Erksine Park Biodiversity Corridor as a result of the WNSLR by carrying out planting within the area shown in the green edging on Figure 9 (Appendix 6 of consent conditions). Plant the areas shown in the green edging on Figure 9 (Appendix 6 of consent conditions) with species similar to those identified for zone 4a, on the south-eastern side of Ropes Creek, in the Biodiversity Management Plan Erskine Park Employment Area (HLA-Envirosciences, 2 May 2006).	
MOD 5	MOD 5 sought to amend the area within which offsetting is take place due to this area no longer being available for this purpose. In consultation with the Planning Ministerial Corporation a new location has been agreed on and a VMP prepared and submitted with MOD 5 that details the amended location and methods in which the now obsolete Condition D93 will be fulfilled. Conditions D94 and D95 remain unchanged.	Completed compliantly
SSD 7348	D94. The Applicant shall monitor and maintain the planting for a period of six months to ensure a minimum 85% planting survival rate. D95. The Applicant must notify the Planning Ministerial Corporation at least one month before the completion of planting to enable the Planning Ministerial Corporation to arrange ongoing maintenance.	
SSD 7348	D96. Prior to construction of Stage 1, the Applicant must implement snake management measures to limit, to the extent practicable, movement of snakes from the Site into the adjacent school and retirement village on the western boundary of the Site. The measures (provision of alternative snake habitat on Site, fencing along the western boundary and installation of snake deterrents) shall be detailed in the CEMP.	
MOD 7	Minor change to building layouts across Precinct 3 and 4, namely Lot 3B, 3C, and 4E, which results in minor amendments to the estate infrastructure including bulk earthworks in both precincts, the removal of an Estate Road in Precinct 4, and inclusion of additional retaining walls in Precinct 3 & 4	Not applicable - no change to FFMPs conditions
MOD 8	Modifications to approved plans for Warehouses 1A, 1B and 1C	
MOD 9	Changes associated with the Modifications to the Concept Plan including the layout of Precinct 2A and the building height of Building 2C to facilitate the Oakdale West Estate Stage 3 Development.	
MOD 10	Modification to update Precinct 1 signage plans, including façade signage.	



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Appendix I:

Vegetation Management Plan

The background of the page features abstract, flowing green lines of varying thicknesses, some in a vibrant lime green and others in a muted sage green, creating a sense of organic movement and growth.

Oakdale West Estate

Vegetation Management Plan

prepared for

Goodman Property
Services (Aust.) Pty Ltd

écologique | environmental consulting

Oakdale West Estate

Vegetation Management Plan

prepared for

Goodman Property Services (Aust.) Pty Ltd

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Document control

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02/10/2019

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Revision Schedule

Rev No	Date	Description	Issued to
1	19/07/2019	Draft VMP for review	Goodman
2	05/08/2019	VMP for MOD 1 submission	Goodman
3	02/10/2019	VMP for MOD 1 submission - amended consent condition numbers	Goodman

Executive Summary

Background

Goodman Property Services (Aust.) Pty Ltd (Goodman) are currently developing the Oakdale West Industrial Estate (Oakdale West) under State Significant Development approval (SSD7348). Consent approved the removal of approximately 4.4 ha of native vegetation.

Consent conditions are based on various assessment and strategy reports lodged and approved under the original SSD7348, which has included:

- Biodiversity Assessment Reports (2017, 2018) prepared under the NSW Framework for Biodiversity Assessment (FBA), which calculated that 172 ecosystem credits would need to be retired to offset native vegetation clearing (consent condition D90).
- Biodiversity Offsetting Strategies (2017, 2018), which specified how Goodman would establish and manage a biodiversity offset area in order to offset the required ecosystem credits as conditioned under consent condition D91 (which required the establishment of a biodiversity conservation area)

However, during the time since the SSD7348 was lodged and assessed, the *Threatened Species Conservation Act 1995* (TSC Act), under which the FBA was based, has been repealed and replaced by the *Biodiversity Conservation Act 2016* (BC Act).

Transitional arrangements provisioned for under the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* (BC Reg.) expired in February 2018. This has resulted in the redundancy of the approved Biodiversity Offset Strategy.

Purpose of VMP

This Vegetation Management Plan (VMP) has been prepared to support a development modification (MOD 1) for Oakdale West. Relevant to the site's biodiversity, the intent of MOD 1 is as follows:

- To overcome the redundancy of the BOS while avoiding lengthy delays associated with reassessment under new legislation.
- Meet the objectives of the *Water Management Act 2000* (WM Act) through the rehabilitation and restoration of a riparian corridor along Ropes Creek, which would otherwise have been restored as part of the proposed biodiversity offset area.

This VMP applies to an area of approximately 4.2 ha which extends along the western side of Ropes Creek as shown in Figure 1-2. The areas of the Ropes Creek corridor are considered commensurate with the proportion of the SSD7348 development footprint that has encroached onto waterfront land.

Site constraints that have been considered in determining the extent of the VMP proposed are shown on Figure 1-1 and outlined below:

- The alignment of the future Southern Link Road (SLR) which traverses the Ropes Creek riparian corridor;
- Feasible management boundaries and access constraints, given that Oakdale South's boundaries extend to the western side of Ropes Creek and conflict with the future development of Oakdale West under SSD7348;
- The alignment of the existing electricity easement, which also precludes restoration works; and
- The proposed preferred alignment of the Western Sydney Freight Line (WSFL), which has been identified by Transport for NSW as requiring a 60m easement along the northern boundary of Oakdale West.

Goodman may choose to establish the remainder of the former biodiversity offsetting area as a Biodiversity Stewardship Site under agreement with the Biodiversity Conservation Trust (BCT). In the interim this area will continue to be protected by way of the following:

- Removal of cattle, replacement of redundant fencing and installation of new fencing
- Habitat placement (large woody debris), which is provisioned for in civil contracts for the development and detailed in the Flora and Fauna Management subplan to the Construction Environmental Management Plan (CEMP)
- Targeted weed control of scheduled weeds in accordance with the Biosecurity Act 2015 and as listed in the Greater Sydney Regional Strategic Weed Management Plan 2017-2022

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Glossary / Abbreviations

Abbreviations	Expanded text
BAR	Biodiversity Assessment Report
BC Act	NSW Biodiversity Conservation Act 2016
BC Reg.	NSW Biodiversity Conservation (Savings and Transitional) Regulation 2017
BCT	NSW Biodiversity Conservation Trust
BOS	Biodiversity Offset Strategy
CEEC	Critically Endangered Ecological Community
CEMP	Construction Environmental Management Plan
DoEE	Australian Department of Environment and Energy
DOI	NSW Department of Industry
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
FM Act	Fisheries Management Act 1994
MNES	Matters of National Environmental Significance
OEH	NSW Office of Environment and Heritage
PCT	Plant community type
RTS	Response to Submissions
SSD	State Significant Development
TSC Act	NSW Threatened Species Conservation Act 1995
VMP	Vegetation Management Plan
WM Act	NSW Water Management Act 2000
WNSLR	Western North South Link Road

1. Introduction

1.1 Overview

Oakdale West Industrial Estate (Oakdale West) is a State Significant Development (SSD7348) being developed by Goodman Property Services (Goodman).

Oakdale West is a staged development for a warehousing and distribution hub, which includes estate-wide earthworks, infrastructure and services and the construction of the Western North South Link Road (WNSLR).

The SSD7348 application was supported by the following documentation in response to SEARs and subsequent stakeholder submissions:

- Environmental Impact Statement (EIS) (Urbis, November 2017)
- Response to Submissions (RTS) (Urbis, May 2018)
- Supplementary RTS (Urbis, October 2018)
- Biodiversity Assessment Report (BAR) (Cumberland Ecology 2017 and écologique 2018)
- Biodiversity Offset Strategy (Cumberland Ecology 2017 and écologique 2018)

Consent for SSD7348 approves the removal of approximately 4.41 hectares (ha) of remnant native vegetation, subject to the following consent conditions:

- D90. Within 12 months of the date of this development consent, or as otherwise agreed with the Planning Secretary, the Applicant must retire 172 ecosystem credits to offset the removal of 4.41 hectares of native vegetation on the Site.
- D91. The Applicant shall establish a Biodiversity Offset Area on the Site, consistent with the area described in the RTS, in accordance with a Biodiversity Stewardship Agreement with the Biodiversity Conservation Trust.

The Biodiversity Offset Strategy (BOS) specified how Goodman would meet the above consent conditions. However, during the time since the SSD7348 was lodged and assessed, the *Threatened Species Conservation Act 1995* (TSC Act) was replaced by the *Biodiversity Conservation Act 2016* (BC Act).

Investigations and assessment required to prepare both the Oakdale West BAR and BOS used the former TSC Act biodiversity assessment methods.

Transitional arrangements provisioned for under the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* (BC Reg.) expired in February 2018. This has resulted in the redundancy of the BOS, which was approved under SSD7348.

This Vegetation Management Plan (VMP) has been prepared to support a development modification (MOD 1) for Oakdale West. Relevant to the site's biodiversity, the intent of MOD 1 is as follows:

- To overcome the redundancy of the BOS while avoiding lengthy delays associated with reassessment under new legislation
- Meet the objectives of the *Water Management Act 2000* (WM Act) through the rehabilitation and restoration of a riparian corridor along Ropes Creek, which would otherwise have been restored as part of the proposed Biodiversity Offset Area.

1.2 Consultation

1.2.1 Department of Planning and Environment

The neighbouring Oakdale South Estate (Oakdale South SSD6917) recently lodged a modification MOD 11) for the same reasons as the Oakdale West SSD7348 MOD 1.

In preparing the Oakdale South SSD6917 MOD 11, consultation was undertaken with the Department of Planning and Environment (the Department) and that the same issue would occur for Oakdale West SSD7348 was also discussed.

In response the Department consulted with Office of Environment and Heritage (OEH) on the matter, and issued the following suggestions which applied to both Oakdale South SSD6917 and Oakdale West SSD7348:

- Purchase of appropriate BBAM credits from the market (i.e. credits assessed and calculated under repealed legislation) available on the market assessed under the repealed legislation), or
- Obtain a statement of reasonable equivalence to convert the existing BBAM credit obligation into BAM credits (i.e. credits assessed and calculated under the BC Act) and,
 - Enter into a biodiversity stewardship agreement under the BC Act on a parcel of land to generate the relevant credit types, then retire the relevant credits, or
 - Pay an amount equivalent to those credits into the Biodiversity Conservation Trust (BCT).

Oakdale South SSD6917 has obtained a statement of reasonable equivalence from the OEH and will be fulfilling its offsetting requirements through a combination of purchasing and retiring ecosystem credits from the market and direct payment to the BCT.

Oakdale West SSD7348 intend on taking the same approach and propose also to restore/rehabilitate and maintain areas of the Ropes Creek riparian corridor to fulfil the objects of the WM Act.

1.2.2 Department of Industry

The Department of Industry (DOI) was consulted during the assessment of SSD7348, specifically in relation to the proposed Biodiversity Offsetting Strategy encompassing the Ropes Creek riparian zone and meeting the objects of the WM Act.

The RTS and supplementary RTS for Oakdale West SSD7348 provided a number of diagrams in response to DOI's submissions, which illustrated the areas of the proposed development's footprint that encroached onto waterfront land.

The masterplan footprint for Oakdale West SSD7348 has been amended since the issue of the RTS and supplementary RTS. As a result the areas of the development that encroach onto waterfront land have also been amended and are illustrated in Figure 1-1 of this VMP.

1.3 Land to which this VMP applies

This VMP applies to an area of approximately 4.2 ha which extends along the western side of Ropes Creek as shown in Figure 1-2.

The areas of the Ropes Creek corridor are considered commensurate with the proportion of the SSD7348 development footprint that has encroached onto waterfront land.

Site constraints that have been considered in determining the extent of the VMP proposed are shown on Figure 1-1 and outlined below:

- The alignment of the future Southern Link Road (SLR) which traverses the Ropes Creek riparian corridor;
- Feasible management boundaries and access constraints, given that Oakdale South's boundaries extend to the western side of Ropes Creek and conflict with the future development of Oakdale West under SSD7348;

- The alignment of the existing electricity easement, which also precludes restoration works; and
- The proposed preferred alignment of the Western Sydney Freight Line (WSFL), which has been identified by Transport for NSW as requiring a 60m easement along the northern boundary of Oakdale West¹.

The remainder of the biodiversity offsetting area identified in the redundant BOS will continue to be protected by way of the following:

- Removal of cattle, replacement of redundant fencing and installation of new fencing
- Habitat placement (large woody debris), which is provisioned for in civil contracts for the development and detailed in the Flora and Fauna Management subplan to the Construction Environmental Management Plan (CEMP)
- Targeted weed control of scheduled weeds in accordance with the Biosecurity Act 2015 and as listed in the Greater Sydney Regional Strategic Weed Management Plan 2017-2022

Goodman may choose to establish this area in the future as a Biodiversity Stewardship Site under agreement with the Biodiversity Conservation Trust (BCT).

¹ Should the WSFL eventually be constructed at this location, the impacts to the remnant native vegetation that would result will become the responsibility of TfNSW. For the purpose of SSD7348 MOD 1, the proposed development will not impact on this area.

Oakdale West Estate

Vegetation Management Plan

RIPARIAN GUIDELINES

- Ropes Creek 3rd order
- Tributary 1st order
- - - 40m - waterfront land
- 30m - riparian buffer
- Waterfront land encroachment

OAKDALE WEST

- Oakdale West boundary
- Native vegetation to be retained
- Fenced conservation area
- Oakdale West siteworks
- WNSLR siteworks

SITE CONSTRAINTS

- - - Electricity easement
- - - Future WSFL
- Future Southern Link Road

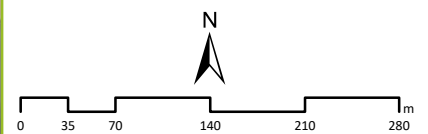
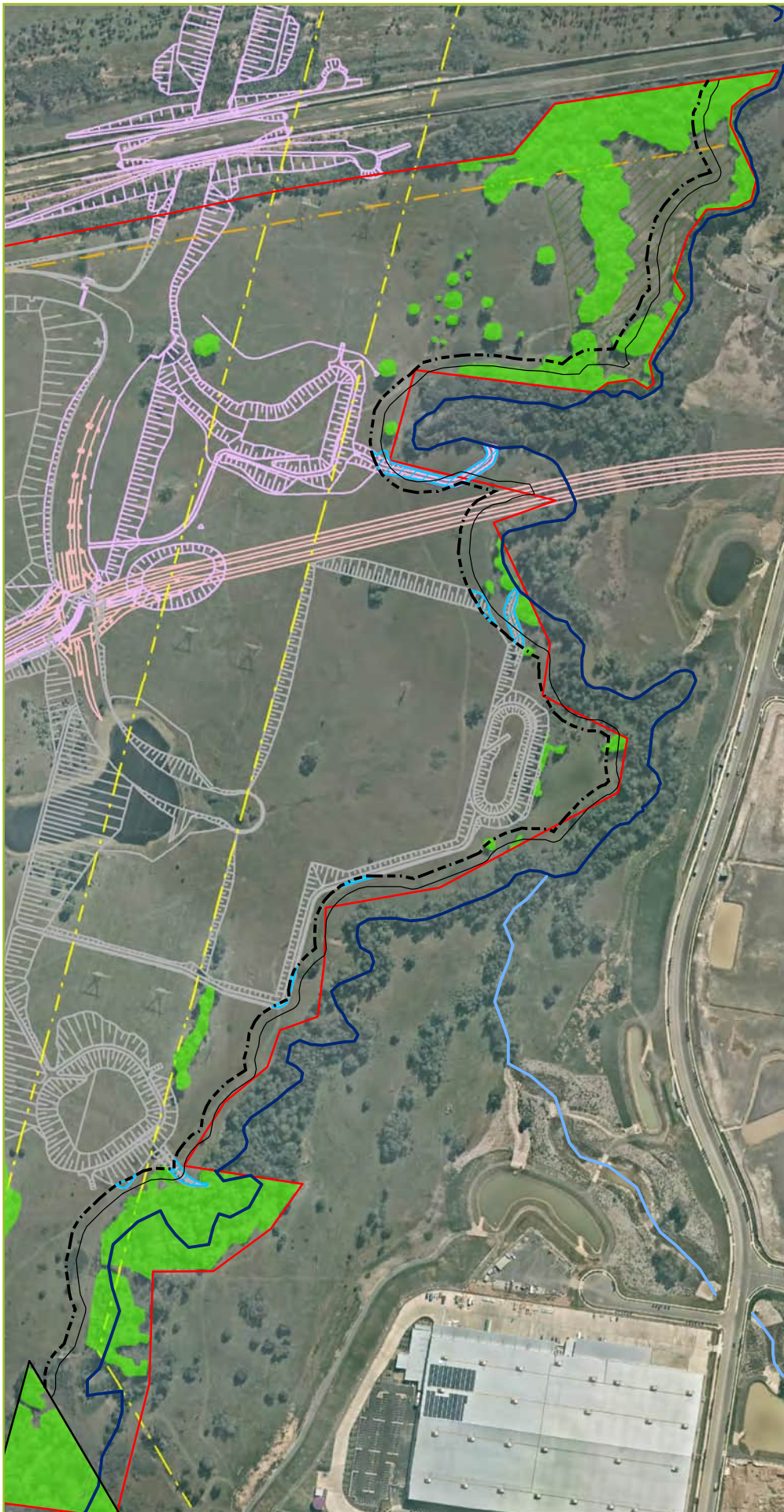
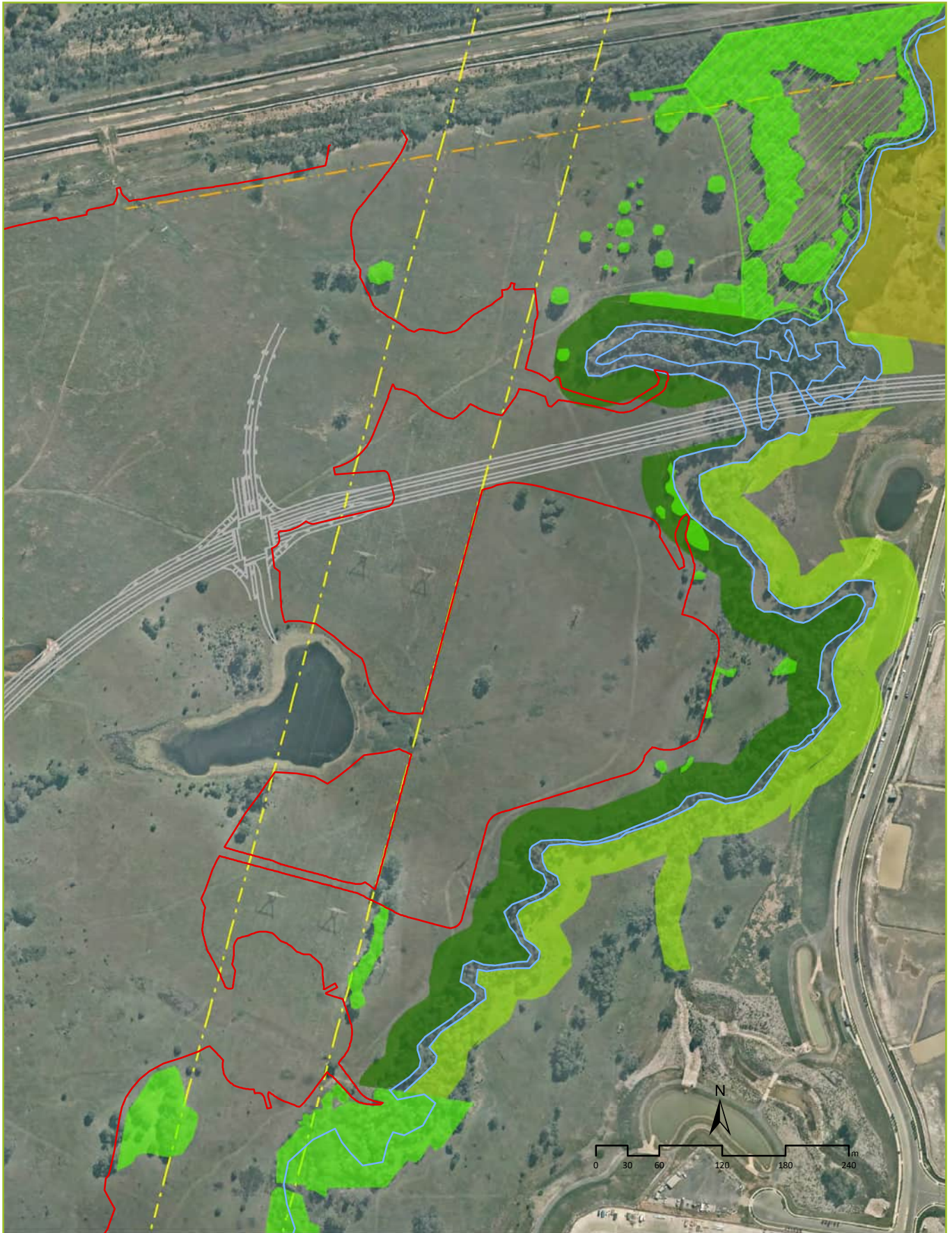


Figure 1-1
Site constraints

*Coordinate System: MGA Zone 56 (GDA 94)
Image sources: Nearmap 7 April 2019*





Oakdale West Estate VMP

Figure 1-2 Proposed VMP extent

Coordinate System: MGA Zone 56 (GDA 94)
Image sources: Nearmap 7 April 2019

- | | |
|---|--|
| Oakdale West VMP extent | Extent of works |
| Oakdale South VMP extent | Ropes Creek |
| Native vegetation to be retained | Electricity easement |
| Oakdale Central biodiversity area | Future WSFL |
| Fenced conservation area | Future Southern Link Road |

2. Site Description

2.1 Ropes Creek riparian corridor

As can be seen from Figure 1-1, the Ropes Creek riparian corridor broadly defines the eastern boundary of Oakdale West although much of the creek itself lies within the neighbouring Oakdale South Estate

Ropes Creek is a 3rd order Strahler stream order watercourse, as mapped on the NSW Hydro Line dataset². As such, this watercourse generally needs to be retained with a 30m vegetated riparian zone to each side of the channel.

A 30m riparian zone will be restored from the top of the western bank of Ropes Creek as part of the Oakdale West SSD7348 development. A corresponding 30m riparian zone will be restored from the top of the eastern bank of Ropes Creek as part of the Oakdale South SSD6917 development.

The Oakdale West SSD7348 development footprint encroaches marginally onto waterfront at five separate areas (see Figure 1-1), which in total amounts to 485m².

The outlets from three bioretention basins are located within the riparian corridor (see Figure 1-1), which are permitted, so long as they create minimal harm, and as they relate to meeting the objectives of the WM Act and the DOI's guidelines for controlled activities on waterfront land.

2.2 Native Vegetation

2.2.1 Plant Community Types

The Ropes Creek riparian corridor is subject to a significant level of remnant riparian vegetation. Investigations and assessment under the former biodiversity assessment method (BAM) identified two plant community types (PCTs) within the corridor, as summarised in Table 2-1.

Table 2-1. PCTs identified within the Ropes Creek riparian corridor

ID	PCT common name	Status	
		BC Act	EPBC Act
PCT 835	Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin	Endangered	Not listed
PCT 1232	Swamp Oak floodplain forest fringing estuaries, Sydney Basin Bioregion and South East Corner Bioregion	Endangered	Endangered

Since investigations and collection of floristic data were undertaken to support the SSD7348 development application, a major upgrade to the NSW Vegetation Information System (VIS) took effect for the Sydney Metropolitan region.

Appropriate to the Ropes Creek riparian corridor is the inclusion of "Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley" (PCT 1800) which is a more appropriate PCT than PCT 1232.

² The Water Management (General) Regulation 2018 hydro line spatial data is a dataset of mapped watercourses and waterbodies in NSW. Based on the Spatial Services (Department of Finance, Services & Innovation) the data set is used to determine the Strahler stream order of a stream to identify whether an exemption from the requirement for a water licence or approval under the Water Management (General) Regulation 2018 applies.

The allocation of PCTs is only necessary for the assessment of native vegetation removal and calculation of ecosystem credits that are required to offset impacts to native vegetation. For the purpose of this VMP the appropriateness of PCT allocation is provided to justify the assemblage of vegetation communities and associated constituent plant species) proposed for restoration purposes.

A further consideration is the dominance of *Casuarina glauca* (swamp oak), which is regenerating through widespread suckering and resultant monospecific gene pool. The aim of this VMP is to ensure that a diverse range of endemic riparian flora is reinstated, which includes genetic diversity.

2.2.1 Flora species

Native flora species observed within the riparian corridor consists of a canopy dominated by swamp oak and *Melaleuca styphelioides* (prickly-leaf paperbark) with less frequently occurring *Eucalyptus tereticornis* (river redgum), *E. moluccana* (grey gum) and *Angophora floribunda* (rough barked apple gum).

Regenerating *Bursaria spinosa* (native blackthorn) is the most dominant species in the shrub layer species with various acacia species also present (*Acacia implexa*, *A. decurrens*, *A. floribunda* and *A. parramattensis*).

Native ground layer plant species are scattered throughout the riparian corridor including patches of native grasses such as *Microleana stipoides* (weeping meadow grass) and other herbs (such as *Dichondra repens*, *Pratia purpurascens*, *Brunoniella australis*).

Given the extent of remnant vegetation within the corridor, a medium to high level of natural resilience is expected.

2.3 Introduced Vegetation

Sections of Ropes Creek are infested with *Juncus acutus* (spiny rush) within the channel and lower creek banks. *Alternanthera philoxeroides* (alligator weed) is known to occur upstream of the VMP subject area but has yet to be identified within downstream reaches.

Higher elevated creek banks and the riparian corridor support moderate populations of grazed exotic grasses with scattered patches of *Rubus fruticosus* (blackberry) and individuals of *Lycium ferocissimum* (African boxthorn), *Dovyalis caffra* (kei apple) and *Cestrum parqui* (green cestrum). Most of which are identified as priority weed species in the Greater Sydney Regional Strategic Weed Management Plan 2017-2022 (refer Section 3.4.1).

3. Restoration Approach

3.1 Overview

The specific objectives of this VMP align with those prescribed in the NSW Guidelines for vegetation management plans on waterfront land (DPIW July 2012) (the guidelines). The main objective being to provide a stable watercourse and riparian corridor which will emulate local native vegetation communities. Specific issues that need to be addressed within this VMP include:

- Conserve and protect environmentally sensitive areas and biodiversity values;
- Restore and rehabilitate degraded bushland and areas of significant vegetation;
- Ensure the protection of threatened species, populations or ecological communities;
- Limit the impact of development upon existing native vegetation;
- Provide habitat connectivity and fauna corridors;
- Promote sustainable vegetation management;
- Undertake responsive site management and landscaping to ensure that bushland values are conserved; and
- Specify appropriate environmental protection works to enhance the ecological and bushland amenity value of the site.

A combination of assisted bushland regeneration and reconstruction through revegetation shall be undertaken in areas of remnant native vegetation and pasture land within the VMP riparian zones (respectively).

3.2 Assisted Bushland Rehabilitation

Assisted bushland regeneration works shall be implemented in areas where natural regeneration is likely, by removing obstacles and making amendments to abiotic conditions to effect the regeneration of remnant native vegetation with varying resilience levels.

The aim of assisted bushland regeneration is to create conditions that favour the ecosystem's own recovery processes. The following principles from OEH's Conservation Management Notes (OEH 2011) apply to this VMP:

- Working where the natives are stronger, i.e. looking after the good areas and creating the conditions that promote their expansion into adjoining more degraded areas. An exception to this approach in the VMP riparian corridors will be targeting priority weed species in accordance with the *Biosecurity Act 2015*;
- Avoiding excessive disturbance because it often favours weed regrowth. But employing some disturbance where it is needed to trigger native plant regeneration or to treat compacted soil;
- Avoiding mulching (mostly) because mulch suppresses germination of seedlings, although it should be used in the following circumstances:
 - Small, low resilience patches within the regeneration area where natural leaf litter is available from nearby sources, and
 - On the edges of bushland areas to define the limits of the regeneration zone, and to suppress the encroachment of exotic grasses.
 - Above all, mulching shall avoid burying resilient areas where natural recruitment from the soil seed bank is evident.

Management activities relating to the assisted bushland regeneration are detailed in Section 4.

3.3 Reconstruction through revegetation

Where areas are found to have a low capacity for natural regeneration (i.e. former pasture land), these shall be fully reconstructed through revegetation of canopy, shrub and ground layer plant species constituent of River-flat Eucalypt Forest communities (RFEF). Reconstruction activities generally entail the following:

- Spraying out of introduced pasture grasses, herbs and forbs using a combination of selective and non-selective herbicides and high volume and low volume applications;
- Planting of local RFEF tree, shrub and groundlayer species; and
- Jute matting or mulching, depending on the location.

Section 4 details management activities relating to the reconstruction through revegetation.

3.4 Threatening processes

The most significant threatening processes that contribute or have contributed to degradation of the site's riparian corridors include:

- Past clearing of native vegetation;
- Grazing;
- Weed infestations, and
- Disturbance of soil and soil-stored native seed from various works associated with past land uses and proposed development.

The site's boundary will be securely fenced and grazing cattle removed. The existing natural riparian corridors will be demarcated as 'no go' zones and silt fencing installed to prevent movement of sediments in runoff entering these zones, during construction.

3.4.1 Weed infestations

Weed infestations will be managed as outlined in this VMP and in accordance with the *Biosecurity Act 2015*. The *Biosecurity Act 2015* replaces the *Noxious Weeds Act 1993*, which was repealed in August 2017.

The *Biosecurity Act 2015* itself is tenure neutral, in that unlike the previous *Noxious Weeds Act 1993* there is no scheduled "list" of weeds. As such all weeds need to be categorised by a risk they pose in relation to human health, biodiversity or agricultural production. The General Biosecurity Duty (GBD) is a key feature of the *Biosecurity Act 2015* (S22). Simply put, it means that all private and public land managers (or anyone who deals with weeds) must prevent, eliminate or minimise the risk of those weeds present.

The Greater Sydney Regional Strategic Weed Management Plan 2017-2022 identifies both State level and regionally determined priority weeds and high-risk activities that are relevant to the Oakdale West are listed in Appendix 1.

4. Management Actions

4.1 Management Zones

The VMP applies to two management zones: (a) assisted bushland regeneration, and (b) reconstruction through revegetation.

Work activities specific to these management zones are summarised in Table 4-1 and detailed in the following Sections with relevant work areas shown in Figure 4-1.

4.2 Weed Control

4.2.1 Primary weeding

Primary weeding is the first stage of bushland regeneration and reconstruction, which will require a range of techniques such as: the selective spraying of weeds with herbicides; cutting/scraping and painting deep rooted woody weeds and climbers with hand tools, chainsaws and brushcutters and painting cut stumps with herbicide; and selective hand removal of weeds.

Primary weeding is required in all VMP zones with a priority given to:

- Species scheduled under the *Biosecurity Act 2015* (see Table A, Appendix A);
- Widespread growth of spiny rush; and
- Woody weeds and climbers.

Additionally:

- Herbicide should not be allowed to fall into a watercourse or when wind conditions could cause drift outside the area to be treated or onto desirable plants.
- Weeds that cannot be removed by hand are to be manually removed, ensuring that the entire weed including all roots is removed;
- Damage to native plant species should be avoided during any weeding works; and
- All seed, flowering and invasive vegetative parts of weeds should be bagged and disposed of appropriately off site.

4.2.2 Secondary weeding

Secondary weeding involves the selective removal or treatment of weeds, whilst allowing regenerating or planted native plants to increase in size, abundance and percentage cover.

Secondary weeding should be undertaken at intervals of not more than four weeks following the completion of primary weeding and continue throughout the plant establishment period in reconstruction areas and as an ongoing task in assisted bush regeneration areas.

All herbaceous weeds should be managed to be at very-low percentage cover levels, (as a minimum 5% cover), or better. Particularly problematic herbaceous weeds with wind-blown seeds should be prevented from seeding at all times throughout the site.

4.2.3 Maintenance weeding

It can be expected that the remnant and revegetated areas in each VMP zone will always require a certain level of maintenance weeding, as weed seeds and vegetative propagules make their way on site from the soil stored seedbank, via water, wind and bird droppings. However, it can be expected that the amount of weeding required will decrease once the regenerating native plants grow, recover and become more resistant to disturbance and weed colonisation.

Maintenance weeding shall extend for a minimum of three years following the completion of the Plant Establishment / Defects Liability Period (refer Section 4.5.4) or until such time as a minimum

80% survival rate for all plantings and a maximum five percent (5%) weed cover for each VMP management zone.

4.3 Soil amelioration

In areas not subject to construction disturbance it is anticipated that existing soils will be suitable for revegetation following weed control without the need for amelioration.

Where construction activities have disturbed site soils (e.g. compaction, loss of topsoil) the following shall apply:

- All debris, stones and left over building materials (arising from the works) are to be removed from site.
- Stones exceeding 25 mm, clods of earth exceeding 50 mm, and weeds, rubbish or other deleterious material brought to the surface during excavation or cultivation, must be removed.
- Supply and cultivate/spread 50mm layer of organic compost within 50mm layer of topsoil.
- Organic compost to be pH neutral; low in phosphorus suitable for planting Australian natives; free from clods of soil, rock, rubbish, and other non-organic matter.

4.4 Mulching

The higher elevated parts of VMP reconstruction zones are to be mulched with a minimum 100mm layer of mulch to assist with weed suppression, improve soil water conservation and soil erosion control.

Mulch is to be placed to the required depth, clear of plant stems, and raked to an even surface flush with the surrounding finished levels. Mulch is to be spread so that after settling it is:

- Smooth and evenly graded between design surface levels
- Flush with adjacent finished levels
- Of the required depths (100 mm depth)
- Sloped towards the base of plant stems, but not in contact with the stem

4.5 Planting program

4.5.1 Plant procurement

Plant procurement involves the sourcing of plant species that are consistent with those provided in the Planting Schedule (provided in Appendix B).

Plant procurement shall either be undertaken by Goodman or the Contractor (to be determined on engagement of Contractor).

Most commercial nurseries that supply plant stock to the Western Sydney Region have the capacity to provide suitable seed or other propagative materials without the need for targeted collection of seed/ propagation materials. However at least four to six months advance notice will be required to ensure that the species listed the Planting Schedule (provided in Appendix B) are able to be supplied at the intended commencement of planting.

Plant stock is to be inspected by the Contractor and Site Superintendent (or otherwise appointed Goodman representative) at least one month prior to commencement of planting works and on delivery to the site.

Plants that are not: true to species; vigorous and healthy; with a well-developed root system; free from disease / pests; and are not without scars or dead wood; are to be rejected at delivery.

Planting shall be undertaken immediately after acceptance of plant delivery. If this is not possible: appropriate storage to keep the plants in good condition on the site, adequately protected from frost, wind, sun and vermin, and secured from vandals; shall be facilitated.

4.5.2 Planting procedure

Planting shall generally entail the following:

- Dig hole sufficient for root ball of plant. The removal from the container and the positioning of the plant is to be done with minimum disturbance to the roots.
- Slow-release native plant fertiliser (low phosphorous formulated native plant fertiliser tablet/granules) and water saving crystals shall be placed into the planting hole.
- After planting, the soil shall be replaced and carefully firmed, leaving a slight depression around each plant to allow for water collection. Soil is to be replaced in the hole so that the base of the stem is level with the soil surface, not set below the soil, or sitting above.
- All plants should be watered-in thoroughly after planting to settle any air pockets around the root ball of the plant and to give the plant a good initial supply of water.

4.5.3 Practical completion

It is anticipated that Practical Completion can be achieved within six months from commencement of the bush regeneration/restoration works in each VMP zone. During this time planting establishment is to be achieved through watering, weeding, pest/disease control, replacing dead plant material and repairing/replacing erosion control matting/mulch. All plants should be watered thoroughly on at least 4 to 6 occasions, during this period.

Failure to maintain each VMP management zone in a stable and healthy condition may result in the Superintendent arranging for the maintenance work to be carried out by others at the expense of the Contractor.

Practical Completion shall require a minimum 80 per cent survival rate of each species planted and a maximum of:

- 5 per cent weed cover in restoration zones
- 10 percent weed cover in rehabilitation zones

4.5.4 Planting establishment /defects liability

The Plant Establishment / Defects Liability Period shall be in force for 18 months after Practical Completion of each stage of the works or until the site is stable, whichever is the longer period.

Any defective work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or of any other cause, shall be removed and replaced at the Contractor's expense by work or materials of the required standard.

4.6 Performance measures

Performance targets are necessary to objectively measure the progress and the achievement of the VMP objectives. The anticipated timing of VMP management activities and related performance measures are outlined below and in Table 4-1.

- 1) All environmental and priority weeds are to be continuously suppressed and, if possible, eradicated from the site using recognised appropriate bush regeneration methods in accordance with best practice.
- 2) Weed control and revegetation works are to be carried out by a qualified bushland regeneration contractor for a period of 5 years.
- 3) Regeneration/restoration specified vegetation communities with a minimum 80% cover of native species achieved.
- 4) Weed control targets should eventually progress down to between 5% - 10% (or less) at the end of year 5.

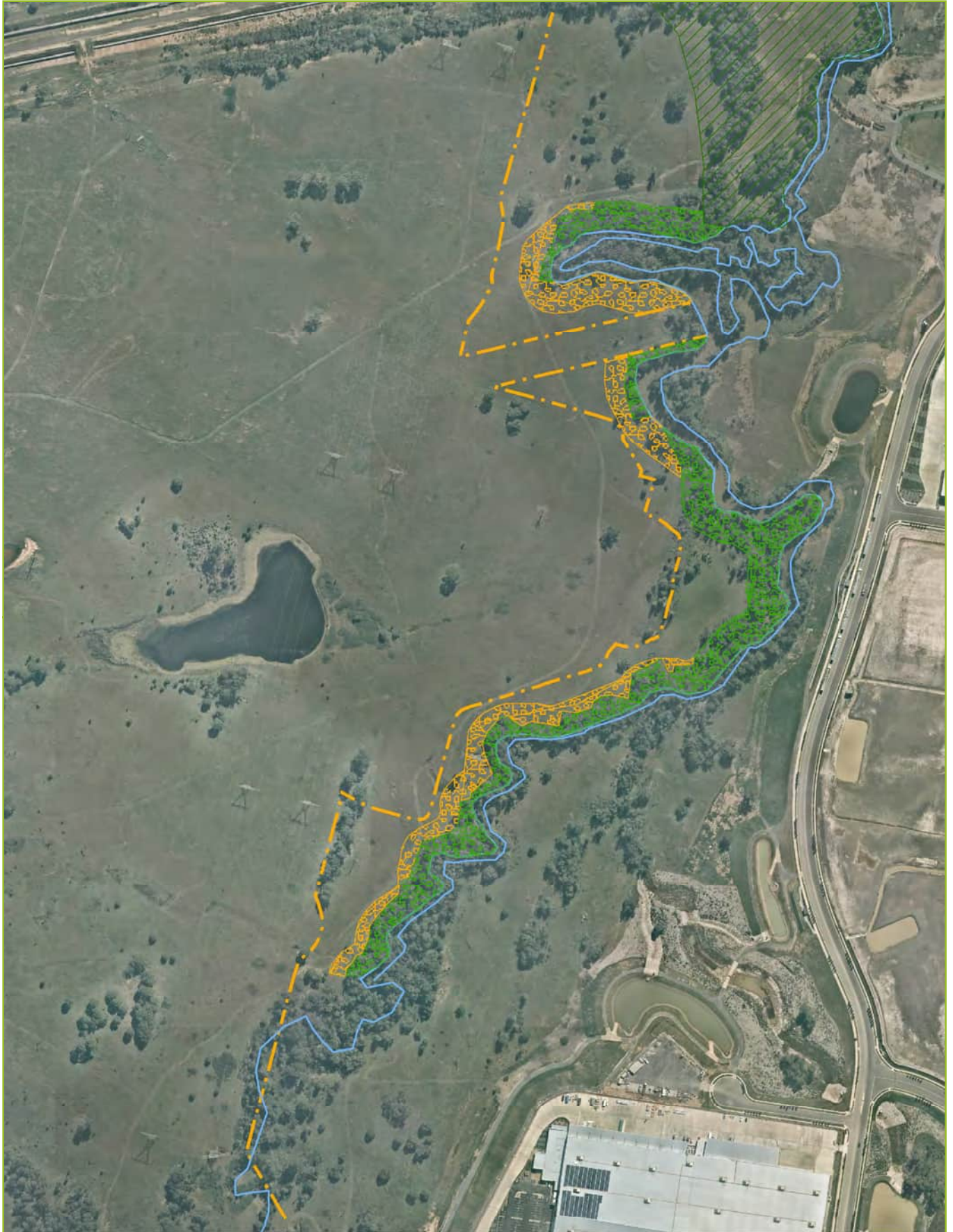
Table 4-1. VMP implementation schedule






Task	Timing	Performance measure
Plant procurement	Minimum 4-6mths pre-commencement of VMP implementation	Plants that are not: true to species; vigorous and healthy; with a well-developed root system; free from disease / pests; and are not without scars or dead wood; shall be rejected at delivery.
Completion of revegetation planting works	Practical Completion	<ul style="list-style-type: none"> 100% of management zones treated 100% of plants installed
Plant establishment	6 months	<ul style="list-style-type: none"> Minimum 90% per cent survival rate of each species planted in all zones Maximum 10% weed cover in reconstruction zones Maximum 20% weed cover in regeneration zones
Defects Liability Period	18 months	<ul style="list-style-type: none"> Minimum 80% per cent survival rate of each species planted in all zones Maximum 10% weed cover in reconstruction zones Maximum 20% weed cover in regeneration zones
Maintenance Period	36 months	<ul style="list-style-type: none"> Minimum 80% per cent survival rate of each species planted in all zones Maximum 5% weed cover in reconstruction zones Maximum 10% weed cover in regeneration zones

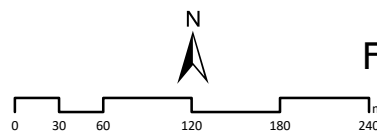
4.7 Compliance certification

Site audits, monitoring and reporting on the progress and achievement of the VMP performance targets shall be undertaken by the Site Superintendent or other representative nominated by Goodman. In general, reporting and compliance certificates shall be issued for the following items:

- Completion of primary weed control works
- Completion of secondary weed control works
- Inspection of plant materials delivered to site prior to commencement of planting works
- Completion of revegetation planting works (Practical Completion)
- Completion of plant establishment period
- Defects Liability Period
- Satisfactory achievement of revegetation/restoration works as per VMP performance targets (Section 4.6).



-  Regeneration
-  Revegetation
-  Fenced conservation area
-  Ropes Creek
-  Former_BOS_extent



Oakdale West Estate VMP

Figure 4-1 Proposed VMP extent

Coordinate System: MGA Zone 56 (GDA 94)
Image sources: Nearmap 7 April 2019

5. References

Cumberland Ecology (2017) Oakdale West State Significant Development Application Biodiversity Assessment Report, prepared for Goodman Property Services (Aust.) Pty Ltd, March 2017.

Cumberland Ecology (2017) Oakdale West State Significant Development Application Biodiversity Offsetting Strategy (BOS), prepared for Goodman Property Services (Aust.) Pty Ltd, April 2017

DPIW (2012) Controlled activities on waterfront land - Guidelines for vegetation management plans on waterfront land, NSW Office of Water, July 2012

Greater Sydney Local Land Services (2017) Greater Sydney Regional Strategic Weed Management Plan 2017-2022 Version: June 2017

écologique (2018) Oakdale West Estate Biodiversity Assessment Report Amended. Prepared for Goodman Property Services (Aust.) Pty Ltd, 1 October 2018

écologique (2018) Oakdale West Estate Biodiversity Offsetting Strategy Amended. Prepared for Goodman Property Services (Aust.) Pty Ltd, 2 October 2018

NRAR (2018) Guidelines for controlled activities on waterfront land - Riparian corridors. Natural Resources Access Regulator | NSW Department of Industry | INT19/15607 | May 2018

Office of Environment and Environment (OEH) (2011) Conservation Management Notes - Managing bushland and wildlife habitat. Office of Environment and Heritage, Department of Premier and Cabinet NSW. ISBN 978 1 74293 316 0 OEH 2011/0659

Appendix A. Weeds of the riparian zone

Species / Common names	Management measures
Shrubs	
<i>Cestrum parqui</i> Green cestrum	<p>Schedule 2: Regional Priority Weed</p> <p>Regional Priority Weed Objective - ASSET PROTECTION:</p> <p>Land managers mitigate the risk of the plant being introduced to land used for grazing of livestock.</p> <p>Land managers prevent spread from their land where feasible.</p> <p>The plant or parts of the plant are not traded, carried, grown or released into the environment.</p> <p>The plant should be fully and continuously suppressed and destroyed on grazing land</p> <p>Implement quarantine and/or hygiene protocols</p> <p>Schedule 3: Local Priority Weed</p> <p>Land managers have mitigated the risk of the plant being introduced to land used for grazing of livestock</p> <p>The plant should be fully suppressed and destroyed on grazing land.</p>
<i>Dovyalis caffra</i> Kei apple	<p>Schedule 2: Regional Priority Weed</p> <p>Regional Priority Weed Objective - ERADICATION</p> <p>The plant is eradicated from the land and the land is kept free of the plant.</p> <p>Destruction of all infestations where feasible.</p> <p>Manage in accordance with New Weed Incursion Plan.</p> <p>Detailed surveillance and mapping to locate all infestations</p> <p>Local Control Authority is notified if the plant is found on the land.</p> <p>The plant or parts of the plant are not traded, carried, grown or released into the environment.</p>
<i>Lantana camara</i> Lantana	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Regional Strategic Response: Identify priority assets for targeted management.</p>
<i>Lycium ferocissimum</i> African boxthorn	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Regional Strategic Response: Identify priority assets for targeted management.</p>

Species / Common names	Management measures
<i>Olea europaea</i> subsp. <i>cuspidata</i> African olive	<p>Schedule 2: Regional Priority Weed</p> <p>Regional Priority Weeds Objective - CONTAINMENT:</p> <p>Oakdale West lies within the region classified as the core infestation area. The following applies:</p> <p>The plant or parts of the plant are not traded, carried, grown or released into the environment.</p> <p>Implement quarantine and/or hygiene protocols.</p> <p>Surveillance and mapping to locate all infested properties.</p> <p>Monitor change in current distribution to ensure containment of spread.</p> <p>Land managers prevent spread from their land where feasible.</p> <p>Land managers reduce the impact on priority assets.</p> <p>Identify priority assets for targeted management</p>
<i>Rubus fruticosus</i> agg Blackberry	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Regional Strategic Response: Identify priority assets for targeted management.</p>
<i>Ulex europaeus</i> Gorse	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Schedule 2: Regional Priority Weed</p> <p>Regional Priority Weeds Objective - CONTAINMENT:</p> <p>Land managers prevent spread from their land where feasible</p> <p>Destruction of all infestations, aiming at local eradication where feasible.</p> <p>Detailed surveillance and mapping to locate all infestations.</p> <p>Implement quarantine and/or hygiene protocols.</p> <p>Monitor progress towards eradication</p>
Aquatic and semi-aquatic	
<i>Alternanthera philoxeroides</i> Alligator weed - Weed of National Significance	<p>Schedule 1: State Priority Weeds</p> <p>State Priority Weed Objective - CONTAINMENT:</p> <p>Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Schedule 2: Regional Priority Weed</p> <p>Regional Priority Weeds Objective - CONTAINMENT:</p>

Species / Common names	Management measures
	<p>Oakdale West lies within the region classified as the core infestation area. The following applies:</p> <p>Prevent spread from their land where feasible.</p> <p>Mitigate the risk of the plant being introduced to their land.</p> <p>Reduce the impact on priority assets.</p> <p>Implement quarantine and/or hygiene protocols.</p> <p>Manage in accordance with the Priorities for the control of Alligator Weed in the Sydney Region.</p>
<i>Cyperus difformis</i> Dirty Dora	Other
<i>Cyperus eragrostis</i> Umbrella sedge	Other
<i>Juncus acutus</i> Spiny rush	Other
Vines/scramblers	
<i>Anredera cordifolia</i> Madeira vine	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Regional Strategic Response:</p> <p>Identify priority assets for targeted management.</p>
<i>Araujia sericifera</i> Moth vine	Other
<i>Asparagus aethiopicus</i> ground asparagus † <i>A. africanus</i> climbing asparagus <i>A. asparagoides</i> bridal creeper <i>A. plumosus</i> climbing asparagus fern	<p>Schedule 1: State Priority Weed</p> <p>State Priority Weed Objective - ASSET PROTECTION (Whole of State):</p> <p>Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.</p> <p>Regional Strategic Response: Identify priority assets for targeted management.</p> <p>†<i>A. africanus</i></p> <p>Destruction of all infestations where feasible.</p> <p>Manage in accordance with New Weed Incursion Plan.</p> <p>▫ Detailed surveillance and mapping to locate all infestations</p>
<i>Asparagus virgatus</i> Asparagus fern	<p>Schedule 3: Local Priority Weed</p> <p>The plant or parts of the plant have not been traded, carried, grown or released into the environment.</p> <p>Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives.</p>
<i>Modiola caroliniana</i> Creeper mallow	Other

Species / Common names	Management measures
Grasses	
<i>Axonopus fissifolius</i> Carpet grass	Other
<i>Briza subaristata</i> hilean quaking grass	Other
<i>Bromus catharticus</i> Prairie grass	Other
<i>Ehrharta erecta</i> Panic veldtgrass	Other
<i>Lolium perenne</i> Ryegrass	Other
<i>Paspalum dilatatum</i> Paspalum	Other
<i>Pennisetum clandestinum</i> Kikuyu	Other
<i>Sporobolus africanus</i> Parramatta grass	Other
Herbs	
<i>Anagallis arvensis</i> Scarlet pimpernel	Other
<i>Brassica fruticulosa</i> Twiggy turnip	Other
<i>Cirsium vulgare</i> Spear thistle	Other
<i>Hypochaeris radicata</i> Catsear	Other
<i>Senecio madagascariensis</i> Fireweed	Schedule 1: State Priority Weed State Priority Weed Objective - ASSET PROTECTION (Whole of State): Mandatory Measure (Division 8, Clause33, Biosecurity Regulation 2017): A person must not move, import into the State or sell. Regional Strategic Response: Identify priority assets for targeted management.
<i>Sida rhombifolia</i> Paddy's lucerne	Other
<i>Solanum americanum</i> American black nightshade	Other
<i>Solanum linnaeanum</i> Apple of Sodom	Other
<i>Sonchus oleraceus</i> Common sowthistle	Other

Appendix B. Planting Schedule

Zone	Species	density/m ²	%mix	Qty
RC reconstruction (15,604m²)				
Trees/large shrubs	Acacia decurrens	0.05	5	40
	Acacia parramattensis	0.05	5	40
	Angophora floribunda	0.05	15	115
	Eucalyptus amplifolia	0.05	15	115
	Eucalyptus eugenoides	0.05	15	115
	Eucalyptus moluccana	0.05	15	115
	Eucalyptus tereticornis	0.05	15	115
	Melaleuca styphelioides	0.05	15	115
			100	770
Smaller shrubs	Acacia floribunda	0.2	8	250
	Breynia oblongifolia	0.2	10	312
	Clerodendrum tomentosum	0.2	10	312
	Daviesia genistifolia	0.2	8	250
	Daviesia ulicifolia	0.2	8	250
	Dillwynia sieberi	0.2	8	250
	Dodonaea spp.	0.2	10	312
	Goodenia ovata	0.2	10	312
	Indigofera australis	0.2	10	312
	Ozothamanthus diosmifolium	0.2	10	312
	Pultenea spp.	0.2	8	250
			100	3,122
Grasses	Aristida ramosa/vagans	2	5	1,560
	Cymbogon refractus	2	10	3,120
	Chloris truncata/ventricosa	2	5	1,560
	Dicanthium sericeum	2	5	1,560
	Dichelachne micrantha	2	10	3,120
	Echinopogon ovata	2	10	3,120
	Eriochloa pseudochritcha	2	5	1,560
	Imperata cylindrica	2	10	3,120
	Microlaeana stipoides	2	10	3,120
	Poa labillardieri	2	10	3,120
	Rytidosperma racemosum	2	10	3,120
	Themeda triandra	2	10	3,120
			100	31,200
Sedges/Sedge-like	Lomandra longifolia	1	50	7,802
	Dianella longifolia	1	50	7,802

Zone	Species	density/m ²	%mix	Qty
			100	15,604
Herbs	Arthropodium spp.	0.05	as available	780
	Bulbine bulbosa	0.05		
	Clematis spp.	0.05		
	Desmodium varians	0.05		
	Dichondra repens	0.05		
	Glycine clandestina	0.05		
	Hardenbergia violacea	0.05		
	Oplismenus aemulus	0.05		
	Oxalis perannans	0.05		
	Plectranthus parviflorus	0.05		
	Pratia purpurescens	0.05		
	Scaveola albida	0.05		
	Veronca plebeia	0.05		
	Wahlenbergia gracilis	0.05		
				780
Total plants RC reconstruction				51,476
RC Regeneration (30% of 26,071m ²)				
Smaller shrubs	Acacia floribunda	0.2	8	125
	Breynia oblongifolia	0.2	10	156
	Clerodendrum tomentosum	0.2	10	156
	Daviesia genistifolia	0.2	8	125
	Daviesia ulicifolia	0.2	8	125
	Dillwynia sieberi	0.2	8	125
	Dodonaea spp.	0.2	10	125
	Goodenia ovata	0.2	10	125
	Indigofera australis	0.2	10	125
	Ozothamanthus diosmifolium	0.2	10	125
	Pultenea spp.	0.2	8	156
			100	1468
Grasses	Aristida ramosa/vagans	2	5	782
	Cymbogon refractus	2	10	1,564
	Chloris truncata/ventricosa	2	5	782
	Dicanthium sericeum	2	5	782
	Dichelachne micrantha	2	10	1,564
	Echinopogon ovata	2	10	1,564
	Eriochloa pseudochritcha	2	5	782
	Imperata cylindrica	2	10	1,564
	Microlaeana stipoides	2	10	1,564
	Poa labillardieri	2	10	1,564

Zone	Species	density /m ²	%mix	Qty
	Rytidosperma racemosum	2	10	1,564
	Themeda triandra	2	10	1,564
			100	15,640
Sedges/Sedge-like	Lomandra longifolia	1	50	3,910
	Dianella longifolia	1	50	3,910
			100	7,820
Herbs	Arthropodium spp.	0.05	as available	391
	Bulbine bulbosa	0.05		
	Clematis spp.	0.05		
	Desmodium varians	0.05		
	Dichondra repens	0.05		
	Glycine clandestina	0.05		
	Hardenbergia violacea	0.05		
	Oplismenus aemulus	0.05		
	Oxalis perannans	0.05		
	Plectranthus parviflorus	0.05		
	Pratia purpurescens	0.05		
	Scaveola albida	0.05		
	Veronca plebeia	0.05		
	Wahlenbergia gracilis	0.05		
Total plants RC revegetation zone				25,319



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Appendix J:

Landscape Management Plan

Oakdale West, Precinct 1 - Lot 1A

Landscape Management Plan

Prepared by: Scape Design Pty Ltd
Prepared for: Goodman Property Services



Revision Schedule

Revision	Date	Issued by
01	05/05/20	MF & CH
02	22/05/20	MF & CH
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2 CONDITIONS

2.1 TABLE OF CONDITIONS

Visual Amenity			
Condition No.		Condition	Action
<i>D35. Prior to the commencement of construction of Stage 1, the Applicant must prepare a Landscape Management Plan (LMP), to the satisfaction of the Planning Secretary. The plan must form part of the CEMP in accordance with Condition D119 and the OEMP in accordance with Condition D130 and must:</i>	(a)	<i>be prepared in consultation with Council</i>	Refer to Section 3.1.4 of this LMP for Council Consultation
	(b)	<i>detail procedures for the retention of existing native vegetation in the north-western corner of the Site and protection of this vegetation from construction impacts</i>	Refer to the <i>Oakdale West Estate - Flora and Fauna Management Plan and Erosion and Erosion and Sediment Control Plan</i> Refer to Section 4.3.1 of this LMP for species specific vegetation management.
	(c)	<i>include visual impact mitigation measures for construction including but not limited to:</i> <i>(i) the location of site sheds, compounds and machinery parking areas, avoiding the western and southern side boundaries, or other locations highly visible from adjacent residential properties.</i> <i>(ii) procedures for progressive grassing of exposed soil, as soon as reasonably practical after disturbance, focusing on the areas where building construction will occur at a later stage</i>	(i) Refer to the Construction Environmental Management Plan and the Oakdale West Estate LMP for location of construction facilities operations. (ii) Refer to the Oakdale West Estate LMP for procedures of progressive grassing techniques.
	(d)	<i>detail the works required to construct the landscape bund along the western boundary of the Site, as shown on Figure 5 in Appendix 2, including provision for the landscaping to incorporate mature tree (no less than 75 litre pot size)</i>	Refer to the Oakdale West Estate LMP for further information.
	(e)	<i>include a schedule of works which prioritises the construction of the landscape bund along the western</i>	Refer to the Oakdale West Estate LMP for further information.

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		<i>boundary of the Site, as shown on Figure 5 in Appendix 2.</i>	
	(f)	<i>include a program for implementing the landscape bund as soon as reasonably practicable and no later than prior to operation of Stage 1.</i>	Refer to the Oakdale West Estate LMP for further information.
	(g)	<i>describe the integration of landscaping with fixed elements, including retaining walls and noise walls</i>	Refer to Section 4.3.1 of this LMP
	(h)	<i>describe the monitoring and maintenance procedures to ensure the success of the landscaping work over the life of the Development.</i>	Refer to Section 5 of this LMP
	(i)	<i>update the LMP to include modifications to the western bund, bio-retention basin 2/3 and the noise wall approved under MOD 3.</i>	Refer to the Oakdale West Estate LMP for further information.
D36. The applicant must:	(a)	<i>not commence construction of Stage 1 until the LMP is approved by the Planning Secretary</i>	N/A
	(b)	<i>must implement the most recent version of the LMP approved by the Planning Secretary</i>	Noted
	(c)	<i>Include the monitoring and maintenance procedures contained in the LMP within the OEMP required in accordance with Condition D130</i>	N/A
Landscaping			
D37. The Applicant must complete the landscape bund along the western boundary of the Site as shown on Figure 5 in Appendix 2 within six months of commencing any construction including bulk earthworks.	-	-	Refer to the Oakdale West Estate LMP for further information.

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<i>D38. The Applicant must maintain all landscaping implemented as part of Stage 1, as shown on Figure 5 in Appendix 2, for the duration of the Development. If the monitoring carried out as part of Condition D35 indicates that any aspect of the landscaping has not been successful, the Applicant must undertake re-planting and rehabilitation works, as soon as reasonably practicable.</i>	-	-	Refer to Section 5 of this LMP for maintenance requirements. Refer to Section 5.3.1 of this LMP for requirements of unsuccessful planting
Management Plan Requirements			
<i>D118. Management plans required under this must be prepared in accordance with relevant guidelines, and include:</i>	(a)	<i>details of:</i> (i) <i>the relevant statutory requirements (including any relevant approval, license or lease conditions)</i> (ii) <i>any relevant limits or performance measures and criteria</i> (iii) <i>the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, Stage 1 or any management measures</i>	(i, ii) In relation to landscape softworks, the following Australian Standards are applicable and have guided all landscape works: AS 4419-1998 Soils for landscaping and garden use, AS 4970-2009 Protection of existing trees on development sites (where not covered by council requirements) and AS 2303-2015 Tree stock for landscape use. (iii) Refer to this LMP for more information.
	(b)	<i>a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria</i>	All landscape works have been designed using relevant Australian Standards as a guiding point. Refer to this LMP for more information.
	(c)	<i>a program to monitor and report on the:</i> (i) <i>impacts and environmental performance of Stage 1</i> (ii) <i>effectiveness of the management measures set</i>	(i) Refer to Section 6 of this LMP for maintenance and monitoring schedule (ii) Refer to Section 6 of this LMP for maintenance and monitoring schedule

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		<i>out pursuant to paragraph (b) above</i>	
	(d)	<i>a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible</i>	Refer to Section 6.5 of this LMP for the contingency management plan
	(e)	<i>a program to investigate and implement ways to improve the environmental performance of Stage 1 over time</i>	Refer to Section 5.3 and Section 6 of this LMP for maintenance and monitoring requirements and schedules
	(f)	<i>a protocol for managing and reporting any:</i> <ul style="list-style-type: none"> <i>(i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria)</i> <i>(ii) complaint</i> <i>(iii) failure to comply with statutory requirements</i> 	Completed in the Infrastructure CEMP
	(g)	<i>a protocol for periodic review of the plan</i>	Completed in the Infrastructure CEMP

3 INTRODUCTION

3.1 GENERAL

3.1.1 GENERAL CONDITIONS

Contract: Oakdale West Estate (OWE) **SSD 7348 - MOD 10**. Refer Oakdale West LMP for further information.

Local Council(s): Penrith City Council

3.1.2 DRAWING REFERENCE

All landscape plans, details and specifications included in the project documents should be read in conjunction with this Landscape Management Plan, as well as the Oakdale West Estate LMP. All structural and civil works components of the landscape design should be referenced to engineers' details and specifications. Read the Landscape Management Plan in conjunction with these packages. If in doubt about any details or if conflicts are found in the documents, seek advice.

This Landscape Management Plan should be read in conjunction with the Oakdale West Estate LMP as it is intended to support and provide further information and detail regarding the on-lot works for Lot 1A.

3.1.3 WORKMANSHIP AND MATERIALS

All landscape works must be carried out by a competent, trained and qualified landscape contractor who is experienced in horticultural practices, landscape construction and planting techniques.

The landscape contractor must hold a current Building Contractors License and/or be a financial member of LNA Landscape Association NSW & ACT or equivalent organisations in other states.

3.1.4 COUNCIL CONSULTATION

Penrith City Council (PCC) were engaged to provide input and comments on the Landscape Drawing set. Any Queries and consultation as a result of this review have been resolved as per the table below:

PCC Query	PCC Advice	Action
Comments Received 28/01/2020		
1. The landscape plans and architectural drawings provide landscape beds within the car parking areas which are not considered to achieve the intention and objectives of the DCP. It is agreed that canopy tree planting is required to ameliorate the massing of built form and hard stand car parking areas, however the landscape beds are too narrow.	<i>It is recommended that landscape beds be consolidated to provide dimensions of no less than 2m wide and the length of a parking space is necessary with greater planting capability at the end of aisles and tree planting in dedicated beds (not diamonds between 4x spaces).</i>	Car parking planting layout has been consolidated to larger beds, supporting grass/groundcover planting and canopy trees. Refer to Appendix 7.1 of this LMP for amended Landscape Plans.

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2. Islands are proposed as resin bonded aggregate. There is opportunity for Water Sensitive Urban Design measures	<i>It is recommended that Water Sensitive Urban Design measures are implemented, with engineered planting pits to ensure optimal healthy root volume and other growing conditions for trees.</i>	Resin bonded aggregate has been removed and replaced with planting and canopy trees. Refer to Appendix 7.1 of this LMP for amended Landscape Plans.
3. There is inadequate quantity of trees to produce necessary cooling in relation to the expanse of building and pavement footprints. The quantity of perimeter (setback) trees is not adequate as spacings are shown at between 18 and 30m. For street trees, Council typically requires 8-10m spacings, within supplementary planting in landscape setbacks to maximise canopy area.	<i>It is recommended that tree quantities are increased within landscape setbacks, this can be achieved by decreasing spacing between individual trees.</i>	Landscape setback zones have been updated to provide additional tree and planting areas, aiding in the screening of large hardstand and building surfaces. Refer to Appendix 7.1 of this LMP for amended Landscape Plans.
4. Council has consistently raised issue with the streetscape language of street tree plantings (being small groups with ballast mulch at verge large centres planted at 3 trees per 100 linear meters). This does not deliver adequate streetscape outcomes nor best practice for cooling the streets.	<i>It is recommended that street trees are planted at 8-10m centres.</i>	Street tree layouts are located within the Stage 1 infrastructure works. Refer to the CEMP relating to the infrastructure works for further information.
5. There is opportunity for greater variety in tree species adding to climate and biodiversity resilience. Some species suggested are not considered sufficiently resilient to climate change and their longevity and health are potentially compromised.	<i>Small trees are inappropriate for the scale of the built form ie. Crepe Myrtle, Tuckeroo. Tree species diversity is to be increased.</i>	Tree species have been updated to reflect a greater diversity of native canopy trees, providing greater resilience and amenity to the area. Refer to Appendix 7.1 of this LMP for amended Landscape Plans.
6. Council through other project and road approvals has established a Southern Link Road streetscape character (road verge and front setback) of informal yet massed planting with native trees providing full canopy cover.	<i>It is recommended that the Southern Link Road streetscape character is maintained and reflected in the landscape design, creating a consistent landscape design for the precinct.</i>	Refer to the Oakdale West Estate LMP for further information.

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7. Surrounding public road intersections are considered to require additional landscaping.	<i>It is recommended that additional landscaping be added to public road intersections to reinforce spatial definition of the intersection and reduce large scale grey infrastructure.</i>	Landscape in public areas are located in the Stage 1 infrastructure works. Refer to the CEMP of the Oakdale West Infrastructure Project for further information.
8. Ballast as a groundcover is not supported due to its heat attracting properties thus compromising healthy growing conditions for trees.	<i>An alternative product must be provided and established for the precinct.</i>	Ballast has been removed and replaced with groundcovers. Refer to Appendix 7.1 of this LMP for amended Landscape Plans.
9. Tensile wire rope for green wall effect	<i>This feature should be designed to be visually effective and attractive without climbers as the climate conditions often results in failure of green walls to achieve their intended forms.</i>	Green walls have been designed to incorporate steel button that fasten to the tensile wire rope. This can be arranged to create an artistic effect if failure of planting occurs. Refer to L.SK.202 in Appendix 7.1 for further information.
10. Irrigation details should be required as security of ongoing maintenance and viability is critical.	<i>Irrigation details required.</i>	Refer to Section 5.2 and Appendix 7.3 of this LMP for further information.

3.2 DESCRIPTION

3.2.1 SITE LOCATION

The Oakdale West Estate is located in the Penrith Local Government Area (LGA) at the far south-western extent of the WSEA. The site is bound to the north by the Water NSW Pipeline and to the east by the Ropes Creek riparian corridor. Land along the eastern boundary of the site is also affected by a transmission easement associated with TransGrid infrastructure.

Other boundaries interface with adjoining rural lands used for a mix of rural-residential, agricultural. Emmaus Catholic College and Emmaus Retirement Village is located to the west of the site. To the east of the site is Goodman's Oakdale South estate.

Building 1A of Precinct 1 is located in the North East of the Oakdale West Estate, with the only access points being off Estate Road 1. Building 1A is bordered by the Water NSW Pipeline to the North, Western North South Link Road (Compass Drive) to the East, Lots 1B and 1C as well as the future Southern Link Road corridor directly South, and Lots 2A, 2B and 2CD to the West.

3.2.2 PURPOSE OF LANDSCAPE MANAGEMENT PLAN

This Landscape Management Plan has been developed as per the Development Consent for the Oakdale West Estate works specifically.

The intended purpose of this Landscape Management Plan is to support the Oakdale West Estate LMP by providing greater detail on site management, visual and landscape treatments, and maintenance works specially for Lot 1A. Further information on each of these can be found below within this Landscape Management Plan.

4 SITE MANAGEMENT

4.1 ENVIRONMENTAL ASPECTS

4.1.1 DESCRIPTION

The Landscape Management plan seeks to manage potential visual impacts as a result of operational activities that may affect local and regional visual receptors. These impacts need to be managed to minimise impacts to sensitive visual receptors, and satisfy the conditions of the DA.

4.2 OBJECTIVES & PERFORMANCE CRITERIA

4.2.1 OBJECTIVES

The objectives of this LMP include:

- *ensuring that the conditions of the DA and Goodman Landscape standards are met*
- *managing the visual impacts of the project to comply with the landscape performance criteria*
- *ensuring the visual and landscape treatments are consistent with the ecological revegetation works described in the Oakdale West Estate – Flora & Fauna Management Plan*

4.3 MANAGEMENT ACTIONS

4.3.1 PERMANENT LANDSCAPE MANAGEMENT

Landscape Bund

The major screening element to be constructed will be the environmental bund along the western boundary of the site which is to be completed in Q3 2020. Further information is located in the Oakdale West Estate LMP.

On-Lot Landscape Treatment

The major on-lot screening technique used to provide a visual barrier to the large expanses of built form, parking and utility spaces is mass planting and the utilisation of native canopy trees.

Plant typologies implemented are to be low maintenance and drought resistant, ensuring all new landscaped areas are water sensitive and tolerant of the harsh Western Sydney Climate. Tree planting typologies have utilised the PCC Native Tree Guide, ensuring that locally endemic trees are used and returned back into the Western Sydney environment, whilst simultaneously increasing the percentage of canopy cover across the site. Landscape setbacks are to foster a clustered, yet dense approach to tree planting with native species, with a layered series of shrubs and groundcovers below.

Car-parking areas are to incorporate Water Sensitive Urban Design (WSUD) where possible. Tree pits are to utilise heavy duty smart soaker pits and structural soil to ensure the best possible conditions for tree growth and maturity. Refer to L.SK.204 in Appendix 7.1 for further information.

Integration of landscaping with fixed elements

The Integration of fixed elements and the landscape within Oakdale West Estate Precinct 2 include elements such as:

Entry Signage

Entry signage is typically to be installed within TF1 – Turf Rolls. Monitor Maintenance requirements of lawn care with interface elements (Section 5 of this LMP).

Fencing & Gates

All fencing and gates are to be finished as per the CIVIL ENG. and ARCHITECT Drawings. Monitor Maintenance requirements with lawn care at fence and gate interfaces (Section 5 of this LMP).

Planted Verges (Excluding Turfing)

Where road medians and verges are to be planted, **250mm of mulch only** is to be used next to kerbing. **Refer to the Oakdale West Estate LMP** for further details.

Retaining Walls

Retaining walls and balustrading are to be finished as per CIVIL ENG. Drawings. Planting at the top of RW09 is inclusive of spill over species (PM4B) these are to be planted at the front of the top of the wall. PM4B is also to be planted at the base of the wall as a buffer between the outlet swale and RW09. **Refer to the Oakdale West Estate LMP** for further details.

Street Trees and Verge Planting

Street trees and verge planting are to be finished per CIVIL ENG. Drawings and Landscape Infrastructure Stage 1 Drawings. **Refer to the Oakdale West Estate LMP** for further details.

5 VISUAL AND LANDSCAPE TREATMENTS

5.1 GENERAL

5.1.1 QUALITY

This section of the Landscape Management Plan describes the procedures to ensure the success of the landscaping work over the life of the development.

All landscaped areas must be maintained to the approval of the principal and landscape architect.

5.1.2 APPROACH

A proactive approach to all landscape tasks must be adopted to ensure that the appearance of the landscape as a whole is highly presentable at all times.

5.1.3 REQUIREMENTS

Contractors must submit annual routine landscape maintenance program to the Project Superintendent, Landscape Manager and/or the Landscape Architect within two weeks of the contract commencement date.

It is the contractor's responsibility to ensure the success of the landscaping work over the establishment period of the development.

5.2 MAINTENANCE PROGRAMS

5.2.1 GENERAL CONDITIONS

The Contractor shall rectify all defects during installation that become apparent in the works during the defect's liability period **(18 months)**.

The Contractor shall maintain the contract areas by the implementation of industry accepted horticultural practices between the date of practical completion and the date of final completion **(18 months)**.

The landscape maintenance works shall include, but not be limited to the following:

- *Replacing failed plants*
- *Pruning*
- *Herbicides/Insect and pest control*
- *Fertilizing*
- *Maintaining mulch*
- *Mowing*
- *Watering/Irrigation*
- *Weeding*
- *Rubbish removal; and Cleaning of the surrounding areas.*
- *Timber stakes and ties*

Ongoing maintenance: Ongoing maintenance facilitated by the Owner's corporation. Goodman is to contract the management of all landscape areas. The standard specification and reporting requirements of this contract are located in Goodman's Landscape Guidelines. **Refer to Appendix 7.3** for further detail.

Safety: Safety procedures/ plans are to be documented for review by Principal prior to commencement of work.

Failure to maintain the landscape planting in a healthy condition may result in the Principal arranging for the maintenance work to be carried out by others at your expense.

5.2.2 AREAS DEFINED IN LANDSCAPE MAINTENANCE PLAN

Hard and Soft Landscape works to be maintained throughout the maintenance program includes all landscape areas including the landscape bund and street trees.

5.2.3 PROTECTION OF PERSONS AND PROPERTY

Temporary works: Provide and maintain required barricades, guards, fencing, shoring, temporary roadways, footpaths, signs, lighting, watching and traffic flagging.

Accessways, services: Do not obstruct or damage roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Determine the location of such services.

Property: Do not interfere with or damage property which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

5.2.4 RECTIFICATION

Accessways, services: Rectify immediately any obstruction or damage to roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Provide temporary services whilst repairs are carried out.

Property: Rectify immediately any interference or damage to property which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

5.2.5 EXISTING SERVICES

General: Attend to existing services as follows:

- *If the service is to be continued, repair, divert or relocate. Submit proposals.*
- *If the service crosses the line of a required trench, or will lose support when the trench is excavated, provide permanent support for the existing service. Submit proposals.*
- *If the service is to be abandoned, remove redundant parts, and make safe.*

Proposals: Submit proposals for action to be taken with respect to existing services before starting this work. Minimise the number and duration of interruptions.

5.2.6 ACCESS FOR MAINTENANCE

Requirement: Provide access for maintenance of plants and equipment.

Standards: Conform to the relevant requirements of AS 1470, AS 1657, AS/NZS 1892.1, AS 2865 and AS/NZS 3666.1.

Work Health and Safety: Conform to the requirements of the applicable Work Health and Safety regulations for all temporary and permanent works.

Protection from injury: Protect personnel from injury caused by contact with objects including those that are sharp or protrude at low level.

5.2.7 LOGBOOK

Ensure a Maintenance Logbook is recorded to demonstrate that maintenance work has been undertaken and what materials, including chemical materials, have been used throughout the maintenance and establishment period.

The logbook must include the date of visit, maintenance works completed, maintenance works in progress and maintenance works required. The logbook must give details of damaged, dead or missing plants and show their locations on the relevant sheets of the Drawings.

Use the logbook to identify chemicals used as well as the reason for their use. Submit the initial logbook for inspection prior to Practical Completion and again at the end of the Defects Liability Period as a prerequisite for granting Practical and Final Completion Certificates.

Record all major events and activities in the logbook. Ensure the logbook is available for inspection on request.

5.3 MAINTENANCE WORKS ---

5.3.1 PLANT CARE

Planting: Ensure the general appearance and presentation of the landscape and the quality of plant material at date of practical completion is maintained for the full planting establishment period. Trees, shrubs and groundcovers shall at all times display healthy growth. Spent flower heads or stalks shall be removed immediately following flowering.

All shrubs, hedges, ground covers and trees must be trimmed into shape as required to an acceptable presentation standard.

Excessive foliage impacting onto roads, paths, fencing and lighting must be pruned during all site visits. Leaf litter and or all cuttings should be removed from all gardens and site each visit and disposed of at contractor's cost. Any dead or dying plants/shrubs should be removed and replaced with same or comparable species. The Landscape Manager must be consulted when large trees need to be removed and or replaced. The contractor will maintain each plant in a healthy condition to increase the visual appeal of the gardens.

Replacements: Replace failed, dead and/or damaged plants at maximum 3-week intervals as necessary throughout the full plant establishment period. Replacement plants shall be in a similar size and quality and identical species or variety to the plant that has failed. Replacement of plants shall be at the cost of the Contractor unless advised otherwise. If the cause of the failure is due to a controllable situation then correct the situation prior to replacing plants.

Keep all planting areas as specified and free of grass and weed.

Carry out grass and weed removal at intervals of not more than four (4) weeks and ensure that weeds do not flower to form seed heads.

For those species listed by the relevant local government authority as noxious under the [Biosecurity Act 2015](#) take action as required by that local Government Authority (Penrith City Council). [Refer to](#)

[the Flora and Fauna Management Plan \(FFMP\) for further information regarding Weed Management and Mitigation Measures.](#)

5.3.2 PRUNING

General: Prune to the Pruning schedule and AS 4373.

Any pruning requested by the Landscape Architect shall be performed, including any pruning of damaged growth or miscellaneous pruning considered as beneficial to the condition of the plants. All pruning works shall be undertaken in a manner equal to acceptable horticultural practice.

Pruning to ensure pathways, roads, lighting and services such as fire hydrants, overhead services and signs are kept clear from encroaching growth of plant material at all times.

- *Remove all damaged, dead or diseased wood by pruning to the nearest lateral shoot or active bud with a neat clean cut*
- *No more than 40mm - 50mm of new growth present on hedges at any time*
- *Remove all spent or dead flower heads from plants following flowering*
- *Prune young shrubs for shape by pinching out the growing tips to encourage lateral bushy growth*
- *Hedging shall be carried out to appropriate plants within garden beds. This should be carried out on a regular basis so as to avoid cutting back into 'old wood' in order to achieve the desired form.*
- *All existing hedges on site to be maintained*
- *Removal of suckers from base of trunks*
- *Formative pruning of trees to allow effective canopy development and retain natural or desired shape of the tree*
- *Pruning cuts shall be made and close to the bud at a 45° angle to ensure that any water is shed away from the bud*

5.3.3 SPRAYING

Responsibility for insect and disease control: Contractor

Period of treatment: Until the problem has been eliminated.

Chemical spray: Apply outside of normal working hours.

Avoid spraying:

- *whenever possible*
- *in the case of wet weather*
- *if wet weather is imminent*
- *if target plants are still wet after rain*
- *during windy weather*
- *if adjacent desirable species are too close to the target plants to be avoided.*

Do not spray where herbicide could fall into a watercourse or when wind conditions could cause drift outside the area to be treated or onto desirable plants.

After spraying, lop any dead weeds flush with the ground surface and dispose of the cuttings. Remove by hand any weeds which cannot be controlled by herbicide. Ensure that the entire weed including all roots is removed. Dispose of the weeds off site.

Immediately report to the Project superintendent/landscape manager any evidence of intensive weed infestation, insect attack or disease amongst plant material. Submit all proposals to apply chemicals and obtain approval before starting this work.

When approved, spray with herbicide, insecticide, fungicide as appropriate in accordance with the manufacturers' recommendations. Record in the logbook all relevant details of spraying activities including:

- *Product brand / manufacturer's name*
- *Chemical / product name*
- *Chemical contents*
- *Application quantity and rate*
- *Date of application and location*
- *Results of application*

5.3.4 FERTILISING

Soil tests: Take samples from planting beds areas and conduct tests.

Fertilising: Base the fertilisation program on the soil testing results. Fertilise trees once every two years. Generally, apply an all-purpose fertiliser of N:P: K (nitrogen: phosphorus: potassium) 10:4:6 at recommended rates. Alternatively apply 12-month slow release fertiliser (such as Nutricote) at the manufacturer's recommended rate. Apply all-purpose fertiliser to shrubs annually in two bands and cultivated into the soil 100 mm deep.

Record in the logbook all relevant details of fertilizing including:

- *Product brand / manufacturer's name*
- *Fertilizer / product name*
- *Application quantity and rate*
- *Date of Application and Location*

5.3.5 STAKES, TIES, TREEGUARDS AND ROOT BARRIERS

Stakes

Generally: If plants are unable to be self-supported or if stakes are damaged, stake or restake the plants

Material: Hardwood, straight, free from knots or twists, pointed at one end.

Installation: Drive stakes into the ground at least one third of their length, avoiding damage to the root system.

Stake sizes and quantities:

- *For plants ≥ 2.5 m high: Three 50 x 50 x 2400 mm stakes per plant.*
- *For plants 1 to 2.5 m high: Two 50 x 50 x 1800 mm stakes per plant.*
- *For plants < 1 m high: One 38 x 38 x 1200 mm stake per plant.*

Ties

General: Provide ties fixed securely to the stakes, one tie at half the height of the main stem, others as necessary to stabilise the plant. Attach ties loosely so as not to restrict plant growth.

Tie types:

- For plants ≥ 2.5 m high: Two strands of 2.5 mm galvanized wire neatly twisted together, passed through reinforced rubber or plastic hose, and installed around stake and stem in a figure eight pattern.
- For plants < 2.5 m high: 50 mm hessian webbing stapled to the stake.

Marker stakes

Material: Timber offcuts 25 x 25 x 1200 mm. Dip the top 200 mm in white paint.

Installation: Drive firmly into the ground at least 300 mm from the plant. Do not tie to the plant.

Location of marker stakes:

- Trees in grass: Mark each tree.
- Rip line planting areas: Mark each rip line at every fifth plant along the line.

Trunk protection/Tree guards

Collar guards: 200 mm length of 100 mm diameter agricultural pipe split lengthways.

Removal: If plants are robust with well-developed systems and are strong enough to no longer require support, remove stakes and ties at the end of the planting establishment period (Defects Liability Period).

- Adjust and replace as required to ensure plants remain correctly staked.
- Repair any tree ties that have been broken and replace any missing stakes.
- Maintain the tree guards around each plant so that the natural plant growth is not impeded or restricted. Replace damaged and missing tree guards as soon as practicable after being identified.
- Remove tree guards progressively as plants mature and where it is deemed that the tree guard provides no further benefit to the establishment of the plant.

Root Barriers

Type/ location: Street Trees. Refer to the Oakdale West Estate LMP for further details. City Green 'ReRoot' 600mm Depth

Supplier: City Green. Ph: +61 1300 066 949

<https://citygreen.com/products/reroot/>

5.3.6 MULCHED SURFACES

The contractor is required to maintain all areas of mulch cover within garden beds. Displaced mulch should be returned to the garden beds wherever possible. All areas of mulch cover must be packed to a depth of 75mm. If replacement of mulch is required, the contractor must notify the Landscape Manager and provide quotation for approval. Specific mulch must be approved prior to installation.

5.3.7 HYDROMULCHING

General: Maintain temporary and permanent grassing areas.

Weeding: Remove weeds that emerge in newly established hydroseeded/hydromulched areas.

Reseeding: Repair topsoil, supplementing if necessary, to achieve design surface levels. Reseed over the course of the contract to maintain required densities and repair bare patches.

Watering: Until germination, keep the surface damp and the topsoil moist but not waterlogged.

After germination: Water to maintain a healthy condition, progressively hardened off to the ambient climatic conditions

5.3.8 MOWING AND TOPDRESSING

Mow and edge all turf areas and remove all grass clippings. Do not mow if there is litter, roadside rubbish and debris left on the turf as the litter may be transformed into confetti-like pieces after mowing.

Unless directed otherwise, the cut grass height must not be less than 35 mm or greater than 75 mm. Do not remove more than 50% of the height of the uncut grass at any one time. The upper limit may be varied to account for terrain, species of grass and presence of debris.

Clippings may remain where they fall, except for those that fall on road surfaces, line drains, footways or paved areas where they must be swept clear.

Lawn care

Lawn areas, including nature strips must be neatly mown and edged weekly in the high season (summer months), fortnightly in the low season (winter months), or weekly if required due to abnormal weather condition. All clippings must be removed from the site. All lawns must be fertilized once a year with an approved lawn fertilizer.

Interface Issues

Where landscape treatments requiring lawn care interface fixed elements such as signage, fencing and walling ensure optimal care to avoid damaging the fixed element.

5.3.9 IRRIGATION & WATERING

Maintain the irrigation system to sure that each individual plant receives the required amount of water to maintain healthy growth, adjust and rectify as required.

Provide additional hand watering, if irrigation system fails or is yet to be installed.

Undertake watering at two-day intervals for four weeks after completion of each planting area.

The irrigation system must be fully functional at all times to ensure that all plants, trees and lawns receive adequate water at optimal frequency. The system should be tested during each site visit to ensure proper operation timing is set correctly. Adjustments must be made where necessary.

It is the contractor's responsibility to submit a bi-monthly report throughout the defect's liability period. This report should include a comprehensive report on the operational function of the system.

Notification as to when the system is in need of major repair must be done so immediately as the cost of major repairs to the system can be claimed as variation to the contract price and should be invoiced separately.

When water restrictions prevent the use of the irrigation system, arrangements must be made by the contractor to provide an alternative system of watering. Under no circumstances should plant stock be allowed to perish through lack of water.

Locations of water supply points have been marked indicatively on Landscape Drawings; all irrigation supply conduits are subject to Sydney Water Approval.

5.3.10 EROSION CONTROL MEASURES

Where necessary, maintain the erosion control devices in a tidy and weed free condition and reinstate as necessary to ensure control measures are effective where deemed necessary. [Refer to the **Erosion and Sediment Control Plan** for erosion control measures.](#)

5.3.11 FINAL CLEANING

Lamp and filter replacement and the like are dealt with in the various SERVICES worksections.

General: Before practical completion, clean throughout, including interior and exterior surfaces exposed to view. Clean debris from the site, roofs, gutters, downpipes and drainage systems. Remove waste and surplus materials.

The contractor shall target weeds that are capable of producing a major infestation of unwanted plants by seed distribution. Whenever possible, time weed removal to precede flowering and seed set.

Samples: Remove non-incorporated samples, prototypes and sample panels.

5.3.12 REINSTATEMENT

General: Before practical completion, clean and repair damage caused by installation or use of temporary work and restore existing facilities used during construction to original condition.

5.3.13 ADJOINING PROPERTY

Evaluation: At practical completion, for properties described in the Adjoining properties to be Recorded schedule inspect the properties with the project superintendent, recording any damage that has occurred since the pre-commencement inspection.

5.3.14 REMOVAL OF PLANT

General: Within 10 working days after practical completion, remove temporary works and construction plant no longer required. Remove the balance before the end of the defect's liability period.

5.3.15 URGENT WORKS

Notwithstanding anything to the contrary in the Contract, the Project Superintendent may instruct the Contractor to perform urgent maintenance works that place the completed contract works at risk.

If the Contractor fails to carry out the work within seven (7) days of such notice, the Project Superintendent (or representative) reserves the right without further notice to employ others to carry out such urgent and specified work and charge the cost to the Contractor. Such work shall include but not be limited to the inspection and clearing of drains in the pavement and gardens.

5.4 COMPLETION

A final inspection shall be made by the Project Superintendent, Contractor and Landscape Architect before the completion of the Plant Establishment Maintenance Period (Defects Liability Period).

Any items requiring rectification shall be repaired before completion of the relevant works and finally approved prior to certification.

Maintenance requirements should extend for a minimum of 18 months after the completion of works (i.e. Practical Completion or PC). Prior to handover, the contractor(s) is/are required to submit all maintenance records, progress reports and a final monitoring report. The final monitoring report shall provide a summary of all works undertaken during the plant establishment period.

6 MAINTENANCE SCHEDULES

The following Maintenance Schedule is only applicable to the 'Defects Liability Period' and/or 'Establishment Period'.

6.1 MAINTENANCE REPORT SCHEDULE

General

Landscape Maintenance Schedule, Landscape Maintenance Procedure Schedule and Landscape Specification are to be read in conjunction with one another

* Key: D – Daily, W – Weekly, F – Fortnightly, M – Monthly, 3-6M – Quarterly or Half Yearly, Y – Yearly

Task	Activity	Frequency						Action
		D	W	F	M	3-6M	Y	
1	Logbook				x		x	Complete a logbook entry when at site and at a minimum every two weeks. Upon request, make the logbook available for inspection. Submit copies of new entries in the logbook to the Contract Administrator on a monthly basis. Maintenance requirements should extend for a minimum of 1 year after the completion of works or until such time as a minimum 80% survival rate for all plantings and a maximum five percent (5%) weed cover for the treated riparian corridors, basins and verge/median planting is achieved.
2	Planting and Replacement			x	x			Inspect planting every 2 weeks and remove spent flowers and dead stalks as they become apparent. Inspect and replace failed plants within 2 weeks of observation of failure. Match species with original planted sizes and location of new with old.
3	Pruning			x				Inspect every 2 weeks and prune as necessary to remove dead wood.

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								Pruning should Improve plant shape and promote healthy new growth.
4	Spraying			x				Inspect every 2 weeks and action as necessary. Do not spray if other nonchemical methods will satisfy the need to remove pests. Spray for disease control only when absolutely necessary.
5	Fertilising					x		Fertilise gardens every 3 months or in accordance with fertiliser manufacturer's directions.
6	Stakes and Ties			x			x	Inspect every 2 weeks, adjust and/or replace as necessary but remove as plants mature and are able to support themselves.
7	Mulching							Inspect and replace mulch deficiencies within 2 weeks of observation. Prior to placing new mulch aerate the soil by fork turning to a depth of at least 100mm, roughly level the soil and then place mulch. Do not disturb major plant roots while aerating soil. It can be expected that mulch will have significantly broken-down after an estimated 12-month period following initial application. It is therefore, recommended that all mulch beds are topped-up with a 50mm layer of woodchip/leaf mulch (Compliant with AS 4454) at this stage. This should be accompanied by a topdressing application of a 9-month, slow release, low phosphorous fertilizer to ensure that semi-established plantings do not suffer as a result of potential nitrogen draw-down that may be associated with the application of the 50mm mulch layer at yearly period.
8	Hydroseeding		x		x		x	Remove weeds monthly that emerge in newly established hydroseeded/hydromulched areas. Reseed monthly over the course of the contract to maintain required densities.

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								Water until germination, keep the surface damp and the topsoil moist but not waterlogged. After germination: Water to maintain a healthy condition, progressively hardened off to the ambient climatic conditions
9	Mowing and Topdressing			x	x	x		Summer fortnightly. Winter monthly. Top-dress 6 monthly.
10	Irrigation and Watering	x		x				Water when and where necessary every day at site and at least every 2 weeks generally. Do not allow soil and plants to dehydrate. Allow for prolonged rain, windy and dry periods. Water in the early morning or late afternoon to avoid excessive evaporation during the heat of the day.
11	Erosion Control Measures							<p>Refer to the Erosion and Sediment Control Plan for erosion control measures.</p> <p>Inspect every two weeks and repair ground, soil and mulch immediately. Maintain erosion control device as necessary. Silt fencing installed for sediment control purposes to the east of the tributary. Silt fencing should be regularly inspected and repaired or reinstalled as necessary.</p> <p>Maintenance as per Penrith City Council guidelines, including: Monitoring for scour and erosion, and sediment or litter build-up. Weed removal and plant re-establishment.</p> <p>Monitor overflow pits for structural integrity and blockages.</p>
12	Final Cleaning		x				x	Inspect and remove litter immediately upon observation. Leave no waste on site. Dispose of waste material at a designated waste disposal site. All herbaceous weeds should be managed to be at very-low

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							percentage cover levels, (as a minimum), or better. Pasture grasses should be prevented from spreading into any bushland zones by applying a spot glyphosate herbicide spray application on the 1-metre wide buffer zone, on a monthly basis or as required. Maintenance weeding for a period of 12 months after the completion of primary works with an increase in maintenance hours occurring throughout the warmer growing months.
13	Urgent Works		x				Complete within 1 week (7 days) of notification. Inspect and clear drains as required.

6.2 MAINTENANCE PROCEDURE SCHEDULE**Maintenance Scope of Works**

The Maintenance procedure schedule should be used as a check list of tasks when in attendance

Week	Spring (Sep, Oct, Nov)	Summer (Dec, Jan, Feb)	Autumn (Mar, April, May)	Winter (June, July, Aug)
1	Mow and trim lawns	Mow lawns, weed	Mow Lawns	Weed
2	Weed; trim and adjust trees and shrubs	Weed; mow lawns, trim and adjust trees and shrubs	Weed; mow lawns, trim and adjust trees and shrubs	Mow and trim lawns Trim and adjust trees and shrubs
3	Mow and fertilise lawns; treat plant material for insects and disease	Mow lawns; weed; treat plant material for insects and disease	Mow and trim lawn	Weed
4	Weed; topdress, condition lawns and oversow bare patches; issue logbook	Weed; mow and trim lawns; issue logbook	Weed; mow lawns; issue logbook	Mow lawns; issue logbook
5	Fertilise all trees and shrubs in garden beds; mow and trim lawns	Mow lawns; weed	Mow lawns	Mow lawns
6	Weed; inspect mulch for deficiencies in	Mow lawns; check and adjust irrigation	Weed; inspect mulch for deficiencies in	Mow and trim lawns; treat for insects and

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	cover; check and adjust irrigation		cover; check and adjust irrigation	disease; check and adjust irrigation
7	Reinstate mulch as required; treat plant material for insects and disease; mow lawns	Mow lawns; weed	Reinstate mulch as required; mow, trim and fertilise lawns	Weed
8	Weed; inspect condition of paving and furniture; issue logbook	Mow and trim lawns; inspect condition of paving & furniture; issue logbook	Weed; inspect condition of paving and furniture; issue logbook	Mow lawns; Inspect condition of paving and furniture; issue logbook
9	Mow and trim lawns	Mow lawns; treat plant material for insects and disease	Mow lawns	Weed
10	Weed; mow lawns	Mow and topdress lawns	Weed; treat plant material for insects and disease	Mow and trim lawns
11	Mow and fertilise lawns; trim and adjust trees and shrubs	Mow lawns; trim and adjust lawns; weed	Weed	Mow lawns; treat plant material for insects and disease
12	Weed; mow lawns; treat plant material for insects and disease	Mow, trim & fertilise lawns	Weed	Mow lawns; treat plant material for insects and disease
13	Check and adjust irrigation; mow lawns; issue logbook	Check and adjust irrigation; mow lawns; weed; issue logbook	Check and adjust irrigation; mow lawns; weed; issue logbook	Check and adjust irrigation; weed; issue logbook

6.3 IRRIGATION SCHEDULE

The following Irrigation Schedule is only applicable to the 'Defects Liability Period' and/or 'Establishment Period'.

Irrigation Maintenance Schedule

The Irrigation Maintenance Schedule should be used as a check list of minimum attendance

Task	Timeframe
Filters – Mainline	Monthly
Electrical Source Output (auto system)	Monthly
Controller (automatic system)	Monthly
Operation – Progression	Monthly

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Activation of Valves	Monthly
Timing of Stations	Bi-Annually
Time and Day Readings	As Required
Exterior Appearance	Bi-Annually
Valve Operation	Bi-Annually
Open/Close Weeping	As Required
Sprinkler Operation	As Required
Rotaries – Clogged Nozzles	Bi-Monthly
Plant Obstructed Pattern	Bi-Monthly
Arc Coverage	Bi-Monthly
Radius Adjustment	Bi-Monthly
Pop-up Action	Bi-Monthly
Riser Seal Leaks	Bi-Monthly
Set to Grade	Bi-Monthly
Coverage Pressure	Bi-Monthly
Rotational Speed	Bi-Monthly
Clogged Screens	Bi-Monthly
Head Damage	Bi-Monthly
Piping	Bi-Monthly
Leaks – Broken or Cracked	As Needed
Poor Welding or Threading	As Needed
Connection	As Needed
Clogged Piping	As Needed
Irrigation Report	Bi-Monthly

6.4 PRUNING SCHEDULE

The contractor is to prune all plants or shrubs species as required to satisfy Goodman's presentation standard. Pruning should be carried out on a 'needs-basis' specific to each plant. Pruning should be carried out to encourage new growth that will result in a dense canopy density. No more than 30mm of new growth should be seen before pruning takes place. All plant pruning should be carried out using best horticultural techniques. No hedging of native grasses permitted at any time.

6.4.1 PRUNING SCHEDULE – OAKDALE WEST ESTATE, PRECINCT 1

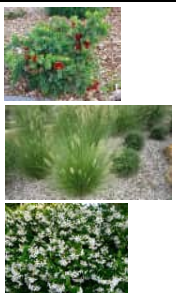
Plant Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
PM1A	Car Park Edge Mix - Sun <i>Callistemon viminalis</i> 'Little John' <i>Pennisetum alopecuroides</i> 'Nafay' <i>Trachelospermum jasminoides</i>	Shrubs/Grasses/ Groundcovers Drought tolerant, low water and fertiliser requirements.	Shrubs/Grasses/ Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	

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Plant Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
PM1B	Car Park Edge Mix - Shade <i>Hibbertia scandens</i> <i>Pennisetum alopecuroides</i> 'Nafray' <i>Viola hederacea</i>	Grasses/Groundcovers Drought and shade tolerant, low water and fertiliser requirements.	Grasses/Groundcovers Remove spent flowers and any dieback. Only prune to maintain safe access.	
PM2A	Car Park Island Mix - Sun <i>Carex appressa</i> <i>Gazania tomentosa</i> <i>Lomandra longifolia</i> <i>Pennisetum alopecuroides</i> 'Nafray'	Grasses/Groundcovers Drought tolerant, low water and fertiliser requirements.	Grasses/Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM3A	Side Edge Mix Low - Sun <i>Callistemon 'White Anzac'</i> <i>Gazania tomentosa</i> <i>Pennisetum alopecuroides</i> 'Nafray'	Shrubs/Grasses/Groundcovers Drought tolerant, low water and fertiliser requirements.	Shrubs/Grasses/Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM3B	Site Edge Mix Low - Shade <i>Rhaphiolepis indica 'Oriental Pearl'</i> <i>Trachelospermum jasminoides 'Tricolor'</i> <i>Viola hederacea</i>	Shrubs/Grasses/Groundcovers Drought tolerant, low water and fertiliser requirements.	Shrubs/Grasses/Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM4	Site Markers Mix <i>Nandina domestica 'Gulf Stream'</i> <i>Pennisetum alopecuroides</i> 'Nafray'	Shrubs/Grasses Drought tolerant, low water and fertiliser requirements.	Shrubs/Grasses Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM5A	Feature Planting Mix <i>Doryanthes excelsa</i> <i>Loropetalum chinense rubrum</i> 'China Pink' <i>Photinia x fraseri 'Red Robin'</i>	Shrubs/Grasses Drought tolerant, low water and fertiliser requirements.	Shrubs/Grasses Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	

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Plant Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
PM6A	Site Hedge Mix – Sun <i>Acmena smithii</i> 'Hot Flush' <i>Metrosideros thomasi</i> <i>Rhapiolepis indica</i> 'Oriental Pearl' <i>Rhapiolepis indica</i> 'Snow Maiden'	Shrubs Drought tolerant, low water and fertiliser requirements.	Shrubs Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM7A	Groundcovers Mix A <i>Gazania tomentosa</i>	Groundcovers Drought tolerant, low water and fertiliser requirements.	Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM7B	Groundcovers Mix B <i>Trachelospermum jasminoides</i> 'Tricolor'	Groundcovers Drought tolerant, low water and fertiliser requirements.	Groundcovers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM9A	Climbers Mix – Sun <i>Hibbertia scandens</i>	Climbers Drought tolerant, low water and fertiliser requirements.	Climbers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	
PM9B	Climbers Mix – Shade <i>Trachelospermum jasminoides</i>	Climbers Drought tolerant, low water and fertiliser requirements.	Climbers Prune after flowering to remove spent flowers, encourage healthy growth and maintain safe access.	

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Tree Mix	Shape/description	Critical issues	Pruning Frequency	Planting Palette
Trees	General Trees <i>Angophora bakeri</i> <i>Angophora floribunda</i> <i>Corymbia eximia</i> <i>Corymbia maculata</i> <i>Cupaniopsis anacardioides</i> <i>Eucalyptus amplifolia</i> <i>Eucalyptus crebra</i> <i>Eucalyptus moluccana</i> <i>Glochidion ferdinandi</i> <i>Lagerstroemia indica</i> 'Tuscarora' <i>Melaleuca linarifolia</i> <i>Pyrus calleryana</i> 'Capital' <i>Tristaniaopsis laurina</i> 'Luscious' <i>Waterhousea floribunda</i>	Street Trees Plant in moist but well drained soils with full or partial sun.	Trees Prune during flower dormancy, to encourage dense canopy and maintain safe access.	

6.5 CONTINGENCY MANAGEMENT PLAN

Contingency Management Plan – Oakdale West Estate

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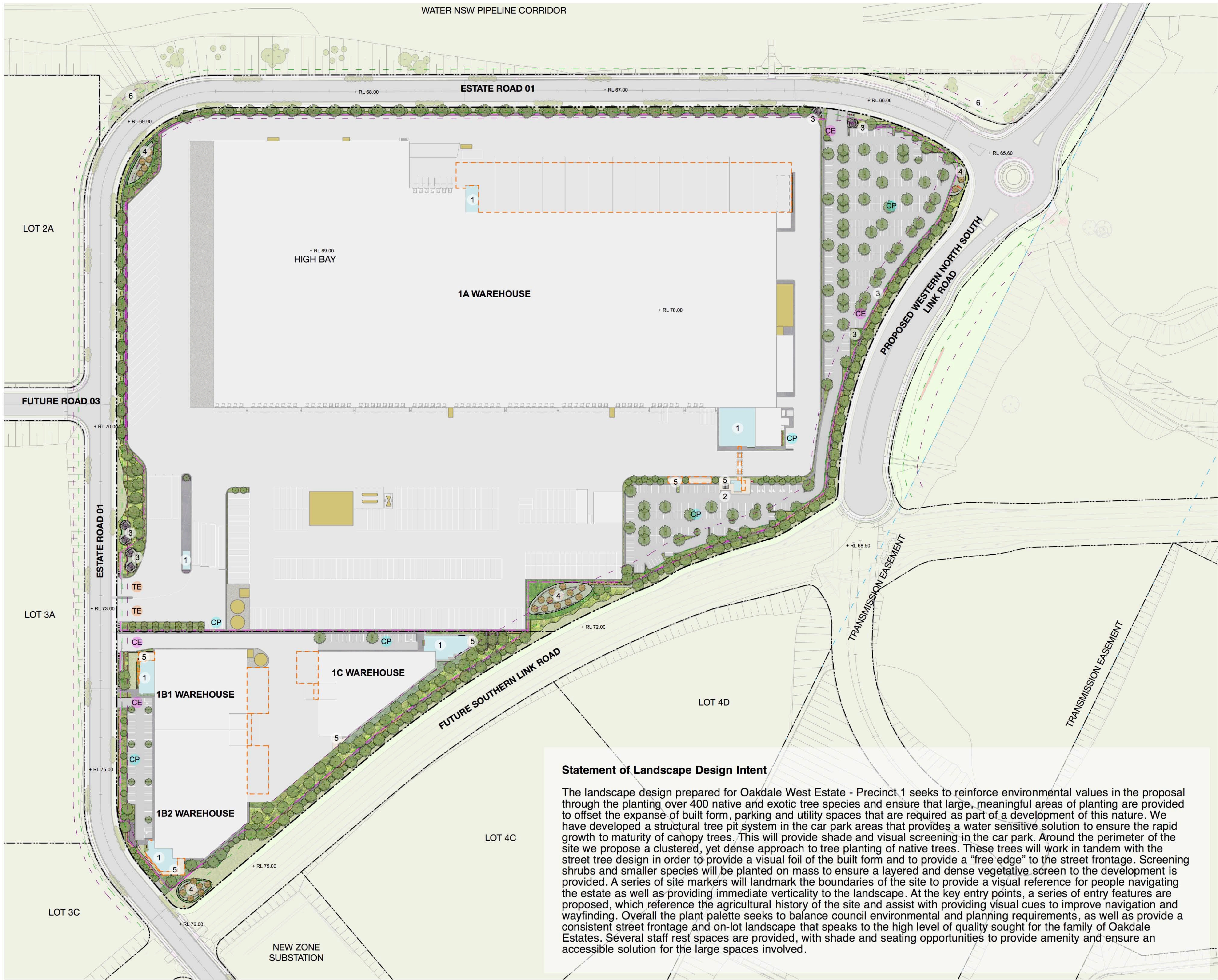
Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
Irrigation	Trigger	Irrigation system operating at optimum frequency.	Irrigation system yet to be installed.	Irrigation system fails.
	Response	No response required. Continue to monitor.	Provide additional hand watering until system is installed.	Provide additional hand watering until system is repaired. The irrigation system must be fully functional at all times to ensure that all plants, trees and lawns receive adequate water at optimal frequency.
Plant Failure	Trigger	No significant plant failure is present. Monitoring verifies that there is <5% of plants failing.	Monitoring verifies there is plant failure at a rate between 5% -10%.	Monitoring verifies there is plant failure at a rate greater than 10%.
	Response	No response required. Continue to monitor.	If the cause of failure is due to a controllable situation then correct situation prior to replacing plants. All planting areas are to be free of grass and weed. Replace plants with one of similar size and quality and identical species. of variety of the ones failed.	If the cause of failure is due to a controllable situation then correct situation prior to replacing plants. All planting areas are to be free of grass and weed. Replace plants with one of similar size and quality and identical species. of variety of the ones failed.
Revegetation Failure	Trigger	Revegetation is growing to desired design surface levels	Monitoring verifies that weed emergence has occurred.	Monitoring verifies that weed emergence and plant failure has occurred.

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Key Element	Trigger/ Response	Condition Green	Condition Amber	Condition Red
	Response	No response required. Continue to monitor.	Refer to LMP for monitoring requirements once problem has been identified. Possible solutions include the removal of weeds as per Section 5.3.7 of this LMP.	Refer to LMP for monitoring requirements once problem has been identified. Possible solutions include removal of weeds and re-seeding of revegetation cover crop as per Section 5.3.7 of this LMP.
Slope Failure	Trigger	No significant erosion is present that would constitute a safety hazard or compromise the capability of supporting the end land use. Monitoring verifies there are no gully or tunnel erosion features, or rill erosion >200mm deep.	Monitoring verifies there is gully or tunnel erosion features, or rill erosion 200mm deep.	Monitoring verifies there is gully or tunnel erosion features, or rill erosion > 200mm deep.
	Response	No response required. Continue to monitor.	A suitably trained person to inspect the site. Investigate opportunities to install water management infrastructure to address erosion. Remediate as appropriate.	Undertake a review of the drainage of the area and provide recommendations to appropriately remediate the erosion. Remediate as soon as practicable.

7 APPENDICES

7.1 REFERENCED LANDSCAPE DRAWINGS



LEGEND	
PROGRAMME	PAVEMENTS
1 Office	Coarse Aggregate
2 Motorcycle Parking	Asphaltic Concrete
3 Entry Marker	Insitu Concrete
4 Site Marker	Precast Concrete
5 Staff Rest Area	Stone Tiles
6 OWE Stage 1 Pocket Parks	Feature paving
CE Car entry/exit	FURNITURE & FITTINGS
CP Carparking	Proposed Seating
TE Truck entry/exit	Proposed Pergola
GENERAL	Proposed Bollards
Site Boundary	Proposed Street Lighting
Lot Boundary	Proposed Sleeper Mullion
Proposed Contour Line	Proposed Sandstone Block
Existing Contour Line	Bicycle rack
+ RL 69.00 Finished Level	Gate
+ FFL 562.00 Finished Floor Level	Sculpture
+ RL 562.00 Reduced Level	Signage
Fence	PLANTING
20m Setback Building	TF1-General Turf
10m Setback Landscape	TF2-Feature Turf
Transmission Easement	PM1A-Car park edge mix-sun
Demolition	PM1B-Car park edge mix-shade
Architecture Above	PM2A-Car park island mix-sun
Architecture Below	PM2B-Car park island mix-shade
Proposed Ramp	PM3A-Site edge mix - sun
Proposed Stairs	PM3B-Site edge mix - shade
Building	PM4-Site markers mix
Office	PM5A-Feature planting mix-sun
PREPERATION & GROUNDWORKS	PM5B-Site hedge mix-sun
Services	PM7A-Groundcover mix A
Drainage - Grated Sump	PM7B-Groundcover mix B
WALLS & EDGES	PM9A-Climbers mix - sun
Steel Edge	PM9B-Climbers mix - shade
Flush Concrete Kerb	Existing Vegetation
Raised Concrete Kerb	TREES
Retaining Gabion Wall	Existing Tree to be Removed
Retaining Insitu Wall	Refer ARBORISTS REPORT
Steel Wall	Existing Tree to be Transplanted/ original location
	Existing Tree to be Transplanted/ new location
	Existing Tree to be Retained
	Proposed Tree - General
	Proposed Tree - Entry Marker
	Proposed Tree - Site Marker

scapeDESIGN

LANDSCAPE ARCHITECTURE
Address Suite 5, 15 The Corso
Manly NSW 2095
Phone 02 9976 0756
email office@sapedesign.com.au
Web www.sapedesign.com.au

PROJECT
Oakdale West Estate, Precinct 1

CLIENT
Goodman Property Services

M	DEVELOPMENT APPLICATION	MF	25/2/20
L	DEVELOPMENT APPLICATION	MF	21/2/20
K	DEVELOPMENT APPLICATION	MF	14/2/20
J	DEVELOPMENT APPLICATION	ZZ	25/10/19
I	CLIENT REVIEW	MF	18/10/19
revision	revision description	by	date

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Refer to 'On Before You Dig' documents, design drawings and survey for locations of all services.
Verify services locations prior to commencement.
Verify all dimensions on site prior to construction.

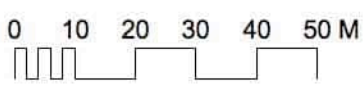
Landscape Master Plan

scale	1:1250@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

Statement of Landscape Design Intent

The landscape design prepared for Oakdale West Estate - Precinct 1 seeks to reinforce environmental values in the proposal through the planting over 400 native and exotic tree species and ensure that large, meaningful areas of planting are provided to offset the expanse of built form, parking and utility spaces that are required as part of a development of this nature. We have developed a structural tree pit system in the car park areas that provides a water sensitive solution to ensure the rapid growth to maturity of canopy trees. This will provide shade and visual screening in the car park. Around the perimeter of the site we propose a clustered, yet dense approach to tree planting of native trees. These trees will work in tandem with the street tree design in order to provide a visual foil of the built form and to provide a "free edge" to the street frontage. Screening shrubs and smaller species will be planted on mass to ensure a layered and dense vegetative screen to the development is provided. A series of site markers will landmark the boundaries of the site to provide a visual reference for people navigating the estate as well as providing immediate verticality to the landscape. At the key entry points, a series of entry features are proposed, which reference the agricultural history of the site and assist with providing visual cues to improve navigation and wayfinding. Overall the plant palette seeks to balance council environmental and planning requirements, as well as provide a consistent street frontage and on-lot landscape that speaks to the high level of quality sought for the family of Oakdale Estates. Several staff rest spaces are provided, with shade and seating opportunities to provide amenity and ensure an accessible solution for the large spaces involved.

Note: All finished levels subject to change +/- 1000mm.



PLANTING SCHEDULE

Botanical Name	Common Name	Height (m)	Spread (m)	Pot Size	Rate (m2)
Trees & Specimen Shrubs					
<i>Angophora bakeri</i>	Narrow-leaved Apple	12.0	6.0	75L	As Shown
<i>Angophora floribunda</i>	Rough-barked Apple	20.0	10.0	100L	As Shown
<i>Corymbia eximia</i>	Yellow Bloodwood	12.0	8.0	75L	As Shown
<i>Corymbia maculata</i>	Spotted Gum	30.0	10.0	75L	As Shown
<i>Cupaniopsis anacardioides</i>	Tuckeroo	12.0	6.0	75L	As Shown
<i>Eucalyptus amplifolia</i>	Cabbage Gum	25.0	8.0	75L	As Shown
<i>Eucalyptus crebra</i>	Narrow leaved Ironbark	30.0	10.0	75L	As Shown
<i>Eucalyptus moluccana</i>	Grey Box	25.0	10.0	75L	As Shown
<i>Glochidion ferdinandi</i>	Cheese Tree	20.0	10.0	75L	As Shown
<i>Lagerstroemia indica</i> 'Tuscarora'	Tuscarora Crepe Myrtle	6.0	4.5	200L	As Shown
<i>Melaleuca linariifolia</i>	Snow-in-Summer	10.0	4.0	75L	As Shown
<i>Pyrus calleryana</i> 'Capital'	Capital Flowering Pear	10.0	3.0	200L	As Shown
<i>Tristaniopsis laurina</i> 'Luscious'	Water Gum	12.0	5.0	75L	As Shown
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	12.0	8.0	75L	As Shown
PM1A - Car Park Edge Mix - Sun				Area =	5878 sq.m
<i>Callistemon viminalis</i> 'Little John'	Little John Bottlebrush	0.6	0.8	140mm	2
<i>Pennisetum alopecuroides</i> 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1
<i>Trachelospermum jasminoides</i>	Star Jasmine	0.9	0.3	140mm	2
PM1B - Car Park Edge Mix - Shade				Area =	668 sq.m
<i>Hibbertia scandens</i>	Climbing Guinea-Flower	2.0	2.0	140mm	2
<i>Pennisetum alopecuroides</i> 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1
<i>Viola hederacea</i>	Native Violet	0.1	0.2	140mm	2
PM2A - Car Park Island Mix - Sun				Area =	528 sq.m
<i>Carex appressa</i>	Tall Sedge	0.7	0.5	140mm	2
<i>Gazania tomentosa</i>	Silver Gazania	0.3	1.5	140mm	2
<i>Lomandra longifolia</i>	Spiny-headed Mat-Rush	0.8	1.0	140mm	1
<i>Pennisetum alopecuroides</i> 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1
PM3A - Site Edge Mix Low - Sun				Area =	7292 sq.m
<i>Callistemon 'White Anzac'</i>	Bottlebrush	1.0	2.0	140mm	1
<i>Gazania tomentosa</i>	Silver Gazania	0.3	1.5	140mm	2
<i>Pennisetum alopecuroides</i> 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1
PM3B - Site Edge Mix Low - Shade				Area =	250 sq.m
<i>Rhaphiolepis indica</i> 'Oriental Pearl'	Oriental Pearl Indian Hawthorn	1.0	1.0	140mm	2
<i>Trachelospermum jasminoides</i> 'tricolor'	Tricolor Star Jasmine	0.5	1.0	140mm	2
<i>Viola hederacea</i>	Native Violet	0.1	0.2	140mm	2
PM4 - Site Markers Mix				Area =	711 sq.m
<i>Nandina domestica</i> 'Gulf Stream'	Dwarf Sacred Bamboo	0.8	0.8	140mm	2
<i>Pennisetum alopecuroides</i> 'Nafray'	Pennisetum Nafray	0.5	0.5	140mm	1
PM5A - Feature Planting Mix				Area =	1016 sq.m
<i>Doryanthes excelsa</i>	Gynea Lily	2.0	1.5	200mm	2
<i>Loropetalum chinense rubrum</i> 'China Pink'	Chinese Fringe Flower	1.5	1.5	200mm	2
<i>Photinia x fraseri</i> 'Red Robin'	Red Robin	3.0	2.0	200mm	1
PM6A - Site Hedge Mix - Sun				Area =	1087 sq.m
<i>Acmena smithii</i> 'Hot Flush'	Lilly Pilly	4.0	2.0	300mm	1
<i>Metrosideros thomasi</i>	New Zealand Christmas Bush	4.0	4.0	300mm	1
<i>Rhaphiolepis indica</i> 'Oriental Pearl'	Oriental Pearl Indian Hawthorn	1.0	1.0	300mm	2
<i>Rhaphiolepis indica</i> 'Snow Maiden'	Snow Maiden Indian Hawthorn	0.5	1.0	300mm	2
PM7A - Groundcover Planting Mix A				Area =	812 sq.m
<i>Gazania tomentosa</i>	Silver Gazania	0.3	1.5	140mm	2
PM7B - Groundcover Planting Mix B				Area =	698 sq.m
<i>Trachelospermum jasminoides</i> 'tricolor'	Tricolor Star Jasmine	0.5	1.0	140mm	2
PM9A - Climbers Mix - Sun				Area =	38 sq.m
<i>Hibbertia scandens</i>	Climbing Guinea-Flower	2.0	2.0	300mm	2
PM9B - Climbers Mix - Shade				Area =	6 sq.m
<i>Trachelospermum jasminoides</i>	Star Jasmine	0.9	0.3	300mm	2
TF1 - General Turf				Area =	4134 sq.m
<i>Stenotaphrum secundatum</i> 'Sir Walter'	Sir Walter Buffalo			Turf Roll	
TF2 - Feature Turf (Planted)				Area =	1512 sq.m
<i>Zoysia tenuifolia</i>	No-Mow Grass/Velvet Grass			200mm	

NOTE:
1. Mass planting to be undertaken in large groupings of the same species to approval of landscape architect.
2. Hedging species are to be set out in linear arrangements of same speceies to approval of landscape architect.

PLANTING PALETTE

Trees & Specimen Shrubs



Angophora floribunda



Corymbia maculata



Eucalyptus moluccana



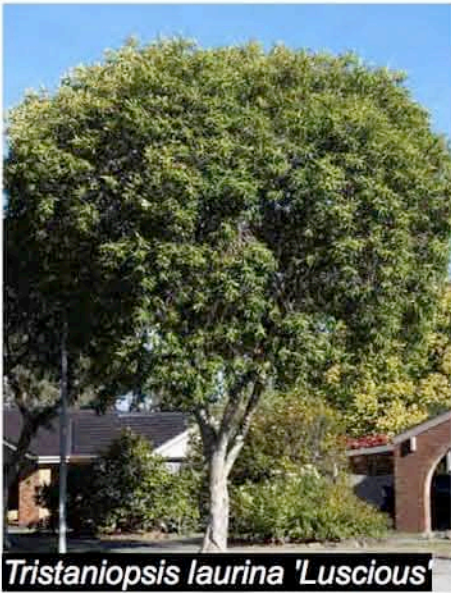
Lagerstroemia indica 'Tuscarora'



Melaleuca linariifolia

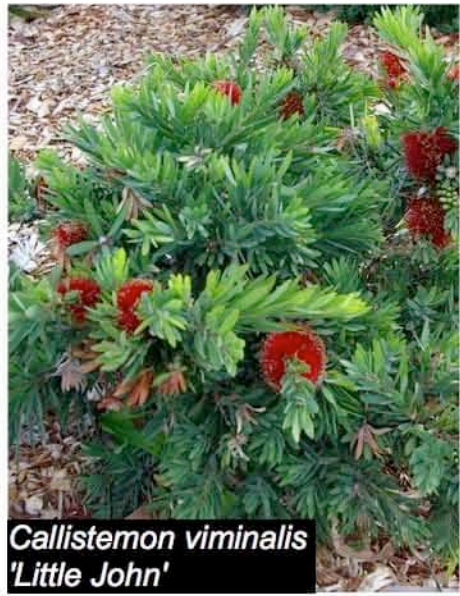


Pyrus calleryana 'Capital'



Tristaniopsis laurina 'Luscious'

PM1A - Car Park Edge Mix - Sun



Callistemon viminalis 'Little John'



Pennisetum alopecuroides 'Nafray'



Hibbertia scandens



Viola hederacea



Carex appressa



Gazania tomentosa



Callistemon 'White Anzac'

PM1B - Car Park Edge Mix - Shade

PM2A - Car Park Island Mix - Sun

PM3A - Site Edge Mix Low - Sun

PM3B - Site Edge Mix Low - Shade

PM4-Site Markers Mix

PM5A - Feature Planting Mix



Rhaphiolepis indica 'Oriental Pearl'



Trachelospermum jasminoides 'Tricolour'



Nandina 'Gulf Stream'



Doryanthes excelsa



Loropetalum rubrum chinense 'China Pink'



Photinia x fraseri 'Red Robin'

PM6A - Site Hedge Mix - Sun



Acmena smithii 'Hot Flush'



Metrosideros thomasi



Gazania tomentosa



Trachelospermum jasminoides 'Tricolour'

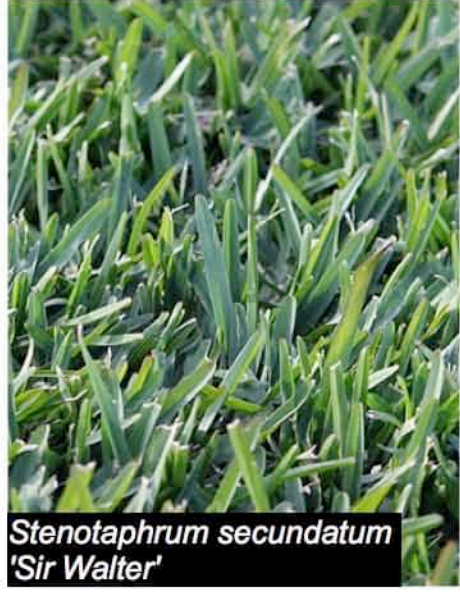


Hibbertia scandens



Trachelospermum jasminoides

TF1 - General Turf



Stenotaphrum secundatum 'Sir Walter'

TF2 - Feature Turf



Zoysia tenuifolia



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Oakdale West, NSW
CLIENT
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L	DEVELOPMENT APPLICATION	MF	9/3/20
K	DEVELOPMENT APPLICATION	MF	26/2/20
J	DEVELOPMENT APPLICATION	MF	21/2/20
I	DEVELOPMENT APPLICATION	MF	14/2/20
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Planting Schedule

scale NTS
drawn MF/ZZ
checked CH
project no. 163-18
project phase Development Application

L.SK.03

L



LEGEND

PROGRAMME
1 Office
2 Motorcycle Parking
3 Entry Marker
4 Site Marker
5 Staff Rest Area
6 OWE Stage 1 Pocket Parks
CE Car entry/exit
CP Carparking
TE Truck entry/exit

PAVEMENTS
Coarse Aggregate
Asphaltic Concrete
Insitu Concrete
Precast Concrete
Stone Tiles
Feature paving

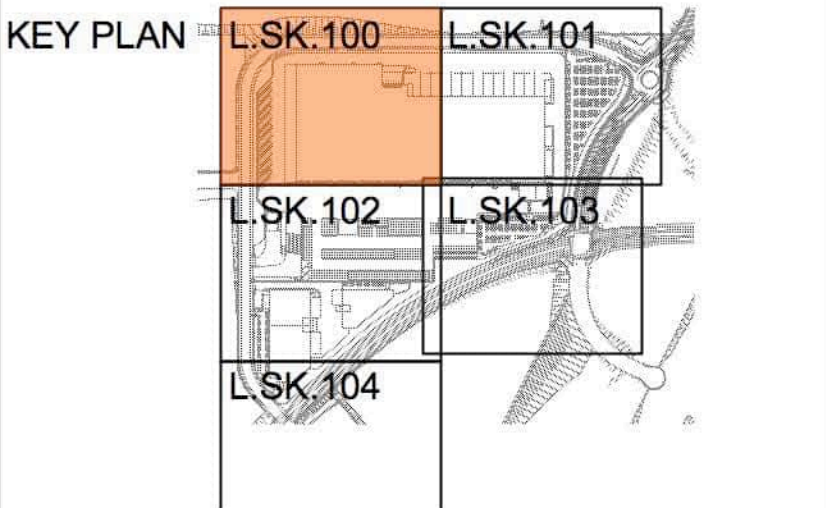
FURNITURE & FITTINGS
Proposed Seating
Proposed Pergola
Proposed Bollards
Proposed Street Lighting
Proposed Sleeper Mullion
Proposed Sandstone Block
Bicycle rack
Gate
Sculpture
Signage

GENERAL
Site Boundary
Lot Boundary
Proposed Contour Line
Existing Contour Line
+ FL 562.00 Finished Level
+ FFL 562.00 Finished Floor Level
+ RL 562.00 Reduced Level
Fence
20m Setback Building
10m Setback Landscape
Transmission Easement
Demolition
Architecture Above
Architecture Below
Proposed Ramp
Proposed Stairs
Building
Office
Services
Drainage - Grated Sump
Steel Edge
Flush Concrete Kerb
Raised Concrete Kerb
Retaining Gabion Wall
Retaining Insitu Wall
Steel Wall

PREPERATION & GROUNDWORKS
TF1-General Turf
TF2-Feature Turf
PM1A-Car park edge mix-sun
PM1B-Car park edge mix-shade
PM2A-Car park island mix-sun
PM2B-Car park island mix-shade
PM3A-Site edge mix - sun
PM3B-Site edge mix - shade
PM4-Site markers mix
PM5A-Feature planting mix-sun
PM5B-Site hedge mix-sun
PM7A-Groundcover mix A
PM7B-Groundcover mix B
PM9A-Climbers mix - sun
PM9B-Climbers mix - shade
Existing Vegetation

WALLS & EDGES
Steel Edge
Flush Concrete Kerb
Raised Concrete Kerb
Retaining Gabion Wall
Retaining Insitu Wall
Steel Wall

TREES
Existing Tree to be Removed
Refer ARBORISTS REPORT
Existing Tree to be Transplanted/ original location
Existing Tree to be Transplanted/ new location
Existing Tree to be Retained
Proposed Tree - General
Proposed Tree - Entry Marker
Proposed Tree - Site Marker



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K	DEVELOPMENT APPLICATION	MF	21/2/20
J	DEVELOPMENT APPLICATION	MF	14/2/20
I	DEVELOPMENT APPLICATION	ZZ	25/10/19
H	CLIENT REVIEW	MF	18/10/19
G	CLIENT REVIEW	MF	26/9/19
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Landscape Plan Sheet 1

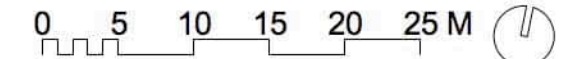
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drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application



Adjoins Sheet L.CD.100

Note: All finished levels subject to change +/- 1000mm.

Adjoins Sheet L.CD.103



LEGEND

PROGRAMME

1

Office

2

Motorcycle Parking

3

Entry Marker

4

Site Marker

5

Staff Rest Area

6

OWE Stage 1 Pocket Parks

CE

Car entry/exit

CP

Carparking

TE

Truck entry/exit

GENERAL

Site Boundary

Proposed Contour Line

Existing Contour Line

Finished Level

Finished Floor Level

Reduced Level

Fence

20m Setback Building

10m Setback Landscape

Transmission Easement

Demolition

Architecture Above

Architecture Below

Proposed Ramp

Proposed Stairs

Building

Office

Services

Drainage - Grated Sump

WALLS & EDGES

Steel Edge

Flush Concrete Kerb

Raised Concrete Kerb

Retaining Gabion Wall

Retaining Insitu Wall

Steel Wall

PAVEMENTS

Coarse Aggregate

Asphaltic Concrete

Insitu Concrete

Precast Concrete

Stone Tiles

Feature paving

FURNITURE & FITTINGS

Proposed Seating

Proposed Pergola

Proposed Bollards

Proposed Street Lighting

Proposed Sleeper Mullion

Proposed Sandstone Block

Bicycle rack

Gate

Sculpture

Signage

PLANTING

TF1-General Turf

TF2-Feature Turf

PM1A-Car park edge mix-sun

PM1B-Car park edge mix-shade

PM2A-Car park island mix-sun

PM2B-Car park island mix-shade

PM3A-Site edge mix - sun

PM3B-Site edge mix - shade

PM4-Site markers mix

PM5A-Feature planting mix-sun

PM5B-Site hedge mix-sun

PM7A-Groundcover mix A

PM7B-Groundcover mix B

PM9A-Climbers mix - sun

PM9B-Climbers mix - shade

Existing Vegetation

TREES

Existing Tree to be Removed

Refer ARBORISTS REPORT

Existing Tree to be Transplanted/ original location

Existing Tree to be Transplanted/ new location

Existing Tree to be Retained

Proposed Tree - General

Proposed Tree - Entry Marker

Proposed Tree - Site Marker

KEY PLAN

L.SK.100

L.SK.101

L.SK.102

L.SK.103

L.SK.104

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Oakdale West, NSW

CLIENT

Goodman Property Services

revision

K

DEVELOPMENT APPLICATION

MF

21/2/20

J

DEVELOPMENT APPLICATION

MF

14/2/20

I

DEVELOPMENT APPLICATION

ZZ

25/10/19

H

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MF

18/10/19

G

CLIENT REVIEW

MF

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Landscapes Plan

Sheet 2

scale

1:500@A1

drawn

MF/ZZ

checked

CH

project no.

163-18

project phase

Development Application

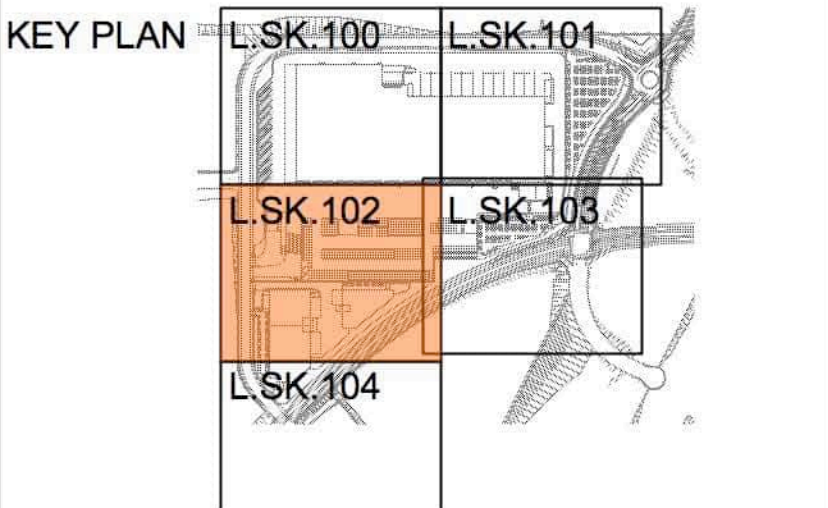
L.SK.101

K

INSET PLAN A: SCALE 1:200

LEGEND

PROGRAMME		PAVEMENTS	
1	Office		Coarse Aggregate
2	Motorcycle Parking		Asphaltic Concrete
3	Entry Marker		Insitu Concrete
4	Site Marker		Precast Concrete
5	Staff Rest Area		Stone Tiles
6	OWE Stage 1 Pocket Parks		Feature paving
CE	Car entry/exit	FURNITURE & FITTINGS	
CP	Carparking		
TE	Truck entry/exit		
GENERAL			
---	Site Boundary		Proposed Seating
---	Lot Boundary		Proposed Pergola
---	Proposed Contour Line		Proposed Bollards
---	Existing Contour Line		Proposed Street Lighting
+ FL 562.00	Finished Level		Proposed Sleeper Mullion
+ RL 562.00	Finished Floor Level		Proposed Sandstone Block
+ RL 562.00	Reduced Level		Bicycle rack
	Fence		Gate
	20m Setback Building		Sculpture
	10m Setback Landscape		Signage
	Transmission Easement	PLANTING	
	Demolition		
	Architecture Above		
	Architecture Below	TF1-General Turf	
	Proposed Ramp	TF2-Feature Turf	
	Proposed Stairs	PM1A-Car park edge mix-sun	
	Building	PM1B-Car park edge mix-shade	
	Office	PM2A-Car park island mix-sun	
		PM2B-Car park island mix-shade	
		PM3A-Site edge mix - sun	
		PM3B-Site edge mix - shade	
		PM4-Site markers mix	
		PM5A-Feature planting mix-sun	
		PM5A-Site hedge mix-sun	
		PM7A-Groundcover mix A	
		PM7B-Groundcover mix B	
		PM9A-Climbers mix - sun	
		PM9B-Climbers mix - shade	
		Existing Vegetation	
		TREES	
		Existing Tree to be Removed	Refer ARBORISTS REPORT
		Existing Tree to be Transplanted/ original location	
		Existing Tree to be Transplanted/ new location	
		Existing Tree to be Retained	
		Proposed Tree - General	
		Proposed Tree - Entry Marker	
		Proposed Tree - Site Marker	



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Oakdale West, NSW
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K	DEVELOPMENT APPLICATION	MF	21/2/20
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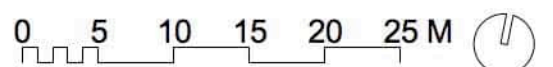
**Landscape Plan
Sheet 3**

scale	1:500@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.102

L

Note: All finished levels subject to change +/- 1000mm.





LEGEND

PROGRAMME
1 Office
2 Motorcycle Parking
3 Entry Marker
4 Site Marker
5 Staff Rest Area
6 OVE Stage 1 Pocket Parks
CE Car entry/exit
CP Carparking
TE Truck entry/exit

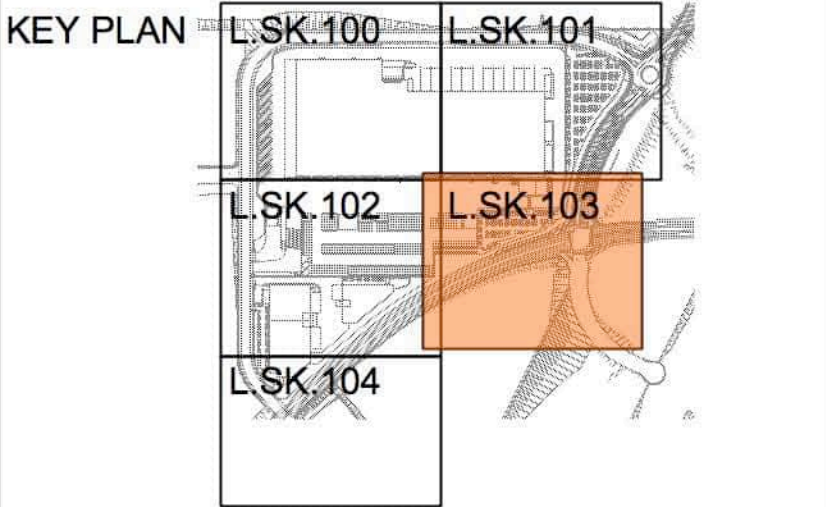
PAVEMENTS
Coarse Aggregate
Asphaltic Concrete
Insitu Concrete
Precast Concrete
Stone Tiles
Feature paving

FURNITURE & FITTINGS
Proposed Seating
Proposed Pergola
Proposed Bollards
Proposed Street Lighting
Proposed Sleeper Mullion
Proposed Sandstone Block
Bicycle rack
Gate
Sculpture
Signage

GENERAL
Site Boundary
Lot Boundary
Proposed Contour Line
Existing Contour Line
Finished Level
Finished Floor Level
Reduced Level
Fence
20m Setback Building
10m Setback Landscape
Transmission Easement
Demolition
Architecture Above
Architecture Below
Proposed Ramp
Proposed Stairs
Building
Office
Services
Drainage - Grated Sump
Steel Edge
Flush Concrete Kerb
Raised Concrete Kerb
Retaining Gabion Wall
Retaining Insitu Wall
Steel Wall

PLANTING
TF1-General Turf
TF2-Feature Turf
PM1A-Car park edge mix-sun
PM1B-Car park edge mix-shade
PM2A-Car park island mix-sun
PM2B-Car park island mix-shade
PM3A-Site edge mix - sun
PM3B-Site edge mix - shade
PM4-Site markers mix
PM5A-Feature planting mix-sun
PM5A-Site hedge mix-sun
PM7A-Groundcover mix A
PM7B-Groundcover mix B
PM9A-Climbers mix - sun
PM9B-Climbers mix - shade
Existing Vegetation

TREES
Existing Tree to be Removed
Refer ARBORISTS REPORT
Existing Tree to be Transplanted/ original location
Existing Tree to be Transplanted/ new location
Existing Tree to be Retained
Proposed Tree - General
Proposed Tree - Entry Marker
Proposed Tree - Site Marker



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PROJECT
Oakdale West Estate, Precinct 1

CLIENT
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K	DEVELOPMENT APPLICATION	MF	21/2/20
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Landscape Plan

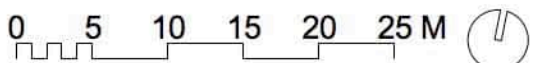
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scale	1:500@A1
drawn	MF/ZZ
checked	CH
project no.	163-18
project phase	Development Application

L.SK.103

L

Note: All finished levels subject to change +/- 1000mm.





LEGEND

PROGRAMME

- Office
- Motorcycle Parking
- Entry Marker
- Site Marker
- Staff Rest Area
- OWE Stage 1 Pocket Parks

CE Car entry/exit

CP Carparking

TE Truck entry/exit

GENERAL

- Site Boundary
- Lot Boundary
- Proposed Contour Line
- Existing Contour Line
- Finished Level
- Finished Floor Level
- Reduced Level
- Fence
- 20m Setback Building
- 10m Setback Landscape
- Transmission Easement
- Demolition
- Architecture Above
- Architecture Below
- Proposed Ramp
- Proposed Stairs
- Building
- Office

PREPARATION & GROUNDWORKS

- Services
- Drainage - Grated Sump

WALLS & EDGES

- Steel Edge
- Flush Concrete Kerb
- Raised Concrete Kerb
- Retaining Gabion Wall
- Retaining Insitu Wall
- Steel Wall

PAVEMENTS

- Coarse Aggregate
- Asphaltic Concrete
- Insitu Concrete
- Precast Concrete
- Stone Tiles
- Feature paving

FURNITURE & FITTINGS

- Proposed Seating
- Proposed Pergola
- Proposed Bollards
- Proposed Street Lighting
- Proposed Sleeper Mullion
- Proposed Sandstone Block
- Bicycle rack
- Gate
- Sculpture
- Signage

PLANTING

- TF1-General Turf
- TF2-Feature Turf
- PM1A-Car park edge mix-sun
- PM1B-Car park edge mix-shade
- PM2A-Car park island mix-sun
- PM2B-Car park island mix-shade
- PM3A-Site edge mix - sun
- PM3B-Site edge mix - shade
- PM4-Site markers mix
- PM5A-Feature planting mix-sun
- PM5A-Site hedge mix-sun
- PM7A-Groundcover mix A
- PM7B-Groundcover mix B
- PM9A-Climbers mix - sun
- PM9B-Climbers mix - shade
- Existing Vegetation

TREES

- Existing Tree to be Removed
- Refer ARBORISTS REPORT
- Existing Tree to be Transplanted/ original location
- Existing Tree to be Transplanted/ new location
- Existing Tree to be Retained
- Proposed Tree - General
- Proposed Tree - Entry Marker
- Proposed Tree - Site Marker

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PROJECT
Oakdale West Estate, Precinct 1

CLIENT
Goodman Property Services

L	DEVELOPMENT APPLICATION	MF	25/2/20
K	DEVELOPMENT APPLICATION	MF	21/2/20
J	DEVELOPMENT APPLICATION	MF	14/2/20
I	DEVELOPMENT APPLICATION	ZZ	25/10/19
H	CLIENT REVIEW	MF	18/10/19
revision	revision description	by	date

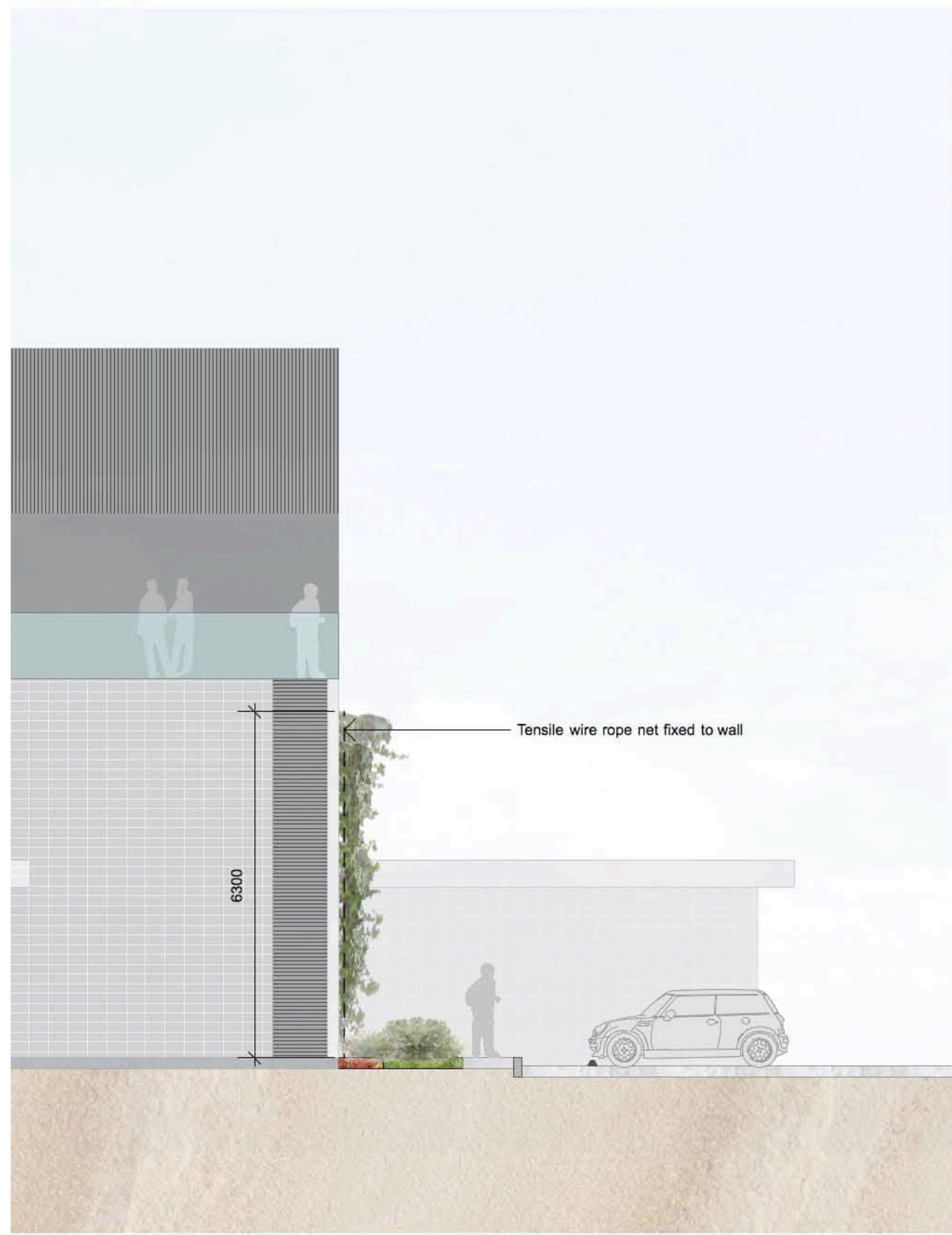
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Landscape Plan Sheet 5

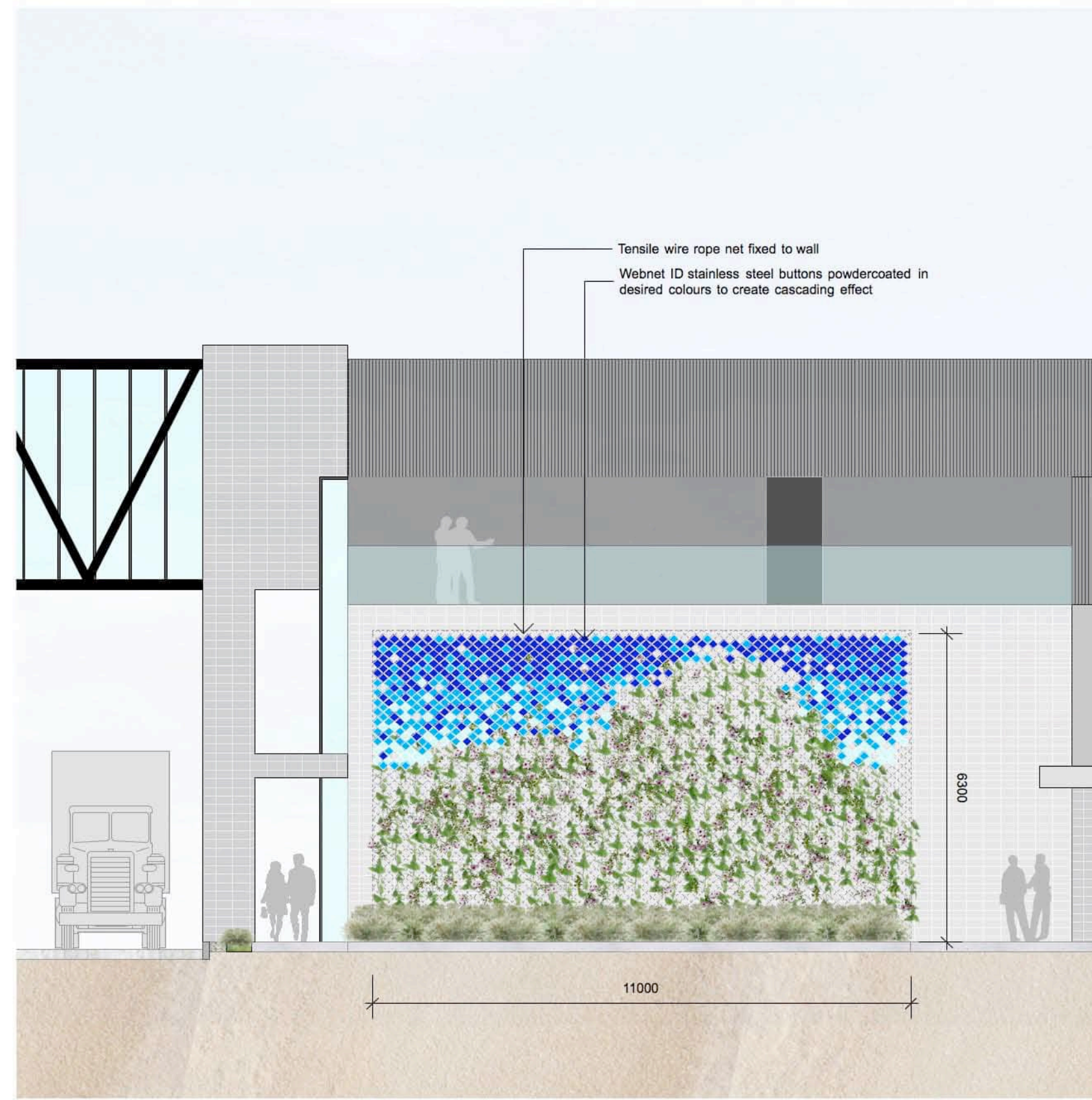
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checked	CH
project no.	163-18
project phase	Development Application

L.SK.104 **L**

Note: All finished levels subject to change +/- 1000mm.



01 Green Wall Type A - Office 1A Wall - Profile
Typical Elevaton - Scale 1:100 @ A1



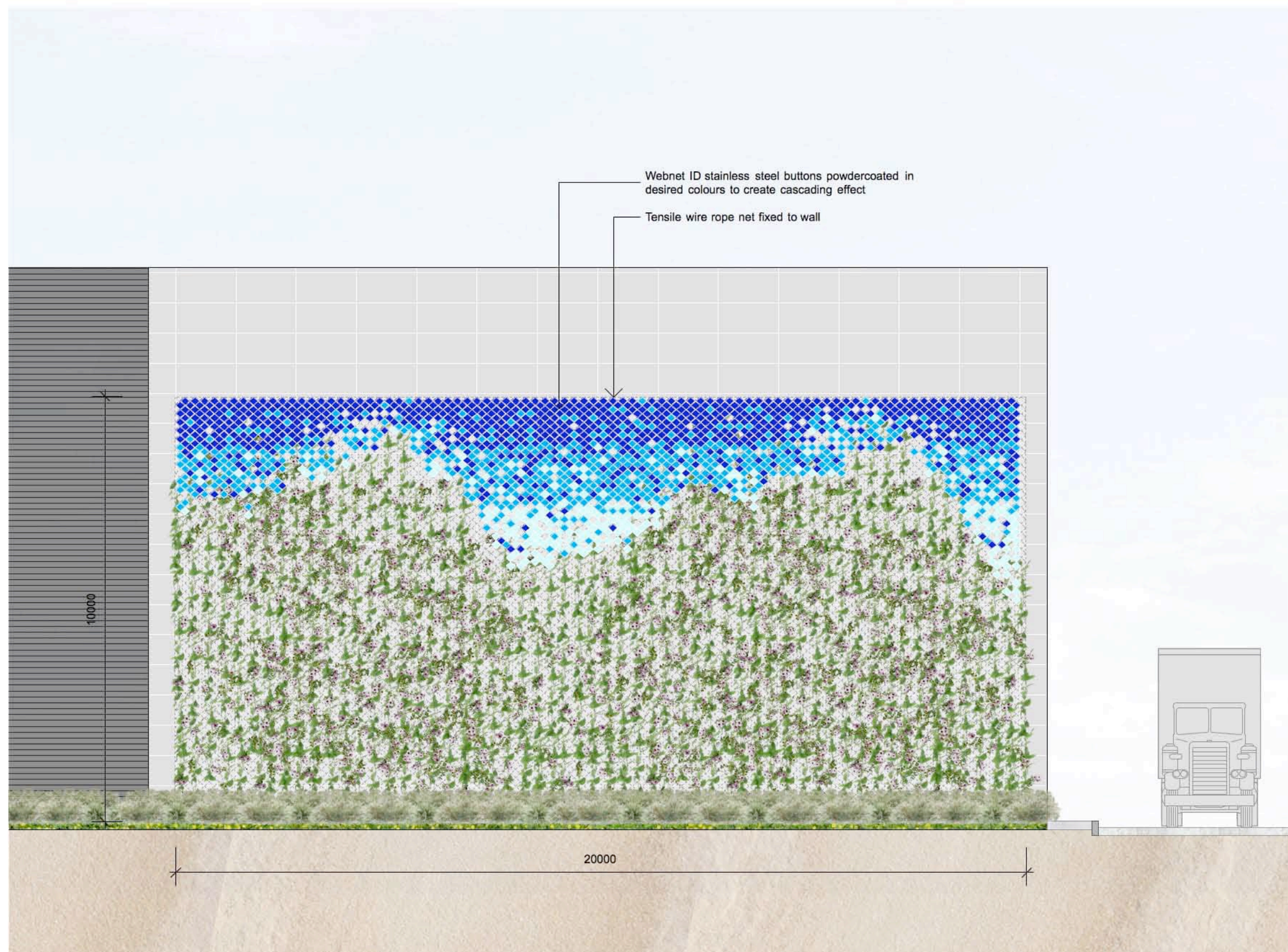
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Typical Elevaton - Scale 1:100 @ A1



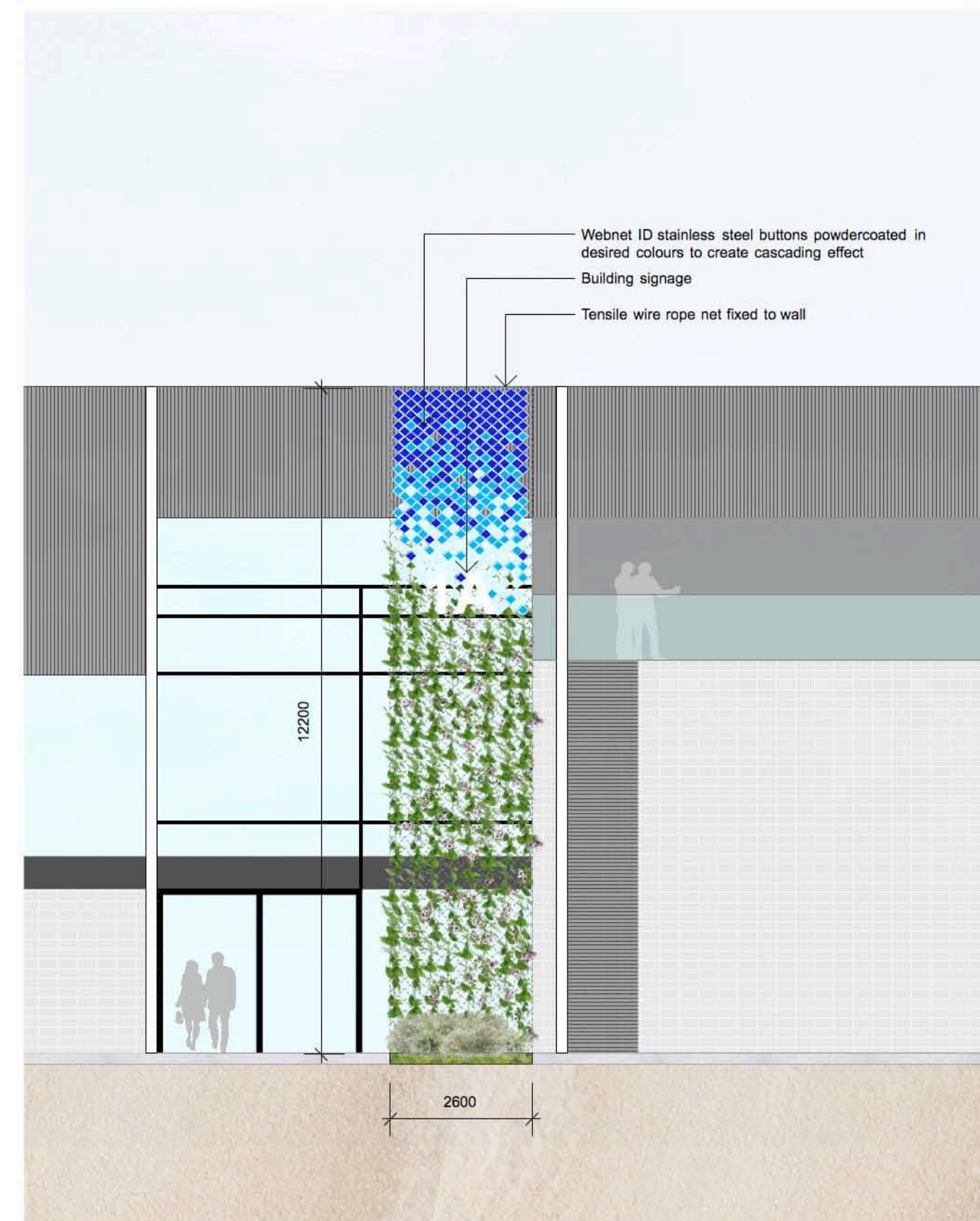
03 Green Wall Type B - Office Entrance
Typical Elevaton - Scale 1:100 @ A1



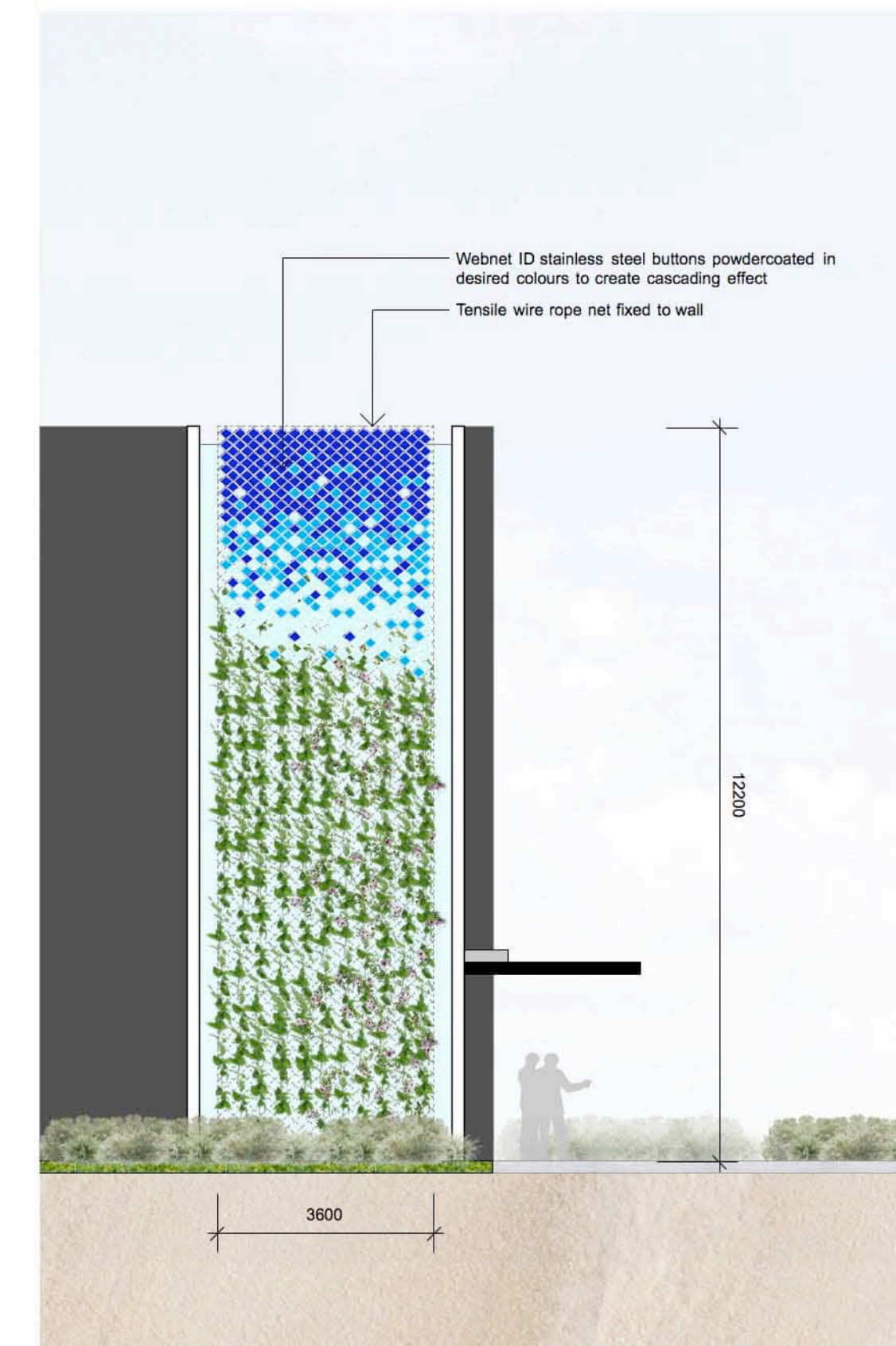
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Typical Elevaton - Scale 1:100 @ A1



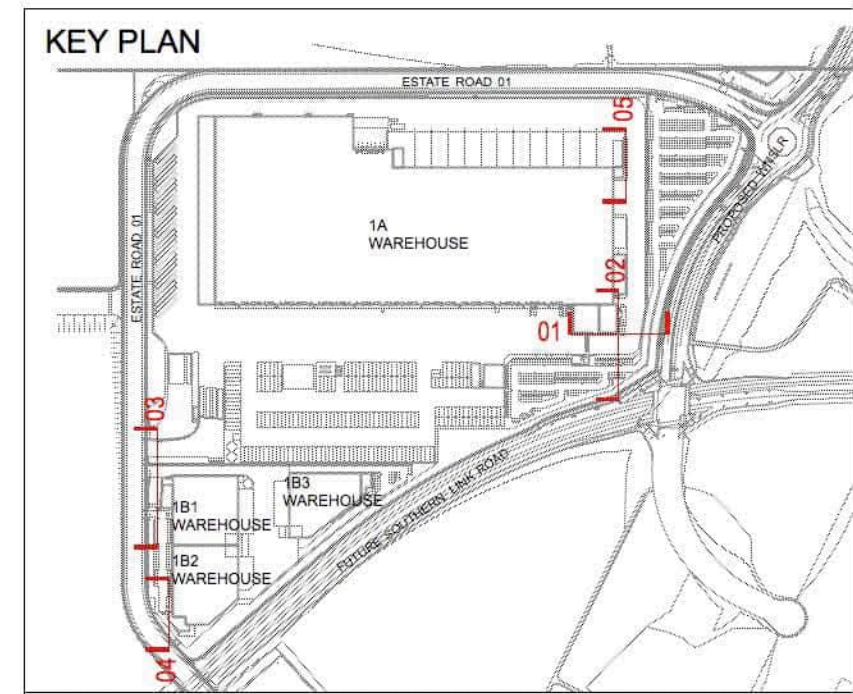
05 Green Wall Type D - Warehouse Wall
Typical Elevaton - Scale 1:100 @ A1



06 Green Wall Type E - Office Entrance
Typical Elevaton - Scale 1:100 @ A1



07 Green Wall Type F - Sky Bridge Lift
Typical Elevaton - Scale 1:100 @ A1



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Oakdale West, NSW
CLIENT
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I	DEVELOPMENT APPLICATION	MF	14/2/20
H	DEVELOPMENT APPLICATION	ZZ	25/10/19
G	CLIENT REVIEW	MF	18/10/19
F	CLIENT REVIEW	MF	26/9/19
E	CLIENT REVIEW	MF	20/9/19
revision	revision description	by	date

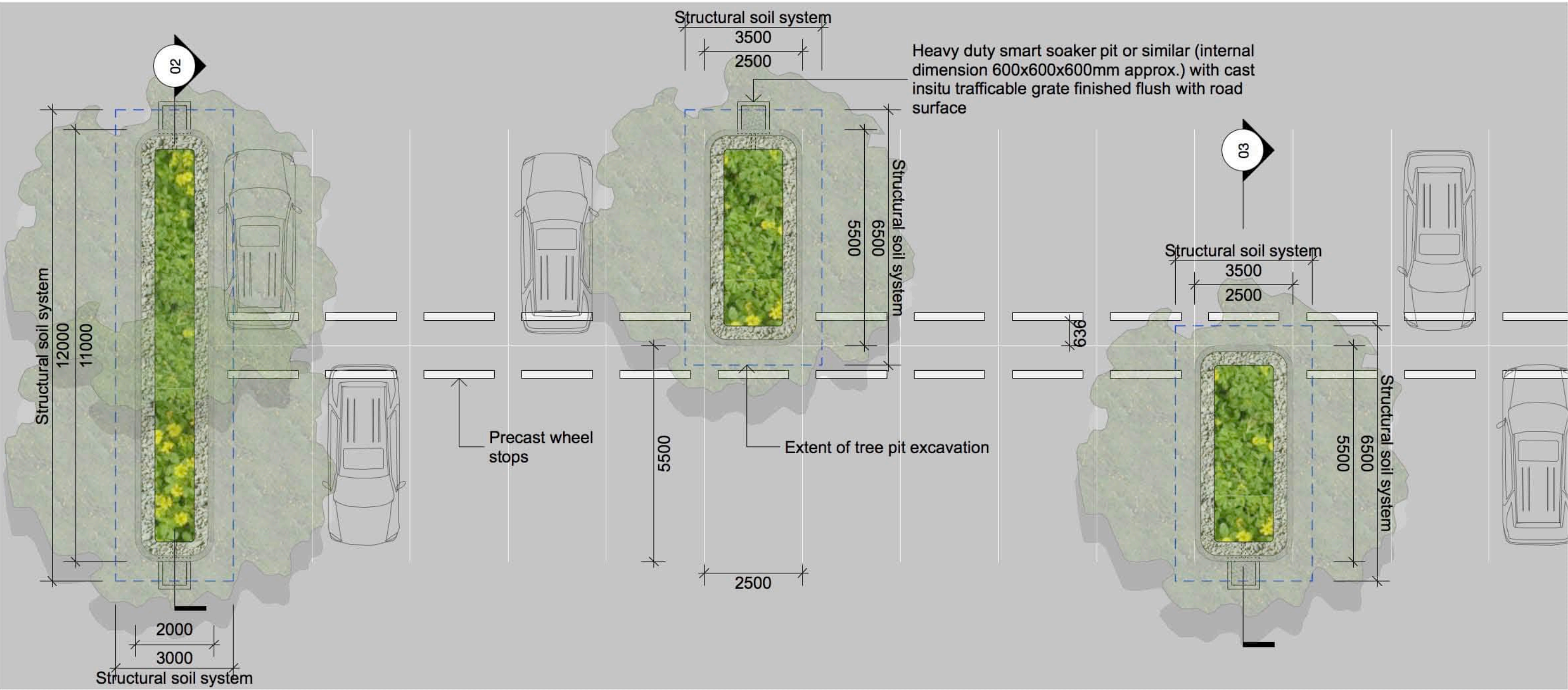
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Landscape Sections Sheet 3

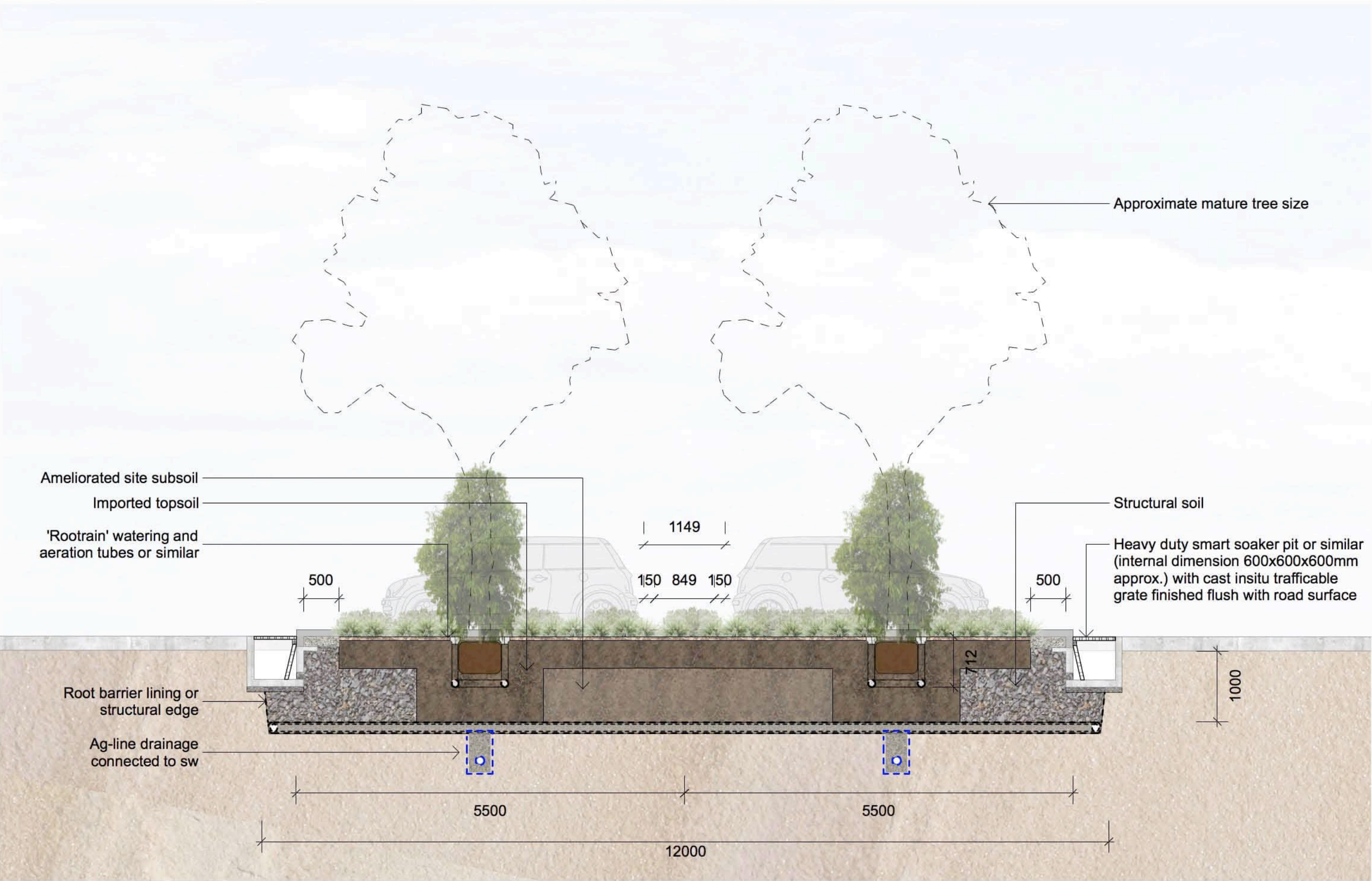
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project no.	163-18
project phase	Development Application

L.SK.202

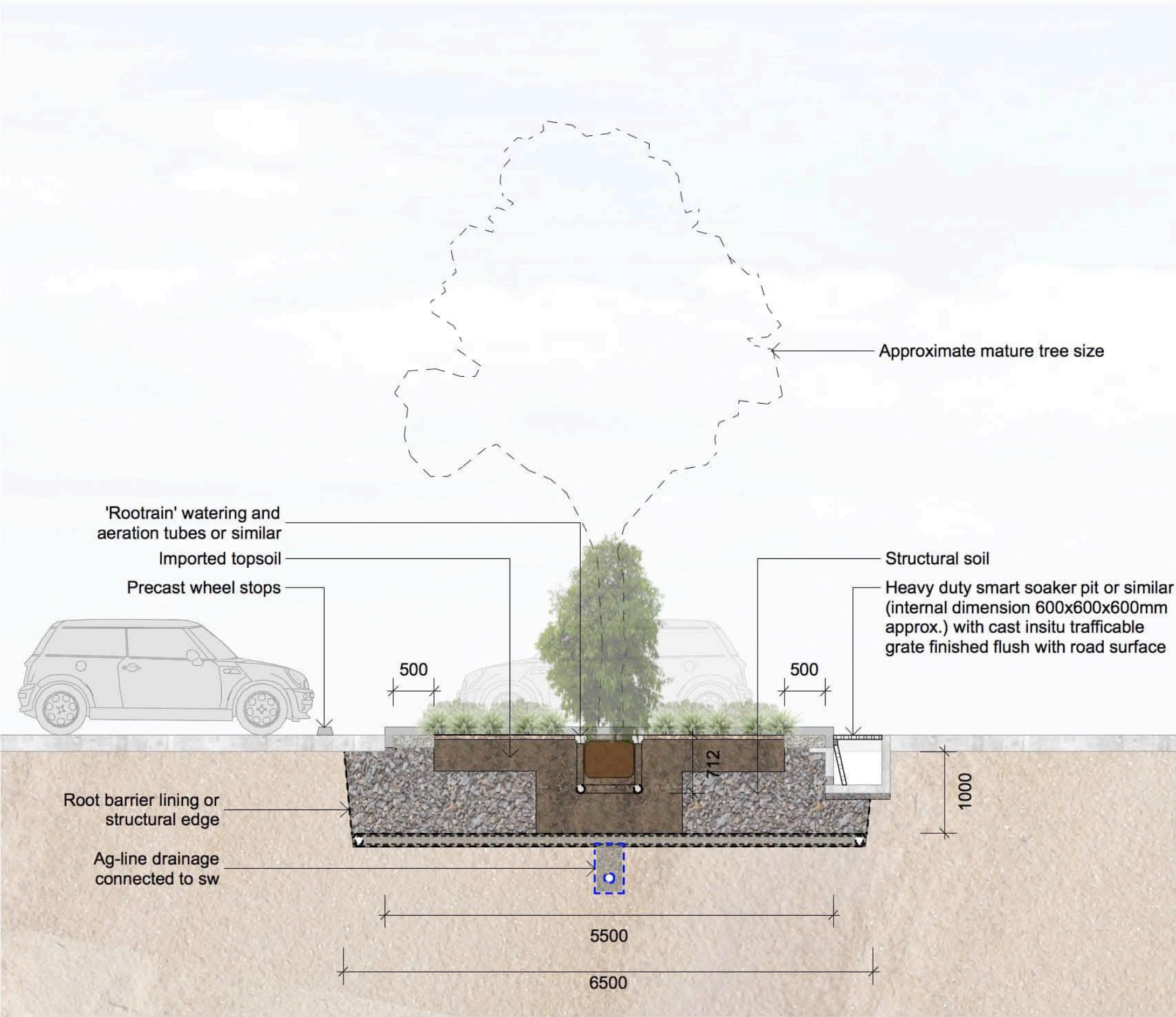
Note: All finished levels subject to change +/- 1000mm.



01 Carpark Tree Pit System
Detailed Plan - Scale 1:50 @ A1



02 Carpark Tree Pit System
Detailed Section - Scale 1:50 @ A1



03 Carpark Tree Pit System
Detailed Section - Scale 1:50 @ A1

LEGEND

GENERAL

- Architecture Below

PAVEMENTS

- Concrete Insitu Vehicular
- Coarse Aggregate

WALLS & EDGES

- Raised Concrete Kerb

PLANTING

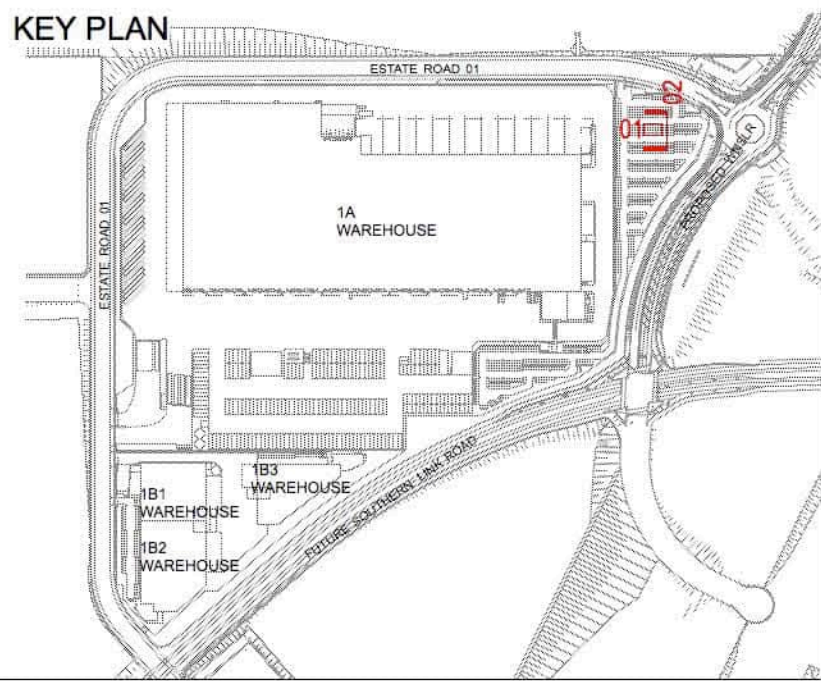
- PM2A-Car park island mix-sun

FURNITURE & FITTINGS

- Precast Wheel Stop
- Soaker Pit

TREES

- Proposed Tree - General



SCAPE DESIGN

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Oakdale West, NSW

CLIENT
Goodman Property Services

F	DEVELOPMENT APPLICATION	MF	9/3/20
E	DEVELOPMENT APPLICATION	MF	2/3/20
D	DEVELOPMENT APPLICATION	MF	25/2/20
C	DEVELOPMENT APPLICATION	MF	14/2/20
B	DEVELOPMENT APPLICATION	MF	12/2/20

revision description date

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Carpark Details

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project no.	163-18
project phase	Development Application

7.2 REFERENCED LANDSCAPE SPECIFICATION

SD-163-18 Oakdale West Estate

Landscape – Planting

Quantity of Soil Additive

Plant Size	Quantity
"Viro-Tube"	Nil
"Forestry Tube"	20 grams
"Semi Advanced"	40 grams
"Advanced"	80 grams
"Super Advanced"	400 grams
"Semi Mature"	One kilogram

3.8 STAKES AND TIES

Stakes

Material: Hardwood, straight, free from knots or twists, pointed at one end.

Installation: Drive stakes into the ground at least one third of their length, avoiding damage to the root system.

Stake sizes:

- For plants ≥ 2.5 m high: Three 50 x 50 x 2400 mm stakes per plant.
- For plants 1 to 2.5 m high: Two 50 x 50 x 1800 mm stakes per plant.
- For plants < 1 m high: One 38 x 38 x 1200 mm stake per plant.

Ties

General: Provide ties fixed securely to the stakes, one tie at half the height of the main stem, others as necessary to stabilise the plant. Attach ties loosely so as not to restrict plant growth.

Tie types:

- For plants ≥ 2.5 m high: Two strands of 2.5 mm galvanized wire neatly twisted together, passed through reinforced rubber or plastic hose, and installed around stake and stem in a figure of eight pattern.
- For plants < 2.5 m high: 50 mm hessian webbing stapled to the stake.

Trunk protection

Collar guards: 200 mm length of 100 mm diameter agricultural pipe split lengthways.

3.9 SEED PREPARATION

Where site conditions are not suitable for the pre-treatment and mixing of native and grass seed, this work may be done off site in conditions conducive for this purpose.

HOLD POINT

Process Held:	Use of seed pre-treated off site.
Submission Details:	At least 3 working days prior to delivery, submit the accompanying certificate showing the species, variety, weight and place of pre-treatment.
Release of Hold Point:	The Principal will consider the submitted documents and may inspect the seed prior to authorising the release of the Hold Point.

Pre-treatment to Assist Germination

Where hot water is the specified pre-treatment, place the seed in a calico bag together with camphor granules as an insect repellent at the rate of 50 g per 10 litres of water. Immerse the bag in hot water

SD-163-18 Oakdale West Estate

Landscape – Planting

with temperature of around 90°C for a minimum period of 60 minutes and then remove from the water, drain and allow to dry. When dry, mix the treated seed with the remaining seed and broadcast when conditions are suitable.

Seed that has been pre-treated must be used within five days of pre-treatment.

Where proprietary products are used to assist germination, use as recommended by the manufacturer.

Preparation for Hydromulching, Hydroseeding and Straw Mulching

Storage tanks, containers and equipment to be used in hydromulching, hydroseeding and straw mulching must be clean and free of contamination from previous operations.

Table– Application Rates for Materials

Material	Rate per Hectare
Hydromulching	
Water	35,000 litres
Organic fertiliser: pelletised poultry manure	250 kg
Seed	See Planting Schedule
Cellulose fibre mulch:	
– Sugar cane mulch, mixed with 20% (by weight) of shredded paper	3,500 kg
– Wood fibre mulch	2,500 kg
Binder: granulated 'Guar gum'	60 kg
Biodegradable green dye	As recommended
Hydroseeding	
Water	20,000 litres
Organic fertiliser: pelletised poultry manure	250 kg
Seed	See Planting Schedule
Biodegradable green dye	As recommended
Straw mulching	
Straw	5,000 kg
Binder	
– Undiluted residual bitumen emulsion	2,500 litres
– Granulated 'Guar gum'	100 kg

Produce hydromulch / hydroseed slurry mixtures by adding the specified materials into the tank and agitate until a homogenous blend is obtained.

Sowing Methods

Unless otherwise shown on the Drawings, sow areas with slopes of 5 to 1 or flatter, using one of the following methods:

- dry sowing
- for small areas only, by hand.

Unless otherwise shown on the Drawings, sow areas with slopes steeper than 5 to 1 in any direction, using one of the following methods:

- hydroseeding and straw mulching
- hydromulching
- for rock face batters, hydroseeding
- for small areas only, by hand.

Stepped batters must be topsoiled as described and hydroseeded or hydromulched.

SD-163-18 Oakdale West Estate

*Landscape – Planting***WITNESS POINT**

Process Witnessed: Sowing

Submission Details: Notify the Principal, not less than 5 clear working days prior to the intended time of sowing, giving details of the area to be sown.

3.10 DRY SOWING

Undertake dry sowing using either:

- a tractor drawn seed drill to place seed at a depth of 5 mm
- a spreader followed immediately by a single pass with an unweighted diamond harrow.

Where practicable, tractor passes with the seed drill or harrow must follow finished surface contours. Distribute seed and fertiliser evenly over the areas to be sown at the rates specified. Apply fertiliser concurrently with the seeding operation.

Gauge the application rate of the seed mix to ensure an even distribution over the areas sown, in accordance with the nominated rates. Maintain records of measurements and calculations to determine actual distribution rates for each lot.

Hydromulching and Hydroseeding

Carry out hydromulching / hydroseeding within 2 days of completion of soil preparation or, if delayed by weather conditions, as soon as weather conditions permit.

Agitate continuously the slurry to maintain a uniform consistency during application.

The sprayed hydromulch layer within 48 hours of application must have a minimum thickness at any location of 5 mm when using sugar cane mulch (mixed with shredded paper), or 2 mm when using wood fibre.

Straw Mulching

The straw mulch must comprise the materials and application rates set out in Table R178.1.

Apply the straw mulch uniformly using a purpose-made blower unit. Incorporate the emulsion as a spray into the air stream of the mulch blower or apply it in a separate operation within 12 hours from the application of straw mulch.

The straw mulch layer within 48 hours of application must have a minimum thickness at any location of 25 mm.

Weather Conditions for Hydroseeding, Hydromulching and Straw Mulching

Do not apply hydroseeding, hydromulching and straw mulching:

- when winds exceed 15 km/hr
- when temperatures exceed 37°C
- where the surface is too wet
- during rain periods or when rain appears imminent.

Signposting

Supply and install information signs approximately 1,500 x 600 mm stating, "NATIVE PLANT REGENERATION AREA—PLEASE KEEP OFF", including the requisite posts, brackets and fittings, where shown on the Drawings or as directed by the Principal. Support each sign at a height of 1.5 metres on two 75 mm dia steel posts set in concrete 500 mm deep into the ground at a distance of 900 mm apart.

7.3 GOODMAN MAINTENANCE GUIDELINES

Appendix 2 | Specification

system again to re-flush if blockages are apparent and re-seal tube ends

Commissioning

The entire system should be tuned and tested to deliver an adequate amount of water to all plants and turf. Test the system in the presence of the Landscape Architect and/or irrigation designer to facilitate the issue of a Certificate of Practical Completion.

Maintain the system for the duration of the establishment maintenance period as detailed elsewhere in the specification. Replace any faulty, broken or stolen components. Leave the system operating as if it was newly installed upon acceptance of the completed work.

Maintenance

General

Gardens, lawns and landscaped areas must be maintained to Goodman's presentation standard and condition at all times. Goodman places a heavy emphasis on a high standard of landscaping to support their market image.

Plants and shrubs should be cultivated to maintain optimal growth while individual plants that don't thrive should be replaced with healthy specimens. Plants and shrubs should be pruned appropriately to promote growth. Where necessary, all plants should be dead headed to maintain optimal appearance.

Weeds should be removed at all visits while measures should be taken to discourage weed growth. Weeds must be removed from all garden beds, fence lines and surrounding areas, all paved areas and walkways, construction joints and any entrance areas. All large weeds should be removed by hand, small weeds are to be sprayed with appropriate industrial strength weed killer with blue dye additive.

A prophylactic chemical weeding program should be implemented. Goodman Building Manager must be notified and approve any application of chemical weed treatment. The contractor must specify the type of chemical weed treatment product used, where it was used and quantity used. The contractor must submit a certificate or signed documentation received from chemical weed treatment supplier confirming application of chemical treatment to Goodman Landscape Manager. Spraying is to occur during non-office hours to reduce any health hazard for occupants of the commercial offices or industrial estates.

Every effort must be made to ensure that all plants are adequately watered at all times. When irrigation is not permitted, alternative methods of watering should be discussed with the Building Manager.

A proactive approach must be adopted to ensure that appearance of the landscape as a whole is highly presentable at all times. Recommendations on new plant or shrub specimen, landscape design, modifications etc should be made to Goodman Landscape Manager where opportunities exist to enhance the appearance of the landscape generally or in specific areas.

Contractors must submit annual routine landscape maintenance program to Goodman Landscape Manager within two weeks of contract commencement date.

Lawn care

Lawn areas, including nature strips must be neatly mown and edged weekly in the high season (summer months), fortnightly in the low season (winter months), or weekly if required due to abnormal weather condition. All clippings must be removed from the site.

All lawns must be fertilized once a year with an approved lawn fertilizer.

Tree shrub and plant care

All shrubs, hedges, ground covers and trees must be trimmed into shape as required to an acceptable Goodman presentation standard. Flowering plants/shrubs should be pruned to promote optimal flowering at the appropriate times.

Excessive foliage impacting onto roads, paths, fencing and lighting must be pruned during all site visits.

Leaf litter and or all cuttings should be removed from all gardens and site each visit and disposed of at contractor's cost.

Any dead or dying plants/shrubs should be removed and replaced with same or comparable species. Goodman Landscape Manager must be consulted when large trees need to be removed and or replaced.

The contractor will maintain each plant in a healthy condition to increase the visual appeal of the gardens.

Guidelines for landscaping

60

Appendix 2 | Specification

Remove faded leaves, fronds and flowers to encourage new growth.

The contractor will prune all plants or shrubs species as required and satisfy Goodman's presentation standard. Pruning should be carried out on a 'needs-basis' specific to each plant. Pruning should be carried out to encourage new growth that will result in a dense canopy density. No more than 30mm of new growth should be seen before pruning takes place. All plant pruning should be carried out using best horticultural techniques. No hedging of native grasses permitted at any time.

Replacement of any plant or shrub which may die, fail to thrive, or are damaged due to contractors negligence must be replaced by the contractor without cost to Goodman. The replacement plant or shrub must be of a similar size, quality and identical species or variety to the plant or shrub which has failed, unless otherwise directed by Goodman Landscape Manager

Where plants fail due to vandalism, or where plants are stolen, the cost of replacement of the plants will be met by Goodman.

Mulch

The contractor is required to maintain all areas of mulch cover within garden beds. Displaced mulch should be returned to the garden beds wherever possible. All area of mulch cover must be packed to a depth of 75mm. If replacement of mulch is required, the contractor must notify Goodman Landscape Manager and provide quotation for approval. Specific mulch must be approved by Goodman representative prior to installation.

Guidelines for landscaping

Irrigation

The irrigation system must be fully functional at all times to ensure that all plants, trees and lawns receive adequate water at optimal frequency. The system must be tested during each site visit to ensure proper operation timing is set correctly. Adjustments must be made where necessary.

It is the contractors responsibility to submit a monthly report to Goodman which includes a comprehensive report on the operational function of the system.

Goodman Landscape Manager must be notified when the system is in need of major repair. The cost of major repairs to the system can be claimed as variation to the contract price and should be invoiced separately.

When water restrictions prevent the use of the irrigation system, arrangements must be made by the contractor to provide an alternative system of watering. Under no circumstances should plant stock be allowed to perish through lack of water.

Herbicide / pesticide application

Apply pesticide treatment to lawn areas to eliminate weeds/pests and diseases as soon as any attack is noticed. At any given time no more than 2% may be effected by weeds/pests and diseases. Spraying must occur during non-office hours to reduce any health hazard for occupants of the commercial offices or industrial estates. Do not use pesticides near streams, ditches, wetlands, or shorelines.

Rubbish

All rubbish generated by landscaping maintenance activities and from garden beds must be removed from the site at each visit and deposited at an approved waste collection depot at contractor's cost.

General rubbish accumulating within the driveways, car parks etc. will be removed by the landscape contractor on each weekly visit.

Fertilizing

Apply slow-release fertiliser in liquid form or in pellet form to all plants as required to maintain healthy growth conditions.

Fertilising of individual trees, individual palms, garden beds containing shrubs and groundcovers, and lawns should occur as required by individual species to maintain healthy growth conditions. All garden plants are to be fertilised in March and September of every year.

Seasol or other seaweed extract type fertilises and/or Dynamic Lifter or other organic fertiliser in pelletised form should be used. Do not use soluble fertilizers near streams, ditches, wetlands, or shorelines. Do not use blood and bone. All fertiliser is to be odourless.

Turf topdressing

The contractor is to review the condition of lawn areas to assess the need to provide topdressing. If topdressing is required, the contractor must report to Goodman Landscape Manager for approval. Premium topdressing mix must be 80% sand and 20% soil.

Appendix 2 | Specification

Repairs

Any repairs required to lawn areas should occur immediately following notification of the extent of works and approval to proceed by Goodman Landscape Manager.

Restaking

Where trees, palms, or shrubs require staking during plant establishment, the contractor will ensure that staking remains intact and rigid for its intended purpose. Staking that has failed must be repaired immediately to ensure no plant stress from winds.

Garden edging

The contractor is to review the condition of garden bed edging and ensure that no damage, sinking, or lifting has occurred. If any repair is required, contractor must notify Goodman Landscape Manager for approval. Contractor is to ensure that all garden edging is maintained in original condition.

Planters

The maintenance of any planter box (especially on-slab) requires careful attention to ensure that the waterproofing element is not affected. Any work done within planter box must be by hand. Neither machinery nor tools are to be used within any planter box that may cut and damage the waterproofing elements. The contractor will replenish soil nutrients and fertilisers in each planter box on a regular basis to ensure healthy continual growth of any plant species.

Letterboxes / directory boards

The contractor is to clean and wipe down directory boards and letter boxes at the entrance to the property and remove unwanted material (this is limited to a height accessible by ladder).

All hedges or shrubbery near directory boards must be kept trimmed, so that clear visual recognition by any emergency services can be ascertain the clear address of the site or direction to any part of the site.

Drains

All grated stormwater drains or strip drains in all car park levels and driveways zones must be inspected monthly and cleared of accumulation of debris, leaves and soil, so that there is no hindrance or impediment of their correct operation as stormwater drains.

All grated stormwater drains or strip drains in all gardens, lawn zones and pavement areas must be inspected weekly or after storms and maintained free of and accumulation of debris, leaves and soil, so that there is no hindrance or impediment of their correct operation as stormwater drains.

Any drains grate or section of strip drains that is rusted, faulty or may constitute a hazard to the site's tenants or visitors must be reported to Goodman Landscape Manager. Recommendation and replacement cost is to be submitted to Goodman Landscape Manager for approval.

Equipment

The contractor will supply all necessary equipment required to conduct landscape maintenance in the most efficient manner and with minimal interruption to tenants. All necessary equipment will be tested and tagged to comply with all relevant OH&S legislation and regulations.

Supervision / communication

Contractor is to appoint one point of contact (Supervisor/Operation Manager) to represent the contractor for the term of the agreement. The nominated point of contact should provide regular supervision to the on-site staff undertaking the works. Goodman anticipates that this supervisor should attend all sites as a minimum weekly to ensure presentation standards and workmanship is within required KPI's. The supervisor will also to attend site meetings with the relevant Goodman Landscape Manager to inspect the site and review any landscape maintenance issues and or variations each month.

A works report will be required to be filled out by the contractor and sent to Goodman, including relevant information regarding the following (Photos, Summary of works for period, works to be completed next month, safety issues, enhancement ideas, general issues). This report should be forwarded to Goodman on a monthly basis.

Appendix K:

Sustainability Management Plan

OAKDALE WEST ESTATE - STAGE 1 MOD 2

Sustainability Management Plan

Prepared for:

Goodman Properties
Level 17, 60 Castlereagh Street
SYDNEY NSW 2000

SLR Ref: 610.15612-R03
Version No: -v1.0
December 2019



PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Properties (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.15612-R03-v1.0	11 December 2019	Horatio Cai Dr Hamidul Islam	Dr Neihad Al-Khalidy	Dr Neihad Al-Khalidy

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Appendix A	Energy Saving Lighting Design Recommendations
Appendix B	Water Saving Recommendations

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Goodman Property Services to prepare a Sustainability Management Plan (SMP) for the proposed warehouse and distribution facilities of the construction and operational activities of Precinct 1 of Modification 2 (MOD2) and the Stage 1 development of Oakdale West industrial Estate (the Project).

The Project is classified as a State Significant Development on the basis that it falls within the requirements of Clause 13 of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

This study has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD 7348 MOD 2) and will accompany the SSD Development Application (DA) for the proposal.

1.1 Objectives of the Study

The principal objective of this Sustainability Management Plan is to identify all potential energy savings that may be realised during the operational phase of the Project, including a description of likely energy consumption levels and options for alternative energy sources such as solar power in accordance with Penrith City Council (Council) requirements.

The specific objectives of this plan are as follows:

- To encourage energy use minimisation through the implementation of energy efficiency measures;
- To promote improved environmental outcomes through energy management;
- To ensure the appropriate management of high energy consumption aspects of the Project;
- To identify energy savings procedures for overall cost reduction, greenhouse gas emission reduction and effective energy management;
- To assist in ensuring that any environmental impacts during the operational life of the development comply with Council's development consent conditions and other relevant regulatory authorities; and
- To ensure the long-term sustainability of resource use through more efficient and cost-effective energy use practices for the life of the development

2 SUSTAINABILITY MANAGEMENT GUIDELINES AND LEGISLATION

2.1 Building Code of Australia

The Building Code of Australia (BCA) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government with the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently. The BCA contains mandatory technical provisions for the design and construction of BCA class buildings.

Volume 1, Section J of the BCA outlines energy efficiency provisions required for BCA class buildings (including Class 7b Warehouses and Class 5 Offices). There are 8 Deemed-to-Satisfy subsections, J1 to J8, that focus on separate aspects of energy efficiency as follows:

- J1 - Building Fabric (i.e. the ability of the roof, walls and floor to resist heat transfer)
- J2 - External Glazing (i.e. the resistance to heat flow and solar radiation of the glazing)
- J3 - Building Sealing (i.e. how well parts of a building are sealed to ensure comfortable indoor environments are efficiently maintained)
- J4 - Air Movement (i.e. the provision of air movement for free cooling, in terms of opening and breeze paths)
- J5 - Air Conditioning and Ventilation Systems (i.e. the efficiency and energy saving features of heating, ventilation and air-conditioning systems)
- J6 - Artificial Lighting and Power (i.e. power allowances for lighting and electric power saving features)
- J7 - Hot Water Supply (i.e. the efficiency and energy saving features of hot water supply)
- J8 - Access for Maintenance (i.e. access to certain energy efficiency equipment for maintenance purposes)

2.2 SSD 7348 SEARs

The SEARs of the Oakdale Site (SSD 7348 MOD 2) include the following requirement:

- **Ecologically Sustainable Development and Energy Efficiency – including:**
 - an assessment of how the modification will incorporate ecologically sustainable development principles in all phases of the development;
 - consideration of the use of green walls, green roof and/or cool roof into the design;
 - climate change projections developed for the Sydney Metropolitan area and how they are used to inform the building design and asset life of the project; and
 - an assessment of the energy uses on-site, and demonstration of the measures proposed to ensure the modification is energy efficient.

3 DESCRIPTION OF THE PROJECT

Goodman Property Services (Aust) Pty Ltd is developing the Oakdale West site at Lot 11 in DP 1178389 in Erskine Park for the purposes of providing a warehouse and distribution complex. This site is primarily a greenfield site and will be comprised of industrial warehouses and office precincts, including internal roads, car parking spaces and hardstand.

The Oakdale West site is a precinct within the wider Oakdale Estate development and forms part of a progressive development designed to make Oakdale a regional distribution park of warehouses, office facilities and distribution centres. The project is a staged development which includes bulk earthworks, civil works and the construction of infrastructure and stormwater management.

The works for the proposed Stage 1 requires an alteration to the existing masterplan, identified as MOD 2. MOD 2 will relate to the development of building 1A, 1B and 1C. The MOD 2 design includes the following modifications from the approved design:

- Layout changes to Precinct 1 to accommodate requirements of the future customer for Lot 1A
- Increase in warehouse heights within Lot 1A to accommodate high bay (around 36.0 m height)
- Revision of proposed traffic volumes for Precinct 1 to account for layout changes and requirements of the future customer for Lot 1A.

3.1 Overview of Proposed Development

The overall Oakdale West Estate is a 154-ha site located within the Oakdale Estate. Oakdale West Estate is the third of four stages of the broader Oakdale Estate under the management of Goodman Limited.

Oakdale West is essentially a Greenfield site at present which has been used for stock grazing. The surrounding areas are primarily rural in nature, but the area to the north is becoming more industrial. Land uses in the surrounding area include:

- Rural (grazing, market gardens, etc) and rural residential to the south-east, south and west.
- Sydney Water Pipeline and industrial land to the north (industrial zones at Eastern Creek to the north and Erskine Park to the north-west).
- To the west land uses include a number of sensitive uses such as an aged care facility (Catholic Health Care) and three schools: Mamre Anglican School, Emmanuel Catholic College and Trinity Primary School. Other land uses include recreational and sporting facilities.

Oakdale West Estate will be developed in stages with the first stage including:

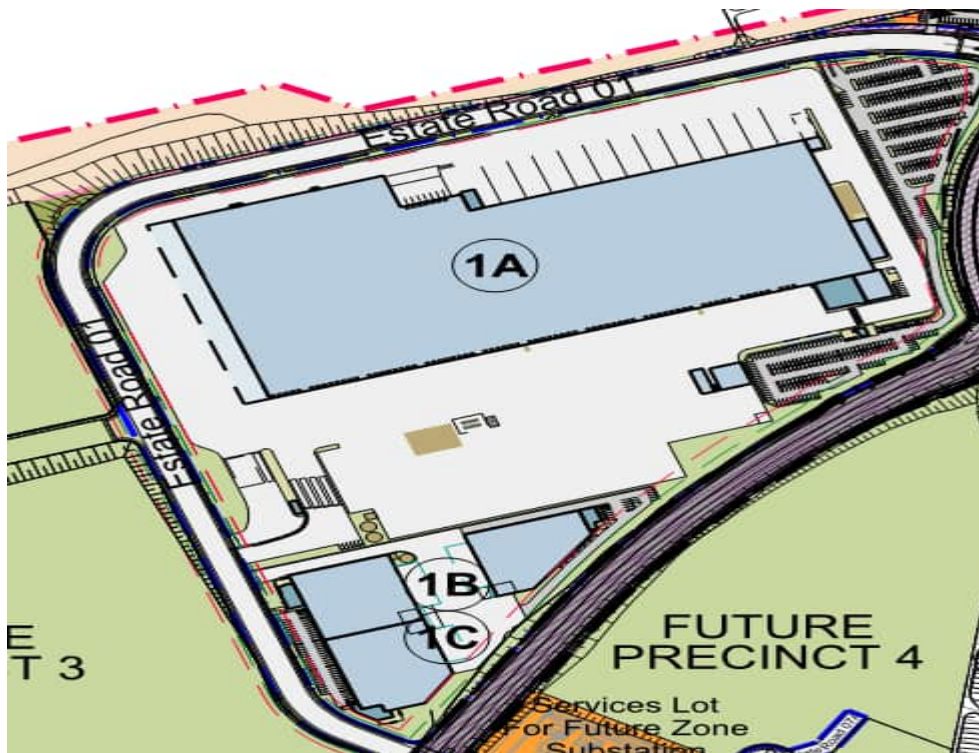
- Staged bulk earthworks across the whole site, staged subdivision, Landscaping and public works.
- Development comprising the construction and operation of three warehouse and distribution facilities in Precinct 1 (i.e. Warehouse 1A, 1B and 1C).

The Precinct 1 development area comprises 21.72 ha. Overall building areas are outlined in **Table 1**. An overview of the site is provided in **Figure 1**.

Table 1 Building Areas

Site Area	Lot 1A	Lots 1B & 1C
Warehouse	68,160 m ²	13,613 m ²
Office	2,646 m ²	1,257 m ²
Awning	8,620 m ²	2,095 m ²
Hardstand Area	88,610 m ²	7,440 m ²
Light Duty Area	14,030 m ²	3,755 m ²
Car Parking	472 m ²	86 m ²

Figure 1 Overview of the Oakdale West Estate Precinct 1 Development Area



Source: SBA Architects (23 Oct 2019)

Further details of the MOD 2 development are shown in **Figures 2 and 3**.

Figure 2 Oakdale West Estate: Warehouse 1A and Associated Office & Amenities

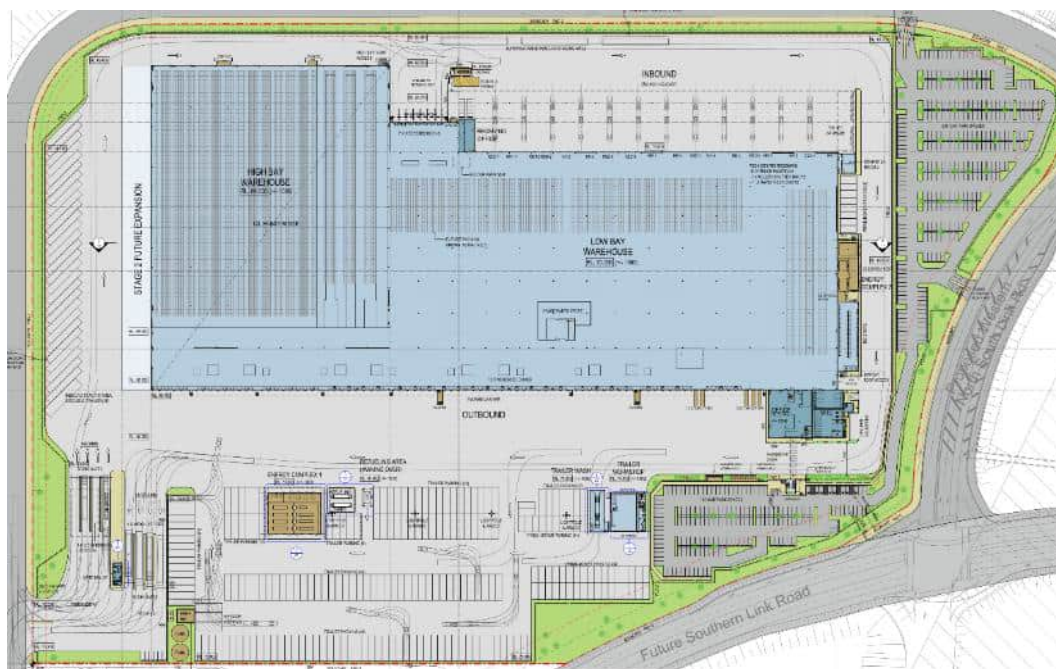
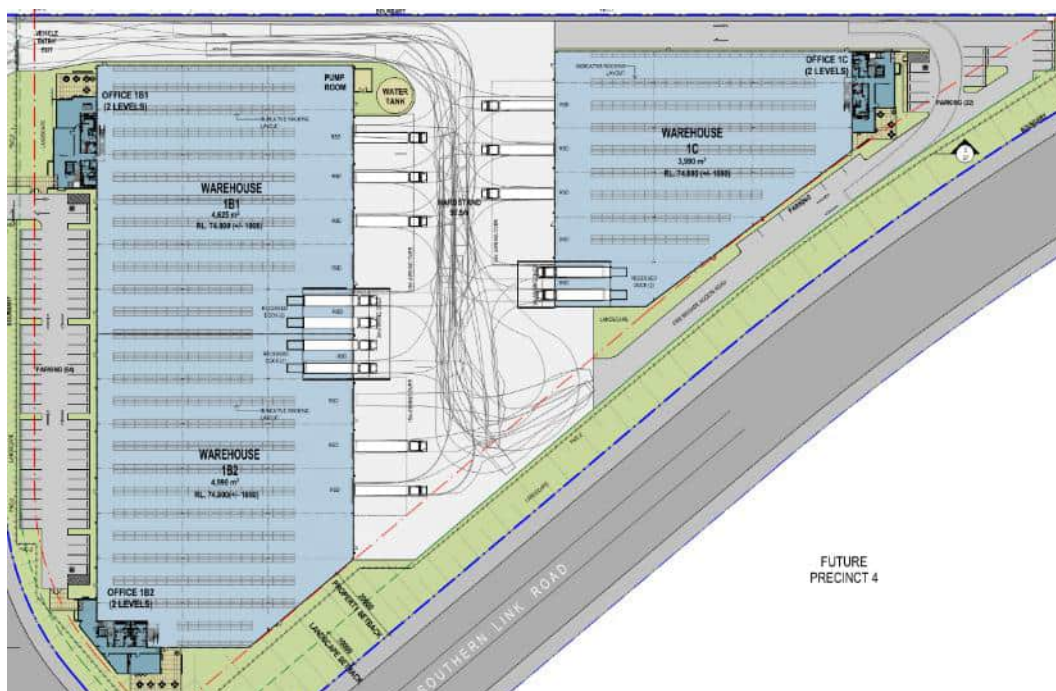


Figure 3 Oakdale West Estate: Warehouse 1B/1C and Associated Office & Amenities



4 OPERATIONAL ENERGY MANAGEMENT

Ineffective energy management for industrial and commercial premises can lead to unnecessary growth in greenhouse gas emissions and consumption of natural resources. Effective energy management reduces costs using energy efficiency measures and improves environmental outcomes locally, regionally and globally.

Effective energy management is achieved through the implementation of a Sustainability Management Plan (SMP) for the operational life of the Project.

4.1 Identified Major Energy Use Components

The major energy use components of the Project Site have been identified below based on information available within the Project Design Brief.

- Lighting (include natural and artificial lighting and shading);
- Air Conditioning; AND
- Power.

4.2 Energy Sources

The main source of energy for the proposed site is electricity, but it is also proposed to have gas available at the site as required.

5 SUSTAINABILITY MEASURES COMMITMENTS

5.1 Documentation

The documentations used in this report is listed in **Table 2**.

Table 2 Project Documentation Sources

Document Type	Document Number	Issue Date
Architectural Drawing	OAK MP 01-14	23/10/2019
BCA Assessment Report	Blackett Maguire + Goldsmith project no 190119	30/08/2019

Energy Efficiency measures have been recommended and approved for project implementation and have informed the sustainability assessment of this project – they are listed in **Table 3**.

Table 3 ESD Assessment Summary

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Design & Management	<ul style="list-style-type: none"> Documentation of design intent and expected outcomes. Appropriate commissioning. 	<ul style="list-style-type: none"> Communicate sustainability initiatives and operation to building users. Commissioning and building tuning required by contractors and reviewed for 12 months after completion. 	<ul style="list-style-type: none"> Provision of Building Users Guide. 	✓	<ul style="list-style-type: none"> SLR recommends the preparation of Building User Guide that enables building users to optimise the building's environmental performance. A sub-contractor will be engaged to maintain the facility in accordance with the operations and maintenance manuals during the 12-month defects liability period.
			<ul style="list-style-type: none"> Investigate costs and viability of commissioning and building tuning requirements and appointing an independent commissioning agent. 	✓	
			<ul style="list-style-type: none"> Independent consultant to perform quarterly tuning of fire, mechanical, electrical, hydraulic services. 	✓	
Façade Performance	<ul style="list-style-type: none"> Optimised façade performance. 	<ul style="list-style-type: none"> Achieve minimum performance requirements under NCC Section J1 and J2. Reduce heat gain through the warehouse façade. 	<ul style="list-style-type: none"> Meet or exceed NCC Section J1 and J2 façade performance for conditioned spaces. 	✓	<ul style="list-style-type: none"> NCC Section J report needs to be prepared by a qualified ESD consultant. This warehouse will comply with all the requirements specified within the report during construction stage. Colourbond roof sheeting which has a higher solar reflectivity is proposed; As per project NCC Section J report.
			<ul style="list-style-type: none"> Light coloured roofing with high reflectivity and appropriate insulation to reduce solar heat gain into the warehouse. 	✓	
			<ul style="list-style-type: none"> Daylight: evenly spaced translucent roof sheeting to warehouses areas. 	✓	
			<ul style="list-style-type: none"> Performance glazing in office spaces appropriate to the window size and orientation. 	✓	

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Social Sustainability	<ul style="list-style-type: none"> Consider design with due regard to occupant satisfaction in accessibility, usability, Indoor air quality and public space utility. 	<ul style="list-style-type: none"> High level of occupant satisfaction. Provide external as well as internal comfort. 	<ul style="list-style-type: none"> Flexibility of space for potential future configurations. 	✓	<ul style="list-style-type: none"> The design will incorporate open plan workspaces, offices, client rooms, meeting rooms, lunch room and outdoor seating area Low VOC paints, carpet and sealant will be used Green Walls shown on Architectural Drawings Selection of endemic and low maintenance landscaping species Both AC and lighting control is provided to offices and warehouses.
			<ul style="list-style-type: none"> Use of Low VOC paints, carpets and sealants. 	✓	
			<ul style="list-style-type: none"> Consider using green walls and dense planting to screen the outdoor areas from the docks to increase visual amenity. 	✓	
			<ul style="list-style-type: none"> Consider occupant user control eg A/C systems, glare reducing strategies, lighting etc. 	✓	
Minimising Transport Impact	<ul style="list-style-type: none"> Consider location with links to public transport and employee services. Consider location to reduce operational transport. Consider the impact of industrial trucks on local traffic. 	<ul style="list-style-type: none"> Reward drivers of fuel-efficient vehicles by providing spaces for small cars and or motorbikes. Provide alternatives to single-occupancy vehicles. Reduce operational fuel consumption through proximity to major arterial roads. Reduce the impact of operational traffic on local communities. 	<ul style="list-style-type: none"> Consider providing 10% of total parking spaces for small cars and 5% for motorbikes situated near the office entrance. 	✓	<ul style="list-style-type: none"> Motorcycle parking spaces showing on Architectural Drawings Due to the location of the site, it is considered that staff bicycle riding will be unlikely, although if staff surveys indicate a preference for cycling, consider appropriate amenities. Car park numbers and provision for disabled parking are provided be in accordance with Consent Authority requirements.
			<ul style="list-style-type: none"> The site is located within proximity (<5km) to both the M7 and M4 motorways. The roads linking the site to the motorways are predominantly used for industrial traffic, as such the traffic is unlikely to impact on local areas. 	✓	

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Optimising IEQ	<ul style="list-style-type: none"> Optimise natural light to work environment. Optimise fresh air ventilation. Consider Thermal Comfort of occupants. Consideration of noise transference in space planning. Minimise use of materials that emit volatile organic compounds. Create a pleasant working environment. 	<ul style="list-style-type: none"> Daylight: Daylight Factor (DF) of at least 2% at finished floor level under a uniform sky for at least 60% of the GLA. Thermal comfort: 95% of office areas have PMV levels between -1 and +1 for 98% of the year; Warehouse spaces include passive thermal comfort strategies. Finishes: 95% of all paints, adhesives & sealants and all carpet and flooring to be low-VOC finishes; use low-formaldehyde wood products. Electric lighting levels: 95% of GLA has a lighting system that is flicker free and has a maintained illuminance of no more than 25% above those recommended in AS1680.2.4, 2.1 and 0.1. Reduce visual glare. 	<ul style="list-style-type: none"> Daylight: rationalised glazing to offices; high performance glass. Daylight: evenly spaced translucent roof sheeting to warehouses areas. Thermal comfort: Office envelope and HVAC system designed to meet thermal comfort requirements; Provide sufficient roof and wall insulation to the air-conditioned spaces; Finishes: Specify and track correct finishes and wood products. Provide pleasant indoor and outdoor breakout spaces with sufficient daylight and plants. Lighting: Good light fixtures and well-designed layout. Ventilation: Consider increased fan and duct sizing. Provide sufficient shading and blinds with rationalised glazing for visual and thermal comfort. 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> High performance glazing to all air-conditioned areas to satisfy Section J requirements Shown on the Architectural Drawings Refer Section 6.3.1 of this report for proposed set up temperatures Roof and External Wall insulation as per the NCC requirements LED lighting and lighting controls to warehouse and offices. Adequate ventilation will be supplied in accordance with AS1668. Shown on the Architectural Drawings

Minimising Energy Use	<ul style="list-style-type: none"> Consider passive design to minimise energy use such as orientation, ventilation, shading and floor plate design. Appropriate sizing of plant and equipment in heating and cooling, lighting, control systems, Building management systems and renewable energy sources. Reduce reliance on connection to grid electricity and gas. 	<ul style="list-style-type: none"> Target a 20% reduction in Greenhouse gas emissions. Energy sub-metering for all major uses greater than 100kVa; linked to monitoring system. High efficiency warehouse lighting and controls. Reduce energy for water heating. Integrated building management. Consider renewable energy generation for a portion of energy consumption and/or consider future-proofing the building for future installation. Reduce urban heat island effect and heat load through the roof by providing a highly reflective roof. Reduce office equipment load from 20W/m² to 15W/m². Optimise insulation for energy and thermal comfort. 	<ul style="list-style-type: none"> Roof Insulation, External Wall Insulations, Reduced Glazing area and associated heat loss in winter. Consider office air conditioning temperature set-points for an increased comfort band. Provide energy efficient T5 lighting, with zoning and automatic controls where reasonable. Consider LED lighting strategies and advanced controls. Consider a solar hot water system with gas boost or a heat pump. Sub-metering: install appropriate metering; develop metering and tracking strategy to allow for self-assessment, problem solving and ongoing improvements during operations Use roofing material that has a high Solar Reflective Index Investigate current insulation design and determine proposed options. 	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ 	<ul style="list-style-type: none"> Shown on the Architectural Drawing Design brief sets the temperature - Refer Section 6.3.1 of this report. LED lighting to warehouse and offices. Lighting controls to warehouse and offices. Solar hot water or heat pump system Sub meters for major energy/water uses Colourbond roof sheeting which has a higher solar reflectivity is proposed. As per project NCC Section J report.
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Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Choosing Materials	<ul style="list-style-type: none"> • With consideration to energy inputs in manufacture. • Toxicity. • Consequential impacts – rain forest timbers. • Regional or local manufacturer employment support. 	<ul style="list-style-type: none"> • Reduce steel and cement in internal slab (10% reduction in embodied energy). • Reduce embodied energy in concrete and plasterboard elements. • Consider 95% of timber to be AFS or FSC certified. • Reduce emissions associated with insulation and refrigerant. • Reduce environmental impact of materials for tiling, awning. 	<ul style="list-style-type: none"> • Jointless fibre reinforced slab. • Use pre-cast concrete panels with recycled content. 	<p>✓</p> <p>✓</p>	<p>To minimise the environmental impacts of materials used by encouraging the use of materials with a favourable lifecycle assessment based on the following factors:</p> <ul style="list-style-type: none"> • Fate of material • Recycling / re-use • Embodied energy • Biodiversity • Human health • Environmental toxicity • Environmental responsibility.

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Minimising Waste	<ul style="list-style-type: none"> By clever design. Contracted to builder as a requirement on site for construction waste. During the life of the building. And in dealing with building end of life options. 	<ul style="list-style-type: none"> Reduce construction waste going to landfill by 90%. Reduce operational waste going to landfill. Consider a design that can be disassembled at the end of the building's life. 	<ul style="list-style-type: none"> Contractor is to develop and implement a Waste Management Plan and track all waste going offsite to show that 90% of all construction waste is re-used or recycled. Waste storage and recycling facilities to be provided for different operational recycling streams such as paper, glass, plastics, metals, food waste etc. Consider operational waste plans and training for staff to provide incentive to reduce waste. 	<p>✓</p> <p>✓</p>	<ul style="list-style-type: none"> SLR recommends more than 70% of the predicted construction waste arising from development can be re-used (on-site or at another development) or recycled off-site. Refer project Waste Management Plan. The following waste avoidance measures are recommended in the Waste Management Plan for the Project: <ul style="list-style-type: none"> Provision of take back services to clients to reduce waste further along the supply chain.
Water Conservation and Reuse	<ul style="list-style-type: none"> Monitoring of meters to track use. Timely maintenance of fixtures and fittings. Water sensitive landscape design. Source potable water alternatives such as rain water harvesting, grey and black water treatment. 	<ul style="list-style-type: none"> Reduce potable water in internal fixtures. Reduce potable water for irrigation. Water efficient operation of appliances. Utilise rainwater and/or recycled water. 	<ul style="list-style-type: none"> Water efficient sanitary taps and toilets. Water efficient and drought tolerant landscaping. Water and energy efficient dishwasher. Rainwater collection for toilets, irrigation and truck wash down. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<ul style="list-style-type: none"> Low flow fixtures and fitting including taps and shower heads Selection of endemic and low maintenance landscaping species SLR recommends water efficient dishwashers 10 kL Rainwater tanks have been proposed for rainwater harvesting and re-use for landscape irrigation and flushing of toilets.

Category	Objective	Proposed Target	Proposed Strategy	Commitment	Comment
Land Use and Ecology Impact	<ul style="list-style-type: none"> Consider local biodiversity impacts of flora and fauna. Look to specialist advice on land in development. 	<ul style="list-style-type: none"> Encourage biodiversity. Reduce light pollution from the site. Consider reducing impact of stormwater flows off the site into the natural watercourses including Ropes Creek adjacent to the site. 	<ul style="list-style-type: none"> Install indigenous planting appropriate to the area and the adjacent biodiversity lots. 	✓	Selection of endemic and low maintenance landscaping species
			<ul style="list-style-type: none"> Design external lighting to avoid emitting light into the night sky or beyond the site boundary. 	✓	LED lights have been proposed for all external lights to avoid emitting light
			<ul style="list-style-type: none"> Consider integrated stormwater management to minimise the impact on receiving waters of flow volumes and pollution content, eg bioswales, bio retention, OSD tanks and treatment. 	✓	The warehouse sustainability objectives include:
			<ul style="list-style-type: none"> Consider permeable concrete/paving for staff parking areas and footpaths, etc. 	✓	<ul style="list-style-type: none"> Reduce the impact of stormwater runoff and improve quality of stormwater runoff Achieve best practice stormwater quality outcomes Incorporate water sensitive urban design principles.

5.2 Baseline and Proposed Energy Consumption

An NCC Sections J Deem-to-Satisfy compliant building is used as the baseline building for energy consumption savings. NCC Section J provides the minimum requirement for energy efficiency and it is predicted that the proposed development will have more than 50.8% energy reduction - refer **Section 6.7** for the energy simulation results. The reduction has been enabled via:

- All luminaire shall be low energy LED type;
- Warehouse lighting is generally to be zonally controlled via motion sensor;
- Office lighting shall be controlled via dual technology infrared/ultrasonic sensor;
- Daylight harvesting function to office with external windows;
- Efficient air conditioning system; and
- Translucent sheets to warehouse 1B and 1C to receive daylight.

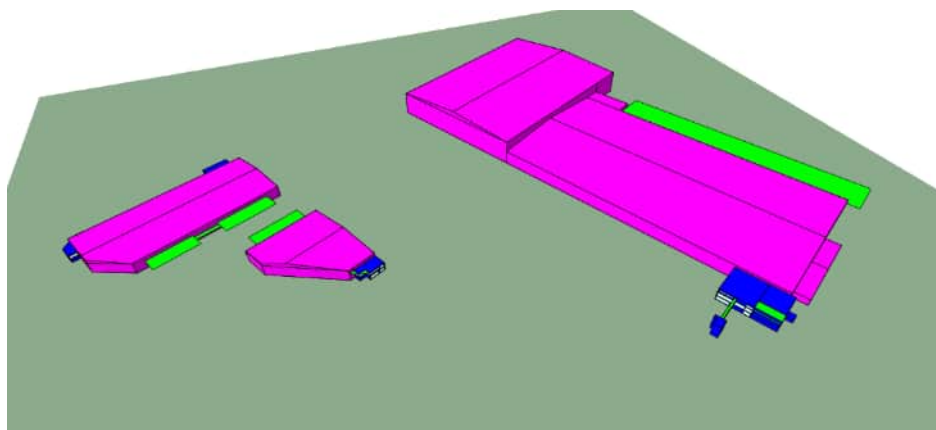
All building information and associated parameters are listed in the following sections of this report.

5.3 Energy Calculation of the Proposed and Reference Buildings

The Energy Simulation Program used in this study is the IES computer program Virtual Environment 2019 (VE). The program is based on the ASHRAE response factor and the modifications included utilising Australian weather data and including building materials more appropriate to those used in Australia and enabling the input of metric data.

- SLR supports a perpetual license of the Energy Simulation Software package IES <VE>;
- IES <VE> has passed the BESTEST (ASHRAE Standard 140) external validation process;
- The weather data from ACADS-BSG NSW Richmond Test Reference Year (TRY) is used for the modelling;
- IES<VE> assesses U-Value, SHGC, and shade coefficient when evaluating the effect of glazing;
- Detailed warehouse operating schedules are not available at this stage. Therefore, NCC standard building operating profiles such as occupancy, lighting, air conditioning and equipment were adopted for warehouse and office area; and
- At least 50 kW of PV system has been proposed for each warehouse.

Figure 4 Proposed Warehouses in IES Model



5.4 Artificial Lighting

In Section J6 of the NCC, the requirement for the total lighting power load within the proposed spaces of a building is to be no greater than a maximum illumination power load, measured in Watts (W). The maximum allowable building illumination power load is based on the total illumination power load calculated for each space.

For artificial lighting, the aggregate design illumination power load must not exceed the sum of the allowances. This may be obtained by multiplying the area of each space by the maximum illumination power density (as found in Table J6.2a of the NCC 2016 Volume One). The maximum illumination density for a storage warehouse is 10 W/m² as per Table J6.2a of the NCC 2016 Volume One.

The proposed warehouses will adopt the following energy efficiency measures to reduce the lighting energy consumptions:

Office lighting

- LED fitting for offices.
- Occupancy sensors to low occupancy areas e.g. office, toilets and lunch room.
- Lighting will be dimmable up to 10% when daylight allows, or area is vacated.

Warehouse lighting

- LED fitting for warehouse.
- Occupancy sensors to low occupancy areas.

Outside lighting

- LED external lighting for all outside areas.
- External lighting will be controlled via daylight sensor (photocell).

Electrical lighting is the major energy reduction component for warehouse with a large footprint.

The lighting calculation for NCC reference building is based on the maximum illumination power density specified within NCC Table J6.2A as below:

- Warehouse = 10 W/m²
- Offices = 9 W/m²

The electrical lighting layout of the proposed building is not provided at the time of preparing this report. It is assumed the maximum design lighting power density will be achieved as below:

- Warehouse 6 W/m²
- Offices 5 W/m²

Therefore, the proposed building is likely to achieve a 40% lighting energy reduction when compared with reference building. Detailed calculation is shown in **Appendix A**.

5.5 Mechanical Air-Conditioning

The mechanical service design is not available at this stage. Performance reverse cycle package units to offices with individual controls. As per the mechanical specification of the Tenant Base Building Specification, air conditioning to be designed to the BCA/NCC section J and other statutory authorities and applicable Australian standards.

As per the mechanical specification of the Goodman's Tenant Base Building Specification, air conditioning to be designed to the BCA/NCC section J and other statutory authorities and applicable Australian standards.

Air-conditioning temperature control and set point – refer Table 4

Table 4 AC Unit Temperature Control Range

Space Type	Temperature Control Range (°C)
Offices	22.5±1.5°CBD

Air-conditioning energy efficiency requirements

2016 NCC Section J5.2e has specified the minimum energy efficiency ratios requirements for package air conditioning equipment.

Table 5 BCA Unitary Plant Requirement

Office Equipment	Minimum Energy Efficiency Ratio	
	NCC Requirement	Proposed System ¹
Cooling	2.7	3.5
Heating	2.7	3.5

Note 1: Detailed Mechanical design is not available at this stage. It is assumed that the proposed package system will achieve the performance requirements above.

When the air flow rate of a mechanical ventilation system is more than 1000L/s, the system must have a fan motor power to air flow rate ratio in accordance with BCA 2015 Section J5.2a – refer **Table 6**.

Table 6 Maximum Fan Motor Power to Airflow Ratio – General Mechanical Ventilation Systems

Filtration	Maximum Fan Motor Power to Airflow Rate Ratio (W/(L/sec))
With filters	0.98
Without filters	0.65

Details or NCC Section J5 certification demonstrating compliance will need to be submitted with the application for a Construction Certificate

5.6 Building Fabric Requirements

Parts J1 to J3 of the BCA Section J contain the requirements of the Deemed-to-Satisfy compliance of the building fabric. The purpose of this subsection is to ensure that the building fabric will provide sufficient thermal insulation to minimise heating and cooling loads placed on the building and the commensurate energy consumption HVAC systems servicing internal building spaces.

All fabrics of the proposed building shall comply with NCC Section J. A Project Section J report will need to be submitted with the application for a Construction Certificate.

5.7 Domestic Hot Water (DHW)

The BCA specifies the thermal efficiency for hot water systems to be at least 80%. The solar hot water reticulation system shall be provided to all faucets' fittings, equipment and apparatus within the development. Hot water will be generated from the roof mounted solar water packaged plant.

With the installation of water efficient fixture, the hot water consumption will be decreased and thus the domestic hot water usage will also decrease. If the domestic hot water usage is less than the energy required to heat to the water also decreases. Moreover, the supplement natural gas consumption will be reduced by using the proposed solar hot water system.

The energy simulation in this analysis is assumed both reference and proposed building are using same gas fired boiler for DHW. The actual energy consumption will be reduced once solar hot water is adopted for the proposed building.

5.8 Simulation Results

The predicted Total Annual Energy Consumption of the NCC Reference Building and the Proposed Building is summarised in **Table 7**. For both buildings, temperatures lie within the range 16°CDB to 27°CDB for 100% of the plant operation time.

Table 7 Comparison of Annual Energy Consumption Between the Reference and Proposed Building

Electricity Usage	Reference Building (MWh)	Proposed Building (MWh)
Heating	679.7	204.2
Cooling	1432.9	442.0
Auxiliary	150.1	150.1
Lighting	4134.8	2468.0
Equipment	assumed identical	assumed identical
DHW	assumed identical	assumed identical
PV System	-	-116.1
Total	6397.56397.5	3148.2

Note 1 these items are specific to a tenant's Fit out - hence assumed to be the same for the Reference and Proposed Buildings

By implementing all energy efficiency measures described in **Section 6**, the project is predicted to achieve a 50.8% GHG emission reduction when compared with NCC Reference Building.

6 POTABLE WATER CONSUMPTION

It is proposed that the Project will have a number of sustainable water-saving measures, including:

- Rainwater reuse and reticulation system – Rainwater will be harvested from the roof and reuse for irrigation and toilet flushing. The reticulation will be a separate system to the domestic cold water with domestic water top up in the event of insufficient rainfall;
- Use of water saving plumbing devices; and
- Water sensitive landscape design.

Further to above sustainable water measures, the following items will be considered during the detailed design stage:

- Water efficient sanitary taps and toilets – install higher WELS Rating sanitary fixtures such as 4 stars for water taps, urinals and toilet.
- Water and energy efficient dishwashers with minimum 4-star WELS water rating.

By installing 4 star rated toilets, urinals and taps and the proposed rainwater harvesting facility the proposed development will reduce its potable water demand by approximately 37%.

The quantities of each water fittings are assumed from the drawing and listed in **Appendix B**.

7 CLIMATE CHANGE

7.1 Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2013)

IPCC 2013 unequivocally concluded that:

- Greenhouse gas (GHG) emissions have markedly increased in recent times as a result of human activities. This increase has influenced a warming of the atmosphere and the ocean (especially since the 1950s), changes in the global water cycle, reductions in overall snow and ice, a global rise in mean sea level, and changes in some climate extremes.
 - Each of the three most recent decades has been successively warmer at the Earth's surface than any preceding decade since 1850. In the Northern Hemisphere, 1983-2012 was likely the warmest 30-year period of the last 1400 years (**medium confidence**).
 - Over the last two decades, the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink almost worldwide, and Arctic sea ice and Northern Hemisphere spring snow cover have continued to decrease in extent (**high confidence**).
 - The rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia (**high confidence**).
- Continued warming and changes in all components of the global climate system are projected.

7.2 Climate Change Impacts in Australia – Updated CSIRO-BOM Assessment

Australia has already experienced increasing temperatures, shifting rainfall patterns, surrounding ocean acidification and a rise in sea level associated with the impacts of a warming global climate.

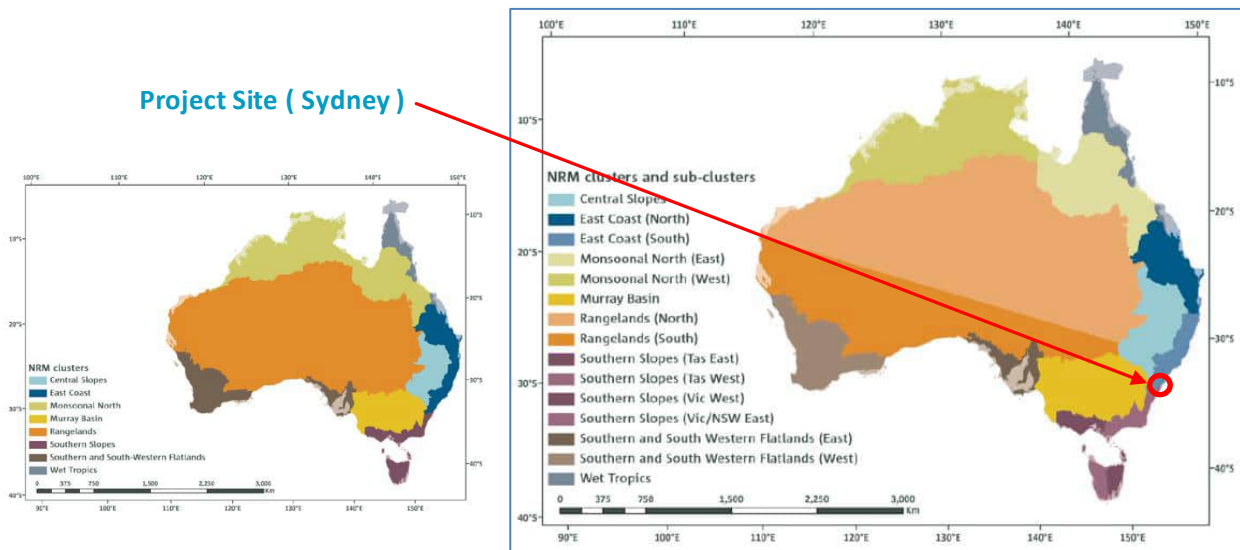
In recognition of the impact of climate change on the management of Australia's natural resources, the Australian Government developed the **Regional Natural Resource Management (NRM) Planning for Climate Change Fund**, to provide projections of the likely impact of climate change on Australia's natural resources. The Fund (which operates within the Commonwealth Department of Environment) has also been reviewing adaptation opportunities for protecting and managing our land, soil, water, plants and animals.

Australia has **54 NRM regions**, defined by catchments and bioregions. Many aspects of the activities of both human activity and ecosystems within these regions are vulnerable to impacts of climate change.

- For the purposes of climate change impacts, NRM regions have been grouped into so-called "**clusters**", which essentially correspond to the broad-scale climate and biophysical regions of Australia – refer left-hand diagram in **Figure 5**. Each cluster is broadly consistent in terms of its own history, population, resource base, geography and climate, and therefore has a unique set of priorities for responding to climate change
- Recent studies suggested that further sub-division was needed in some cases to better capture the important patterns of projected change for specific climatic variables. In light of this, five of the eight clusters were sub-divided into so-called "**sub-clusters**", more useful for impact assessment and adaptation planning - refer right-hand diagram in **Figure 5**.
- The location of the Project (Sydney) is shown in the sub-cluster diagram – it lies within the East Coast South sub-cluster.

Australia's CSIRO and Bureau of Meteorology (BOM) have prepared tailored climate change projections for each of Australia's eight NRM clusters (as well as their sub-clusters) to be considered in planning and adaptation option assessments.

Figure 5 Australia's Natural Resource Management (NRM) Clusters & Sub-Clusters



7.3 Most Recent CMIP5 Modelling Methodology Used for Climate Change Predictions

The future of anthropogenic greenhouse gas and aerosol emissions (and hence their resultant radiative forcing) is highly uncertain, encompassing substantial unknowns in population and economic growth, technological developments and transfer, and in particular, **political and social changes**. The recent Paris Agreement for example showed evident enthusiasm to tackle the impacts of climate change. Commitments were made in terms of both mitigation and adaptation strategies and targets. How these commitments will be delivered over coming years and decades however would appear to have considerable uncertainty.

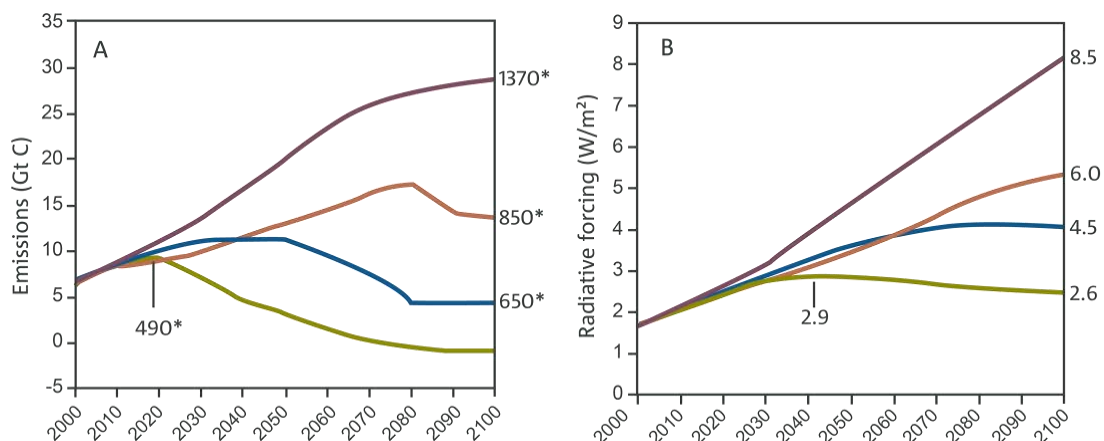
The climate modelling community has therefore developed “**Representative Concentration Pathways**” (RCPs) to explore credible future options, expressed in terms of future carbon emissions and associated radiative forcing.

- Each RCP prescribes internally self-consistent ‘representative’ concentrations of greenhouse gases and aerosols, as well as land use changes. RCPs were developed by a group of experts in areas spanning atmospheric modelling, chemistry and the carbon cycle and social scientists working in economics, policy and impacts [Moss et al. 2010].
- Four standard RCPs have since been commonly adopted in most global climate studies (**and used in the Australian context**). They represent the distillation of a much larger number of potential futures discussed in the literature [van Vuuren et al. 2011, Meinshausen et al. 2011].
- These RCPs were used in the **Fifth Climate Model Intercomparison Project (CMIP5)** and the latest **IPCC Assessment Report (2013)**. They span the range of plausible global warming scenarios and provide a range of options for the world's governments and other institutions for decision making.

The (projected) carbon emissions and the corresponding radiative forcing for the four standard RCPs are shown in . No particular scenario is deemed more likely than the others, although the lowest radiative forcing scenario, RCP2.6, would require major and rapid change in carbon emissions patterns on a global scale.

- **RCP8.5** represents a future with little curbing of emissions, with CO₂ concentrations continuing to rapidly rise, reaching 940 ppm by 2100 (we are currently just over 400 ppm).
- **RCP6.0** represents lower emissions, achieved by application of some mitigation strategies and technologies. CO₂ concentrations rise less rapidly than RCP8.5, but still reach 660 ppm by 2100 with total radiative forcing stabilising shortly after 2100.
- **RCP4.5** concentrations are slightly above those of RCP6.0 until after mid-century, but emissions peak earlier (around 2040). CO₂ concentrations reach 540 ppm by 2100.
- **RCP2.6** represents the most ambitious mitigation scenario, with emissions peaking very soon (around 2020), then rapidly declining. Such a pathway would have required early and aggressive carbon emission controls from all emitters, including developing countries, combined with advanced technologies for actively removing carbon dioxide from the atmosphere. Given current national commitments, it is questionable whether RCP2.6 can still be considered a practical future scenario.

Figure 6 RCP Emission Scenarios – Carbon Emissions and Associated Radiative Forcing



7.4 East Coast (South) Cluster – Sydney Projections

CSIRO-BOM have produced a set of future climate projections derived from the East Coast Cluster dataset applying specifically to Sydney, with the following key outcomes:

- Average temperatures will continue to increase in all seasons (**very high confidence**). More hot days and warm spells are projected with **very high confidence**. Fewer frosts are projected with **high confidence**.
- Decreases in winter rainfall are projected with **medium confidence**. Changes in other seasons are possible but unclear. Increased intensity of extreme daily rainfall events is projected, with **high confidence**.
- Increased evapotranspiration is projected (**high confidence**).
- Mean sea level will continue to rise and height of extreme sea-level events will also increase (**very high confidence**).
- A harsher fire-weather climate is projected (**high confidence**).

Projections of key climatological parameters for Sydney are provided in **Table 8**. Data are shown for two of the CSIRO-BOM RCP scenarios - RCP4.5 and RCP8.5 – and two benchmark years – 2030 and 2090.

Table 8 Sydney Area Climate Projections

Variable	Season	Simulation Scenario: Year / RCP Pathway		
		2030 RCP4.5	2090 RCP4.5	2090 RCP8.5
Temperature (°C)	Annual	0.9 (0.6 to 1.1)	1.8 (1.3 to 2.5)	3.7 (2.9 to 4.6)
Number of Days over 35°C	Annual (currently 3.1)	4.3 (4.0 to 5.0)	6.0 (4.9 to 8.2)	11.0 (8.2 to 15.0)
Number of Days over 40°C	Annual (currently 0.3)	0.5 (0.5 to 0.8)	0.9 (0.8 to 1.3)	2.0 (1.3 to 2.3)
Solar Radiation (% change)	Annual	+0.5 (-0.5 to +1.9)	+1.5 (-0.3 to +3.7)	+1.3 (-1.2 to +3.4)
Rainfall (% change)	Annual	-3 (-10 to +6)	-2 (-16 to +9)	-3 (-20 to +16)
	Summer	+1 (-10 to +15)	0 (-15 to +19)	+11 (-12 to +27)
	Autumn	-3 (-22 to +15)	-1 (-22 to +18)	-2 (-28 to +20)
	Winter	-5 (-18 to +14)	-8 (-24 to +7)	-17 (-31 to +1)
	Spring	-1 (-19 to +12)	-6 (-23 to +9)	-8 (-30 to +14)
Relative Humidity (% change)	Annual	-0.5 (-1.6 to +0.8)	-1 (-3.1 to +0.3)	-1.5 (-3.8 to +1.3)
Evapotranspiration (% change)	Annual	+3.4 (2.3 to 4.4)	+7.8 (5.3 to 9.5)	+14.3 (10.1 to 18.1)
Wind Speed (% change)	Annual	-1.1 (-2.9 to +0.5)	-1.0 (-4.2 to +0.2)	-1.5 (-6.9 to +4.2)
Sea Level Rise (m)	Annual	0.13 (0.09 - 0.18)	0.13 (0.09 - 0.18)	0.14 (0.10 - 0.19)

Given the Project site location away from the coastline, and in relation to Sustainability aspects of the development, the projections shown in **Table 8** for the following climate variables are deemed of significance to this study:

- **Increasing** Temperature;
- **Increasing** Solar Radiation;
- **Decreasing** Relative Humidity;
- **Decreasing** Average Winter Rainfall & **Increasing** Peak Rainfall Intensity Events; and
- **Increasing** Number of Days for Extreme (Hot) Weather.

7.5 Impact of Climate Variables on ESD Outcomes

Changes in Solar Radiation

According to ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers), the following variables contribute to indoor thermal comfort: solar (or thermal) radiation (ie sunlight), temperature, indoor humidity, the time of day and external weather conditions.

Solar (thermal) radiation is a heat transfer mechanism. It has a significant impact on solid bodies (including people). The effectiveness with which solid bodies radiate or absorb thermal radiation depends on the type of material and its colour. A blackened surface for example is usually a super strong absorber and emitter.

The main sources of radiation in buildings are windows and walls/roofs. Glazing, wall and roof types as well as insulation all impact on internal building thermal comfort and hence HVAC system set-point temperatures.

Solar radiation is therefore controlled through various design responses, including:

- Shading of building surfaces and windows in summer;
- Selection of glazing;
- Introduction of blinds, curtains, etc, to limit solar radiation penetration through glazing; and
- Wall and Roof types and associated insulation.

Solar radiation is expected to rise under future climate conditions.

Changes in Temperature

As temperatures increase beyond a normal range, HVAC systems consume more energy than their typical design levels and can even experience underperformance. Typically, under these conditions, building occupants respond by lowering pre-set thermostat levels which will not automatically improve the effectiveness of their system. The system energy consumption will however increase significantly.

Apart from the increase in power bills, an increase in the expected number of extreme hot days has the potential to cause the following:

- clogging of air filters at a faster rate than normal and earlier accumulation of debris on fan blades;
- increases in area-wide energy usage that can cause instability to power grids.

Temperatures and the number of extreme hot days are expected to rise under future climate conditions.

Changes to Relative Humidity

Excessive humidity can have a significant impact on the effectiveness of air conditioning and heating systems in summer. Low humidity can also cause under-performance in HVAC systems in winter.

To help address high (summer) humidity and low (winter) humidity, HVAC systems are supplied with dehumidifiers that extract moisture from the airflow and humidifiers which add moisture to air respectively, before the airflow is distributed through the air-conditioned space.

7.6 Design Responses to Climate Change

MITIGATION

It is proposed that the development will incorporate a minimum 50 kW PV solar system for each warehouse.

This measure provides a direct (albeit modest) reduction of overall (ie national) demand on fossil fuel generated electricity and hence greenhouse gas generation.

ADAPTATION

HVAC

The calculations in **Section 5.8** comparing the NCC Reference Building and Proposed Building were made using the same historical climatic variable inputs. If the potential changes to these key variables suggested in **Table 8**, eg increased temperatures, solar radiation, etc, are incorporated into these calculations, the resulting relative improvement in energy consumption will be comparable, ie a 50% reduction in energy consumption.

It is recommended that during the Detailed Design phase of the Project, the sizing of the project HVAC system be developed with an allowance for the projected changes to key climatic variables shown in **Table 8**. At that time, consideration as to which RCP pathway to adopt can be made.

Stormwater and Flood Management

Australian Rainfall and Runoff (ARR 2016) identifies two alternative methods to estimate the impact of climate change on rainfall depth.

- The **Simplified Method**, which incorporates the effects of climate change in design rainfall and flood estimation by modelling of the 0.5% (1 in 200) AEP or 0.2% (1 in 500) AEP events in lieu of the 1% AEP event. For a 24-hour rainfall event this would represent an increase in rainfall of 12% and 28% respectively. This provides a convenient approach suitable for small sites.
- The **Detailed Assessment Approach**, which involves a more detailed assessment of increased rainfall intensity based on predictive modelling of temperature increases sourced from CSIRO-BOM climate projection datasets and applying a 5% change in design rainfall per degree of global warming (Equation 1.6.1 of ARR 2016). In this approach it is necessary to select the RCP pathway results for the assumed increase in average temperature. A 2.5°C temperature increase would result in a 12.5% increase in peak rainfall intensity.

A consistent approach to selecting increased rainfall intensity for water retention, stormwater, flooding, etc, calculations taking into climate change would be to use the 0.5% AEP rainfall event in lieu of the normal 1% AEP rainfall event.

It is recommended that during the Detailed Design phase of the Project, Civil Design features of the Project related to the intensity of peak rainfall events take into account the projected changes to key climatic variables shown in **Table 8**, namely increased temperatures and increase in peak 24-hour rainfall event intensity.

Water Retention (Grey Water)

It is recommended that all landscaping incorporated into the Project take into account the projected decrease in average rainfall during the winter-spring months of the year (a projection that is common to the entire southeast Australia region).

Similarly, the accumulation rate of on-site water tanks which have as their source locally captured water, should take into account the potential for decreased average rainfall during relevant seasonal periods.

Fire Suppression / Firefighting Management / Bushfire Management

It is recommended that the Bushfire Management Plan developed for the Project (post-approval) consider the increased risk of bushfires projected for the Sydney area, and indeed the wider East Coast cluster region. This should cover both the construction and operational phases of the Project and cover practices such as:

- Hot works that may cause fire and use of petrol-powered tools in general
- Mulch piles and other increases to fire fuel loading from clearing and grubbing
- Management of smoking and careless disposal of cigarettes on site
- Site maintenance activities such as mowing, etc.

8 MONITORING AND REPORTING

All committed sustainability-related measures need to be commissioned and tuned once the project is completed, to ensure all services operate to their full potential and as designed.

As specified within the Tenant Base Building Specification, the building tuning will be provided by service contractors and overseen by an independent assessor, at least once a month within the Defects Liability Period (DLP) period to ensure that services are operating effectively and efficiently. Monthly reports to be provided to the tenant for DLP.

8.1 Energy Review and Audit

An energy usage review should be undertaken within the first few months of operation to ensure the Energy Management Plan is sufficient for the development's needs. A breakdown of energy usage per month at the Project Site will help to measure the development's baseline energy use and assess what appliances, equipment and processes are consuming energy.

An energy review is also necessary for the assessment of energy utilisation to further identify opportunities for improvement. Energy usage data obtained during the review process may be used to establish key performance indicators and annual energy targets for the Project.

Energy usage to be included in the review should include all purchased electricity and energy which is consumed by stationary equipment on site. Energy consumed by mobile equipment (e.g. forklifts) should also be examined as this will identify variations in warehouse operation efficiency. (Refer to 'Guidelines for Energy Savings Action Plans' (2005) (as developed by the former Department of Energy, Utilities and Sustainability) for reporting templates and further information.)

An energy audit and management review should also be undertaken on a half-yearly basis to ensure employees are following energy savings procedures correctly. Where audits show that energy savings procedures are not carried out effectively, additional employee training should be undertaken and signage and procedures re-examined.

The Energy Management Plan should be progressively improved and updated on an annual basis, or as required, to reflect changes to the Energy Management System and to promote continual improvement of energy management at the Project Site.

8.2 Energy Metering and Monitoring

To enable effective review of energy usage by the project, sub-metering should be implemented for all major energy consuming processes or items of equipment including sub-metering for all loads greater than 100 kVA.

Electrical equipment should be maintained to Australian Standards to ensure unnecessary energy wastage is minimised. Roof access system is proposed for third party access to roof for carry out necessary maintenance as required.

In accordance with the Goodman's Industrial Building Specification, a Building Users' Guide is to be prepared for the Project. The Building Users' Guide provides details regarding the everyday operation of a building and should include energy minimisation initiatives such as natural ventilation strategies, user comfort control, maintenance of air conditioning units and other electrical devices to ensure maximum operating efficiency, and lighting zoning strategies.

An effective Building Users' Guide will ensure that:

- Facility managers understand in detail their responsibilities for the efficient operation of the facility and any additional building tuning necessary to continuously improve energy management.
- Maintenance contractors understand how to service the particular systems to maintain reliable operations and maximum energy efficiency.
- Employees understand energy minimisation procedures and working limitations required to maintain design performance for energy efficiency.
- Future fit-out / refurbishment designers understand the design basis for the building and the systems so that these are not compromised in any changes.

8.3 Roles and Responsibilities

It is the responsibility of the facility manager to routinely check energy savings procedures are undertaken correctly (i.e. lighting turned off while areas of the development are not in use). The facility manager should also ensure all monitoring and audit results are well documented and carried out as specified in the Energy Management Plan.

Senior management should also be involved in energy management planning as an indication of the organisation's commitment to the Energy Management Plan

9 CONCLUSIONS

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Goodman Property Limited (Goodman) to provide a Sustainability Management Plan (SMP) for Stage 1 MOD 2 establishing warehouse and office facility within a portion of Precinct 1 at Oakdale West Estate development.

The SMP has been undertaken in accordance with the Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD 7348 MOD 2) application:

- **Ecologically Sustainable Development and Energy Efficiency** – including:
 - an assessment of how the modification will incorporate ecologically sustainable development principles in all phases of the development;
 - consideration of the use of green walls, green roof and/or cool roof into the design;
 - climate change projections developed for the Sydney Metropolitan area and how they are used to inform the building design and asset life of the project; and
 - an assessment of the energy uses on-site, and demonstration of the measures proposed to ensure the modification is energy efficient.

The principal objective of this Sustainability Management Plan is to identify all potential energy savings that may be realised during the operational phase of the project, including a description of likely energy consumption levels and options for alternative energy sources such as PV solar power.

A BCA Sections J Deem-to-Satisfy compliant building is used as the baseline building for energy consumption savings. BCA Section J provides the minimum requirement for energy efficiency and it is expected that the proposed development will operate energy efficiently via:

- 50 kW PV Solar to each warehouse;
- Daylight controlled LED lighting for the warehouse instead of metal halide, resulting in a considerable energy reduction and reduced maintenance;
- Motion sensors to all LED lights within the warehouse, and offices;
- Roof and external wall insulation as per the NCC requirements;
- High performance glazing to all air-conditioned areas or minimum NCC requirements;
- Passive solar design for external outdoor areas;
- Translucent sheets to warehouse 1B and 1C to receive daylight;
- High efficient air conditioning system;
- Power sub-metering to enable continued review of power consumption for the offices, and warehouse;
- Green walls;
- Selection of endemic and low maintenance landscaping species;
- 10 kL Rainwater tank for rainwater harvesting and re-use for landscape irrigation and toilet flushing;
- Low flow fixtures and fittings including taps and shower heads;
- Low VOC paints, carpet and sealant; and
- Other measures as detailed in this report.

By implementing all energy efficiency measures described in Section 6 of this report, the project is predicted to achieve a 50.8% GHG emission reduction when compared with NCC Reference Building.

By installing 4-star rated toilets, urinals and taps and the proposed rainwater harvesting facility the proposed development will reduce its potable water demand by approximately 37%.

In conclusion, the relevant ESD initiatives and Energy Efficiency measures outlined in this report are incorporated into the proposed building and development details. The proposed ESD initiatives will help to achieve significant reductions in the energy required by the development both in building and operation.

Building tuning will be conducted by builder and SLR recommends that quarterly reviews of actual building energy and water consumption be carried out once the warehouses are operational to check the actual energy usage and energy savings and verify that all systems are performing at their optimum efficiency. This will provide an opportunity for the systems to be tuned to optimise time schedules to best match occupant needs and system performance while satisfying the sustainability target for the project.

APPENDIX A

Energy Saving Lighting Design Recommendations

BCA Lighting Requirements Oakdale West MOD 2								
BCA Comply Building	BCA Requirements	Area	Operating Hrs	Lighting Control			Total Annual Energy Consumption (kWh)	
	Warehouse W/m2	10	81773	Monday to saturday 24 hours	Motion Detector, Daylight Sensor	0.9	0.6	3857592
	Offices W/m2	9	3903	Monday to saturday 24 hours	Motion Detector	0.9	1	276183
			85676				Total	4133775
							kWh/m2	48.25

Proposed Lighting Requirements Oakdale West MOD 2								
BCA Comply Building	BCA Requirements	Area	Operating Hrs	Lighting Control			Total Annual Energy Consumption (kWh)	
	Warehouse W/m2	6	81773	Monday to saturday 24 hours	Motion Detector, Daylight Sensor	0.9	0.6	2314555
	Offices W/m2	5	3903	Monday to saturday 24 hours	Motion Detector	0.9	1	153435
			85676				Total	2467990
							kWh/m2	28.81

APPENDIX B

Water Saving Recommendations

WATER SAVINGS CALCULATION				
Table C1 - Number of fixtures				
Area	Toilets	Urinal	Basins	Showers
Amenities	44	19	44	9
Total	44	19	44	22
Assume 70% of toilet water usage is supplied by rainwater				
Fraction not supplied by RWH	0.3			
Table C2 - Results				
No water saving measures		Max water usage rate ¹		
Toilet	Adopt 3* Average Flush Usage in Table C3	176	L/s	
Tap	Adopt 3* Tap Usage in Table C3	396	L/s	
Urinal	Adopt 3* Urinal Usage in Table C3	38	L/s	
Water reuse measures (4*) with RWH		Max water usage rate ¹		
Toilet	Adopt 4* Average Flush Usage in Table C3	154	L/s	
Tap	Adopt 4* Tap Usage in Table C3	330	L/s	
Urinal	Adopt 4* Urinal Usage in Table C3	28.5	L/s	
Water reuse measures (5*) with RWH		Max water usage rate ¹		
Toilet	Adopt 5* Average Flush Usage in Table C3	132	L/s	
Tap	Adopt 5* Tap Usage in Table C3	264	L/s	
Urinal	Adopt 5* Urinal Usage in Table C3	19	L/s	
	3* with RWH	4* with RWH	5* with RWH	
Improvement Percentage (%) ³	25	37	49	

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